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THEME

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FORWARD

The purpose of the Readings Book is to provide a unique international forum to facilitate the exchange of cutting-edge information through multidisciplinary presentations of new challenges in global business and technology strategies, policies and issues. Academicians, practitioners, and public policy makers at all levels throughout the world submitted original papers for publication in this Readings Book. The result of the double-blind peer reviewing process efforts produced 316 empirical, conceptual and methodological papers involving all functional areas of business education with a special focus on international aspects. Of the 236 papers accepted, 80 papers are published in this Readings Book.

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THE IMPACT OF SUSTAINABLE LEAN PRACTICE ON PROJECT TIMELINES AND PERFORMANCE ON CONSTRUCTION SITES IN THE UK: A REVIEW OF EXISTING LITERATURE TO DECIPHER BROADER DIMENSIONS

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ABSTRACT

This research paper presents a comprehensive review of existing literature on the impact of sustainable lean practice on project timelines and performance within the UK construction sector. This review, drawing from a variety of academic sources, attempts to decipher broader dimensions surrounding the implementation of sustainable lean practices in construction projects. The implementation of lean practices in the construction industry has gained significant attention in recent years due to its potential to improve project timelines and performance. This paper examines and evaluates the impact of lean practices on construction project management, focusing on how these practices influence timelines and overall project performance. Additionally, case studies and empirical evidence are reviewed on previous research articles to assess the efficiency of lean methodologies in different construction settings. The findings suggest that lean principles and strategies such as waste reduction, continuous improvement, and value stream mapping can lead to streamlined processes, reduced lead times, and enhanced project performance.

Keywords: lean practices, construction industry, project management, timelines, performance.

INTRODUCTION

“In the construction industry world-wide, lean concepts and practices are being broadly employed; but in respect of planning, designing, and constructing infrastructure and building projects, the type and quantities of lean methods deployed are not well understood” (Babalola et al., 2019).

According to Sadikoglu et al. (2024), “to promote construction project performance in the construction industry, lean tools and techniques are of utmost importance”. The implementation of sustainable lean methodologies is a vital approach in the ever-changing construction industry to improve efficiency, reduce waste, and foster ecological consciousness, the UK, being known for taking a progressive approach to sustainability is leading the way in merging lean concepts with sustainable building projects.

For sustainable lean building techniques, comprehensive strategy is required to support social, economic, and environmental goals. These approaches shorten project schedules and improve general performance metrics by consolidating operations, enhancing processes, and encouraging a continuous improvement culture.

“In the engineering, architecture and construction industry during the past ten years, the management of sustainable construction projects (SCPs), which comprise everything from building materials to the construction process, has increased” (Jiang et al., 2024).

Objectives of the Literature Review

This paper investigates the impact of lean practices on project timelines and performance in construction and site management, answering the ensuing inquiries for research:

Research Questions

1. How do sustainable lean practices influence project scheduling and time management in the construction industry?
2. What are the key benefits of integrating environmentally friendly techniques with lean principles in construction projects?
3. How do lean practices like Kanban and Just-In-Time manufacturing improve efficiency and reduce waste in construction projects?
4. What are the critical success factors (CSFs) that enhance the effectiveness of lean techniques during the construction phase?
5. How does the adoption of lean construction principles impact the sustainability and environmental performance of construction projects in the UK?
6. What are the challenges and barriers to implementing lean practices in the UK construction industry, and how can they be addressed?

Methodology

- Carry out a rigorous scrutiny of the literature to find pertinent scholarly journals, reports, case studies, and articles.
- Use keywords like "performance," "construction project timelines," "sustainable lean practice," and "UK" to search academic resources using Google Scholar.
- Select works that offer significant insights and directly address the topic by utilizing inclusion and exclusion criteria.
- Examine the chosen literature to determine important themes, conclusions, and knowledge gaps.
- Gather the information and make conclusions regarding how sustainable lean practices affect project schedules and performance in the UK construction industry.

LITERATURE REVIEW

Sustainable Lean Practice

According to Bashir et al. (2010), “lean construction is a management strategy focused on increasing profits through improved efficiency and reduced resource waste; by implementing lean construction methods, companies can promote sustainability by minimizing energy consumption, enhancing health and safety, and eliminating materials waste”. “Although many countries have experienced major gains from implementing the approach, it appears that UK construction organizations have not widely used it” (Bashir et al., 2010).

“The efficacy of lean production principles in minimizing waste and enhancing process performance has been well-established in intricate development and production settings. This article presents a study that applies lean concepts to identify the presence of value and waste in a sustainable building project” (Lapinski et al., 2006).

"Kanban is a visual scheduling and control system that was first used by Toyota for lean production; the symbols of Kanban indicate a demand from a prior work unit through items like slots or cards" (Tezel et al., 2017 as cited in Noorzai, 2023). "This method makes Just-In-Time (JIT) manufacturing easier by reducing production system flow time and supplier response times" (Jang and Kim, 2007; Ko and Kuo, 2015 as cited in Noorzai, 2023); with favourable effect on project schedules in the construction industry by fostering efficiency, cutting waste, and improving stakeholder participation.

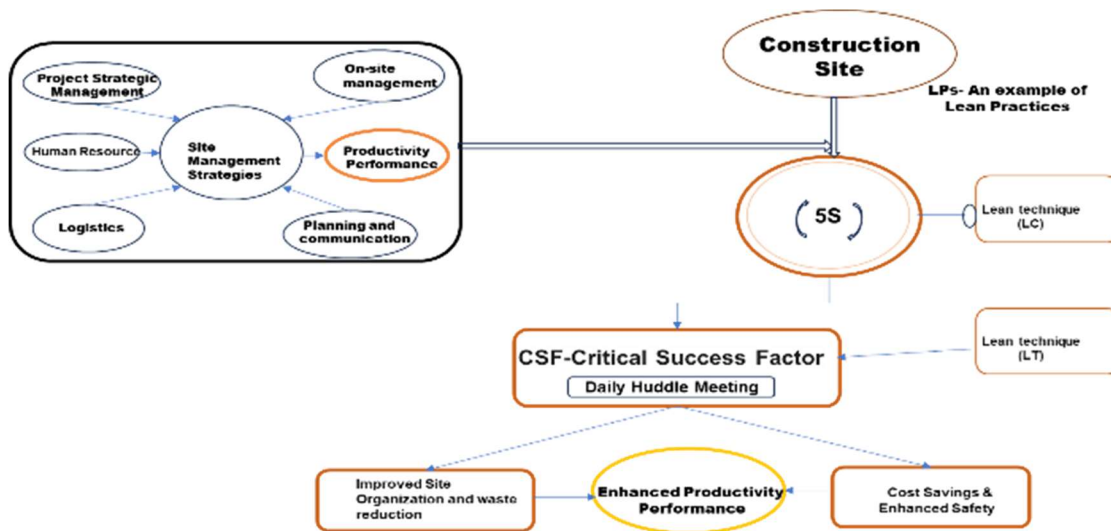
Lean practices, Strategies, Project timelines, Performance and External factors

“In order to meet customer expectations and enhance performance so as to provide value, lean product management is the foundation of the project delivery system known as LC” (Mollasalehi et al., 2016 as cited in Noorzai 2023). “To completely understand the nature of manufacturing, add value, get rid of waste, and shorten project building time are the key goals of lean construction (LC)” (Aziz and Hafez, 2013; Koskela, 1992; Arayici et al., 2011 as cited in Noorzai 2023).

According to Hardin and McCool (2015), “lean techniques (LTs) establish a continuous workflow in the project that can enhance safety, improve tracking of building components and materials, and produce a better plan; the findings indicate that "Daily Huddle Meetings" is the most successful LT at enhancing the factors of success during the construction phase of the building, and efficient construction management is the most important component that has the major influence selection of LT”.

Essentially, to promote effective site management, CSFs (Construction Success Factors) as stated in this research examines the relationship between LTs and CSFs. This is because the construction phase is crucial to the whole project life cycle and LTs have a positive impact on this phase's productivity. “Implementation of lean principles like value stream mapping, sort, set in order, shine, standardize, and sustain (5S), and Just-in-Time production directly impact project timelines and performance: for instance, reducing non-value-added activities through lean techniques shortens project durations and enhances overall productivity” (Albliwi et al., 2015).

Figure 1. The conceptual framework of the relationship between LPs, LTs, CSFs, and enhanced productivity performance



Source: Own Creation, (2024). Conceptual framework of the relationship between LPs, LTs, CSFs.

Lean Approach and Sustainable Construction: Overview of the UK Construction Industry and Sustainability

“In the U.K, it is well known that within the construction industry, there are four major sectors where task operations are routinely implemented which comprise building, civil engineering, materials and goods, and related professional services; given a £40 billion yearly returns, building materials and products constitute the largest sector, contributing approximately 40% of the total construction output and 20% of the manufacturing output in the United Kingdom” (Holton et al., 2010).

“The process of building in harmony with the natural environment, considering the social, environmental, and economic aspects of decisions, and reducing our footprint through a less energy, water and material intensive lifestyle is intricate and demands finding ways to lessen environmental damage and make fair use of natural resources; for this reason using waste and recycled resources to build new infrastructure that are in compliance with construction material regulations ” (Rylyko-Polak et al., 2022).

Lean construction comes out as a reaction to the deficiencies of the conventional management approach, which produces notable improvements in project deliverables and management” (Akanbi et al., 2019) “The U.K construction sector is dynamically responding to the current demands for sustainability, driven by pressures emanating from regulations and commercial activities to improve its sustainability practices” (Bennett and Crudginton 2003, as cited in Ogunbiyi et al., 2014).

Theoretical Foundations

Lean Construction Theory: Lean Construction is a theoretical framework that focuses on applying lean principles and practices specifically to construction industry. It emphasizes waste reduction, continuous improvement, and maximizing value to improve project efficiency and performance.

Sustainability Theory: Sustainability theory examines the long-term viability and ecological impact of construction practices. It explores methods for minimizing environmental impact, maximizing resource efficiency, and promoting social responsibility within construction projects. “While protecting the ability of future generations to meet up with their own needs, sustainable development defines a process where current requirements are met” (Brandon & Lombardi, 2007). “The basic concept of lean thinking is ensued by main characteristics of the UK's highway construction supply chain; in this context the lean thinking has been known as a strategic approach since the late 2000s” (Tezel et al., 2018) “In order to address challenges facing the construction industry and address some productivity and waste issues, lean construction (LC) has been considered as a feasible project management philosophy” (Aslam et al., 2022). According to Li (2015), “value stream mapping is referred to as a lean tool used in manufacturing industry to visually depicts production processes to identify and reduce various forms of waste”,

Just-in-Time (JIT) Theory: A lean manufacturing concept known as "just-in-time" production seeks to reduce lead times and inventories by providing supplies or components precisely when they are needed for production. Using information technology and process improvement strategies, these industries have significantly raised their levels of profitability, quality, and productivity over the course of several decades; their adoption of the lean production philosophy, which originated from the "Just-in-Time" method that served as the cornerstone of Toyota's success in the automobile industry, has greatly increased these industries' competitiveness (Forbes & Ahmed, 2020)

Lean Implementation in the UK Construction Sector: According to Forbes & Ahmed (2011), “the UK construction industry has been progressively implementing lean concepts due to the need for increased productivity, lower costs, and better project outcomes”. “Lean construction is a novel concept that involves the application of lean practices in the construction settings which essentially aims at improving efficiency and promote quality in the U.K sector which affects performance of the project” (Akanbi et al., 2019).

Justification of Application of lean practice in the UK Construction Site: “The UK construction business has historically encountered challenges such as project delays, exceeding budgeted costs, and safety apprehensions; lean techniques provide systematic methodologies to tackle these persistent issues, perhaps resulting in more reliable and secure project results” (Bashir et al., 2015). The construction sector is characterized by its dynamic nature, since it constantly experiences changes in rules, technologies, and market needs. The focus on continual improvement in lean construction makes it a flexible framework that enables organizations to maintain competitiveness and adaptability in response to changes.

Theoretical Gaps of the lean practice in the UK Construction Sector: According to Bashir et al. (2015), “considering the discovered findings and gaps, there are valid reasons to implement lean practices on construction sites in the U.K”. One of these reasons is the absence of comprehensive integration models specifically designed for different types of construction projects. This area can be further investigated in future study to improve the adoption of lean principles. Other areas of gaps in literature include:

- Sector-Specific problems: Research is needed to investigate the variations in Lean problems across different construction sectors.
- Longitudinal Impact Studies are crucial for comprehending the sustainability and dynamic characteristics of lean practices over an extended period.
- An analysis of the impact of company culture on the effectiveness of lean deployment.

- Client and supplier engagement involving examining efficient technique to improve client and supplier participation in lean initiatives.

Future study can fill these theoretical gaps to gain a more thorough understanding of the problems and opportunities related to Lean construction in the UK. This will result in better implementation strategies and improved project outcomes. Implementation of lean methods can result in notable decreases in project durations through enhancing stakeholder participation, streamlining procedures, and reducing delays.

SUSTAINABILITY AND WASTE REDUCTION

Improved project performance measures like cost effectiveness, workmanship quality, safety results, and client happiness have been associated with lean approaches through waste elimination and resource optimization, so construction companies can attain increased productivity and improved project results. Project schedules are directly impacted by the availability of qualified personnel, tools, and supplies. Ineffective resource management can result in delays and bottlenecks. The way tasks are planned, carried out, and tracked depends on the project management technique selected, whether it is agile (Scrum, Kanban) or traditional (waterfall). Agile approaches frequently provide greater adaptation and flexibility to changes, which may cut down on delays. Stability and clarity of scope of the project have an impact on the timelines; scope creep may arise due to improperly defined scope repeated changes, resulting in delays of the project (Kerzner, 2022).

“To avoid any delays, it becomes necessary to establish efficient communication with stakeholders to ensure that their expectations are met, and apt decisions made” (Larson & Gray, 2018). “Utilizing appropriate project management tools and technology can streamline processes, enhance collaboration, and improve productivity, thereby positively impacting project timelines” (Schwalbe, K. 2018).

Project Timelines

Efficient project scheduling aligned with Lean principles minimizes delays and optimizes resource utilization, leading to timely project completion. "Planning out a project's duties and activities in an intelligent manner is the definition of efficient project scheduling: it entails more than just making a list of everything that has to get done but involves allocating resources wisely, thinking about dependencies, and arranging activities logically" (Abdul-Rahman et al., 2017). This schedule adheres to the fundamental concepts of the lean methodology since it is in line with Lean principles. This involves concentrating on providing value to the client, reducing waste, and continuously looking for methods to make the procedure better.

“Lean emphasizes continuous improvement and the measurement of key performance indicators (KPIs) such as cycle time, defect rates, and customer satisfaction: tracking these metrics allows for real-time monitoring of project progress and enables timely interventions to address any deviations” (Koskela et al., 2002).

Real-life Examples of Successful Lean Implementation in Construction Projects

Toyota Production System (TPS): TPS provides as a fundamental illustration of Lean concepts effectively implemented in manufacturing, although not being directly related to building. Remarkable results have been achieved in construction projects by implementing just-in-time and continuous improvement (Liker, 2004).

Heathrow Airport Terminal 5: Lean construction methods were used during the building of Terminal 5 at Heathrow Airport, which increased project efficiency, decreased waste, and resulted in significant cost savings. Together with integrated project delivery and cooperative planning, the project was finished on schedule and under budget (Koskela & Howell, 2002).

Review of Some Publications on Lean Practice with Research Gaps and Findings

1. **Themes:** Lean construction techniques, assessment, implementation
Subthemes: Implementation and Assessment
Direct Quotes from Papers that Support the Themes: “The construction sector has embraced lean approaches to minimize waste and maximize profits, following the success of the lean production system in manufacturing”. **Source of the literature:** (Salem et.al,2005),
2. **Themes:** Lean project delivery, integrated practices
Subthemes: Lean Thinking
Direct Quotes from Papers that Support the Themes: “Regrettably, the construction industry is significantly behind in implementing performance enhancement and optimization methods, as well as in terms of its overall competitiveness”. **Source of the literature:** (Forbes & Ahmed, 2011).
3. **Themes:** Lean thinking, construction performance improvement
Subthemes: Lean Thinking in Construction
Direct Quotes from Papers that Support the Themes: This statement emphasizes the possible advantages of implementing lean thinking in the construction industry. "The global construction industry has experienced a decrease in productivity over the last four decades. One potential solution to address this issue is the implementation of lean construction. **Source of the literature:** (Aziz & Hafez, 2013).
4. **Themes:** Sustainable development, strategic planning, BIM
Subthemes: Strategic Sustainable Development
Direct Quotes from Papers that Support the Themes: Emphasizes the capacity of strategic sustainable growth in the building sector. Nevertheless, the UK construction industry must also confront other sustainability concerns, specifically the adverse effects stemming from waste generation. **Source of the literature:** (Alwan et al., 2017)
5. **Themes:** Lean practices, construction industry
Subthemes: Systematic Review
Direct Quotes from Papers that Support the Themes: The construction sector worldwide is increasingly adopting lean principles and practices. Currently, there is a lack of comprehensive knowledge regarding the quantity and types of lean techniques that are being utilized, as well as the advantages that are linked to their implementation in the planning, design, and construction of building and infrastructure projects. **Source of the literature:** (Babalola et al., 2019).

An Overview of the Comments from the Literature Based on the Publications Provided

In this paper, "Modern Construction: Lean Project Delivery and Integrated Practices (2010)," the publication, which has garnered excellent feedback from the literature, emphasizes the potential of lean approaches in contemporary building. The paucity of comprehensive case studies and the scant empirical support, on the other hand, have drawn criticism and point to the necessity of more rigorous research techniques.

"Strategic Sustainable Development in the UK Construction Industry (2017)," a publication examined showed that the literature values the investigation of sustainable development strategy in the UK building sector. The paucity of quantitative data and the scant in-depth analysis are two criticisms that point to the necessity for stronger research methods. "Implementation of Lean Practices in the Construction Industry: A Systematic Review (2019)" reflected that though there are certain criticisms, such as the relatively high level of abstraction and the lack of concrete case study examples, which point to the need for more in-depth.

Some Findings from the Literature Review

1. **Implementation and Assessment of Lean Construction Techniques (Salem et al., 2005):** The construction industry is implementing lean methodology to minimize waste and enhance profitability, drawing inspiration from the achievements of lean manufacturing. There is a dearth of comprehensive research and precise statistical data, highlighting the necessity for more rigorous research methodologies.

2. **Modern Construction: Lean Project Delivery and Integrated Practices (Forbes & Ahmed, 2011):** This highlights the efficacy of lean methodologies in modern construction. It is being criticized for the absence of thorough case studies and empirical evidence, highlighting the necessity for further rigorous research.
3. **Applying Lean Thinking in Construction and Performance Improvement (Aziz & Hafez, 2013):** This emphasizes the benefits of implementing lean thinking to enhance efficiency in the construction industry. There is lack of quantitative data and thorough analysis has been criticized, highlighting the need for further rigorous research.
4. **Strategic Sustainable Development in the UK Construction Industry (Alwan et al., 2017):** This shows the advantages of using lean thinking to improve efficiency in the construction sector. Critics have pointed out the absence of quantitative data and comprehensive analysis, emphasizing the necessity for additional rigorous research.
5. **Implementation of Lean Practices in the Construction Industry: A Systematic Review (Babalola et al., 2019):** There is emphasis on the increasing acceptance of lean ideas and techniques in the construction industry. The high level of abstraction and absence of actual case study examples have been criticized, suggesting a requirement for more comprehensive research.
6. **Sustainable Construction Projects Management (Jiang et al., 2024):** Incorporates waste management, energy management, building materials management, and other sustainable strategies that are combined with lean construction. It highlights the wider scope and advantages of integrating lean and sustainable methods.

DISCUSSIONS

The integration of sustainable lean practices into construction sites presents a multifaceted approach to enhancing project effectiveness and efficiency. This discussion delves into the critical role of performance metrics in evaluating the impact of these practices, addressing various dimensions ranging from productivity to environmental sustainability.

First and foremost, performance metrics serve as the cornerstone for evaluating the effectiveness of sustainable lean practices. By measuring metrics such as productivity, waste reduction, resource optimization, and adherence to project timelines, stakeholders can quantitatively assess the outcomes of implementing these practices. This data-driven approach enables continuous improvement by identifying areas of strength and opportunities for enhancement.

In addition to quality, sustainable lean practices aim to minimize costs by eliminating waste and optimizing resources. Metrics related to cost reduction, such as material usage and energy consumption, provide insights into the economic benefits of these practices. Beyond immediate cost savings, organizations can leverage sustainable approaches to realize long-term financial gains through energy efficiency measures and material conservation strategies. Reduced waste and streamlined processes not only contribute to improved project performance but also enhance safety outcomes by minimizing hazards and potential risks.

Moreover, sustainable lean practices play a pivotal role in enhancing client satisfaction by delivering project tasks completed on schedule, within budget, and with guaranteed quality. Metrics such as client feedback and project delivery performance serve as indicators of customer satisfaction and loyalty. By aligning with clients' environmental and corporate social responsibility objectives, organizations can further bolster their reputation and competitiveness in the marketplace. Reviewing the body of research offers perspectives on the more comprehensive aspects of sustainable lean methods in the U.K construction sector. Research can examine how lean approaches and sustainability programs affect project schedules, cost effectiveness, and overall performance.

The literature may highlight effective case studies, difficulties encountered, and best practices for applying lean principles to sustainability in the U.K. construction industry. There is a chance that incorporating sustainable lean methods into UK construction projects can enhance performance indicators like quality, customer satisfaction, safety, and cost effectiveness.

CHALLENGES IN IMPLEMENTING LEAN PRACTICES IN CONSTRUCTION

The adoption of sustainable lean practices may encounter various challenges, ranging from stakeholder resistance to regulatory constraints to organizational norms. Stakeholders may exhibit inertia or fear of disrupting existing workflows, highlighting the importance of change management and stakeholder engagement strategies. Additionally, organizational culture and norms may pose barriers to implementation, underscoring the need for leadership commitment and cultural transformation initiatives.

Furthermore, regulatory constraints may limit the flexibility of implementing certain sustainable practices, emphasizing the importance of regulatory compliance and risk management considerations. Despite these challenges, raising awareness, and fostering a culture of innovation can facilitate the adoption and integration of sustainable lean practices into construction site operations. Using lean techniques in construction projects is made more difficult by the absence of defined processes and procedures. In lean construction projects, standardizing processes and best practices is crucial for efficiency and consistency (Howell et al., 1993).

MANAGERIAL IMPLICATION AND RECOMMENDATIONS

Construction site managers should make efforts to proactively identify how lean and sustainability principles are intertwined. Managers can improve long-term results by implementing lean approaches with social and environmental factors. Implementing strategies like waste reduction, energy conservation, and ethical sourcing, for instance, can enhance project schedules and outcomes while lessening their environmental impact. The following recommendations can be employed by managers of construction sites to improve the implementation of lean practices and sustainability:

- **Prioritising stakeholders' engagement:** Project managers have an active role in communicating the advantages of sustainability initiatives to stakeholders and including them in decision-making processes. One way to improve community relations and project acceptance is to involve local people in green building initiatives.
- **Collaborate with Industry Peers:** Collaboration with other industry stakeholders in the construction sector helps hasten the implementation of lean principles and promote group enhancements.
- **Project managers can share best practices and lessons learned by participating in industry forums, consortia, and knowledge-sharing initiatives.**
- **Incorporating sustainable lean methods can be facilitated by engaging in industry-led sustainability initiatives such as the UK Green Building Council, which offers resources and guidance.**

RESEARCH LIMITATIONS

The following are some of the listed limitations of the literature on "The Impact of Sustainable Lean Practice on Project Timelines and Performance on Construction Sites, U.K." that are mostly caused by the paucity of primary sources of data for the research:

- **Lack of Practical Evidence:** Several research studies focus too much on theoretical debates or conceptual frameworks instead of practical evidence. The lack of empirical data compromises the validity and reliability of the research findings, especially when evaluating how sustainable lean techniques affect project performance and deadlines in the real world.
- **Limited Generalizability:** Research with small sample sizes or case studies with little variation may not be applicable to the larger population of UK building projects. This limitation makes it more difficult for study findings to be applied in various construction settings and situations.
- **Lack of Quantitative Analysis:** Several studies lack comprehensive statistical data or quantitative analysis, which could provide important new information about the quantifiable effects of sustainable lean methods on project performance and timelines. This constraint limits the scope of the analysis and makes it more difficult to measure the effectiveness of lean methods.

FUTURE RESEARCH

This research journal presents a clear technique for performing a literature review along with a thorough description of the subject. The framework successfully divides the material into logical divisions, and the research questions are pertinent and precise. However, it's crucial to ensure that the references are current and relevant to the subject of the study. Furthermore, adding a section discussing possible biases and limitations in the literature would increase the review's legitimacy.

Future research should focus on improving visualization tools for better analysis, encompassing a wider range of case studies, and highlighting the significance of empirical data in understanding the relationship between sustainability and lean in construction projects.

Since the effective implementation of lean principles in the construction sector depends on addressing issues such as cultural opposition, a lack of standardization, and legal restrictions, more efforts should be directed towards deeper primary research. Furthermore, highlighting the significance of quantitative analysis and ensuring that the study is conducted in a broader manner could improve the validity and relevance of the results in guiding sustainable lean practices in the UK construction sector.

CONCLUSIONS

This study has conducted a thorough literature analysis to examine the fundamental ideas, obstacles, and elements that contribute to the effective use of lean methods, along with their effects on project performance, timelines, and schedules. The results provide actionable insights and emphasize how lean concepts like waste reduction, continuous improvement, and value stream mapping may improve project schedules and overall performance in building projects for site managers. Lean methodologies enhance project efficiency and results by streamlining procedures, cutting down on lead times, and encouraging stakeholder participation. Overcoming obstacles like cultural resistance, a lack of uniformity, and external variables like legal constraints is necessary for the effective application of lean methods.

This study adds to the current body of knowledge by offering useful perspectives on using lean principles in construction project management. The significance of implementing lean techniques to improve project deadlines, performance, and sustainability in the UK construction industry is highlighted by these findings, which have implications for researchers, practitioners, and policymakers. While implementing lean practices on-site, it is crucial for site managers to plan effectively and schedule tasks in such a way that subcontractor activities are not delayed by continuous site housekeeping operations.

In conclusion, performance metrics play a crucial role in evaluating the effectiveness and efficiency of sustainable lean practices on construction sites. By tracking metrics related to productivity, waste reduction, resource optimization, project timelines, safety outcomes, and client satisfaction, organizations can assess the impact of these practices and drive continuous improvement. Despite challenges such as stakeholder resistance and regulatory constraints, the integration of sustainable lean practices offers significant benefits in terms of economic, environmental, and social outcomes, positioning organizations for long-term success and sustainability.

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THE EFFECTS OF INTERACTIVE COMMUNICATION THROUGH SOCIAL MEDIA ON COMMUNITY ENGAGEMENT: EVIDENCE FROM ABU DHABI HEALTH SECTOR

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ABSTRACT

The role of communication in improving public health outcomes has been acknowledged by public health systems around the world. To facilitate two-way involvement between public health systems and communities, social media has emerged as an essential medium for interactive communication. Increased health knowledge, healthier lifestyle choices, and greater utilisation of health care are only some of the ways in which community involvement can improve population health. Drawing on existing studies, this paper aims to discuss and offer some insights on the role that social media plays in community involvement, how it affects public health outcomes, and how the public health system makes use of it to address community issues. This research is an important addition to the literature since it examines the use of social media in interactive communication within a regional setting as specific as Abu Dhabi's public health system.

INTRODUCTION AND CONTEXT

The general understanding of the benefits of social media in enabling interactive communication in health systems is a widely discussed topic in research (Madhumathi et al., 2021; Park et al., 2016). However, the role of social media in specifically enhancing community engagement within public health systems in unique regions, such as Abu Dhabi, is notably under-researched. Takacs et al. (2019) emphasized the critical role of community engagement in public health emergency preparedness, signifying the importance of understanding how to facilitate this engagement effectively. However, their study did not delve into the mechanisms through which social media can foster this community engagement, especially in the context of public health emergency preparedness. This implies a need for more research to examine the specific ways in which social media can contribute to public health emergency preparedness through community engagement. Furthermore, certain processes are suggested to be fundamental in how social media facilitates engagement.

Interactive Communication involves a variety of activities such as sharing health-related content, engaging in online discussions, responding to queries, or even participating (Bhattacharya et al., 2017) in virtual health awareness campaigns. The 'interactive' aspect highlights that all participants are both message senders and receivers, and communication is real-time. In this context, community engagement refers to the process by which community members (in this case, likely patients, health service users, and the general public) are involved in decision-making processes, or in activities that contribute to the health sector's decisions, services, and direction. Accessibility, two-way communication, and targeted outreach are notable examples of these (Bhattacharya et al., 2017). However, there is limited research that has explored these processes within the context of public health in Abu Dhabi. This lack of research implies that the specific role of social media in fostering community engagement in Abu Dhabi's public health sector remains largely unknown. The role of social media in health communication and engagement has been shown to vary depending on the cultural and social context (Ni et al., 2021; Ngai et al., 2020). Therefore, there is a clear need

to study the role of social media in community engagement in public health systems within the unique cultural, social, and demographic context of Abu Dhabi. Given the dearth of research on this specific topic, it is evident that a significant gap exists that needs to be addressed.

LITERATURE REVIEW

Social media encompasses a variety of online platforms that facilitate interaction, communication, and the sharing of information among users. It includes various platforms like Facebook, Twitter, Instagram, and LinkedIn, acting as conduits for disseminating information and fostering interaction in real-time (Chen et al., 2019). Healthcare communication refers to the means and methodologies employed to share health-related information among healthcare providers, patients, and the public, focusing on improving healthcare delivery, promoting health, and preventing diseases (Massey et al., 2021). Linking the two, social media serves as a contemporary avenue in healthcare communication, presenting opportunities for enhancing public health messaging, patient interaction, and information dissemination (Lai & Chong, 2023). As Chen et al. (2019) illustrate, the exploration of social media usage in healthcare has seen thematic evolution, highlighting its dynamic nature in addressing healthcare needs.

This study's focus on Abu Dhabi aims to intricately understand the nexus between social media communications and public engagement. Given the ubiquity and profound impact of social media, it can act as a catalyst in amplifying community engagement, fostering patient-centric care, and enhancing public health branding within Abu Dhabi's healthcare sector (Koumpouros et al., 2015). Social media can potentially elevate healthcare communication by providing instantaneous, interactive forums for health-related discussions, influencing health behaviors, and fostering a sense of community among users (Huo et al., 2019). It provides a platform where healthcare providers can share health information, respond to patient queries, and receive feedback, thus establishing a reciprocal communication channel that can potentially lead to improved health outcomes (Belt et al., 2013). Gesser-Edelsburg (2021) emphasizes the need for making health and risk communication on social media more "social," advocating for an enhanced interactive approach during times of health crises like COVID-19.

Abu Dhabi's cultural and social context, particularly as it pertains to public health communication, is distinct from the Western world. According to Naeem and Ozuem (2021), the use of social media for health professionals' engagement and productivity shows differences across diverse cultural and geographical contexts, emphasizing the importance of understanding these differences when planning and implementing social media strategies in healthcare. Abu Dhabi, as part of the United Arab Emirates (UAE), has a unique culture that highly values respect for authority, social cohesion, and collective wellbeing (Campbell & Rudan, 2020). These cultural values play a significant role in shaping the ways in which public health communication and community engagement are perceived and implemented. For instance, in such a society, social media communication that emphasizes collective wellbeing, community solidarity, and respect for healthcare authorities might be more effective in fostering engagement than communication that emphasizes individualistic notions of health.

Abu Dhabi's religious and social customs demand a specialized strategy for public health education. For example, during the month of Ramadan, health communication may need to address the topic of fasting in order to be sensitive to religious beliefs (Campbell & Rudan, 2020; Ozuem et al 2024). The public health sector in Abu Dhabi would do well to take advantage of the social media platform for the purpose of community involvement, given the city's exceptionally high rates of internet penetration and social media usage (Naeem & Ozuem, 2021). However, understanding the best ways to utilize these platforms for public health communication in the context of Abu Dhabi's unique cultural and social landscape remains under-researched. Furthermore, Abu Dhabi's public health system has to cater to a multi-cultural and multi-lingual population, with a large proportion of expatriates. The communication strategies thus need to take into account the diverse linguistic and cultural backgrounds of the population (Campbell & Rudan, 2020). These factors underline the need for more focused research on how social media can be utilized effectively for community engagement in public health in Abu Dhabi. Studies from the Western world or other cultural contexts cannot simply be transplanted without considering the specific cultural, social, and demographic context of Abu Dhabi. Therefore, addressing this research gap is crucial in devising effective social media strategies for community engagement in public health in Abu Dhabi.

Research underscores the significance of social media as a tool for communication in the public health sector (Heldman et al., 2013; Keller et al., 2014; Ozuem and Willis, 2024). Yet, the examination of social media's influence

on public perception and trust in health systems is still underexplored, especially in the context of Abu Dhabi. The impact of transparency, responsiveness, and credibility in social media communication within the public health sector is a largely untouched area of research (Burgess et al., 2021). For instance, Bhattacharya et al. (2017) noted in their research that social media engagement of U.S. Federal health agencies on Facebook lacked sufficient examination of the role these key elements play in shaping public perception.

Trust in health information communicated via social media is shaped by various factors, including the perceived credibility and transparency of the source (Graffigna et al., 2021). However, the specific ways in which these factors influence public trust in health systems in Abu Dhabi remains underexplored. Public engagement with health communication on social media is further influenced by the responsiveness of health organizations (Park, Reber, & Chon, 2016). In their study, they discovered that health organizations' Twitter use for health promotion and public engagement significantly impacted the public's perception. However, these findings may not necessarily translate to the social and cultural context of Abu Dhabi, underlining the need for context-specific research. Additionally, the recent COVID-19 pandemic has highlighted the critical importance of understanding public engagement with health information on social media (Landi et al., 2022; Ozuem et al 2021a). They noted in their study that during the COVID-19 crisis, there was a missed opportunity for public engagement and dialogic accounting through social media. Yet, how this translates to the context of Abu Dhabi has not been extensively studied.

The call for more research into this area is echoed by numerous researchers (Burgess et al., 2021). In the light of global health crises, the urgent need to comprehend these dynamics is ever more relevant, especially for a culturally and socially distinct region like Abu Dhabi. To sum up, while there is a growing body of literature on social media's role in public health communication, there is a distinct research gap regarding its impact on public perception and trust, particularly within the context of Abu Dhabi. The unique cultural and social environment of Abu Dhabi necessitates a tailored exploration of these dynamics. This research objective thus addresses a crucial gap in the existing literature and contributes to our understanding of how social media can be effectively used to foster public trust and engagement in the public health sector in Abu Dhabi.

Existing literature clearly identifies the role of social media as a tool for spreading awareness in infection prevention and promoting health behaviors (Madhumathi et al., 2021; Park et al., 2016; Ozuem et al 2021b). However, the extent to which social media engagement has influenced public health outcomes in Abu Dhabi remains largely unknown. For example, Landi et al. (2022) highlight the potential for social media use in dialogic accounting during the COVID-19 crisis, but the impact on health service utilization and behavior change in Abu Dhabi's context is not studied. Ni et al. (2021) stress the importance of situating interactions with health information, suggesting that social media's function in health knowledge acquisition may differ considerably across cultural settings. As a result, there is a substantial knowledge vacuum in Abu Dhabi regarding the impact of social media participation on public health outcomes like improved health behaviour, increased health awareness, and increased use of health services (Takacs et al., 2019; Li et al., 2022; Ozuem and Willis 2022).

Few studies have examined the public health system's use of social media to engage with the community and its results. Although studies like Alamri et al. (2019) and Bhattacharya et al. (2017) have investigated some facets of these interactions, they have not offered a comprehensive study of particular worries or themes that emerge in the Abu Dhabi setting. They also don't dive into how the healthcare system reacts to these problems. While social media has been proved to be an effective tool for public engagement and promotion by health organization (Park et al., 2016), there is a lack of research into the actual results of these efforts in terms of community response and satisfaction, especially in Abu Dhabi. The role of social media in determining public health involvement is an emerging subject, with studies such as those by Ngai et al. (2020) and Keller et al. (2014) investigating the drivers and gaps of public engagement in social media communication. However, neither of this research has addressed the unique circumstances of Abu Dhabi, nor do they shed light on how well the public health system addresses local problems. Since these dynamics are complex and the opportunities for better public health and community participation in Abu Dhabi are not well-studied, the city has a long way to go (Massey et al., 2021; Campbell, & Rudan, 2020).

CONCLUSION

The integration of social media in healthcare communication has seen varying perceptions of reputation in the healthcare sector, impacting how healthcare providers and services are perceived by the public. In an era dominated by narratives, the storytelling by frontline healthcare providers on social media platforms has played a pivotal role in shaping perceptions and illustrating the ground realities of healthcare delivery during pandemics (Massey et al., 2021). However, the integration of social media in healthcare communications is not without challenges. Issues related to professionalism and potential healthcare risks have been evident in individual's social media use, necessitating a careful and ethical approach in utilizing these platforms for health-related communication.

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EXPLORING THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE AND CONSUMER BRAND ENGAGEMENT IN THE UAE FITNESS AND SPORTS INDUSTRY

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ABSTRACT

While certain studies have generated insights regarding artificial intelligence (AI) adoption, usage, & post-adoption, there are no comprehensive studies on AI adoption, including readiness and maturity levels in different contexts like the sports and fitness in the UAE. In view of the above, a vital area for current research is to explore the importance of AI adoption in the sports and fitness sector of the UAE. Also, since AI is expected to contribute to consumer brand engagement, it remains vital to investigate the nature of the relationships. This study bridges these theoretical gaps by critically examining the importance of AI and questioning how it enhances the consumer brand engagement (CBE) within the context of the UAE and the fitness sector. In so doing, the study proposes to develop a conceptual model that illustrates how AI could be used to enhance CBE in the sports and fitness industry of the UAE.

INTRODUCTION

With potential for cost reduction, the integration of machine information systems, and people in real-time, perpetual self-learning through machine learning algorithms has become key (Bollier, 2017; O-Leary, 2009; Cohen and Edward, 2014, Accenture, 2018). A global trend spanning the last two decades has seen the proliferation of AI applications for sports. This has already led to significant transformation in terms of how sports are consumed and analysed (Nader and Westerbeek, 2021). Some of the most visible AI enabled transformations in sports have manifested through improved decision making and forecasting as well as sports biomechanics, team sports, and injury predictions (Nader and Westerbeek, 2021; Bartlett R, 2006; Beal, 2019; Brockett, et al., 2004). Nonetheless, despite these advantages AI in sports represents both opportunities and challenges (Fister et al., 2015; Ozuem et al 2024). Thus, there are still fears linked to the potential negative consequences of AI, such as the displacement of jobs (Accenture, 2018). For many sports managers and audiences, the connection between AI and sports remains fuzzy, unclear, and faint. This has led to a lack of motivation to adopt machine learning related algorithms to improve sports performance and business analytics (Chmiat and Westerbeek, 2021). Other concerns associated with the challenges and barriers to adopting AI in Abu Dhabi due to their complexity have been voiced (Russell and Norvig 2003; Brachman 2006). Some of these concerns often arise from negative perceptions that AI lacks the human capability to feel (Castelo et al., 2019). AI bots ostensibly lack empathy (Luo et al., 2019), and AI might be less likely to identify the uniqueness of customers (Longini et al., 2019).

THEORETICAL CONTEXT

Acceptability of AI and its CBE enhancement potentials have been debated and outcomes would vary based on its effects on consumer (attitudes, motivations, & behaviours). Some experts argue that AI led marketing could enhance CBE through improved consumer outcomes (experiences, and or satisfaction) (Ameen et al., 2021). It has also been argued that AI powered social media engagements can improve brand communities' development, foster connections,

establish brand trust, loyalty, awareness, and value co-creation (Bianchi & Andrews, 2018; Zhang et al., 2018). With advent of AI powered frontline technology like chatbot, comes opportunity to design highly interactive communication experiences through co-created brand experiences – leading to more brand engagements (Kull et al., 2021). There are now numerous examples in the sports and fitness sector in which companies utilise AI to enable customers to be active participants in the creation of their desired products such as customised shoes (example the Adidas MakerLab). Through interactive and contextual knowledge of the consumer the AI provides recommendations for highly unique shoe designs. Other examples by ‘Nike Training Club’, Under Armour Record, Peloton uses AI and machine learning to engage the customers through understanding their data history points (such as sleep patterns, calories burned, nutrition etc) to recommend fitness regimes including workout plans etc. These level of engagements leads to higher customer satisfaction and loyal.

Interesting research on frontline AI powered technology like chatbots have demonstrated that the extent of brand awareness that can be achieved via degrees of personalised engagement with consumers (van Doorn et al., 2017, Kumar et al., 2019). They do so by fostering warmth-engagement effect especially where there is a pre-existing brand relationship (Kull et al., 2021). These research stream on AI powered frontline technology, have accentuated/corroborated earlier notions ground in social response and cues theory (Köhler et al., 2011, Wang et al., 2017). They do help reduce brand distance by creating atmosphere for more connectedness and closeness by creating first impressions of warmth (Kumar, 2017; van Doorn et al., 2010, Kumar, 2017). Research finds that creating human tone with these AI powered frontline technologies helps in shaping persuasiveness with a higher likelihood of responses (Stephen et al., 2015).

Thus, it can be argued used for CBE AI have the power to execute with speed, send targeted messages to specific relevant customer group, as well as an understanding of key customer characteristics – leading to further attraction and retention (Ameen et al., 2021). Despite the forementioned positive applications, the outcomes, and consequences of using AI for CBE are being debated for its potential ethics and misuse (Ameen et al., 2021). There are other legitimate concerns raised regarding trust in a conspicuous AI environment, which could in certain circumstances that may prompt a dislike of AI devices (Shi et al., 2021). Since evidence suggests conspicuous AI environment in comparison to a traditional environment, does not trigger vital consumer behaviour (Baer et al., 2016), experts call for more research on the dynamics of trust in ways that we can clearly understand the nature of attachment or detachment of customers (Borghini et al., 2021; Ozuem and Willis 2022).

On the hand, Lin, and Wu (2023), argues that in addition to warmth the AI chatbots brings additional entertainment value through interpersonal conversation, elements of surprise giving rise to customer experiencing gratification. In addition, research have shown that, robotic voice and gaze have the tendency to positively affect human likeness by attracting attention, and enhancing positive emotions/perceptions, and sustained attention during interaction (Li et al., 2023; Ozuem et al 2021a). In addition to entertainment value, studies have found that chatbots infused with human attributes is more likely to increase the perceptions of dialogue and social presence – leading to more positive attitude and behavioural outcomes from consumers (Go and Sundar, 2019). As more and more humans are learning to live with AI powered machines, other concerns have been raised on AI usage for CBE including possible privacy, bias, and transparency considerations. Particularly, some experts critique the over reliance on technology at the detriment of human agency (Bandura, 2001). According to Bandura (2001, p. 13) “part of the price of proxy agency is a vulnerable security that rests on the competence, power, and favors of others”.

AI IN SPORT AND FITNESS INDUSTRIES

The UAE has become one of the first countries in the world to appoint a Minister of State for AI, as well as launched first of its kind Mohammed Bin Zayed University of Artificial Intelligence (Zaatar, 2019; UAE Artificial Intelligence Strategy, 2017; Chakravorti et al., 2017; IMD’s World Digital Competitiveness Index, 2017). The emergence and utilisation of AI across industries in the UAE and globally is redefining business operations as well as customer engagements (Bollier, 2017; O-Leary, 2009) – powered by inter-connected interfaces of machines, information systems, and people (Cohen and Edward, 2014). Given the ability of AI to self-organise intelligent automated customer facing decisions (Accenture, 2018), sports and fitness industry in the UAE is witnessing a shift in which many organisations are integrating AI driven strategies to enhance their brand awareness, experience, and engagement (Kull et al., 2021; van Doorn et al., 2017, Kumar et al., 2019). The changes in the evolving landscape of sports and fitness industry in the UAE, provides a rationale to exploring the transformative potential of AI for CBE. This rationale

is in line with UAE's ambition to be recognised as one of the sports destination hub – which is technologically advanced. While studies suggested that AI led marketing has the potential to enhance CBE through improved consumer outcomes (experiences, and or satisfaction) (Ameen et al., 2021), the extent to which AI enhances CBE in sports and fitness industry of the UAE is understudied. Thus, the study finds additional rationale – through an attempt to address a critical gap in the extant literature, with opportunity to offer refreshing insights into how AI can be fully deployed/harnessed meaningful interactions between brands and consumers within the UAE sports industry. In so doing, the study rides on the dynamic wave of newer emerging approaches of digital interactive marketing and personalised experiences – enabling brands to mobilise/build loyal, engaging, trusted community of consumers through social media engagements (Bianchi & Andrews, 2018; Zhang et al., 2018). Furthermore, most AI led integrations for CBE tended to focus attention more on the human like performances underpinned by recommendation systems, dialogic systems, conversational systems, leading desired outcomes of real time engagement, establishing closeness, reduction of brand distance, creating impressions of warmth (Kumar, 2017; van Doorn et al., 2010, Kumar, 2017; Ozuem et al 2021b) and persuasion of customer responses (Stephen et al., 2015). Also, robotic AI deployed for CBE are now able to perform self-assessments of their bodies in real time and 'act' accordingly in pursuit of their goals (Verdicchio, 2017), raising more concerns over human agency vs. AI systems as existential agents (cf. also Russell & Norvig, 2009). In view of the above concerns raised, while the AI for CBE promises novel approaches persuading customers (Stephen et al., 2015), it also equally raises ethical implications – necessitating a comprehensive investigation into more effective ways to implement them. This is a vital rationale as concerns over transparency of AI-integrated systems have been raised – with some scholars referring to it as 'complex backbox' (Castelvecchi, 2016; Lipton, 2018). Finally, a resounding rationale for this study is to bridge the conceptual gap in the literature surrounding the role of AI for CBE in sports and fitness industry of the UAE. Thus, far there is an impending gap bolstered by a lopsided AI -driven CBEs' applications in uncharted territory of the UAE sports and fitness industry. The study strives to develop a conceptual model which could illustrate how AI could be used to enhance CBE in the sports and fitness industry effectively. In so doing, and by bridging this gap, the study could change the narrative of one-sided performance centric view, to embrace a multifaced view that's context relevant, and conscious of the end-user consumers of AI-integrated CBE systems in the UAE sports and fitness industry.

CONCLUSION

While AI plays a critical role in enhancing CBE, extant research tended to appear as fragments from variety of conceptual and theoretical perspectives showing AI potential in sports. For example, studies on frontline technologies like chatbots reported disparate findings on how chatbots influences co-created brand experiences, personalised and warmth engagements, awareness (Kull et al., 2021; van Doorn et al., 2017, Kumar et al., 2019), social response and cues (Köhler et al., 2011, Wang et al., 2017), reduction of brand distance Kumar, 2017; van Doorn et al., 2010, Kumar, 2017), and shaping of persuasiveness to response (Stephen et al., 2015). While, these findings are insightful, the fragments remain disparate needing to be fused together into a coherent whole, encapsulating a pragmatic view of AI for CBE within the UAEs sports and fitness sector. In addition to above, despite extensive literature about AI and CBE in other contexts, comprehensive critical examination focusing on the dynamics of UAE sports and fitness sector is given less attention. This particularly, is problematic for a country UAE aspiring to be a leader in AI. As one of the key global sporting destinations, it is imperative that the gap on how AI influences CBE is critical (Bromber et al., 2013; Ozuem and Willis 2024). Another key problem at the heart of integrating AI in sports and fitness is that of a profound concern over a narrowed approach to AI and CBE integration which is pigeonholed into a straight jacket. This uncritical view focuses on the remarkable task performance attributes of AI when applied for CBE in sports, without considering the broader perspective as developed in perspectival philosophy of AI. Experts argue against a hasty approach to integrating AI fir CBE, without comprehensive examination of all AI perspectives (Hoffman, 2022; Hernandez-Orallo, 2017). This outcry is worthy of consideration, given the complexity of integrating AI into CBE bring a vital perspective to spotlight: on how to harness AI multifaceted perspective intelligence to enhance genuine CBE in in UAE sports, instead of the rush to join the bandwagon of AI enthusiasts (Hoffmann (2022a).

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EXPLORING THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE AND SERVICE QUALITY IN THE UNITED ARAB EMIRATES PUBLIC SECTOR: A LITERATURE REVIEW

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ABSTRACT

The incorporation of Artificial Intelligence (AI) into organisational processes has emerged as a powerful force, fundamentally altering the dynamics of workplace environments and the delivery of services across several sectors. AI's influence on workplace results is viewed from multiple angles, transforming conventional operational structures. This highlights the technology's ability to improve efficiency and innovation, but also brings up difficulties associated with its implementation and integration. Drawing on extant literature, this paper examines the simultaneous presence of humans and AI in the workplace, offering a nuanced perspective on AI as both a valuable resource and a difficulty, contingent on its deployment and the preparedness of the organisational ecosystem to embrace technological progress. The adoption of AI technology in public services requires a fundamental change in the culture of public sector organisations. This transition entails adopting innovation, promoting ongoing education, and establishing novel managerial strategies that include AI tools while preserving the human aspect of public service. There is a notable research deficiency on the impact AI on service quality, particularly in the public sector.

INTRODUCTION

Presbitero and Teng-Calleja (2023) examine how employees perceive the integration of AI in the workplace and propose that this integration impacts job attitudes and career behaviours from the perspective of career self-management. Understanding the impact of AI-induced changes in organisational practices on employee engagement and productivity is essential from this standpoint. Wilkens (2020) argues that AI has a dual role, acting as both a catalyst for workplace innovation and a potential threat to established employment structures and job security. This perspective supports the notion that AI is a double-edged sword. AI has played a crucial role in improving service quality and customer happiness in the field of service delivery and management. Noor, Rao Hill, and Troshani (2022) highlight the importance of creating a service quality scale specifically for AI service agents. They emphasize the necessity for new metrics to assess interactions driven by artificial intelligence. In a similar vein, Nguyen and Malik (2022) emphasize the importance of AI in moderating the connection between knowledge sharing and service quality. They demonstrate how AI may enhance the distribution of information and improve decision-making processes. In this study, Prentice, Dominique Lopes, and Wang (2020) examine the collective influence of artificial intelligence (AI) and staff service quality on customer happiness and loyalty. They present empirical findings that demonstrate AI's capacity to enhance human endeavours and raise service benchmarks. Sampaio de Sousa and Villanueva (2022) delve into the concept of utilising AI in service delivery and present a methodology for assessing AI projects that aim to improve service quality. They emphasize the strategic significance of AI in attaining operational excellence and customer satisfaction.

LITERATURE REVIEW

All equations should be placed on separate lines and numbered consecutively, with the equation numbers placed within parentheses and aligned against the left margin. Make sure that they are unique. You may create equations using another software program and import the equations as images. The revolutionary influence of AI goes beyond improving internal organisational processes and includes the wider scope of service delivery and administration across the ecosystem. The adoption of AI across various sectors, including banking and healthcare, highlights its significant impact on reshaping service quality and consumer engagement. Baek, Kim, Lim, and Xiong (2023) propose a strategy for assessing the quality of AI services in startups. Their study showcases how AI may drive innovation and improve service delivery in new corporate environments. In addition, Aminizadeh et al. (2024) examine the possible benefits and obstacles associated with AI in healthcare, emphasising its capacity to enhance the quality of patient care while also tackling ethical and operational difficulties. Martins, Ferreira, Ferreira, and Marques (2020) investigate the utilisation of artificial intelligence (AI) in the field of prosthodontics. They demonstrate that AI has the potential to make a substantial contribution to personalised patient involvement and the evaluation of service quality.

The incorporation of artificial intelligence (AI) into organisational processes and service delivery systems signifies a fundamental change in the management and provision of services. The role of AI in improving efficiency, personalisation, and innovation in several sectors has the potential to revolutionise service delivery and management processes. Nevertheless, achieving effective integration of AI necessitates a comprehensive comprehension of its possible ramifications, encompassing the obstacles associated with ethical deliberations, staff involvement, and customer contentment. As organisations navigate the complexities of integrating AI, existing research insights offer valuable guidance for harnessing AI's transformative potential while ensuring that technological advancements improve, rather than reduce, the quality of service delivery and organisational effectiveness.

The public sector's dedication to ensuring service quality is of utmost importance in order to achieve citizen satisfaction and foster confidence. Traditionally, public services have encountered difficulties in satisfying the ever-changing demands of their users, frequently falling behind the private sector in terms of innovation and effectiveness due to bureaucratic inertia, limited resources, and regulatory frameworks (Rhee & Rha, 2009; Ali AlShehail, O., Khan, & Ajmal, 2022). The issues have become more intense in the digital era, as there is a significantly increased need for agile, efficient, and user-centered services. Artificial intelligence (AI) is a powerful force that can revolutionise various fields by automating repetitive work, improving decision-making processes, and customising service delivery (Pereira et al., 2023; Einola & Khoreva, 2023; Ozuem et al 2024). The function of AI in the workplace is diverse, providing potential to optimise operations, stimulate innovation, and promote a more agile service culture. By utilising data analysis, predictive modelling, and intelligent automation, AI has the potential to greatly enhance the quality and availability of public services, ensuring they are more suited to meet the changing demands of citizens (Presbitero & Teng-Calleja, 2023; Wilkens, 2020).

Nevertheless, the incorporation of AI in the public sector is not devoid of difficulties. To fully leverage the potential of AI while promoting inclusivity and trust, it is imperative to address ethical considerations, data privacy concerns, and the potential for increasing the digital gap (Ozuem et al 2021b; Brougham & Haar, 2018; La Torre et al., 2023). Furthermore, the effective implementation of AI in public services necessitates substantial organisational and cultural transformations, supported by a strategic approach to technology governance, talent management, and stakeholder engagement (Zirar, Ali, & Islam, 2023; Yu, Xu, & Ashton, 2023). Notwithstanding these obstacles, the potential of AI in augmenting the quality of public service is indisputable. AI streamlines repetitive procedures, enabling public sector personnel to dedicate their attention to more valuable assignments, resulting in enhanced service efficacy and citizen contentment (Gallego & Kurer, 2022; Baum, 2023). Moreover, AI-powered analytics can offer more profound understanding of public demands and preferences, facilitating more efficient and focused provision of services (Cruz-Silva & Gordillo-Pérez, 2022; Giorgi et al., 2022). The prevailing discourse around AI in the public sector can be described as a combination of careful anticipation and hopeful outlook. It is imperative to carefully address the ethical, technical, and organisational obstacles that come with using AI as we progress. The primary emphasis should be placed on constructing resilient structures for the governance of artificial intelligence, allocating resources towards enhancing digital literacy and infrastructure, and cultivating a climate of innovation and ongoing enhancement within public sector entities (Molè, 2022; Werens & von Garrel, 2023; Ozuem et al 2021a). This strategy will not only improve the quality of service, but also establish a more robust and citizen-focused public sector in the digital era.

The incorporation of Artificial Intelligence (AI) into the workplace is transforming the level of service provided via a complex combination of direct and indirect influences, utilising a range of scholarly perspectives. Pereira et al. (2023) highlight the diverse effects of AI on workplace results, asserting that AI-boosted procedures directly enhance operational effectiveness and indirectly impact employee involvement by modifying job positions and responsibilities. Einola and Khoreva (2023) provide evidence for this concept as they examine the interactive coexistence of humans and AI. They emphasise the ability of AI to increase human skills and improve service delivery through collaborative endeavours. The study conducted by Presbitero and Teng-Calleja (2023) provides additional insights into how people perceive and behave in their careers when AI is integrated into their work environment. The research highlights the significance of effectively managing these perceptions in order to uphold or enhance the quality of service provided. Wilkens (2020) and Danielsen (2023) have explored the psychological and emotional dimensions of AI in the workplace, highlighting its dual nature. While AI can enhance efficiency and foster creativity, it also poses potential hazards to employee well-being and job security. According to La Torre et al. (2023), the use of AI in team dynamics and its impact on organisational change can be enhanced through strategic planning, leading to enhancements in service quality. Nevertheless, the presence of workplace bullying, as examined by De Obesso Arias et al. (2023), and the necessity for policies that tackle diversity, equity, and inclusion (Baum, 2023), highlight the intricate nature of incorporating AI in a manner that benefits all individuals involved in the workplace.

The wider ramifications of AI on service quality are examined in greater detail by analysing AI advancements in service delivery. Research conducted by Noor, Rao Hill, and Troshani (2022), as well as Nguyen and Malik (2022), emphasize the profound impact of AI in improving customer service experiences and employee performance. Prentice, Lopes, and Wang (2020) have shown a direct connection between the use of AI technology to enhance staff service quality and the subsequent improvement in customer happiness and loyalty. This indicates a clear relationship between the deployment of AI and improved service results. The studies by Pereira et al. (2023), Einola & Khoreva (2023), Presbitero & Teng-Calleja (2023), Wilkens (2020), Danielsen (2023), La Torre et al. (2023), De Obesso Arias et al. (2023), Baum (2023), Noor et al. (2022), Nguyen & Malik (2022), and Prentice et al. (2020) collectively present a narrative that highlights the dual role of AI in the workplace. On one hand, AI acts as a catalyst for improving service quality, while on the other hand, it disrupts the workplace, necessitating careful management of human-AI interactions. The effective incorporation of AI in the workplace hinges on both technological advancements and the consideration of human elements. It is crucial to ensure that AI functions as a tool that complements and enhances human abilities, ultimately leading to the provision of exceptional service quality. The incorporation of Artificial Intelligence (AI) in the workplace, namely in the public sector, has garnered significant scholarly and practical attention. This is evident via an increasing amount of research that examines its many effects. This review compiles information from important studies, specifically examining the difficulties and advantages of utilising AI to improve the quality of services in the public sector.

The use of AI in public sector organisations presents a range of revolutionary possibilities and difficulties. Pereira et al. (2023) present a comprehensive analysis of existing research that emphasises the influence of AI on workplace results. They propose a sophisticated comprehension of AI's contribution in reshaping job responsibilities and enhancing operational effectiveness. In a similar vein, Einola and Khoreva (2023) explore the coexistence of humans and AI, portraying it as an intricate connection that fluctuates between enhancement and displacement. They emphasise the necessity of adaptive approaches in the employment and provision of services in the public sector. An important obstacle emphasised by Presbitero and Teng-Calleja (2023) is the modification of job attitudes and career behaviours as people adapt to the integration of AI into their work environments. The adjustment phase is crucial since it immediately impacts service quality by affecting staff engagement and productivity. According to Wilkens (2020), AI is a complex tool that has both advantages and disadvantages. It can improve efficiency but also has the potential to negatively impact job security and the dynamics of the workplace. These factors, in turn, may alter the standards of public service delivery.

La Torre et al. (2023) address the function of AI in promoting team formation and collaboration in the workplace. They highlight the potential for improving service quality by implementing more efficient and adaptable team structures. This element is especially relevant in the public sector, as teams with diverse expertise frequently address intricate societal problems. The potential of AI to facilitate organisational transformation and boost service delivery by improving teamwork and collaboration is substantial, yet it depends on resolving integration difficulties and ensuring that AI complements human talents. In addition, Zirar, Ali, and Islam (2023) suggest a research agenda that focuses on the coexistence of AI in the workplace. This agenda highlights the investigation of topics such as the impact of AI on workplace culture, ethical considerations, and the changing skill requirements in the public sector.

This study implies that efficiently managing the transition to artificial intelligence is crucial for utilising AI to enhance the quality of public services. Examining the involvement of AI in handling workplace harassment (De Obesso Arias et al., 2023) and improving employee welfare (Xu, G., Xue, M., & Zhao, J., 2023; Ozuem & Willis 2024) uncovers a wider range of AI's influence in the workplace. These studies emphasise the capacity of AI to establish safer and more supportive work environments, a critical factor in upholding elevated levels of service quality in the public sector. The inclusion of the study by Gallego & Kurer (2022) on the impact of AI on political behaviour, as well as the examination of the obstacles it faces in achieving diversity, equity, and inclusion standards by Baum (2023), introduces an additional aspect to the ongoing topic. These viewpoints emphasise the significance of ethical issues and social consequences of integrating AI in public sector workplaces. These factors have a direct or indirect impact on the quality of services through the development and execution of policies. The literature provides a comprehensive perspective on the function of AI in the public sector workplace, with unanimous agreement on its ability to significantly improve service quality. However, harnessing this potential necessitates traversing an intricate terrain of obstacles, encompassing ethical considerations, employment relations, and the digital divide. As the public sector incorporates AI into its operations, it is crucial to prioritise utilising AI's potential to improve service delivery while also managing its dangers through well-informed policy-making, ethical AI practices, and continuous workforce development.

CONCLUSION

The deployment of artificial intelligence (AI) in public services raises ethical and social concerns, such as privacy, data security, bias, and their impact on public trust. Addressing these challenges requires a comprehensive understanding of the technology's societal effects. The integration of AI into several areas of public service has the potential to bring about substantial enhancements in efficiency and effectiveness. However, this progress is accompanied by notable ethical concerns. Experts and professionals have thoroughly examined these consequences, providing valuable knowledge on how AI might be ethically implemented in public services.

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EXPLORING THE EFFECTS OF TRANSFORMATIONAL LEADERSHIP ON EMPLOYEES' MOTIVATION IN DEVELOPING ECONOMIES: A CASE STUDY OF OIL AND GAS IN THE MIDDLE EAST

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ABSTRACT

Transformational leadership engages the leaders with their followers in a process that leads to performance beyond the expectations through four factors which are idealised influence, inspirational motivation, intellectual stimulation and individual consideration. These factors are magnified through the investigation of employees' motivation based on the psychological needs of theory of self-determination. Transformational leadership is particularly suitable in situations with a high level of challenge and pertinent change especially in dynamic environments. The emphasis of this study is to acquire a better and deeper insight into the fundamental mechanism of transformational leadership and its influence on employee motivation. The primary research questions are "What factors of transformational leadership are exhibited in Bahrain oil and gas industries?" and "What relationship exists between transformational leadership and employees' motivation in Bahrain oil and gas sector?". The research findings revealed that there is a positive relationship between the practices of transformational leadership and employee motivation in Bahrain oil and gas sector. It is also noted that the impact of transformational leadership factors on intrinsic motivation are far greater than the extrinsic motivation.

Keywords: leadership, transformational, motivation, leaders, change.

INTRODUCTION

There is a plethora of literature that has long sought to investigate the reward system and the employee's motivation practices which reflect on an individual's performance (Antoni et al., 2017, Noorazem et al., 2021). Caillier (2014) notes that researchers have established and developed theories to expect performance in the job environment. Although there are differences between researchers' theories, the consensus is that leadership practices are significant and influence worker development through motivation (Caillier, 2014). Leadership has typically been a significant issue in the workplace and organisational psychology, with a wealth of studies conducted on it (Yukl and Gardner, 2020). Leaders in various organisations are perceived to have basic responsibilities that include not only fulfilling written tasks but also directing followers toward the organisation's objectives. Leaders effectively embrace the firm's mission, strategy and vision with followers which helps them to carry out the organisation's long-term goals (Crowley, 2011). Transformational leadership varies from other leadership styles in terms of dealing with their teams since it is a style in which an individual engages with people and builds relationships that boost both the motivation and morale of the leader and the followers (Northouse, 2019). According to Bass and Riggio (2006), transformational leaders motivate employees, help them develop and accomplish unexpected performance. Therefore, organisations use this approach due to its emphasis on improving employees' performance and developing the knowledge, skill and capability of workers that lead to their full potential (Bass and Riggio, 2006). Undoubtedly, transformational leadership has dominated the leadership field for a reasonable number of decades since its debut. This is the result of its widespread in several cultures and regions all over the world (Crede et al., 2019). Linked to this is the Global Leadership and Organisation Behaviour Effectiveness (GLOBE) project that released a report on transformational leadership. It states that the characteristics of transformational leaders are those that might be effective in all various cultures and nations

(Den Hartog et al., 1999) and are particularly beneficial for developing nations like the Middle East (Crede et al., 2019).

Numerous researchers have agreed that transformational leadership arises more in circumstances that are high in challenge potential for change or dynamic environments (Bass, 1985; Conger, 1993; Shamir and Howell, 1999). Moreover, organisations in competitive environments where there is a need for ongoing change need to implement transformational leadership. Transformational leadership is particularly suitable in situations with a high level of challenge and potential, such as dynamic environments (Bass, 1985). Since change is occurring so quickly in the current world and businesses should adapt to the shifting expectations of all stakeholders, both internal and external, in order to successfully continue the competition, it is critical to focus more on transformational leadership (Trivedy, 2019).

Based on the existing literature, historical data, and other sources of information that have been accessed in this field, the results indicate there still the existence of a research gap in the literature in the developing countries particularly, in the Middle East including Bahrain. Despite the researches on investigations in transformational leadership, there is no clear emphasis on transformational leadership practices in private sector in especially Bahrain. The emphasis is mostly on the public sector. Therefore, the current study seeks to bridge the gap by examining the extent to which transformational leadership practices influences employees' motivation in the context of the oil and gas sector in Bahrain.

Bahrain organisations are dealing with fundamental changes, new trends, and new discoveries in the energy sector, which have spilt over into other industries and have had a favourable impact on businesses through Bahrain economic vision 2030. Bahrain economic vision 2030 'aspires to shift from an economy built on oil wealth to a productive, globally competitive economy, shaped by the government and driven by a pioneering private sector'. Businesses in Bahrain actively seek for ways to improve the employee motivation in order to maintain market competitiveness. The application and the effectiveness of transformational leadership in businesses need a lot of creativity and innovation to succeed. Hence, the leaders' authenticity and willingness to adapt to situations and to embrace the transformational leadership paves the way for performance beyond expectations. The current research's primary contribution is to provide a deeper understanding of the extent of using a transformational leadership approach in Bahrain oil and gas sector. The present study extends to the rising quantity of knowledge by focusing on the factors of transformational leadership through employees' perspective in Bahrain oil and gas sector.

THEORETICAL PERSPECTIVES

Transformational Leadership

The past four decades have seen a growing trend towards transformational leadership research (Northouse, 2019). Various views have cropped up trying to unravel the aspects in the context of approaches to leadership transformation leaders. The transformational leadership approach covers how to effectively motivate and influence subordinates by appealing to their emotions and values. (Yukl and Gardner, 2020). In addition, transformational leadership is linked to the "New Leadership" model, which focuses the charismatic and efficient facets of leadership. (Bryman, 1992). Based on a qualitative analysis of the history of political leaders, Burns (1978) outlines two leadership styles: transformational and transactional leadership. The transformational leadership happens when someone interacts with others in such a manner that the leaders and subordinates boost each other to a greater degree of motivation and morality. An emphasis on morality raises degrees of humanity and moral aspiration in both the leader and the follower and has a transformative effect on both. Transformational leaders give particular consideration to the needs, wants, and other motives of their followers, and so act as an autonomous force in shifting the composition of the followers' motive base by satisfying their desires (Burns,1978).

Northouse (2019) states that as the name suggests, transformational leadership is entailed in the actions that change and transform persons which is interested in "emotions, values, ethics, standards and long-term goals" (p.163). Furthermore, transformational leadership occurs through the action of people who have a deep emotional attachment to one another and a shared dedication to a higher moral goal, transformational leaders can persuade their subordinates which can lead to performance that exceeds expectations. Dóci and Hofmans (2015) express it as a style of leadership

that increase employees' motivation, performance, and morale by a range of methods, involving role model act, creates a feel of mission and vision, and challenges subordinates' assumptions and beliefs.

However, Northouse (2019, p.164) defines transformational leadership as a "process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower". This process involves evaluating followers' motives, providing their requests, and managing them as human beings that leading to the extraordinary procedure of impact which transfers subordinates to achieve goals beyond expectations (Northouse, 2019). Bass and Riggio (2006) argue that transformational leadership includes an inspiring commitment to the organisation vision and goals, stimulating individuals to solve problems, and improving followers' leadership dimension through challenge, support, mentoring and coaching. Northouse (2019) states that transformational leadership has occupied the most common research in leadership since the early 1980s. Thus, research shows that transformational leadership was an especially powerful resource in the military sector (Bass, 1985; Bass and Reggio, 2006).

Transformational leadership Factors

Although there are no unique factors of transformational leadership that has emerged recently, there are many and varied factors. Bass (1985) divided transformational leadership into four factors, as Bennis and Nanus' (1985) view, which also had four factors but were not the same as Bass. Furthermore, Kouzes and Posner (2006) model consist of five factors. In addition, Podsakoff et al. (1990) state six factors of transformational leadership behaviours. Table 1 presents these key factors, however, this study is based on Bass (1985) factors which positively relate to employee motivation and performance.

Table 1: Transformational Leadership Factors (Bass, 1985)

Authors	Bass (1985)	Bennis and Nanus (1985)	Kouzes and Posner (2006)	Podsakoff et al. (1990)
Factors	<ul style="list-style-type: none"> • Idealised Influence • Inspirational motivation • Intellectual stimulation • Individual consideration 	<ul style="list-style-type: none"> • Paying attention to the vision Effective communication • Trust • Creative deployment of self 	<ul style="list-style-type: none"> • Challenge the process • Inspire a shared vision • Model the way • Enable others to act Encourage the heart 	<ul style="list-style-type: none"> • Identifying and articulating a vision • Providing an appropriate model • Fostering the acceptance of group goals • High performance expectations • Providing individualized support • Intellectual Stimulation

Idealised Influence

Examining the idealised influence, "Charisma" is regarded as a critical characteristic of leaders who are able to act in a transformational manner. Idealised influence or charisma is an emotional component of leadership, which used to define leaders who by the power of their personalities have profound and exceptional effects on their followers (Antonakis, 2012). Bass and Riggio (2006) noted that followers try to imitate leaders because leaders having extraordinary capability, persistence, and determination. In other words, leaders are exponential, admired, trusted and highly respected. As a result, those followers are be able to align with their leaders and their vision, which demonstrates what could be accomplished, as well as copy their leaders' actions (Bass and Riggio, 2006). Idealised influence involves presenting attribute and behaviours which increase emotional state and inspiration from their subordinates. Northouse (2019) states that leaders typically have high degrees of ethical and moral beliefs which enables them to be strong models for their followers. The idealised influence is measured by two elements: an attributional element and a behavioural element. The attributional element relates to the attributes of leaders, as perceived by the followers. The second element is a behavioural component that is created by followers observing the leaders' behaviour (Northouse, 2019).

Inspirational Motivation

Inspirational motivation demonstrates the method of motivating the individuals through their leaders using a sense of mission and defying the current situation. As part of this, leaders who communicate an attractive vision motivate their

individuals to undertake on difficult tasks and accomplish specific objectives. Bacha (2014) states that leaders who provide inspiring motivation rely on three aspects which defy subordinates with high values, transmit optimism about upcoming objectives and deliver sense to their job towards achievable targets. The goal should be conceived as a mental picture of the organisations' potential and desired future state (Bennis and Nanus, 1985). Vision is the fundamental foundation that transformational leaders strive to emulate for their teams. This is echoed, when leaders show inspirational motivation in their visions which are achievable and also provide an explanation on how to accomplish them.

Intellectual Stimulation

Intellectual stimulation is very important in leadership due to the fact it encourages individuals to generate innovative ideas and to critically analyse issues. According to Yukl (2013), this factor assists followers with creativity and innovation through leaders. This dimension refers to when the leader challenges the current situation, makes intellectual appeals to let people re-examine existing presumptions, and then encourages innovative approaches to deal with the pertinent issues. Leaders who act in this manner encourage their followers to challenge their views and thoughts, as well as to address previous situations in novel ways. This aspect enables subordinates to participate in the stage of thinking outside the box, which is a crucial factor for creativity. By using leaders as a means for intellectual stimulation, they encourage subordinates to strive for excellence and improve themselves by selecting challenging tasks or pursuing common goals that occur outside their comfort zones. However, it includes supporting subordinates to undertake intellectual risks and question the current situation. Moreover, Avolio and Bass (2004) assert that intellectual stimulation includes looking for different approaches to remedy any negative situation. Furthermore, Followers should look for new ways to address any problem and treat any difficulty, so it is imperative to avoid "public criticism" or oppose the unexpected consequences on their part (Bass and Reggio, 2006).

Individualised Consideration

Individualised consideration appears when leaders work as advisers or coaches for their followers (Northouse, 2019). In other words, leaders listen carefully to their followers' needs and try to find an optimal solution that fulfils their aspirations (Bass and Riggio, 2006; Northouse, 2019). Transformational leaders demonstrate this dimension by understanding their followers' needs and abilities and taking them into account individually. Moreover, leaders provide advice and a chance to develop tasks. Furthermore, according to Avolio and Bass (2004), individualised consideration denotes the importance of recognising the requests, issues, and concerns of individuals, as well as how to interact with them personally and in a special manner. However, there are two basic requirements to present individualised consideration; the first is to create an encouraging environment for subordinates, and the following one is to provide new opportunities to learn (Bass and Riggio, 2006). In addition, this type of leader, unlike some of the others, does not place an emphasis on criticism and aggression for subordinates. However, safe environment will enable followers to grow and be encouraged with the managers' guidance. Avolio and Bass (2004) suggest that this dimension might aid in the promotion of continuous people development.

Employees Motivation

Motivation comes from the Latin phrase "movere" in English "motivate" that refers to move, push, or influence to choose a way to proceed (Greenberg, 2011). Motivation is primarily focuses on determining why people act in a specific manner in order to answer the question, "Why do people do what they do?". Motivation can be defined as the direction and persistence of action and is interested in why people choose one course of action over another, as well as why they continue to do so (Krech et al., 1962). Intrinsic and extrinsic motivation are two types of motivation that can be used to categorise the: diverse needs and expectations of an organisation (Mullins, 2016). Extrinsic motivation is linked with tangible rewards such as financial benefits, job security, promotion, contract of service, work environment, and working conditions. These tangible rewards are frequently determined at the organisational level and are often beyond the control of managers. On the other hand, intrinsic motivation is linked with psychological rewards such as a sense of challenge and accomplishment, receiving appreciation, positive recognition, and being treated with care and consideration; individual managers' actions and behaviour usually determine these psychological rewards (Mullins, 2016).

METHODOLOGY

A quantitative method was chosen, using a questionnaire as the main source of data. Employees in the oil and gas industry filled out the questionnaire. The representative from each organisation disseminated it internally which 316 employees in the oil and gas industry filled out the questionnaire. Convenience sampling, one of the non-probability sample techniques, will be used in the current study. Saunders et al., (2019) states that convenience sampling is available sampling which involves haphazardly collecting cases as it is easy and convenient to obtain samples. The survey inquired about the demographic data before turning to the evaluate transformational leadership factors. Multifactor Leadership Questionnaire was used to identify the range of using the factors of transformational leadership represented by Bass (1985). Most transformational leadership studies, as described previously depend on the Multifactor Leadership Questionnaire (MLQ) to assess components of transformational leadership. It measures core components of transformational leadership including idealised influence, inspirational motivation, intellectual stimulation and individualised consideration, therefore it is chosen as an instrument for the current study. However, the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) was used to evaluate the motivation of the employees (Tremblay et al., 2009). This scale is associated with self-determination theory, which entails having a true sense of choice and feeling to do what one has chosen. This scale evaluates the work motivation of workers' self-perceptions and it was utilised by many researchers to measure employee motivation since its introduction in 2009. Intrinsic motivation, extrinsic motivation, and amotivation are listed on a continuum from high to low degrees of self-determination.

The study performs many tests in order to statistically analyse the data. The consistency of a concept's measure is referred to as reliability. Cronbach's alpha, which is regarded as a crucial test provided by the SPSS software, is used to measure and appraise it. Moreover, Cronbach's alpha test was used to evaluate the data's reliability for the research variables, which include transformational leadership factors and employees motivation levels. Saunders et al. (2019) state that one of the most frequently used items to check the internal consistency of data sets is Cronbach's alpha. Moreover, Structural equation modelling (SEM) is a statistical method that uses a confirmatory approach to the analysis of a structural theory that is relevant to some phenomenon. It aids in the examination of hypotheses and the determination of relationships between variables. Therefore, SEM and data analysis have been carried out through SPSS Statistic and SPSS Amos.

RESULTS

Demographics Features

This section provides a description of the respondents' demographic profile who worked in the oil and gas sector in Bahrain. The net total number was 316 respondents, the demographics include; age, gender, years of experience and level of education.

In terms of the gender characteristics of the data, Table 2-1 shows that there were 269 male respondents compared to only 47 female respondents, indicating an 85.1 percent male dominance. In regard to age, the results presented that age range are divided into four categories. The first category which has 20 individuals and ranges in age from 18 to 25, is the lowest by only 6.3 percent. The second age category, which includes 73 people aged 26 to 35, accounts for 23.1 percent of the total replies. The third and fourth groups have 110 and 113 responses, respectively and years of age from 36 to 45 years and above 45. This shows that roughly three-quarters of the participants are beyond the age of 36.

The length of experience of employees in organisations is shown in Table 2. The majority of participants have more than 15 years of experience, accounting for about 61 percent of the 194 respondents in the sample. It also reveals that about 15% of respondents have between 10 to 15 years of work experience in the organisations. Whereas, the remaining groups of five to 10 years and less than five years have 11.4 percent and 12.3 percent, respectively. In terms of participants' educational achievement, almost half of the respondents, have a bachelor's degree, while around a fifth of the respondents has a master's degree and a degree less than a bachelor's degree. Furthermore, the result displays that only 3 percent of respondents have a doctoral degree.

Table 2: Demographics Features

Gender		Age				Experience				Education			
Male	Female	18-25 Y	26-35 Y	36-45 Y	46Y & Above	Less than 5 Y	5 – 10 Y	10 -15 Y	More than 15 Y	Diploma or lower	Bachelor	Master	PhD
269	47	20	73	110	113	39	36	47	194	71	163	74	8

Transformational Leadership and Employees’ Motivation

Transformational leadership dimensions were rated by Bahrain employees’ oil and gas sector employees in which represent the independent variables of the study. These behaviours are ranked through scores ranging between 1 to 5 which are 1 (not at all) and 5 (frequently if not always). Table 3.1 shows the average employee rating of leadership dimensions in the means column for each dimension. However, employee’s motivation dimensions present part of dependent variables of this study which are intrinsic and extrinsic motivation. The types of motivation are rated by scores ranging from 1 to 7 which are 1 (Does not correspond at all) and 7 (Corresponds exactly). In the means column of Table 3, the average assessing of motivation dimensions is shown.

Table 3: Means of Transformational leadership and employees’ motivation

	Variables	Minimum	Maximum	Mean
		Statistic	Statistic	Statistic
Transformational Leadership	Idealised Influence	1	5	3.69
	Inspirational Motivation	1	5	3.61
	Intellectual Stimulation	1	5	3.56
	Individualised Consideration	1	5	3.38
Employees Motivation	Intrinsic Motivation	1	7	5.81
	Extrinsic Motivation	1	7	5.42

Hypotheses Results

The findings of hypotheses that present the relationships between the variables were shown in Table 4.

Table 4: Results of Hypothesis Testing

	Hypotheses	Result
1	H1: Transformational leadership factors positively influence employee motivation in the oil and gas sector in Bahrain.	Support
2	H2: Transformational leadership factors positively influence employees intrinsic motivation in the oil and gas sector in Bahrain.	Support
3	H3: Transformational leadership factors positively influence employees extrinsic motivation in the oil and gas sector in Bahrain.	Support
4	H4: Idealistic influence of a leader has a positive effect on employees intrinsic motivation.	Unsupported
5	H5: Inspirational motivation of the leader has a positive effect on the employees intrinsic motivation.	Support
6	H6: The intellectual stimulation of the leader has a positive effect on the employees intrinsic motivation.	Unsupported
7	H7: The individual consideration of the leader has a positive effect on the employees intrinsic motivations of the employees.	Unsupported
8	H8: Transformational leadership influence employees intrinsic motivation more than extrinsic motivation.	Support

DISCUSSION

To meet the main objectives in this study, the researcher employed the transformational leadership factors suggested by Bass (1985). Scholars have proposed several factors or behaviours for transformational leadership since its emergence in 1978 by Burns (Podsakoff et al., 1990; Kouzes and Posner, 2006; Bennis and Nanus, 1985; Bass, 1985). However, the current study used factors from Bass (1985) that were widely employed in numerous studies and could be measured from a variety of angles. In terms of collecting data, the Multifactor Leadership Questionnaire was used with 316 employees to identify transformational leadership practises (Avolio and Bass, 2004). According to findings, Bahraini leaders in the oil and gas industry implement transformational leadership factors, scoring an average of 3.56 out of 5 (or 71%). In the prior survey, Kassa (2014) through research conducted in Ethiopia found that the average score for transformational leadership aspects from an employee perspective was 2.52 out of 4, or 63%. Another study focusing on the petroleum sector in Libya, Zahari et al. (2012) found that from the MQL survey the frequency of leaders' behaviour with transformational factors was 2.81 out of 5 or 56%. Furthermore, Alkhaja and Miniano (2019) conducted a study on one of the government ministries in Bahrain from the perspective of the employees, and discovered that the average score for the four transformational leadership factors was 3.5 out of 5, or 70%. Moreover, Al-Shammari and Khalifa (2013) carried out a study in Bahrain's IT departments of public organisations, and reported the average score for transformational leadership factors to be 4.1 out of 5, or 82%. Consequently, it is evident that Bahrain's oil and gas leaders are applying transformational leadership at a high rate when compared to earlier studies. In term of motivation, the findings reveal that intrinsic motivation was reported to be the highest type of motivation by 5.81 or 83%. On the other hand, the score of extrinsic motivation was 5.42 or 77%.

The hypotheses were tested using SPSS Amos. The first hypothesis, which states that factors involved with transformational leadership influence employee motivation in Bahrain's oil and gas sector, treated transformational leadership as an independent variable and the employees' motivation as a dependant variable. It has been accepted which indicating that transformational leadership has a highly significant positive effect on employee motivation. This means the higher the transformational leadership behaviours the higher the employee's motivation. unsurprisingly, this finding corroborates with the majority of the previous research findings in other nations (Andersen et al., 2018; Nugroho et al. 2020; Susilo, 2018; Lee et al. 2019). However, some researchers argued that there is no any relationship between transformational leadership factors and the employees' motivation (Al Harbi et al., 2019). The outcomes of research investigations may alter if the transformational leadership factors are used as a combination. Nevertheless, due to the scarcity of knowledge for the effect in each dimension, according to Van Knippenberg and Sitkin (2013), it is better to examine all dimensions collectively rather than individually. In contrast, Deinert et al. (2015) advise that because each dimension has a unique origin, they should be measured separately.

The second hypothesis, which claimed that factors related to transformational leadership positively influenced employees' intrinsic motivation in Bahrain's oil and gas sector, has been supported. Bass and Riggio (2006) states that transformational leadership particularly focuses on intrinsic motivation and follower development. According to Nguyen et al. (2019), as found in their research in Vietnam, workers who are led by transformational leaders had higher levels of intrinsic motivation. Moreover, Graves et al. (2013) noted that creating a transformational leadership environment increases the employees' motivation. In contrast, Al Harbi et al. (2019) discovered that there is no connection between transformational leadership and intrinsic motivation in their empirical study conducted in Saudi Arabia.

The third hypothesis, which claimed that factors related to transformational leadership positively influences employees' extrinsic motivation in Bahrain's oil and gas sector, has been supported. In the prior literature, it is notable that Graves et al. (2013) reported a positive relationship between transformational leadership and extrinsic motivation in their study of the private sector in China. Moreover, in research of female employees, Morkeviciūtė and Endriulaitienė (2020) discovered that women's extrinsic motivation increases in response to the transformational leader's high-performance expectations. However, when each factor of transformational leadership is separated, the following outcomes were not expected.

Results from structural equation modelling revealed that there is no correlation between the three factors of transformational leaders (idealised influence, intellectual stimulation, and individualised consideration) and employees' intrinsic motivation, which are the fourth, sixth, and seventh hypotheses that have been unsupported. On the contrary, the fifth hypothesis has been supported which states that the inspirational motivation of the leader has a

positive relationship with the intrinsic motivations of the employees. The idealised influence score of leaders from their employees' perspectives was 3.69 out of 5 or 73.8% while the findings showed that there no relationship between this factor and the employees' intrinsic motivation. In research of 30 managers and 120 employees in Ethiopia, Kassa (2014) reported that the idealised influence of leaders scored at 2.4 out of 4, or 60%.

The final hypothesis, which stated that transformational leadership influences the employees' intrinsic motivation more than extrinsic motivation, has been supported. However, Kassa (2014) founds that transformational leadership is dominant and that employees are significantly more focused on extrinsic motivation than intrinsic motivation. Mullins (2016) noted that managers could control the psychological motivators but the tangible motivators are controlled by the management of organisations. In conclusion, there are positive relationship between transformational leadership and employees motivation in Bahrain oil and gas sector. Even through there is no correlation between some transformational factors and intrinsic motivation when they are tested separately.

CONCLUSION

In conclusion, the research fills a knowledge gap and advances the theoretical understanding of transformational leadership theory in Bahrain's oil and gas sector, one of the most important sectors. Furthermore, it explores the viewpoints of employees, providing a thorough understanding of the application of transformational leadership factors in one of a developing country through quantitative method. Moreover, this research determined the extent of application transformational leadership factors in Bahrain oil and gas sector and their relationships with employees motivation, both intrinsic and extrinsic. However, focusing on this leadership approach could provide substantial advantages to the organisation, including enhanced satisfaction of employees, performance beyond expectation, and significant competitiveness in the sector.

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BLOCKCHAIN TECHNOLOGIES – THE FUTURE IN LAND TRANSACTIONS?

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ABSTRACT

Blockchain is a technical innovation that successfully records and shares timestamped information pertaining to the interaction between parties as a distributed ledger technology. Business models may differ in the degree of centralisation. A blockchain will be only as good as its underlying data and processes, therefore the verification processes used would be crucial to the security and integrity of the documents. The land administration process in South Africa is still paper-based and comprises numerous public and private role-players, which makes property transactions complex, lengthy and costly. Each of these role-players uses their own technological systems, which need to be managed across the end-to-end property process. Blockchain technology can effectively assist in managing the workflow from these diverse systems. This paper discusses blockchain technology as a suitable technology to be deployed and managed in land administration processes and land transactions in South Africa. In addition, the current business processes in land transactions will need to be reengineered to accommodate centralisation and digitised land transactions. The study comprised semi-structured interviews of various stakeholders involved in the property process. The interviews were transcribed and analysed using content analysis. In addition, documents were reviewed, and a desktop literature review explored the use of blockchain technologies in land administration. Current role-players involved in property processes in South Africa are aware and in favour of using blockchain technology in land administration. The technology will make property transactions transparent and will speed up the turnaround time of their processing. Blockchain can enable the payment-versus-delivery principle against real-time updates and automated smart contracts. The relevant legislation will need to be updated to make provision for digitised processes.

Keywords: blockchain technology, land transactions, property, smart contracts, land administration.

INTRODUCTION

Blockchain technology was created to support the Bitcoin cryptocurrency but has since evolved and is used in many other contexts. It is a decentralised system that requires no intermediary to administer it and it can be deployed in a private, public or hybrid mode. Blockchain has penetrated a wide number of industries, including finance, healthcare, government, manufacturing and distribution (Monrat, Afif, Schelén, and Andersson, 2019). Other applications include the transfer of products (supply chain), digital media (art sales), remote service delivery (travel and tourism), distributed resources (electricity generation and transmission), crowdfunding, e-voting, identity authentication, public record governance (Monrat, Afif, Schelén, and Andersson, 2019), food traceability and smart contracts. Many countries have investigated using blockchain as a tool to track and trace property ownership. Various users within the blockchain platform need to verify and validate information through various checks, and information is stored in an encrypted form using encrypted keys and immutable ledgers that attackers are unable to change; they also cannot destroy recorded data. Data are always stored immutably, using timestamps, public audit and consensus to enhance data integrity and privacy (Bodkhe, 2020). Given the number of entities engaged in property transactions, this article focuses on the use of blockchain technology in land administration.

Housing is one of the most crucial and costly investments that most people will conclude in their lives. It is therefore crucial that ownership and occupation rights be protected. To achieve this protection, land ownership is formally recorded and registered against the details of owners that are administered by government. The goal of land registration is to ensure that an individual's rights to own, lease and use land are upheld (Omwoma, 2016). Land registration records guarantee ownership of land; facilitate the transfer of the title of the property from the seller to the purchaser; and facilitate the transfer of the interest in the property from the owner to the lender (Omwoma, 2016).

There are two main ways in which property can be registered, namely deeds registrations and title registrations. With the registration of deeds (often not compulsory), the documents that are related to the specific property (deeds, mortgages, plans of survey and so forth) are stored in a public repository. Deeds registration registers only title documents and does not register title to a property; moreover, many rights are not registered. With the registration of title (usually compulsory), the property register records the current property ownership, outstanding charges and liens, which become the proof of ownership. The state plays an active role in examining and guaranteeing transactions. Titles that are issued are irreversible (Nwafor et al., 2022). In South Africa, property deeds are registered to indicate ownership, but the state takes an active role in examining all records.

Financial institutions are extremely dependent on immovable property as collateral for loans advanced to owners. Ensuring the security for their collateral is of utmost importance. Banks require owners to offset risk by paying deposits for property purchases, which has created alternate funding sources that, in turn, increase funding costs. Banks and other financial lenders securitise loan commitments into portfolios and sell them to investors in the form of debt instruments, such as bonds. (Ashcraft and Schuermann, 2008). Properties have thus become securities (collateral) for financial instruments like mortgage loans and bonds that are traded (Aalbers, 2016), which are underwritten by fixed income in the form of loan repayments. When borrowers can no longer fulfil their monthly mortgage payments, the underlying collateral would need to be sold.

The main criticism of current landed transactions is that communication and information-sharing is tedious. The traditional approach to real estate is highly fragmented, with many public and private entities operating across the property value chain. All the stakeholders separately collect and validate identities, information and documents. Thus, many data silos exist across various parties who share data and information exchanges. Transparency is problematic with traditional transactions; therefore, it is necessary to investigate alternatives to the traditional approach of landed property transactions.

In recent years, blockchain has progressed as an effective and shared management tool that shares data that are to be monitored by everyone in the supply chain without a single entity controlling it (Rangaraju et al., 2017), thus eliminating the need for layers of intermediaries. Several sectors are adopting blockchain technology for transacting and recording of assets, and various countries (Sweden, Australia and the United Kingdom) are also investigating the application of blockchain in real estate transactions (Garcia-Teruel, 2020). Seven European Union (EU) countries (Cyprus, France, Greece, Italy, Malta, Portugal and Spain) signed a declaration in December 2018 to agree on how to advance distributed ledger technologies, and they have enacted legislation to this effect already (Garcia-Teruel, 2020). According to Garcia-Teruel (2020), blockchain technology is suitable to use in the sharing economy and can make real estate transactions more transparent, improve tax inefficiencies, and provide liquidity for real estate transactions. In addition to the elimination of paper documents and faster process times, cost savings can also be achieved by using blockchain. Data can be stored locally, or in the cloud, and only authorised users can gain access to information on the blockchain. Blockchain offers immutability of records and processes as various stakeholders must confirm processes and information at various stages of the contract. All changes made are recorded in an audit trail and only authorised parties may update pre-approved information.

This paper investigates the applicability of using blockchain in land administration and landed transactions in South Africa. Blockchain operations are discussed first, whereafter specific issues that must be addressed in using blockchain are highlighted. The study followed a qualitative approach, whereby interviews were conducted with property experts in South Africa. This section is followed by a discussion of these inputs from the experts, whereafter the paper is concluded.

THE OPERATIONS OF BLOCKCHAIN TECHNOLOGY

Blockchain is a cryptographic encrypted peer-to-peer technology that works on a distributed ledger that is decentralised. Distributed ledgers are digital records that are located among multiple people; updates made to records occur within all copies simultaneously, and all the people involved will automatically know of any changes made to these records. A public key is used by the sender of the information that must be decrypted by the receiver by means of a private key for the encrypted data to be made available. A blockchain can be public, private or a hybrid of the two. In addition, the blockchain can be permissioned (only accessible with permissions) or non-permissioned (public). Although information may be made available publicly, privacy is protected using digital signatures and the security

of all documents remains intact. The various users must essentially agree on the content of documents using consensus algorithms; mistakes made by one entity are thus unlikely, as other members will be able to point out mistakes before transactions are finalised. The visibility of required information and actions ensures transparency of the processes and data. Functionalities can be assigned to different users in terms of specific functions that can be fulfilled on the distributed ledger (Rangaraju et al., 2017).

Blockchain also facilitates the conclusion of smart contracts, which are automated agreements that are concluded based on predetermined and pre-agreed conditions that are performed in the distributed ledger. Smart contracts are enforceable through legal rights and obligations that are enforced by the members, or they are enforced via tamper-proof computer code execution (Clack et al., 2016). Thus, the effects of smart contracts can be converted into legal agreements. China launched a valuation system that is based on blockchain technology in 2016 and it operates using smart contracts. Smart contracts can also be introduced into land administration and the registration of landed transactions. However, blockchain technology would first have to be deployed to connect all role-players, and parties still need to agree to be regulated with smart contracts from the beginning to the conclusion of the transaction (pre-contractual phase, property valuation, registration) (Garcia-Teruel, 2020). Thus, with several interconnected smart contracts across private and public organisations (including administration across the various public institutions), parties would be able to monitor solvency, payments, costs, municipal and tax obligations, and any other relevant information, while simultaneously registering the contract. Since smart contracts can regulate various aspects of the real estate transaction, it will be useful for the end-to-end process to be placed onto a blockchain functionality, rather than for pockets of the process to remain on existing platforms.

Big data analytics and machine learning can assist the government to make sense of the collection and processing of vast amounts of data, which can provide prompts that will autonomously learn and execute tasks as required. Significant capital investment will be required from the government to establish the infrastructure and to secure knowledgeable staff that can manage such operations. The Department of Rural Development and Land Reform in South Africa has already started to convert paper deeds into electronic documents by scanning the paper documents to digitise the data that were in paper form. Even electronically collected data are currently stored in unconnected and silo data repositories, which limits the use of such data. Digitalisation efforts will need to make the digitised electronic data available across barriers and organisations for patterns to emerge, validation to occur and effective problem-solving to take place.

FUTURE IMPERATIVES

The Protection of Personal Information Act (POPI Act) was promulgated in South Africa on 1 July 2020. The POPI Act establishes minimum standards regarding the access and management (collecting, receiving, recording, organising, retrieving, use, distribution or sharing) of personal information of people. Although it is envisaged that blockchain will make available information and data to all parties involved in real estate transactions, the availability of information would need to be deployed within the ambit of the POPI Act. It is important that government retains control over such data and strategically prevents big data from being publicly displayed. However, a large portion of the public distrusts government and is also cautious of the misuse of information by government. Strategic stakeholder management initiatives will therefore need to be deployed to manage and mitigate these fears and grievances carefully.

In keeping with the POPI Act, the number of intermediaries involved in the property transaction will also need to be reviewed. The traditional property process has seen many intermediaries building businesses in the property space. These include organisations that were established for the automation of various types of documents that are necessary for property registrations; bridging finance institutions to cover potential financial shortfalls that were not approved by banks; mortgage originators that apply for financing on behalf of buyers; corresponding attorneys that lodge paper documents in deeds offices because of jurisdiction issues; people who apply for rates and tax clearance certificates at the municipal and revenue offices, among others. In an interlinked and automated system where all primary parties are included and where smart contracts and other automated processes can systematically obtain required information, the need for many of these intermediaries would be eliminated. The disintermediation of additional entities would require interested parties to demonstrate the value that they could contribute to an automated system to remain in the property value chain (Nasarre-Aznar, 2018).

Blockchain technology can achieve several important automated functions, including the validation of information, identification of parties through biometric data, checking for encumbrances registered against the property or parties, and populating legal documents intelligently and correctly to secure the end-to-end process of the real estate transaction. However, in addition to assessing the identification of people, their competence will also need to be assessed along with other minimum legal requirements that blockchain will not be able to fulfil. Failure to assess such information can result in increased litigation; therefore, notaries/attorneys/conveyancers will have to retain some in-person responsibilities in the new blockchain process, functioning as so-called oracles. Oracles are third-party agents who validate real-world occurrences and send the data to blockchain (Garcia-Teruel, 2020). The end-to-end process in all its permutations would need to be carefully mapped and algorithmically programmed to become a reliable system that satisfies all legal requirements. The use of artificial intelligence capabilities would need to be explored to assess whether the assessment of competence and other softer issues can be automated as well. Transactions must be approved only when all legal requirements have been met.

For several years, the Department of Home Affairs (DHA) in South Africa has collected fingerprints from citizens and these have been updated in a centralised system. Banks and insurance houses have received a functionality that allows them to verify their clients through a device that confirms the biometric data that are stored with the DHA. Conveyancers that deal with property transactions have also piloted a project with the same DHA technology in a bid to reduce identity theft. Identifications that cannot be confirmed result in transactions' not taking place and a further investigation is then launched into such cases. The validation takes seconds, can operate with higher volumes of transactions and is not dependent on any human intervention. Such functionality will be beneficial if linked to a blockchain in the real estate industry.

In a delivery-versus-payment (DVP) system, the existing owner transfers ownership of an asset to the prospective owner as the funds flow from the prospective owner to the existing owner immediately, that is, delivery is linked to instantaneous and immediate payment at the moment that ownership is transferred. In the traditional property system, sellers are transferring property ownership at the deeds office and vacating their properties before receiving their payment (proceeds of the property sale), thus increasing risks for sellers. Where fraudulent activities or errors have been identified after payments were made, banks have reversed payments, thus also placing sellers at risk. As a result, a South African blockchain-based network will need to address this issue and ensure that payments and settlements are made electronically and concurrently (Tilbury et al., 2019).

Bitcoin operates using blockchain technology, whereby a bitcoin is created by voluntary miners (people) who are rewarded with an income for successfully using complex mathematical procedures by computing hashes to form the block of information that is stored in the distributed ledger (Singh et al., 2020). There are significant costs attached to acquiring digital technologies and setting up smart contracts, as well as rules for validation and other automation functions, particularly if miners are to be retained in the system. It would be better if a system could be developed where miners are excluded so that costs per transaction are reduced. Costs to be charged across the real estate transaction would need to be regulated. Additionally, the current Bitcoin system does not use personal information in transactions, which has resulted in the conclusion of some illegal transactions (Garcia-Teruel, 2020). This feature would need to change, as identification must be validated and linked to ownership and specific property rights in rem. Know-your-client principles must be observed to curb money laundering initiatives and for legal processes to be executed to reduce the risk of identity theft and forfeiture of rights and obligations.

METHODOLOGY

This research was situated in the interpretivist paradigm and a case study design was used. Semi-structured qualitative interviews were used to collect data that explored how blockchain technology can be used to improve the property transfers in South Africa. The population comprised stakeholders who are involved in the end-to-end property process in South Africa from a national perspective. Seventeen (17) organisations were purposively chosen, which included the Reserve Bank of South Africa, the Master of the High Court, the Banking Association, the Law Society of South Africa, the Surveyor-General's office, the Pretoria deeds office, South Africa's Central Securities Depository (Strate Ltd) and Tshwane Municipal Council. The researcher conducted 19 interviews with representatives of 17 organisations who were involved in the property and financial services sector in South Africa at the time of the research. All interviews were audio-recorded and transcribed verbatim. The data were organised into themes and subthemes and

interpreted using content analysis. The themes were e-mailed to each participant as part of a member-checking procedure to ensure that the correct interpretations were associated with the data.

DISCUSSION

Since all transaction data on blockchain are visible to all parties linked to a particular transaction and securely stored with all changes stored in an audit log that are also visible to all parties, the blockchain technology is deemed to be secure, tamper-proof and transparent (Ameyaw and De Vries, 2020). Ameyaw and De Vries (2020) also envisage the reduction of the property transaction time from 5–6 months to 1–2 weeks. The need to incorporate all role-players involved in the property value chain in a centralised platform will increase the risk and necessitate the improvement of cybersecurity. As such, robust and secure technologies will be required. A centralised platform will enhance the transparency of transactions as all role-players will have sight of the information, which in turn will yield many different benefits. Participant W favoured the implementation of blockchain technologies into land administration:

Companies is looking at the blockchain technology and distributed ledgers...to handle the transfer of ownership of assets...property transfers I think is the type of...of asset that would be one of the target areas or the areas where people will spend some energy to say can't we actually have this deed of property done in distributed ledgers where we can prove who's the owner and, um...um, that transfer has taken place...if you talk about disruptive technologies going forward something like in the property market I think with the blockchain technology and distributed ledgers I think will probably...can be a focus area.

Participant X expressed speed, security and automation of electronic records as benefits of using blockchain technology in the centralised platform:

NASDAQ for instance...they're converting to, um...um, bitcoin technology. Not for the money but for the speed of accuracy of encrypting, decoding, and dematerialising transactions...Blockchain... the transactions are immediate...you have both the money and the transaction and all the detail you can't falsify and you have a...a...a virtually uncrackable transaction record...I just can't imagine that this would be in South Africa in the next ten years...your title deed, your photograph of the owner, where your transaction details themselves, are all embedded in one electronic record on the, um, cloud or on the internet not under the control of government or Deeds Office or anyone like Apple or Google.

Participant V explained efficiency gains, interoperability, reduced delays and repetitions, and transparency as additional benefits of using blockchain as follows:

There's greater certainty, improved transparency, improved efficiency, um, it's safe and secure, and it reduce time delays...it's interoperable. You know, it integrates into any software vendor package...it eliminates repetition of data entry...It improves standards and procedures...There's an enhanced audit trails [sic], reconciliation process is...it speeds up the settlements and improves the liquidity and velocity of money...it reduce [sic] costs due to a leaner and a quicker system...we have extensive reporting...there's more visibility of liquidity and flow within the system because now they have the visibility which they haven't got now.

The first step in establishing a digital property process would be in digitising data and linking all affected parties into a shared system. Whether the system is private, public or a hybrid of the two, there will have to be levels of functionality that are permissioned. Wouda and Opdenakker (2019) propose that the original files and contracts be stored on servers of the parties involved and that the required information be uploaded in the blockchain. There are numerous models that have been researched and implemented in various countries. There are also many questions, for example: Will each transaction run on its own ledger? Will tokens be implemented? Will fiat currency be linked to blockchain, or will cryptocurrencies be used? How will costs be apportioned? However, the infrastructure that is suitable for South Africa must be agreed upon among essential parties to ensure successful, reliable and fast implementation. Stakeholders buy-in is essential to ensure a higher take-up in the use of the envisaged system. In this regard,

Blockchain technology has been previously associated with cryptocurrencies but its use in land administration would need to be managed in the South African fiat currency (Rand) and not cryptocurrencies. This would imply closing the system and establishing rules of engagement that are most suited to what is required. Based on the data collected, the distributed ledger would be organised according to individual properties whereby ownership information will be recorded within each property's ledger as opposed to different properties being recorded according to ownership information. Participant Y stated:

If you envisage...a fully electronic system, I mean, it would be great if they used blockchain technology for example and you have a blockchain for each title deed...you must separate bitcoin, the currency, from blockchain, the technology...blockchain would...could work on rand just as easy as...you don't have to have blockchain and bitcoin...you can separate the two. So, I'm thinking of blockchain as a technology with rand...when you talk about a distributed ledger, I would imagine you would have a ledger for each property. Like, all the transactions that ever happened to that property would be in that ledger...lifting those things to the level and agreeing those...those standards agreeing the planned architecture is...is the next step...there are a myriad of funding models you could use...depending on what infrastructure you decide on...they would need to, um, fund their...their development themselves...and recover that over time with fees...each affected area will typically carry their own costs...The overall effect on the economy however should be dramatically positive...because it reduces the costs, it makes it easier to utilise.

The sovereignty of each ledger will need to be above reproach and the links to all information must be traceable from the envisaged central system. With reference to infrastructural decisions, Participant Z explained:

It's [the ledger] gotta validate that this is in fact a subset of the whole and that it's legitimate and that it's [the property] owned by the right person and that it's going to the right...and there're a whole host of things that you have to build into this...They may be behind the scenes where you've got these massive registers of who owns what and they...those have gotta be unimpeachable...I've gotta have a reference to the surveyor general's LG or SG diagrams and say, well, that piece of property's identified by the following four corner posts and it's got reference numbers, GPS coordinates, dah-dah-dah. Would I carry that in a blockchain? No, I wouldn't. I'd have a reference number in a blockchain but somewhere along the lines somebody's gotta have that information to prove that this particular property described as ERF one Illovo is in fact ERF one Illovo and it's recognised by the SG as being ERF one Illovo... some of it might, some of it won't. Um, some of what we've got here already is, you know, different from what this blockchain technology is proposing. It's just how long it takes to get there and how quickly it can be done.

Although the Electronic Deeds Registration Systems Act 19 of 2019 (EDRS) was promulgated in 2019, there are still various other laws that do not cater for electronic deeds registrations and property transfers. In addition to infrastructural planning, Participant Z cautioned that legislation would need to be amended to cater for blockchain functionality by stating:

There're umpteen legal Acts that need to be changed to facilitate electronic deeds registry, replacing a title deed with an electronic record... those legal issues, would need to be resolved...there's the legal framework we need to look at, we need to look at very, very carefully, but it's more about bringing efficiencies, it's more about mitigating the risks, it's more about reducing the fraud that is currently taking place in the industry because there is a lot of it.

The settlement of payments that are irrevocable reduces systemic risks and enhances the efficiency and safety of transactions, provided that all requirements are met, the correct parties and account details have been identified and all calculations are correctly determined. There are risks involved if property is transferred to new owners and the required money payable for the sale of the property is not yet available and the exchange has not been made. In this instance, the so-called delivery-versus-payment rule is crucial for the effective finalisation of property transactions. The delivery-versus-payment settlement model eliminates the principal risk, namely that a party to the settlement does not meet its settlement obligations: either the buyer provides the funds but does not receive the title, or the seller provides the title but does not receive the funds (De Freitas and Fitzgerald, 2021). It is therefore crucial that irrevocable payments be made in conjunction with property title transfers (Amadi-Echendu, 2021). Participant Z elaborated on the irrevocable payment against the irrevocable confirmation of transfer of ownership as follows:

The Deeds Office needs to be able to issue a confirmation that a transaction has taken place that the property has registered. That confirmation needs to be irrevocable. It cannot be revoked for any reason whatsoever. It needs to be irrevocable. On the strength of that irrevocable confirmation, payment needs to happen irrevocably... So, I can never ever have a situation where somebody is claimed to have made...done this transfer in the Deeds Office and payment is made or that the payment...the transfer does happen, and payment doesn't get made...Do I want the cash to settle at the Central Bank? Absolutely. Why do I want it to settle at the Central Bank? Because then it's...the irrevocability of that cash payment is beyond approach. Go back to this: delivery versus payment. I want the delivery and the payment to both be dependent on the successful conclusion of the other ...and that they are never ever subject to reversal.

Participant W elaborated on the payment-versus-delivery principle. He explained that there is the operational process issue of effecting the property transfer and payments simultaneously, but also that the technological systems and processes must be aligned to meet the payment-versus-delivery requirement:

The movement of property that is linked to the movement of the funds...and the so-called...what we call...term delivery versus payment...addressing, um, solvency, finality and...and irrevocability issues because I think once a payment has been passed across the books of ...the Central Bank that payment is final and irrevocable and it can't be under...uh, overturned...real-time gross settlement systems are credit-push systems, or in other words the payer must initiate, uh, and that's where you get also your finality and your irrevocability from...the asset is first, um, taken on, put in a special state, a frozen or something like that that, that nobody can use it...Once settlement has taken place that's legally when the transfer of ownership has taken place...once the payment is...the, uh, settlement has been....notification reached this operator they can then transfer the ownership of the underlying asset...there's also two...two levels. So...so one is the bus...the system level and the one is the technical network level.

Participant V confirmed the importance of irrevocable payments by stating:

Benefits to the bank bringing the clearing and settlement closer, it's irrevocable same-day, it reduces the fraud, account holder verification, it mitigates your payment and the settlement...the key drivers are [sic] to implement an irrevocable same-day settlement process to improve oversight.

There seems to be consensus among parties involved in the property process in South Africa that the traditional property system must be enhanced and digitised. When designing the blockchain-enabled system, it will be important to liaise with all essential groups to design a system that will cater for all needs and requirements. The interoperability of the blockchain platform among the relevant role-players enables improved communication, enhanced transparency, improved data exchanges, improved collaboration and better security. As a result, the ownership information recorded in a blockchain will be trusted. The configuration of role-players involved in property transactions, the way in which data are stored and the security measures that are implemented can be used in other contexts. Thus, the platform can be extended to other types of assets and industries.

CONCLUSION

The main aim of this paper was to review whether blockchain technology is suitable within the South African land administration context and if property experts are in favour of introducing the technology into the property space. The paper did not focus on the identification of the infrastructure of such capability, but investigated the aspects that may be considered when planning a blockchain infrastructure, for example how the data will be shared, validated and recorded; the exclusion of the use of miners; and that the delivery-versus-payment principle must be upheld, whereby payments and transfer of ownership of property occur simultaneously. The use of smart contracts that are enabled through mathematical algorithms can also speed up transactions and engagements among various parties to a transaction. The paper-based lodgments and property transactions will need to be digitised. The digitisation of the process may lead to the elimination of many intermediaries that are part of the traditional property process. Clearly, the entire system will need to be reengineered and existing stakeholders cannot simply be “plugged into” an electronic interface.

It is recommended that government continue with its digitisation efforts and liaise with all property stakeholders in identifying a suitable property system and process. It is also recommended that inputs into the establishment of smart contracts be established and that various interactions to start this process be initiated. Relevant legislature will need to be updated to make provision for digitised property transactions. Future studies could focus on specific requirements of the different parties in the property sector for the configuration of the blockchain system.

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THE ROLE OF CAPITAL THEORY IN SUSTAINABLE RURAL TOURISM DEVELOPMENT

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ABSTRACT

The case study of Thep Sadej coffee village in Thailand is chosen to illustrate how capital theory can drive sustainable development in rural tourism. Employing qualitative method, the findings show that bridging and bonding social capitals are very important in increasing economic and cultural capitals of rural tourism businesses. We expand prior research by presenting how different types of capital create innovation and authenticity, which in turn lead to sustainable rural tourism development.

Keywords: bridging, bonding, capital theory, sustainable tourism, rural tourism.

INTRODUCTION

In the face of growing environmental concerns and the push for sustainable practices, the development of rural tourism has emerged as a pivotal strategy for economically invigorating and preserving tourist destinations (Prayitno et al., 2023). Initiatives aimed at promoting tourism in these areas often struggle with integrating modern management practices while retaining the authenticity of the local culture and environment (Drammeh, 2015).

A key focus in tourism studies emphasizes the role of social capital in fostering sustainable development in rural areas (Hwang et al., 2012). Previous research has shown that robust relationships and trust among community members play a crucial role in starting and sustaining local support for tourism initiatives. Additionally, social capital aids in organizing collective efforts that enhance the benefits and mitigate the drawbacks of rural tourism development (Jones, 2005).

Despite considerable research on sustainable rural tourism development, significant gaps remain in understanding how other various forms of capital (e.g., economic, cultural, and environment) drive the sustainability in rural tourist destinations. Prior studies mainly focused on the direct influence of capitals on sustainable tourism development (e.g., Drammeh, 2015; Dwyer, 2021; Prayitno et al., 2023). Building on this gap, the aim of the current research is to explore how different forms of capital function as internal and external factors for sustainable development in a rural tourism area, with the emphasis on authenticity and innovation as mediating forces.

THEORETICAL BACKGROUND

Sustainable Rural Tourism

Rural tourism has seen a rapid expansion as increasing numbers of tourists seek to leave urban environments for diverse holiday experiences in the countryside (Schmidt et al., 2016). This sector plays a crucial role in addressing the myriad challenges that rural areas face (Campón-Cerro et al., 2017). It involves a range of activities that are in harmony with the natural environment, cultural traditions, and the lifestyles of rural communities (Lane, 2009). However, achieving sustainability in rural tourism is challenging due to the varied objectives and beliefs of the involved stakeholders (Lane, 1994). Furthermore, Dwyer (2021) emphasizes the urgent need for tourism entities to implement environmentally sustainable practices, highlighting the critical importance of incorporating sustainability into their

operations to maintain long-term viability and make beneficial contributions to society and the environment. As a result, rural tourism is emerging as a pivotal force in the sustainable evolution of the tourism industry (He et al., 2021).

Sustainability is defined as the principle of fulfilling current needs without hindering the ability of future generations to meet theirs, a concept established by the United Nations Brundtland Commission in 1987 (United Nation, 2023). The goal of sustainable rural tourism development is to craft policies and strategies that support local communities and reduce adverse impacts (Ertuna & Kirbas, 2012). Nonetheless, the critical importance of sustainability in tourism, especially in developing nations, lies in the challenge of balancing economic, social, environmental, and cultural effects. Additionally, while many studies have explored sustainable rural tourism from the consumer's perspective (An & Alarcón, 2020), it is necessary to understand it from other stakeholders' viewpoints.

Capital Theory

Several scholars have drawn on Bourdieu's (1986) capital theory to enhance the understanding of tourism studies, recognizing its potential to explain the complex interactions within social worlds beyond mere economic transactions (Carvalho, 2014). Bourdieu's capital forms are delineated that economic capital relates to tangible ownership rights, cultural capital to exclusive abilities in specific practices, symbolic capital to recognition by others, and social capital to reciprocity and solidarity.

The social capital concept is especially relevant in the tourism industry. It is regarded as a relational asset derived from an organization's network relationships, pivotal for forging competitive advantages and adapting to market changes (García-Villaverde et al., 2020). Putnam (2000) categorizes social capital into bridging and bonding capitals. Bonding capital stems from tight-knit networks blending personal, familial, and professional ties, whereas bridging capital arises from connections across diverse networks. Bridging capital, in particular, facilitates access to a broad spectrum of experiences, ideas, and skills by linking disparate agents, thereby offering competitive insights despite potentially high coordination costs due to cultural, value, and objective differences among connected parties (Martínez-Perez et al., 2021).

While bonding capital's role in fostering strong, cohesive networks is recognized, the significance and impact of bridging capital in sustainable rural tourism remain underexplored. Previous studies have called for a deeper examination of bridging and bonding capitals, suggesting that understanding the balance and interplay between bonding and bridging capital is crucial for organizations aiming to achieve strategic orientation in dynamic environments (Parra-Requena et al., 2023). This entails investigating the conditions under which both forms of capital can optimally benefit organizations, especially within the tourism sector.

Innovation and Authenticity as Mediators

Rogers (2003) defined innovation as an idea, practice, or object that is perceived as new to an individual or another unit of adoption. Innovation is important for sustaining and enhancing competitiveness, especially in tourism destinations amidst increasing competition and the globalization of tourism (Azmi et al., 2023). Prior research indicates that social capital is crucial for fostering innovation within firms operating in tourism destinations (Martínez-Pérez et al., 2019). It equips businesses with an inter-organizational network that bolsters their research, development, and innovation capabilities (García-Villaverde et al., 2021). Consequently, firms within tourism sectors that leverage their network's strong ties, trust-based relationships, and shared objectives can achieve heightened levels of innovation (Martínez-Pérez et al., 2019). This advantage allows them to acquire and disseminate new knowledge, share valuable resources, minimize transaction costs, and weed out untrustworthy partners, among other advantages (Czernek-Marszałek, 2020).

In terms of authenticity, Knudsen and Waade (2010) narrowly defined authenticity as the inherent qualities including truth and originality of tangible entities. In tourism studies, authenticity conveys a feeling of the real, genuine or unique and is often attributed to traditional cultures (Tetley, 1998). The term is frequently used to differentiate niche with mass tourism products. Agarwal and Shaw (2018) suggest that the tourist destinations are authentically social because they resist external forces and generally boast-knit host communities. Prior research found that

authenticity can enhance cultural capital for tourism industry because the majority of tourists attracted to destinations that can supply the heritage of attractions or authentic experiences (Roberts, 2022).

METHOD

Using qualitative research method, this study employed purposive sampling to gain access to informants who live in Thep Sadej village of Chiang Mai province, Thailand. This place was chosen to conduct the research because it is famous as a coffee cultural village in Northern region of Thailand. We conducted in-depth interviews with homestay and restaurant owners. Each informant was interviewed for approximately 30-40 minutes at his or her own workplace. All interview data were analyzed using thematic process (Attride-Stirling, 2001). The data were coded and recoded to complete the process of interpretation (Thompson, 1997).

FINDINGS

This study provides empirical evidence to show how capital theory approach can be incorporated to create sustainable rural tourism development. The findings are shown in three main themes.

Bridging Social Capital Increasing Economic Capital

Thep Sadej is a subdistrict of Doi Saket District, in Chiang Mai Province, Thailand. It has been established as a community for at least 100 years (Thep Sadej Subdistrict Administrative Organization, 2024). The subdistrict contains eight villages. In 2024, it had a population of 1,864 people. Recently, Thep Sadej village has gained recognition as a prime location for experiencing authentic coffee culture.

In the past, villagers in Thep Sadej initially relied on producing traditional ‘Miang’ tea as their primary source of income. With the change in consumer tastes, the profitability of tea waned. To counteract this economic downturn, the Ban Pa Miang Royal Project, initiated by the Royal Project Foundation—a non-profit organization entity—was launched. The Royal Project is an initiative of the Late King Bhumibol Adulyadej of Thailand. It was founded in 1969 to solve the problems of deforestation, poverty and social welfare (Highland Research and Development Institute, 2013). Today, the Royal Project Foundation has 38 development centers spread across five provinces in northern Thailand: Chiang Mai, Chiang Rai, Mae Hong Son, Lamphun and Phayao.

The Ban Pa Miang Royal Project aims to improve the quality of life of Thep Sadej’s villagers and protect natural resources by encouraging coffee cultivation in the community. This is because the village is situated in a watershed forest region at elevations ranging from 1,050 to 1,950 meters above sea level. The village's climate and pristine water quality are conducive to producing superior coffee. In addition, the Royal Project Foundation offered comprehensive support, not just in cultivating coffee but also in processing coffee cherries, including buying the harvest for roasting and facilitating market connections. While ‘Miang’ leaves are harvested from April to October, coffee cherries are collected from November to March, enabling year-round income for the community. By integrating coffee cultivation with the traditional ‘Miang’ leaves practices, members in the village ensured the continuation of the ancestral ‘Miang’ occupation alongside a new revenue stream from coffee.

This transition illustrates how the community, facing with economic challenges, gained the social capital and benefitted from the Royal Project's offerings. The Project served as a pivotal link to external expertise and markets, introducing coffee cultivation as a new source of income. This transformation demonstrates the crucial role of *bridging* social capital in connecting communities to outside resources and knowledge, facilitating innovation, and addressing economic challenges through the introduction of product innovation. At the same time, Thep Sadej villagers have to show their reciprocation by protecting their natural resources as a way to maintain social capital.

Bonding Social Capital Increasing Cultural Capital

Once the villagers mastered coffee cultivation, they began to share their knowledge and expertise within their community leading to the formation of a community enterprise. This collective effort is seen as a type of *bonding*

social capital, which aimed to enhance their coffee's value chain from establishing their own roasting facilities to marketing and selling coffee beans. These initiatives allowed villagers to source beans locally and market their finished products under their own brands.

Additionally, the community's commitment to quality and their efforts to preserve their natural resources in the vicinity (e.g., water, soil, coffee flowers, wildflower pollen) contributed a unique floral aroma to the coffee, which then led to the coffee's distinct quality. This effort was recognized with a Geographic Indication (GI) certification in 2015. By 2020, 90 coffee growers in the subdistrict had met the GI certification standards. The GI certification significantly became a symbolic capital of the community. This type of capital was used for a marketing purpose as the way to increase their economic and cultural values.

Moreover, the villagers leveraged their expertise to add cultural value to their coffee products. From the beginning, they only focused on selling coffee cherries to the buyers and continuously moved to other parts of their supply chain. Later, they learned to expand their coffee products to create coffee experiences. Some villagers started to run small cafés to introduce unique Thep Sadej coffee flavors or setup homestay accommodations showcasing the community's coffee route, marking Thep Sadej as a village deeply embedded in coffee culture.

Besides bridging social capital that introduces the product or service innovation, the exchange of knowledge, expertise and experiences (bonding social capital) can accelerate the adoption and improve product quality. Over time, as these innovations become ingrained in the villagers' way of life, they transform into symbolic, economic and cultural capitals.

The Combination of Innovation and Authenticity Creating Sustainability

From the success of coffee business, Thep Sadej's area expanded to other businesses including cafés, restaurants, and accommodation facilities, providing customers with a genuine experience of coffee. However, the villagers continue to embrace their traditional way of life, cultivating both coffee and Miang in the mountains, ensuring a steady income throughout the year. This strategy not only secures their economic future but also maintains the uniqueness of their community. The mix between old and new traditions become their cultural assets that attract tourists seeking authentic experiences. Thus, a new tourist destination emerged.

The allure of Thep Sadej has also caught the attention of entrepreneurs outside the village who are keen on tapping into its tourism potential. To balance rural tourism development with the preservation of authenticity, the Thep Sadej Coffee Entrepreneurs Club was established. The club fosters a platform for knowledge exchange among coffee producers and hospitality business owners. The Thep Sadej Coffee Entrepreneurs Club represents an extension of the community's bonding social capital. It serves as a connection between village entrepreneurs and outsiders. Moreover, local government regulations have been implemented to guide rural tourism development in a way that conserves the natural environment and the village's cultural authenticity of their coffee and 'Miang' cultural heritage.

CONCLUSION

In the Thep Sadej area, most rural tourism businesses are small but can target niche markets to gain a competitive edge. A key strategy for fostering sustainable rural tourism in Thep Sadej involves collaboration among government bodies, businesses, and the local community. This partnership facilitates the exchange of various forms of capital.

Typically, these rural enterprises are short on economic capital, yet they benefit significantly from leveraging both bridging and bonding social capitals. This social capital not only sparks innovation in products and services but also helps preserve the authenticity of the area's environmental, cultural, and economic capitals. Furthermore, the formation of local development groups is essential to ensure active community participation and coordinate efforts with other stakeholders for additional initiatives. As tourism revenue becomes a vital source of income for local residents, the community must aim to create social stability. This will help manage both the influx and outflow of the population and ensure the conservation of the natural environment.

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ONLINE SERVICE FAILURE RECOVERY STRATEGIES AND CUSTOMER SATISFACTION IN THE LUXURY FASHION INDUSTRY

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ABSTRACT

The internet has altered customer–firm interactions and service delivery. Online service failures are inevitable, but social media provides opportunities for efficient service recovery. In light of the lack of research on the drivers of customer satisfaction among luxury fashion customers, the present study investigates customer satisfaction in relation to luxury fashion brand customers and explores the motivations and barriers to satisfaction following a negative service experience. The paper considers the range of recovery strategies that can be adopted and provides managerial and marketing insights for fashion and luxury managers seeking to improve customer satisfaction using various strategies.

Keywords: Service Failure, Service Recovery, Customer Satisfaction, Social Media, Fashion Industry.

INTRODUCTION AND BACKGROUND

The luxury fashion industry plays a significant role in the retail industry globally. Globalisation and the enhancement of consumer capability are its two primary growth factors (Wang, 2022; Xie & Youn, 2020; Ozuem et al 2024). The COVID-19 pandemic precipitated both an expansion in e-commerce and a shift by luxury companies to e-commerce. The outbreak prompted long-term changes to consumer behaviour, and the adoption of e-commerce is perhaps the most notable of these. E-commerce has increased since consumers have become more used to purchasing goods and services online (Xie & Youn, 2020). The switch to online shopping aided by the ascent of smartphones has watered down incentives for fast fashion retailers to maintain a large high street presence, which has prompted a wave of branch closures in recent years. However, Elan (2021) asserted that fashion and luxury brands would undoubtedly be looking for ways to rekindle social connections in the post-pandemic era, with clothing, hair and makeup serving as a form of therapy.

The characteristics of luxury items include excellent quality, exorbitant costs, a premium image, and a pleasant purchasing and consumption experience (Wang, 2022). Gucci was one of the first luxury fashion firms to embrace e-commerce when it launched its website in 2002 (Gucci, 2020). Since then, the growth of online luxury sales has accelerated and the benefits of combining luxury and e-commerce have become more recognisable; there are a few reasons for this. First, e-commerce has facilitated the establishment of a positive online image for luxury brands, and it promotes rapid brand expansion (Liu et al., 2019). Second, the importance of accessibility in the purchasing of luxury goods cannot be overstated (Okonkwo, 2010; Ozuem et al 2021a). Online retailers can provide customers with more information and options than offline stores, and luxury brands can receive more immediate customer feedback. Moreover, social media platforms can facilitate direct and intimate connections with consumers. E-commerce facilitates the propagation and promotion of luxury brands. Ayertey et al. (2021) developed this argument, noting that luxury products are unique, creative and original. Luxury fashion companies have lagged behind in the use of e-commerce, however, due to the challenges of retaining brand image and identity. E-commerce may diminish the brand's image and reputation for exclusivity and prestige (Liu et al., 2019). It is difficult to portray the sensory qualities

of products and the luxury brand experience through virtual experiences (Okonkwo, 2010). Lee and Leonas (2021) expressed a similar point of view, arguing that fashion firms continue to have issues with the consumer buying journey in the digital age. The specific challenges mostly pertain to how to establish consumer confidence in the product and the process, including after-sales service. In relation to consumer confidence, Liu, et al (2019) and Lee and Leonas (2021) highlighted the increasing risk of online service failure in the fashion and luxury industries. This is consistent with the agreement among digital marketing scholars that one of the greatest obstacles facing fashion e-commerce is a problem that has plagued offline stores since the advent of mass-produced clothing (Ozuem et al., 2021b; Lee & Leonas, 2021): a lack of efficient sizing and fit solutions that cause consumers to make unsatisfactory purchases. According to Ayertey et al. (2021), face-to-face encounters are preferred to screen-to-screen encounters by quite some margin. The failure-recovery literature in general argues that service breakdowns are unavoidable (Ozuem et al., 2021).

THEORETICAL CONTEXT

Customers psychologically perceive luxury brands as distinct from mass-marketed brands due to a set of distinguishing characteristics, such as exclusivity, high quality and symbolic qualities (Liu et al., 2019). Customers who purchase luxury fashion labels are motivated by a desire to improve their social standing and to acquire an item that only a select few can truly possess. It is financially difficult for the majority of consumers to acquire luxury fashion brands, such as Christian Dior, Versace and Louis Vuitton. Consequently, luxury fashion brands have a reputation for being uncommon and exclusive, and only available to the elite market as opposed to the mass market. Social media emphasises the formation of interpersonal relationships between members through interactions and exchanges, whereas luxury fashion firms segregate elite fashion tastes from the mainstream market (Ozuem et al., 2023). The consumer's role has transformed from one of passive observation to one of empowered dominance. Consumers are no longer satisfied with merely purchasing fashion items; an exponential increase in the use of digital technology has given them greater autonomy. They want to interact, belong, influence and participate, and they want to form meaningful connections with the brands they purchase from. The lives of customers are becoming increasingly intertwined with technology. This phenomenon is exemplified by the emergence of online user-generated content (UGC) on online platforms, such as Twitter, Facebook and Instagram. These platforms have contributed significantly to the development of online reviews. Customers' experiences and feedback generate a large number of online reviews. As a result, these reviews have become an important source of information that can influence the purchasing decisions and behaviours of potential customers.

As evidenced by numerous studies (e.g., Elan, 2021; Ozuem et al., 2022), the number of consumers who use search engines, social media and review websites to plan their purchases is increasing. The significance of electronic word of mouth (eWOM) for luxury fashion customers must be considered in relation to the function of review sites. Key SEO and local business reviews help marketers manage their online reputation. For example, an independent consumer panel that surveyed 1124 US consumers in November 2021 (Pitman, 2022) examined how consumers choose, trust and understand local businesses using online reviews. The survey focused on Google, Facebook, Tripadvisor, Yelp and other local business reviews. Key statistics revealed that approximately 91% of individuals view blogs, product reviews and other online comments created by users prior to purchasing a product or service. In addition, 84% of respondents said they trust online reviews as much as personal recommendations, and 74% of consumers said they trust companies more if they have received positive reviews.

Liu et al. (2019) analysed engagement in online post-recovery behaviour; they focussed specifically on word of mouth (WOM) and its repercussions. They proposed that WOM has a higher impact on online brand communities; thus, although negative online WOM may impact all types of customers, brands face a higher threat if unfavourable WOM is distributed. According to Elan (2021), online consumer reviews convey a wealth of information. Online customer ratings are frequently viewed as an indication of overall consumer satisfaction, and numerous studies have examined this phenomenon (e.g., Ozuem et al., 2023; Bain & Company, 2020). The issue lies in the provision of customer-satisfying recovery techniques. Continual efforts are being made to meet the ever-increasing expectations of customers. At a time of high inflation and rising household expenses, it is more crucial than ever to provide customers with the best possible value. Failure-recovery literature has generally defined customer satisfaction as the customer's perception of having successfully recovered from a service failure (Wang, 2022). Approaching service recovery strategies through their antecedents, such as shoppers frustrated at machine glitches at self-service checkouts, and service failure typologies led to questions on the topic of self-service: What recovery strategy satisfies a customer

and how do customers' expectations vary? Although some view these concerns as rhetorical, the variability of customer preferences challenges practitioners on a regular basis, and a disconnect is notable between customer and the recovery. In light of the lack of research on the drivers of customer satisfaction among luxury fashion customers, the present study investigated customer satisfaction among luxury fashion brand customers. It investigated online feedback motivations and barriers to satisfaction. Fashion and luxury firms can use the pros and cons highlighted in customer reviews as a guide to maintain their strengths and improve their weaknesses. The chapter finished with a discussion of the study's implications, solutions, and conclusions for professionals and academics.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Managers must promote fashion businesses' endless collections, seasons, runways and campaigns. This chapter suggests that effective recovery strategies for online fashion customers are important to improve customer experiences because service failure may influence customers' post-recovery attitude and behaviour on social media platforms. Social media, consumer ratings and online platforms allow consumers to freely and openly review many products and services. This abundance of information can help businesses gain a competitive edge by changing their strategies. Customer satisfaction is key to social media success in competitive markets. Service failure and recovery strategies are prone to myopic explanations that generate literal questions and parochial responses. According to offline service failure researchers (Odoom et al., 2020; Ozuem and Willis, 2022), customers are heterogeneous and unpredictable in terms of their recovery evaluations, and a structured approach leads to contradictory research findings and unsatisfactory recovery cases.

Thus, customers' interactions with service providers concerning online service failure and recovery strategies are more important than investigating single service failure-recovery experiences; many online service recovery scholars have avoided such an approach. 'Limited understanding of customers' is the main indicator of failed recoveries in offline service failure and recovery strategy literature (Ozuem et al., 2023). Fashion retailers can overcome negative UGC recovery challenges by using social media properly. The findings suggest that businesses should have practical service failure recovery strategies. Employees cannot be service recovery experts. Thus, if employees know what recovery strategy to use and are empowered to do so, they use it effectively. Thus, they should be trained to understand customer expectations and make recovery decisions.

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AI: RISK MANAGEMENT AND MEASUREMENT

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ABSTRACT

Artificial intelligence (AI) systems are inherently risky because how they work is not knowable in detail and how the different elements of an algorithm interact is also not knowable. Monitoring over time will improve understanding of AI systems. Testing the system comprehensively would take a long time and how the elements in the AI system interact would still not be known with great certainty. Hence, there is a need for qualitative and quantitative metrics to measure and quantify the risks inherent in AI systems and to predict an AI system's response or behaviour. Lessons about social acceptance of AI systems could be learned from the introduction of electric vehicle technology that engaged the public and involved stakeholders. Technoeconomic analysis draws out the financial implications and economic benefits of technologies such as AI systems. Risk with AI systems is trust-based and minimising risk will enhance the adoption of AI systems. However, focusing on AI regulation to minimise risks does not guarantee the safety of AI. AI risk reduction requires regulation and innovation.

Keywords: AI, risk management, quantitative risk dimensions, privacy, fairness, trust.

INTRODUCTION

The potential of generative artificial intelligence (AI) to influence humanity is enormous. Its impacts on society, the economy and the workforce will cause unimaginable changes. The size of the AI market is projected to reach \$407 billion by 2027 from a position of \$86.9 billion in 2022. AI is expected to contribute to a 21% net increase in US gross domestic product by 2030 (Haan, 2023a). A Forbes Advisor survey revealed that 75% of consumers fear misinformation by AI tools, such as chatbots (Haan, 2023b). However, 64% of businesses expect AI to improve to productivity (Haan, 2023a). The statistics demonstrate the size and depth of the opportunity of the application of AI to the workforce, society and businesses. However, with opportunities, especially of the size and scope of AI, come risks; the inherent risks in the introduction of new and emerging technologies require understanding and strategies to manage them.

The ranking of the top business applications of AI are: service operations (rank 1), product and service development (rank 2), marketing and sales (rank 3), manufacturing (rank 4), supply chain management (rank 5), risk

modelling and analytics and fraud and debt analytics (rank 6), human resources (rank 7), strategy and corporate finance (rank 7) (McKinsey, 2022). The ranking is based on the business applications in each business function. The primary objective of this paper is to assess the risks and management of AI holistically and identify learning from electric vehicle (EV) technology, which has many parallels with the introduction of AI technology. The paper has sections on AI risks, attitudes to AI risks, and EV risks and measurements.

LITERATURE REVIEW

AI Risks

The increasing use of AI in industries, such as healthcare, carries potentially enormous risk (Dastin, 2018). Risks from the application of AI include harm to society and brand reputation (customers', suppliers' and employees' perceptions of the firm leading to potential legal action) and increasing scrutiny with greater regulatory imposition (Piorkowski, Hind, & Richards, 2022). One approach to reducing risk in AI application is the collection and monitoring of data and information (facts), which influence and govern regulatory processes and organisational policies (Arnold et al., 2019). IBM has introduced a "fact sheet" algorithm that collects these facts; this fact sheet algorithm is the foundation for transparency and governance (Sabhlok, 2022). IBM is expecting firms to use this technology; however, organisations will wish to assess the risk of using a model without knowledge of how it was constructed or access to its developers (Piorkowski, Hind, & Richards, 2022).

AI ecosystems are dynamic and influenced by many factors. Regulatory control could be at the national level (Cabinet Office and Central Digital and Data Office, 2021) and local level (New York City Council, 2021). The Data Trust Alliance is a consortium of companies that require vendors of Human Resources-driven AI applications to meet standards on transparency; other initiatives include AI diligence on mergers and acquisitions and ensuring the safety of AI algorithms used in decision making in the workplace (Data Trust Alliance, 2024).

The idea of risk assessment is not unusual and occurs in many areas of society from car inspections to job and employee evaluations. The output from an audit identifies a level of trust and confidence that the device/person is complying with the standards (not necessarily all the standards) and enables action if there are gaps in the audit process. An audit assessment can be internal or external. Internal audits are carried out by the organisation and external audits are conducted by third parties. Audit assessments can be qualitative or quantitative or both. Qualitative assessments are much wider in focus compared to quantitative assessments. In general, a qualitative assessment can provide a rich picture of a process with potentially detailed information, whereas a quantitative assessment focuses on specific areas with clearly defined metrics. Nevertheless, they can be used together and they can be complementary. AI assessments tend to focus on quantitative metrics (Piorkowski, Hind, & Richards, 2022). With the AI community moving to a quantitative risk assessment, it is worth identifying the potential dimensions for quantitative risk assessment. Piorkowski, Hind and Richards (2022) developed a set of quantitative risk dimensions:

Performance and uncertainty

The accuracy of machine learning in decision making is in doubt and this is a risk. Predictions that are too high in a buyer-seller situation will mean the buyer (customer) may not be willing to pay. Consequently, the seller (business) will lose money. Improvement in accuracy can be achieved with training on test data. It is not always possible to access comprehensive test data, such as testing the creditworthiness of loan applicants. Methods to improve accuracy include segmentation of training data (Ackerman, Raz, & Zalmanovici, 2021); toolkits that quantify the uncertainty of AI models (Ghosh et al., 2021) and creating rigorous artificial test data (Aggarwal et al., 2021).

Fairness

Machine learning is based on statistical analysis that leads to statistical discrimination. When the discrimination is based on privilege versus unprivileged, or advantage based on a systematic advantage over the unprivileged, then society will raise objections. Should creditworthiness just be based on people with higher salaries or aimed towards a particular ethnic group? (Piorkowski, Hind, & Richards, 2022). Training data biases due to prejudice in labelling or under/over sampling lead to unwarranted bias (Barocas & Selbst, 2016). A fairness assessment "measures the likelihood that a model treats one group less favorably than another group even though the groups do not differ in a way that is relevant for the use case. Systematically treating one group less favorably can be illegal, harmful to society, and result in litigation" (Piorkowski, Hind, & Richards, 2022: 3).

Privacy

Many privacy regulations require that organisations abide by privacy principles, for example, the European Union's General Data Protection Regulation (GDPR) (European Union, 2016). Studies by Shokri et al. (2017) and Fredrikson, Jha and Ristenpart (2015) have shown that a third party with malicious intent and access to a trained machine language model can do harm and access personal data by inference of the people's identity that were used to train the model. AI models need to be able to recognise and protect themselves from such activities; this is a growing area of research (Piorkowski, Hind, & Richards, 2022).

Adversarial robustness

Not only are AI systems exposed to risks internally (privacy) but also an attacker can disturb the output to their advantage (Piorkowski, Hind, & Richards, 2022). Examples include hidden modification of input images leading to erroneous information/classifications (Szegedy et al., 2014). Also, model theft is possible if the attacker can gain access to output labels for input data (Piorkowski, Hind, & Richards, 2022). To prevent these situations an AI system must be robust.

Explainability

Explaining how an AI system's decisions are made will aid understanding of the decision-making process and lead to transparency and understandability of the overall model (Piorkowski, Hind, & Richards, 2022). Explanations can decrease the risk of AI systems taking inappropriate decisions. Examples where explainability could be required include decisions near a decision boundary not considered by the model and how they should be classified (Piorkowski, Hind, & Richards, 2022). Regulatory bodies such as the Data Trust Alliance (2024) require certain types of decisions to be explainable. AI explainability is a growing body of research and many tools are available (Arya et al., 2019).

Attitudes to AI Risks

AI will have a profound impact on society over several decades (Olhede & Wolfe, 2018; Vesnic-Alujevic, Nascimento, & Polvora, 2020). The adoption, use and application of AI is a fait accompli because corporations make the decision on how AI systems are used and applied (Chen & Wen, 2021). Individual differences in people's personality affect their behaviour and attitudes (Schepman & Rodway, 2023). Personality influences the acceptance of technology. The acceptance of technology might not necessarily be consistent; it could be based on perceived useability, intention to use and so on. The big five personality traits are: open-mindedness, conscientiousness, extraversion, agreeableness and neuroticism. According to the technology acceptance model (Davis, 1989), perceived usefulness has a positive association with agreeableness, and a negative association with neuroticism, and conscientiousness and extraversion are significantly positive moderating variables (Schepman & Rodway, 2023; Devaraj, Easley, & Crant, 2008).

Trust has been researched as a predictor of risk perception in relation to the acceptance of new technology (Schepman & Rodway, 2023). The public is willing to accept AI (Logg, Minson & Moore, 2019) but at the same time has concerns about AI (Schepman & Rodway, 2020; Yoko & Nakayachi, 2021). However, in certain contexts (nuclear power and climate change), the end users have no choice but to accept a third party and the associated risks, but there is no trust in the third party (Siegrist, 2021).

End user reliance on AI puts trust and attitude to AI in focus. Reliance-based trust refers to confidence in the ability of a technology to deliver functionality, consistency and safety in the task it was designed for (Schepman & Rodway, 2023). An example of reliance-based trust is the use of autonomous vehicles by people with a lack of mobility due to poor health (Charness et al., 2018). Another aspect of trust is linked to explainability (Piorkowski, Hind, & Richards, 2022). AI systems that are less of a black box (i.e., the workings are understood by humans) will engender more trust (EU, 2020). Another trust issue is that AI systems are normally controlled by big corporations that could harvest and use user data without informed consent from the user (Schepman & Rodway, 2023; Ikkatai et al., 2022). People who have a strong distrust of corporations felt negatively about the drawbacks of AI but also were less receptive to the positive aspects of AI (Schepman & Rodway, 2023). AI systems are designed by humans so general trust in humans is also a concern to end users (Deng et al., 2020). Schepman and Rodway (2023) examined people's personality traits and attitude to AI systems. They found that introverts have a more positive attitude to AI systems than extraverts; this suggest that introverts prefer algorithms to humans (Logg, Minson, & Moore, 2019). Their

findings supported the hypothesis that people with a more conscientiousness personality have a more positive attitude to the negative aspects of AI systems. Conscientious people may be more willing to forgive drawbacks in technology.

EV Risks and Measurements

Some of the risk management issues associated with EV grid integration (EVGI) using smart charging (the integration of EV charging with the national grid and the sharing of real-time data) are applicable to the AI ecosystem. The risks identified for smart EVGI range from technoeconomic risks to public acceptance risks; these risks are also associated with AI.

Technoeconomic

The implementation of smart EVGI requires understanding of the economic and technological risks that quantify the financial and economic risks associated with smart EVGI. Rigorous technoeconomic analysis enables stakeholders to understand the potential challenges and to devise strategies to maximise the potential benefits and maximise economic benefits while ensuring efficient and reliable operations for charging (Mahmud, Medha, & Hasanuzzaman, 2023). A Monte Carlo-based modelling and computational framework has been devised for assessing the technical and financial viability of smart hubs (George-Williams, Wade, & Carpenter, 2022). A similar method for AI systems would help to quantify the economic benefits and help decide if some AI systems are worthwhile economically and socially. Technoeconomic analysis is a critical tool for assessing and understanding “the feasibility, revenue potential, cost savings, and operational optimisation of smart charging systems. These studies demonstrate the importance of considering both technological and economic factors when making decisions regarding the implementation of smart charging solutions for electric vehicles” (Mahmud, Medha, & Hasanuzzaman, 2023: 13).

Public acceptance

Social acceptance of EVGI smart charging is an important factor in the feasibility and acceptance of its implementation. Understanding and addressing social perceptions, concerns and attitudes to smart charging is essential for the successful introduction and adoption of EVGI smart charging into communities (Mahmud, Medha, & Hasanuzzaman, 2023).

Several surveys in the US on attitudes to smart charging have shown a positive shift in public acceptance (Pew Research Center, 2021). Increasing global sales of EVs has demonstrated growing public acceptance (IEA, 2021). According to several studies, public engagement and stakeholder involvement are highlighted as important drivers of social acceptance of smart charging. The use of surveys, focus groups and public consultations are some of the many ways to get insight into public opinion on preferences, concerns and expectations of smart charging infrastructure (Mahmud, Medha, & Hasanuzzaman, 2023).

Quantitative indicators have demonstrated the continuing acceptance of EVGI smart charging and EV integration. Attitudes to, and social acceptance of, EV smart charging are likely to vary over time; therefore, they should be continually monitored. Raising awareness, addressing concerns and improving charging infrastructure will continue the positive trajectory of social acceptance (Mahmud, Medha, & Hasanuzzaman, 2023).

IMPLICATIONS

The growth of AI as part of business expansion requires risk assessment. The importance of AI to businesses, the economy, workplaces and society indicates that the assessment of risks from AI algorithms should become important or even mandatory.

AI systems are not going to disappear, so risk assessment is required using qualitative and quantitative techniques. Qualitative measurement gives understanding and an explainability context for an AI system’s risks. However, some objective metrics are required that use quantitative techniques (Piorkowski, Hind, & Richards, 2022). A combination of quantitative and qualitative risk management techniques gives a holistic picture of an AI system’s risks. One limitation to quantitative risk metrics is understanding when a risk profile decision cannot be accurately undertaken by the AI algorithm. Decision making has boundaries or grey areas where a decision needs to be made by a higher authority, in the case of AI systems this would be human intervention in the decision-making process. This will require that all decisions have a threshold to determine if the AI system can make the decision or if human

intervention is required. Who sets the threshold? What is the tolerance for the thresholds? Importantly, how are the thresholds derived from the training data and are they representative of the real-time situation within which the AI system operates? If quantitative metrics are to gain acceptance within organisations and society is a consensus approach required? Which stakeholders will be the arbitrators of the metrics and boundary profiles of the metrics?

GDPR takes a holistic perspective of organisational data governance. Is the regulatory framework fit for managing internal data within AI systems? How are training data to be regulated? What is the level of decision making that AI systems can decide upon without regulatory intervention? AI systems are undergoing continuous innovation, and the architecture of the algorithms will evolve; change could be substantial. How is this to be regulated? Innovation could make some AI system risks redundant but create new ones. Is there a need for a separate governance system for data in AI systems? Data governance in business tends to focus on the organisational aspects and does not consider data governance within the AI systems.

The many different types of trust-based constructs impinge on the adoption of AI systems. Improvement in technology-based trust constructs requires public engagement and explainability of the AI applications. Personality underpins behaviour and attitude and these influence the adoption of, and trust in, technology. Removing the black box approach to AI systems improves explainability, but is this enough? Public understanding of the technoeconomic benefits will also aid and strengthen the adoption of AI systems. There will always be resistance to change, and the adoption of new and emerging technology can cause considerable change, which could be decades in the making. Bringing the users and the public along so they understand the benefits and the vulnerability of the technology will ensure balanced public and end user discussions; discussions that are open can create trust and can dispel some of the trust-based constructs that impinge on the adoption of AI. Consequently, openness about the benefits and limitations of AI technology must be promoted to get more people to adopt it regardless of their attitude and personality. Ultimately, big corporations are the ones who own the AI technology and there will be a degree of force for its adoption. It is better for society to get “comfortable” before big corporations enforce AI systems universally. It comes down to innovation and regulation. AI is a fast-moving technology and its impact will become pervasive; regulation will not be able to minimise all the risks. Innovation will help to minimise AI risks so countries that focus on regulation at the expense of innovation in AI could be putting themselves at a disadvantage. Successful AI systems require innovation and regulation in equal measure. $AI\ risk\ reduction = regulation + innovation$.

CONCLUSION

AI systems are becoming a global phenomenon, and big corporations understand the technoeconomic benefits. AI systems are essentially a big corporation tool, and the power resides with the corporations. However, they need to ensure that the public engage with AI systems so that adoption is “smooth”; this requires taking care of the trust issues and involving stakeholders in discussions about AI systems and moving towards a consensus. Technology like AI is evolving; defraying the risks by regulation could be wishful thinking. A combination of regulation and innovation is an important approach to minimising AI risks.

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THE INTRICATE RELATIONSHIP BETWEEN CULTURE AND INTERNATIONAL MANAGEMENT

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ABSTRACT

Understanding the intricate interplay between culture and international management is crucial in today's globalized business landscape. This paper explores the profound impact of culture on decision-making, communication, and organizational dynamics within multinational corporations. Culture acts as a lens through which managers interpret the world, significantly influencing strategic choices and operational decisions. Cultural nuances in values, norms, and risk perceptions shape managerial approaches to market entry, resource allocation, and organizational structure across diverse international contexts. This research focuses primarily on the impact of culture on global economic development, the strategies required to navigate the complexities of cultural diversity, and the opportunities and challenges that emerge in this dynamic landscape. The overarching research thesis postulates that cultural dynamics profoundly shape international business practices, influencing core values, negotiation, communication, and even sustainability efforts. This understanding is crucial for businesses seeking success in an ever-globalizing world. The exploration of this topic begins with a historical context that lays the foundation for understanding the pivotal role culture plays in international business, followed by an examination of how culture shapes global markets and the profound impact of diverse cultures on international business practices. Subsequently, attention turns to the critical matters of sustainability and how culture influences both environmental and social sustainability. Finally, strategies for continued success are outlined, emphasizing the necessity of embracing cultural diversity and employing technology and cross-cultural education as key tools to bridge cultural gaps. Effective communication is essential for successful international management, yet cultural disparities in styles, language, and nonverbal cues often pose challenges. Managers must adeptly navigate these cultural intricacies, employing sensitive communication strategies to foster collaboration across geographically dispersed teams. A business enterprise must develop effective approaches to accommodating a country's specific cultures, adopting communication styles, negotiation techniques, and other specific business practices that reflect a country's cultural beliefs and practices. Cultural awareness will enable businesses to compete more effectively in a global market and earn favor from international customers. Moreover, cultural diversity within multinational organizations drives variations in leadership styles, teamwork dynamics, and employee motivation. Embracing this diversity can foster innovation and creativity but requires inclusive environments that celebrate differences while promoting shared organizational values. Navigating cultural diversity is more than an essential skill; it is a strategic requirement for international business. To succeed, businesses must recognize the foundational role of culture within their organizations and align core values, missions, and organizational culture with the cultural contexts in which they operate. Further, understanding cultural norms and behaviors in negotiations is critical. This paper argues for investing time and resources in cross-cultural training and education to empower business professionals to navigate these challenges, leading to more successful international negotiations. Additionally, the role of technology cannot be overstated in overcoming communication barriers stemming from cultural diversity and fostering collaboration and idea-sharing across the globe. The exploration aims to underline that recognizing and effectively navigating the challenges and opportunities of cultural diversity is essential for international businesses, enabling more successful global practices and addressing critical issues such as sustainability and harmonized global efforts. In summary, culture permeates every aspect of international management, influencing strategic decisions, communication dynamics, and organizational culture. Cultivating cultural intelligence and cross-cultural competency enables managers to effectively navigate global business complexities, fostering collaboration and sustainable success in the international arena.

Keywords: culture, management, cultural intelligence, collaboration.

INTRODUCTION

This paper explores the intricate interaction between culture and international business. Understanding the profound historical context of global commerce is the first step in recognizing the significance of culture in shaping international business practices. From the ancient Silk Road, which served as a conduit between continents for not only goods but also ideas and customs, to the rise and fall of mercantilism and the turbulent events of the 20th century, history provides a lens through which one can grasp the ongoing influence of culture on international trade.

The primary aim of this paper is to investigate the impact of culture on global economic development, the strategies required to navigate the complexities of cultural diversity, and the opportunities and challenges that emerge in this dynamic landscape. The overarching research thesis postulates that cultural dynamics profoundly shape international business practices, influencing core values, negotiation, communication, and even sustainability efforts. This understanding is crucial for businesses seeking success in an ever-globalizing world. The exploration of this topic begins with a historical context that lays the foundation for understanding the pivotal role culture plays in international business, followed by an examination of how culture shapes global markets and the profound impact of diverse cultures on international business practices. Subsequently, attention turns to the critical matters of sustainability and how culture influences both environmental and social sustainability. Finally, strategies for continued success are outlined, emphasizing the necessity of embracing cultural diversity and employing technology and cross-cultural education as key tools to bridge cultural gaps.

UNDERSTANDING CULTURE IN INTERNATIONAL BUSINESS

The relationship between culture and international business is profound and has evolved significantly over time. Understanding this intricate interaction requires delving into the historical context of globalization, cultural exchange, and the emergence of multinational corporations. Since ancient times, trade has been a catalyst for cultural exchange. As merchants traversed distant lands, they not only exchanged goods but also ideas, languages, and customs. Ancient trade routes like the Silk Road facilitated the flow of goods and cultural practices between Asia, Europe, and Africa, leading to the exchange of technologies, philosophies, and religions.

During the colonial era, European powers expanded their empires across the globe, imposing their culture, language, and economic systems on colonized territories. This period saw the emergence of mercantilism, where colonies served as sources of raw materials and markets for finished goods. The cultural impact was profound, as indigenous cultures often faced suppression or assimilation into the colonial power's dominant culture. The Industrial Revolution brought about significant changes in technology, transportation, and communication, paving the way for increased global trade. As countries industrialized, they sought new markets for their products and new sources of raw materials, leading to increased international economic interactions. This era also saw the rise of multinational corporations, which played a pivotal role in shaping global commerce and culture.

The spread of Western culture, particularly American culture, through media, entertainment, and consumer products, has been a dominant force in the latter half of the 20th century and into the 21st century. Often termed cultural imperialism or cultural hegemony, this phenomenon has sparked debates about cultural homogenization versus cultural diversity. While some societies embrace Western influences, others resist them, seeking to preserve their cultural identities in the face of globalization. In recent decades, there has been a growing recognition of the importance of cultural sensitivity in international business. Companies operating across borders must navigate diverse cultural norms, values, and business practices. Failure to understand and respect these differences can lead to misunderstandings, conflicts, and business failures. To address this issue, businesses now invest in cross-cultural training for employees and adopt strategies tailored to specific cultural contexts.

In the 21st century, globalization has entered a new phase, characterized by increased interconnectedness and the rise of digital technologies. This has facilitated the exchange of ideas, values, and practices across borders at an unprecedented pace. Moreover, cultural hybridity has become more prevalent, as people around the world blend elements of different cultures to create new cultural expressions and identities. The history of the interaction between culture and international business is a complex tapestry of exchanges, conflicts, and adaptations. From ancient trade routes to the digital age, culture has been both a barrier and a bridge in the realm of global commerce. Recognizing

and respecting cultural differences is essential for successful international business ventures in an increasingly interconnected world.

HISTORICAL EVOLUTION OF INTERNATIONAL BUSINESS

To truly comprehend the complex landscape of international business and how it interacts with culture, it is essential to understand the historical evolution of global commerce. Beginning in about 200 BC, “the Silk Road was the first major trade route . . . connecting Asia with Europe via the Middle East” (Wilén, 2022). Not only did these civilizations share silk, gold, and other goods along this trade route, but they also exchanged religions, customs, and other ways of life that are still in place today. The next major aspect of international trade emerged much later, during the early 16th century. This was the theory of mercantilism, in which “a nation’s wealth was measured by its gold reserves and net exports” (Wilén, 2022). Mercantilism operated by establishing colonies and compelling them to import raw materials at low prices to the mother country. Finished products were then exported back to the colonies at higher prices, with trade restrictions established to force the colonies to purchase goods solely from the mother country. This practice was not beneficial for colonized countries, as they were placed under strict rule and had no cultural or economic freedom. In the 18th century, mercantilism ultimately failed due to its restrictive and controlling nature, and their intolerance towards religion and free will within the colonies.

Later, in 1914, the assassination of Archduke Franz Ferdinand in Sarajevo served as the starting point for World War I, leading all European powers to enter the war on one side or the other (Wilén, 2022). After four gruesome years of war that left numerous countries in ruins, the global economy was in a crisis that lasted more than 10 years. The Great Depression was caused by “overproduction, increased competition between companies, high tariffs on imported goods, and low export prices” (Wilén, 2022). When the United States entered World War II, defense manufacturing ramped up, creating an increasing number of private-sector jobs, which benefited both the United States and the rest of the world (Onion et al., 2009). Post–World War II, there was a significant increase in international trade and the formation of multinational corporations across various global sectors. An examination of the historical evolution of international business reveals that culture has consistently played a pivotal role in shaping trade, economic theories, and global events, underscoring the importance of cultural dynamics in international business practices.

GLOBAL IMPACT OF CULTURE ON INTERNATIONAL BUSINESS

The complex interaction between culture and international business has profound global implications across various dimensions, with cultural differences significantly influencing consumer behavior, preferences, and purchasing decisions. Understanding local customs, traditions, and values is crucial for successful market penetration and brand positioning because what works in one culture might be perceived differently or even negatively in another.

Effective communication is the cornerstone of successful international business dealings. However, communication is significantly influenced by communication styles, etiquette, and even nonverbal cues. Misunderstandings can arise due to differences in language, tone, or gestures, leading to strained relationships or failed negotiations. Cultural disparities also extend to management styles and organizational structures. Leadership approaches, decision-making processes, and employee expectations vary across cultures. Adapting management practices to align with local cultural norms enhances employee satisfaction, productivity, and overall organizational performance.

Cultural values also shape ethical frameworks, influencing business practices and decision-making. What may be considered ethical in one culture might be perceived as unethical or inappropriate in another. Understanding and respecting these differences is essential for maintaining ethical integrity and fostering trust in international business relationships. Cultural factors can influence legal frameworks and regulatory environments, impacting business operations, trade agreements, and investment policies. Navigating diverse legal landscapes requires cultural sensitivity and awareness to ensure compliance while mitigating legal risks.

Cultural diversity fosters innovation by bringing together different perspectives, experiences, and ideas. International businesses that embrace cultural diversity are better equipped to adapt to changing market dynamics,

anticipate consumer needs, and create innovative products and services that resonate with diverse global audiences. International business activities can have profound social consequences, including economic development, employment opportunities, and cultural exchanges. Culturally sensitive engagement with local communities fosters positive social impacts, promotes sustainable development, and enhances cross-cultural understanding and cooperation.

The interplay between culture and international business is central to the ongoing process of globalization. While globalization facilitates economic integration and cultural exchange, it also raises concerns about cultural homogenization and the preservation of cultural identities. Balancing the benefits of globalization with the preservation of cultural diversity requires careful consideration and proactive measures. The intricate interaction between culture and international business shapes global economies, societies, and identities. Recognizing and navigating cultural differences with sensitivity and adaptability is essential for fostering successful and sustainable international business relationships in an increasingly interconnected world.

BUSINESS IMPACT OF CULTURE ON INTERNATIONAL BUSINESS

The interplay between culture and international business is profound and multifaceted, influencing various aspects of operations, strategies, and outcomes. Understanding and effectively managing this interaction can have significant implications for businesses. Companies must tailor their approach to suit local customs, preferences, and sociocultural norms. Ignoring cultural factors can lead to market rejection or failure. For instance, cultural nuances heavily influence market entry strategies, and successful entry into a new market often requires adapting products, services, and marketing messages to align with local cultural sensibilities.

Cultural differences profoundly impact consumer behavior and preferences. What works in one market may not resonate in another due to differences in values, beliefs, and lifestyle choices. Businesses must conduct thorough cultural research to understand consumer needs, purchasing habits, and decision-making processes to effectively cater to diverse markets. Cultural sensitivity is crucial in communication and marketing strategies. Language barriers, nonverbal cues, and cultural symbols can either facilitate or impede effective communication. Businesses must craft messages that resonate with local audiences while avoiding cultural taboos or offensive content. Localization of marketing campaigns is essential for building trust and credibility.

Cultural norms heavily influence negotiation styles and relationship-building approaches. In some cultures, building personal rapport is a prerequisite for business deals, while others prioritize professionalism and efficiency. Understanding cultural nuances in communication styles, decision-making processes, and conflict-resolution methods is critical for successful negotiations and long-term partnerships. Managing a culturally diverse workforce requires sensitivity to cultural differences. Effective leadership, communication, and conflict-resolution skills are essential for fostering a collaborative and inclusive work environment. Additionally, cultural differences may impact HR policies related to recruitment, training, compensation, and performance evaluation.

Legal and Ethical Considerations

Cultural variations extend to legal and ethical norms, requiring businesses to navigate complex regulatory landscapes. What is acceptable business practice in one culture may be considered unethical or even illegal in another. Compliance with local laws and regulations, as well as adherence to global ethical standards, is paramount to avoid legal disputes and reputational damage. Cultural diversity can foster innovation and creativity by bringing together diverse perspectives, experiences, and ideas. Companies that embrace cultural diversity within their workforce are better positioned to generate innovative ideas and solutions that resonate with global markets. Cross-cultural collaboration can lead to the development of products and services that cater to diverse customer needs and preferences.

Cultural differences pose both opportunities and risks for international businesses. Failure to understand or respect cultural norms can result in misinterpretation, miscommunication, and conflict, leading to operational disruptions or reputational damage. Implementing robust risk management strategies that account for cultural factors can help mitigate these risks and safeguard business interests. In essence, the intricate interaction between culture and

international business underscores the importance of cultural intelligence and adaptability in today's global marketplace. Businesses that recognize and leverage cultural diversity as a source of competitive advantage are better positioned to thrive in an increasingly interconnected and culturally complex world.

LANGUAGE AND CROSS-CULTURAL COMMUNICATION IN INTERNATIONAL BUSINESS

Language plays a significant role in international business, and its impact on cross-cultural communication is undeniable. Different languages can create challenges in business interactions, potentially leading to communication barriers, misunderstandings, and even conflicts. It is necessary to understand the variations of language to facilitate effective cross-cultural communication in business. Cross-cultural communication can be quite challenging because of differences in language, culture, and nonverbal cues. These differences in language structures, idioms, and vocabulary often make it difficult to communicate effectively and can lead to misunderstandings. Cultural norms, which are deeply tied to language, can also complicate matters, as what is considered polite or acceptable in one culture may have negative connotations in another. Additionally, people from different cultures may interpret tone, gestures, and body language differently, potentially leading to misinterpretations and even offense (Ding, 2018).

In international business, understanding and respecting local business etiquette and customs is crucial. These norms vary by region, impacting how meetings are conducted, how negotiations unfold, and how relationships are built. For example, cultural differences can significantly influence how meetings are conducted, the formality of business attire, and the proper way to address colleagues or superiors. Ignoring or disregarding these customs can hinder effective communication, strain relationships, and ultimately influence the outcome of international business endeavors (U.S. Commercial Service, n.d.).

Individuals' choices and preferences are significantly molded by the cultural values and norms of their regions. These cultural influences are fundamental to what individuals from diverse backgrounds look for and expect in the products and services they encounter. Therefore, a one-size-fits-all marketing and product design strategy will not be effective in every context. What attracts one culture might repel another, so marketing approaches and product characteristics must be adapted to match the customs and preferences of the local population. Understanding that culture underpins consumer behavior is crucial for global businesses to succeed and thrive (Kim & Li, 2013).

It is also essential to grasp how the rules and regulations of a culture are profoundly connected to its values and customs. Following the law isn't just about checking boxes; it's about showing respect for the values and expectations those laws represent. Failure to recognize this can have severe consequences, including legal penalties and harm to a company's reputation. This understanding goes beyond just reading the legal text. It involves considering how the laws work in practice, the level of trust individuals have in their institutions, and the ethical standards they uphold. To ensure they operate ethically and within the bounds of the law, international businesses must navigate these laws with an awareness of cultural differences in diverse global markets (Ermasova, 2021).

SUSTAINABILITY STRATEGIES FOR MANAGING CULTURAL DIFFERENCES

The relationship between culture and international business sustainability is multifaceted and crucial to comprehend in today's globalized world. There are several key aspects of this intricate relationship. First, different cultures have varying values and beliefs regarding sustainability. For example, some cultures may prioritize environmental conservation, while others place more emphasis on economic growth. For businesses operating internationally, understanding these cultural nuances is essential to effectively tailoring sustainability initiatives. This might involve adapting practices to align with local cultural values or engaging in cross-cultural dialogue to promote sustainability in a way that resonates with diverse stakeholders.

Corporate social responsibility (CSR) initiatives are often influenced by cultural norms and expectations. In some cultures, there may be a strong tradition of corporate philanthropy, while in others, there may be greater emphasis on social welfare programs or environmental stewardship. Companies must navigate these cultural expectations to

develop CSR strategies that are both impactful and culturally sensitive. Failure to do so can lead to reputational damage and hinder long-term sustainability efforts.

International businesses operate in culturally diverse environments, involving interactions with various stakeholders, such as employees, customers, suppliers, and local communities. Effective stakeholder engagement requires cultural sensitivity and understanding to build trust and foster collaboration. Respect for cultural differences, language barriers, and local customs is essential for building positive relationships and advancing sustainability goals.

Cultural factors often influence the development and implementation of legal and regulatory frameworks related to sustainability. Business operations must comply with local laws and regulations, which may reflect cultural attitudes toward environmental protection, labor rights, and ethical business practices. Navigating these diverse legal landscapes requires a nuanced understanding of cultural contexts and effective engagement with local authorities and stakeholders. Effective communication and collaboration across cultures are vital for advancing sustainability in international business. This involves not only linguistic translation but also an understanding of cultural nuances in communication styles, decision-making processes, and conflict resolution. Building multicultural teams and fostering inclusive work environments can enhance creativity, innovation, and problem-solving capabilities, leading to more sustainable business practices.

Culturally adaptive businesses are better positioned to innovate and develop sustainable solutions tailored to local contexts. This might involve incorporating indigenous knowledge, traditional practices, or alternative technologies that are more compatible with cultural values and preferences. By embracing cultural diversity and fostering a culture of innovation, companies can drive positive change and contribute to sustainable development on a global scale. In essence, the intricate interaction between culture and international business in the context of sustainability underscores the importance of cultural sensitivity, adaptability, and collaboration. By recognizing and leveraging cultural diversity as a source of strength, businesses can enhance their sustainability performance and create shared value for society and the environment.

FUTURE TRENDS AND RECOMMENDATIONS

The future of the intricate interaction between culture and international business is poised to be both fascinating and complex. Here are some key aspects to consider: As globalization continues to deepen, cultures will increasingly intermingle. This fusion will shape not only consumer preferences but also organizational structures and management styles. International businesses will need to navigate this cultural diversity adeptly to thrive in diverse markets. Understanding and respecting local cultures will become even more critical for international businesses. Companies will need to tailor their products, marketing strategies, and even business practices to resonate with diverse cultural norms and values. This might involve extensive localization efforts, from language translation to adapting product features.

Technology will play a significant role in bridging cultural gaps and facilitating international business interactions. Virtual reality, artificial intelligence, and language translation technologies will enable smoother communication and collaboration across cultures. However, businesses must also be mindful of potential cultural biases embedded in these technologies. As international businesses operate across diverse cultural landscapes, ethical considerations will come to the forefront. Companies will need to navigate complex ethical dilemmas related to labor practices, environmental sustainability, and social responsibility in different cultural contexts. Maintaining a positive reputation and fostering trust with local communities will be essential.

Effective leadership in international business will require a high degree of cultural adaptability. Leaders will need to possess cultural intelligence, empathy, and the ability to navigate cultural nuances sensitively. This might involve investing in cross-cultural training programs and creating diverse leadership teams. Despite efforts to understand and respect various cultures, international businesses will inevitably encounter cultural challenges and misunderstandings. Building resilience to navigate these challenges, whether through effective conflict resolution mechanisms or agile decision-making processes, will be crucial for long-term success.

Embracing cultural diversity can also fuel innovation and creativity within international businesses. By bringing together individuals from different cultural backgrounds, companies can foster new ideas, perspectives, and

approaches to problem-solving. Encouraging diversity and inclusivity in the workplace will be essential to harnessing this potential. The future of the interaction between culture and international business will be characterized by a delicate balancing act between embracing cultural diversity and navigating its complexities. Businesses that can effectively navigate these cultural dynamics will be well-positioned to thrive in an increasingly interconnected global economy.

CONCLUSION

The interaction between culture and international business is intricate and multifaceted, shaping various aspects of global commerce, from market entry strategies to sustainability initiatives. Understanding and navigating this interaction is essential for businesses seeking success in an increasingly interconnected and culturally diverse world. By recognizing the influence of culture on consumer behavior, communication styles, and ethical frameworks, businesses can tailor their strategies and operations to resonate with diverse cultural contexts. Embracing cultural diversity, fostering cross-cultural collaboration, and investing in cultural intelligence are key to thriving in the global marketplace. As globalization continues to deepen and technology advances, the role of culture in international business will become even more pronounced, highlighting the need for businesses to adapt and innovate in response to cultural dynamics. By embracing cultural sensitivity and leveraging cultural diversity as a source of strength, businesses can drive sustainable growth and create shared value for society and the environment.

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THE COMPLEX RELATIONSHIP OF GLOBALIZATION AND SUSTAINABILITY

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ABSTRACT

Globalization and sustainability are dynamic forces that have significantly shaped the contemporary world. Globalization, characterized by increased interconnectedness, interdependence, and the flow of goods, services, information, and people across borders, has undeniably transformed the economic, social, and cultural landscapes. While globalization has led to unprecedented economic growth and technological advancements, it has also given rise to environmental degradation, social inequality, and ethical concerns. The future of globalization is characterized by geopolitical uncertainty, climate change threats, and the need for more attention to sustainable practices. Consequently, the pursuit of sustainability, defined by the United Nations as meeting the needs of the present without compromising the ability of future generations to meet their own needs, has emerged as a critical response to the negative externalities of globalization. Despite posing challenges to sustainability, globalization could, in fact, advance sustainability by facilitating the dissemination of green technologies, fostering international cooperation on environmental issues, and creating opportunities for sustainable business practices. The path forward thus hinges on the ability to harness globalization's benefits while mitigating its challenges. This paper delves into the intricate relationship between globalization and sustainability, exploring the multifaceted ways in which these phenomena intersect, intertwine, and often present both opportunities and challenges for global development. Focusing on labor markets, environmental sustainability, cultural homogenization, and income inequality, this work will analyze the pros and cons of globalization in various aspects of society. This paper also examines the role of global governance mechanisms, such as international treaties, agreements, and institutions, in shaping the relationship between globalization and sustainability. The effectiveness of these mechanisms in promoting sustainable development is explored, acknowledging the need for collaborative efforts to address transboundary challenges and promote responsible global citizenship.

Keywords: sustainability, globalization, inequality, governance.

INTRODUCTION

Globalization is a massive social, economic, and political phenomenon characterized by increased interdependence between nations; the process of globalization has accelerated exponentially in recent decades. Due to its vast scope, it is unsurprising that it has both strengths and flaws and is a subject of intense debate worldwide. Global trade and access to new markets have created economic opportunities that were unimaginable just a generation ago. Goods and services that were once considered luxuries are now affordable and abundant thanks to global supply chains. Global cultural exchange has also enriched humanity with a greater diversity of thought, cuisine, spirituality, and more. However, globalization also poses grave threats. There is a risk of exploited workers and a race to the bottom as multinational corporations scour the globe for cheap labor and resources. There is also a loss of cultural diversity. Globalization accelerates the homogenization of culture as multinational companies target global consumers; this Western culture increasingly dominates the globe. Moreover, globalization may increase economic risks like global financial contagion, as seen in the 2008 crisis. It also makes nations vulnerable to the political shocks of other countries. Overall, globalization demands a balanced and thoughtful approach. It is an irresistible force that brings both blessings and burdens, and nations must assert their sovereignty to maximize the benefits and minimize the costs. Countries can prosper from globalization on their terms by protecting workers, the environment, and strategic industries; enacting prudent regulation of trade and finance; and safeguarding their cultural heritage.

Globalization also affects income inequality. While globalization has led to greater overall global wealth, the benefits have not been evenly distributed. As more foreign direct investment is put into developing countries, the wider the wage gap becomes in the host country. Moreover, the profits that are made from foreign direct investment are put back into investments abroad instead of being invested domestically to help boost the domestic economy. This contributes to income inequality, as it keeps the power to invest in foreign trade among the top 1%; in turn, this harms the domestic economy as the money is not being redistributed back into the domestic markets.

GOVERNANCE

Globalization appears irreversible, but governance is necessary to uphold the principles of both openness and democracy. Leaders must craft policies that maximize shared progress while protecting national interests. An open society depends on democratic institutions that respond to citizens, not just global economic forces. With wisdom, goodwill, and cooperation worldwide, globalization can benefit all. However, without oversight, it threatens to undermine the very democratic values it seeks to advance. The path forward remains uncertain, and the future depends on the vision and courage of leaders who see both global promise and perils.

Policymakers must consider both the promise of shared progress as well as the perils of unrestrained economic competition. With prudent governance, globalization can knit nations together through trade and cultural exchange. Without proper oversight, however, globalization also poses threats of conflict over inequality, markets, and resources. The key is crafting policies that maximize cooperation while upholding national interests.

In terms of global governance, governments play a crucial role in setting the regulatory frameworks that incentivize or mandate sustainable practices. International agreements and treaties, such as the Paris Agreement on climate change, underscore the importance of collective action in addressing global challenges. Governments can offer incentives, subsidies, or tax breaks to businesses that adopt sustainable practices. Regulatory frameworks can be designed to penalize unsustainable activities, encouraging a shift towards environmentally and socially responsible behavior.

Moreover, intergovernmental organizations and collaborations can foster global sustainability. Organizations like the United Nations (UN) and the World Trade Organization (WTO) can provide platforms for countries to coordinate efforts, share best practices, and establish common standards for sustainable development. Global governance mechanisms need to strike a delicate balance, ensuring that economic development is inclusive and environmentally responsible.

Globalization promotes cultural exchange and diversity, exposing people to new ideas, traditions, and ways of living, but it also poses risks of cultural homogenization. Global trade and digital connectivity allow cultural influences to spread rapidly across borders. People have access to a diversity of spiritual teachings, cuisines, stories, fashions, and more from around the world. This fosters greater openness, empathy, and inclusiveness in society. However, while the increased connection and understanding between groups can be beneficial, the loss of cultural diversity is lamentable. As cultures blend, unique aspects of national identities fade away in favor of a shared set of values and beliefs. Globalization also favors a mass consumer culture as it permits large multinational companies to target global audiences. There is a loss of local tradition and identity as Western culture dominates media and markets. Indigenous communities face particularly grave threats to their heritage, values, and languages. There is value in preserving the distinctive qualities of different cultures, even as the world becomes more globalized. A shared global culture does not necessitate the dissolution of local traditions and heritage. With mindful integration of outside influences, cultures can maintain their individuality while still participating in and benefiting from global exchange. The ideal outcome is a tapestry of cultures, woven together yet distinct.

SUSTAINABLE DEVELOPMENT

The advantages of globalization in favor of sustainable development facilitate the spread of green technology. With the internet and the interconnectedness experienced in today's world, the diffusion of information is unparalleled. Green technologies include hydrogen storage, renewable energy sources, and technological advances in machines aiding production. Undoubtedly, sustainable practices have only been aided by the spread of knowledge and efficiency in implementing said technologies resulting from the interconnectedness of the world, in which countries trade and

interact daily. Scientists have projected the carbon emission reductions necessary for humans to have a prosperous future; the plan requires halving carbon emissions by 2030 and being net zero by 2050. The cooperation between nations facilitated by globalization is essential for this plan to become a reality. Globalization connects like-minded people worldwide to raise awareness for the sustainability and security of the environment. Furthermore, the constant collaboration born from the interaction between nations helps to set global environmental standards. Companies involved in international trade must usually abide by specific measures of environmental protection.

The three pillars of sustainability—environmental, social, and economic—provide a comprehensive framework for addressing the complex challenges facing our planet. A truly sustainable future requires a careful balance between these pillars, recognizing their interconnectedness and promoting integrated solutions that prioritize the well-being of people and the planet and ensure prosperity for all. Embracing sustainability in all its dimensions is not just a responsibility but a collective imperative for current and future generations.

The environmental pillar of sustainability is perhaps the most immediately recognizable. It centers around the idea of maintaining and restoring the health of the planet's ecosystems. This involves reducing environmental degradation, conserving biodiversity, and mitigating climate change. Practices aligned with the environmental pillar include the adoption of renewable energy sources, waste reduction, and the protection of natural habitats. Striking a balance between human activities and the Earth's capacity to regenerate resources is paramount to ensure a sustainable future.

The social pillar of sustainability focuses on promoting equity, justice, and well-being among people and communities. It emphasizes the importance of inclusive development, social cohesion, and the protection of human rights. Social sustainability encompasses various aspects such as access to education, healthcare, and necessities, as well as the promotion of cultural diversity and social justice. Efforts to address poverty, inequality, and discrimination are integral components of the social pillar. Sustainable development cannot be achieved without considering the well-being of all individuals and fostering social resilience.

SUSTAINABILITY

The economic pillar of sustainability is often viewed as the engine that drives the other two pillars. It involves creating economic systems that are resilient and inclusive and that do not deplete natural resources faster than they can regenerate them. This pillar encourages responsible resource management, circular economies, and the development of green technologies. Sustainable economic practices strive to balance profit with the well-being of employees, communities, and the environment. It calls for a shift away from short-term profit maximization towards long-term value creation, acknowledging that economic success is interconnected with social and environmental considerations.

These three pillars are interdependent, and success in one area often reinforces positive outcomes in the others. For example, investing in renewable energy not only contributes to environmental sustainability but also creates jobs, fostering economic development and addressing social needs. Conversely, an economically impoverished community may struggle to invest in environmental and social initiatives.

The integration of sustainability practices into global business and governance is not only a moral imperative but also a strategic necessity. Embracing sustainable practices can enhance the long-term viability of businesses, promote economic development, and safeguard the environment. Governments, businesses, and international organizations must collaborate to create a framework that incentivizes and enforces sustainability, ensuring a harmonious balance between economic development and environmental preservation on a global scale. One key opportunity in the realm of global business lies in embracing Environmental, Social, and Governance (ESG) principles and the concept of Corporate Social Responsibility. Companies are increasingly recognizing that their success is intertwined with their impact on the planet and society. Integrating sustainability into business operations can manifest in several ways. Firstly, businesses can adopt eco-friendly production processes, reducing their carbon footprint and minimizing waste. Embracing renewable energy sources, investing in energy-efficient technologies, and adopting circular economy models are vital steps toward environmental sustainability.

Secondly, companies can incorporate social responsibility into their strategies by prioritizing fair labor practices, promoting diversity and inclusion, and engaging in philanthropic activities. Transparent reporting on these

initiatives through ESG disclosures allows stakeholders to assess a company's commitment to sustainability. Investors, consumers, and employees are becoming more conscientious, demanding ethical practices and sustainability from the businesses they support or work for.

Furthermore, global business collaborations can be a catalyst for sustainability. Companies that operate across borders can leverage their influence to encourage suppliers and partners to adhere to sustainable practices. This ripple effect can create a more sustainable and ethical global supply chain. Additionally, partnerships between businesses and non-governmental organizations (NGOs) can facilitate the implementation of sustainable projects, combining expertise and resources for maximum impact.

TECHNOLOGY AND INNOVATION

Technology and innovation also present significant opportunities for integrating sustainability into global business and governance. Advancements in clean energy, sustainable agriculture, and waste management can drive positive environmental outcomes. Governments can encourage research and development in these areas through funding, grants, and partnerships with the private sector. Embracing technology can lead to more efficient and sustainable practices, contributing to a greener and more socially equitable global economy. Achieving a harmonious balance between economic development and environmental preservation is a complex challenge that requires innovative approaches and collaborative efforts from various stakeholders. However, there exist numerous opportunities that can pave the way for sustainable growth, ensuring that economic activities do not come at the expense of our planet's health.

The concept of a circular economy presents another promising avenue. Unlike the traditional linear economy, where resources are extracted, used, and discarded, a circular economy emphasizes recycling, reusing, and reducing waste. This approach minimizes the environmental impact of production and consumption, promoting sustainable practices across various industries. Businesses can explore ways to design products that are easily recyclable, establish take-back programs, and invest in waste-to-energy technologies. Such initiatives contribute to economic growth while lessening the strain on natural resources.

Furthermore, fostering environmental education and awareness is crucial for instilling a sense of responsibility and stewardship among individuals and communities. An informed and engaged public is more likely to support sustainable practices, exert pressure on businesses to adopt eco-friendly policies, and demand responsible governance. Education programs can promote a culture of sustainability, inspiring future generations to consider the environmental implications of their choices and actions.

Although there has been a big push for sustainability, globalization's negative impacts on environmental sustainability far outweigh its benefits. When developed countries outsource their manufacturing to developing countries, not only do they do it for the lower wages they have to pay workers, but they also do it to avoid new laws and regulations set in developed countries about business practices harming the environment. Although the developed countries have these tight environmental regulations, the damage being done by the companies from developed countries in these underdeveloped countries is extensive. However, because of the weak environmental regulations in underdeveloped countries, companies outsource manufacturing to these countries to circumvent the tight environmental regulations set by developed countries such as those in the EU. This outweighs the good the tight environmental regulations do for the environment because, in the end, more carbon emissions are being released due to the weak environmental regulations in developing countries.

Globalization, characterized by the interconnectedness of economies, cultures, and societies, is undergoing transformative changes. The ongoing digital revolution is accelerating the pace of globalization, breaking down traditional barriers to communication and trade. The rise of advanced technologies, such as artificial intelligence and the Internet of Things, is fostering a more interconnected and interdependent world. This increased connectivity has the potential to amplify the positive aspects of globalization, such as the exchange of knowledge, resources, and ideas, leading to more efficient and innovative solutions to global challenges.

Sustainability is emerging as a non-negotiable imperative for the future. The growing awareness of environmental degradation, climate change, and resource depletion is driving a global shift towards sustainable

practices. Governments, businesses, and consumers are increasingly recognizing the importance of incorporating ESG principles into decision-making processes. This shift is not just driven by ethical considerations but also by the realization that sustainable practices are essential for long-term economic stability and societal well-being.

CONCLUSION

The intersection of globalization and sustainability presents both challenges and opportunities. On one hand, the global nature of environmental issues requires collaborative and coordinated efforts across borders. Climate change, loss of biodiversity, and pollution are challenges that no single nation can tackle in isolation. On the other hand, the pursuit of sustainability may clash with certain aspects of globalization, such as the consumption-driven model that relies on resource-intensive production and transportation.

This necessitates finding the delicate balance between the benefits of global collaboration and the imperative of sustainable practices. Policymakers need to navigate this complex landscape, crafting international agreements that prioritize environmental stewardship while fostering economic growth. Companies will be under increasing pressure to adopt sustainable business models that consider the environmental and social impacts of their operations. In conclusion, the pursuit of a balance between economic development and environmental preservation presents a spectrum of opportunities. Green technologies, circular economies, sustainable urbanization, responsible resource management, and ecosystem services all contribute to a holistic approach to economic development. By embracing these opportunities, societies can forge a path toward a sustainable future where economic prosperity coexists with the health and resilience of the planet. It requires a collective commitment from governments, businesses, and individuals to prioritize sustainable practices and foster a harmonious relationship between the economy and the environment.

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PROPOSED CONCEPTUAL FRAMEWORK OF THE INFLUENCES OF THE 4IR: INCORPORATING THE EXTENDED MARKETING MIX ON CONSUMER DECISION-MAKING IN THE AUTOMOTIVE AFTERMARKET

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ABSTRACT

This study aims to investigate the impact of the Fourth Industrial Revolution (4IR) on consumer behaviour within the automotive aftermarket, focusing on the interplay between branding strategies, consumer perceptions, and market competition. The rationale for this study lies in the transformative influence of 4IR technologies on the automotive industry, particularly in reshaping product functionalities and consumer preferences. The methodology involves a quantitative approach, utilizing survey data collected from quota sampling of automotive aftermarket consumers. The study employs regression analysis to examine the relationship between branding strategies, consumer perceptions, and market competition, considering factors such as brand awareness, product functionality, and pricing strategies. The findings of this research are expected to contribute to both academic literature and industry practice by providing insights into how technological advancements are influencing consumer decision-making processes within the automotive aftermarket. Ultimately, this study aims to inform aftermarket businesses on effective branding strategies and marketing approaches to adapt to the evolving landscape shaped by the 4IR, thereby enhancing their competitiveness, and meeting the changing needs of consumers.

Keywords: 4IR, automotive aftermarket, branded and generic products, consumer decision making, Marketing mix.

INTRODUCTION

The automotive aftermarket boasts a diverse range of product categories, spanning from accessories to service repairs (Ganzeboom 2020:2). The automotive aftermarket includes a wide range of categories such as accessories, appearance products, lubricants, tires, replacement parts, service repairs, navigation/telematics, and entertainment (Ganseboom 2020:2). These categories are further segmented into branded and generic products (Delbridge 2021; Kagan 2021). Notably, parts and accessories are commonly categorized as branded or generic, catering to different consumer segments with distinct marketing approaches (Delbridge 2021).

Against the backdrop of the Fourth Industrial Revolution (4IR), consumer behaviour within the automotive aftermarket is experiencing profound shifts. This transformation is marked by products evolving beyond their basic functionalities, propelled by technological advancements and digitalization. Consequently, attributes such as brand awareness and product functionality are assuming greater significance, shaping consumer decision-making processes. Brand awareness, as elucidated by Keller (2001:14) and Tchumtchoua and Cotterill (2010), holds a pivotal role in consumer recognition and brand association, often influencing pricing strategies. These dynamics highlight the intricate interplay between the extended marketing mix elements, consumer perceptions, and market competition within the automotive aftermarket landscape, unfolding amidst the transformative forces of the 4IR.

Problem Statement

In recent years, there has been a growing focus on digitization and technological advancements in parts manufacturing within the automotive aftermarket. Prakash and Pulindindi (2021) explored the impact of digitization on aftermarket product development. Furthermore, advancements in e-commerce technology and the proliferation of digital platforms have garnered attention from scholars. Research by Zhang, Wang, Cao, and Wang (2019), Voramontri and Klieb (2019:210), Indahingwati et al. (2019), and Nguyen, de Leeuw, and Dullaert (2018) investigated the influence of technology, social media, and digital marketing on consumer behaviour.

Despite various research endeavours, several gaps persist in the literature. Mihart (2012:979) has emphasized the need for further exploration of the relationship between marketing mix elements and consumer decision-making processes, particularly in the context of integrated marketing communications. Furthermore, Ganzeboom (2020:11) has called for more research into the effects of different customer experiences with branded and generic automotive products. The impact of the 4IR on the marketing mix of the automotive aftermarket, especially in regions like South Africa, remains underexplored. This study aims to address these gaps by investigating how the extended marketing mix elements influence consumer decision-making when purchasing branded versus generic products in the automotive aftermarket. It will explore how different elements within the marketing mix are utilized for branded and generic products, considering aspects such as production, quality, pricing, marketing strategies, target market, and distribution channels. Furthermore, the study will assess the impact of the 4IR embedded within the marketing mix of the automotive aftermarket in South Africa.

LITERATURE REVIEW

The following section provides a literature review of the variables of the study and the embedded influence of the 4IR thereon.

Fourth Industrial Revolution (4IR)

The Fourth Industrial Revolution (4IR) has significantly transformed the marketing landscape, driven by technological advancements, socioeconomic changes, and shifts in environmental dynamics (Atlam, Azad, Alzahrani & Wills, 2020:19; Brun, Gereffi & Zhan, 2019:47). This evolution has redefined marketing objectives, moving beyond mere consumer attraction to prioritizing consumer and brand loyalty, with a focus on sustainable business models.

Integration of 4IR technologies, particularly the Internet of Things (IoT), into supply chains, is facilitating the transition towards a circular economy, promoting social, environmental, and economic sustainability (Abdul-Hamid, Ali, Tseng, Lan, & Kumar, 2020:23; Tsiligiris & Bowyer, 2021:622). These technologies reshape traditional business operations by revolutionizing the creation, exchange, and distribution of value. Emerging technologies like big data analytics, blockchain, cloud computing, robotics, smart sensors, and 3D printing are driving transformation across industries (Wang & Sarkis, 2021:2; Chauhan, Dhir & Parida, 2022:2), offering opportunities for reduced barriers between inventors and markets, increased utilization of artificial intelligence, integration across domains, and improved quality of life through robotics and enhanced connectivity via the Internet.

4IR facilitates innovative approaches to meeting consumer needs and preferences, thereby driving the development of novel business models (Jin & Shin 2021:31). IoT-driven strategies are reshaping marketing practices, contributing to the evolution of Marketing 4.0, which emphasizes brand interaction in the digital era (Dash, Kiefer, & Paul, 2021:608).

Consumer Decision Making

The integration of Industry 4.0 technologies has revolutionized the automotive aftermarket, profoundly impacted consumer behaviour and reshaping its dynamics (Kovacova, Kliestik, Pera, Lăzăroiu, Neguriță, Grecu, Grecu & Mitran 2019:890;). With the infusion of advanced technologies like artificial intelligence, IoT, and data analytics, consumers now have unparalleled access to information, customization options, and engagement avenues when making aftermarket purchasing decisions. This amalgamation of digital and physical realms, facilitated by Industry

4.0 innovations, has fostered a dynamic, interconnected ecosystem where consumers anticipate seamless, personalized experiences across all touchpoints, spanning from product discovery to post-purchase support (Kovacova, et al 2019:132).

A significant catalyst for these shifts in consumer behaviour within the automotive aftermarket is the heightened visibility and accessibility of product information and choices, courtesy of Industry 4.0 technologies (Radu & Schneider 2019:4; Lăzăroiu et al 2020:893). Through online platforms, mobile applications, and connected devices, consumers can explore and compare an extensive array of aftermarket products and services, access user-generated reviews and ratings, and obtain real-time insights into pricing, availability, and performance metrics (Radu 2019; Kovocova et al 2019:13; Mitran & Neguriță, 2020). This wealth of information empowers consumers to make informed purchasing decisions based on product features, quality, and value proposition, rather than solely relying on brand reputation or conventional marketing messages (Radu & Schneider 2019:4; Lăzăroiu et al 2020:893). Furthermore, Industry 4.0 innovations such as augmented reality and virtual showrooms enable consumers to visualize and experience aftermarket products in immersive, interactive ways, augmenting their confidence and satisfaction with their purchase decisions. As aftermarket businesses increasingly embrace and leverage Industry 4.0 technologies to cater to the evolving needs and expectations of consumers, the automotive aftermarket stands on the brink of further transformation, driven by a transition towards more empowered, informed, and digitally adept consumers (Kovacova et al., 2019).

Marketing Mix Elements

The definition of the marketing mix, first introduced by Borden in 1964, has evolved to encompass the array of marketing elements that organisations employ to achieve their objectives within target markets (Goi, 2009:12). Bitner and Booms (1981:2). expanded upon this concept by introducing the extended marketing mix, initially tailored for service delivery, which differs from the traditional marketing mix applied to tangible products, encompassing product, price, place, and promotion strategies. This extended mix, comprising of product, price, place, promotion, people, processes, and physical evidence, offers a comprehensive framework that considers influences from manufacturers, consumers, intermediaries, and various operational aspects, providing a nuanced approach to marketing. In this research, 'positioning' is added to the marketing mix as it could enhance consumer decision-making, starting with an examination of the product element.

Product

The automotive aftermarket encompasses a diverse array of categories, including accessories, appearance products, lubricants, tyres, replacement parts, service repairs, navigation/telematics, and entertainment (Ganseboom 2020:2) segmented into branded and generic categories (Delbridge 2021; Kagan 2021). Generic products, ubiquitous across various industries like pharmaceuticals, consumer goods, and automotive aftermarket parts, are characterized by their absence of a recognizable brand name or logo, typically offered at a lower price point compared to branded counterparts. These items are often perceived as essential or unbranded versions of commonly available products, prioritizing functionality over brand recognition (Bhasin 2020). Unlike their branded counterparts, generic brands lack a distinct identity or logo and are typically less aggressively marketed.

In contrast, branded products are distinguished by specific brand names, logos, or trademarks, setting them apart in the market (Chandra & Latwal 2021:22). Branded items often carry a reputation for quality, reliability, and consistency, influencing consumer perceptions and purchase decisions (Porter 1980:66). Brands invest in marketing initiatives, product innovation, and customer service to cultivate a strong brand identity and loyalty among consumers, often commanding a premium price due to the perceived value associated with the brand name. The advent of the 4IR has revolutionized consumer behaviour within the automotive aftermarket, elevating products beyond basic functionality to incorporate advanced features and connectivity. Brand awareness holds particular significance in this era, empowering consumers to make informed choices based on brand reputation, reliability, and alignment with personal values in a digitally saturated landscape. Furthermore, the integration of advanced product functions within aftermarket offerings shapes consumer preferences and choices, with IoT technologies, AI, and data analytics facilitating the development of enhanced connectivity and automation (Hollensen Kotler & Opresnik 2022:2). From smart diagnostics to in-vehicle entertainment systems, these functions cater to consumers' evolving needs, emphasizing convenience, safety, and personalized experiences. As consumers prioritize these aspects, the

incorporation of 4IR-driven product functions becomes instrumental in influencing their decision-making processes within the automotive aftermarket landscape.

Price

Artificial intelligence (AI), incorporating machine learning, replicates consumer cognitive functions, aiding organizations in analyzing consumer behaviour, adjusting inventory based on real-time demand, and customizing pricing strategies (Jin & Shin, 2021:12). Huang and Rust (2021:39) suggest that merging consumer online word-of-mouth and private information enables the customization of prices whilst Fanoro et al (2021:77) add that predictive analytics not only reduces expenses but also enhances pricing accuracy, tailored marketing, and customer service. Mobile devices play a crucial role in lowering transactional and distribution costs by facilitating communication between businesses and manufacturers or wholesalers and supporting pricing research. In the context of the 4IR paradigm, agile pricing strategies tailored to different stages of the product life cycle become imperative (Subramoniam, Sundin, Subramoniam, & Huisingsh 2021:12). Concurrently, competitive pricing strategies gain significance as aftermarket players navigate a competitive landscape characterized by rapid technological advancements and evolving consumer preferences (Tripathi, 2023:2).

The 4IR influences pricing across the value chain and lean production, resulting in increased revenues and reduced waste (Fanoro Božanić & Sinha 2021:77). Within the automotive aftermarket, factors such as price elasticity, value-based pricing, and competitive pricing strategies shape consumer perceptions and choices in the dynamic 4IR landscape. As 4IR technologies redefine product functionalities and customer expectations, value-based pricing strategies gain prominence, emphasizing the alignment of prices with perceived value and benefits derived from advanced features (Hollensen Kotler & Opresnik 2022:2).

Place

In the dynamic landscape of the automotive aftermarket, consumer decision-making is profoundly influenced by a multitude of factors, with place emerging as a pivotal determinant. The advent of 4IR technologies has revolutionized traditional distribution channels, empowering aftermarket players to expand their reach, enhance accessibility, and personalize the purchasing experience for consumers. Dual distribution strategies, combining traditional brick-and-mortar outlets with online channels, further augment accessibility and reach, catering to diverse consumer segments with varying preferences for purchasing channels. Direct sales, e-commerce platforms, reverse distribution models, mobile applications, and online marketplaces all play integral roles in shaping consumer perceptions and choices (Costa & Castro 2021:1) and offer automotive aftermarket businesses unprecedented opportunities to engage directly with customers, bypassing intermediaries and leveraging data-driven insights to tailor offerings to individual preferences and needs. AI-driven recommendation engines and augmented reality (AR) visualization tools, enhance the online shopping experience, enabling consumers to make informed decisions and explore product features in immersive virtual environments (Rodrigues & Brandão 2021:81). Additionally, reverse distribution models, facilitated by 4IR-enabled logistics and supply chain solutions, streamline product returns, refurbishment, and recycling processes, contributing to sustainability and environmental stewardship within the automotive aftermarket (Costa & Castro 2021:1).

Promotion

Marketing communication has been revolutionized by 4IR through AI-driven analytics, enabling targeted and personalized advertising campaigns tailored to specific consumer segments. While traditional promotional tools like public relations, service campaigns, sponsorships, and customer loyalty initiatives have long been prevalent, the advent of the 4IR has introduced a plethora of online and e-commerce advertising avenues, search engine optimization strategies, and social media engagements (Voramontri & Klieb 2019:211). These advancements in technology have reshaped consumer decision-making processes by offering immersive brand experiences, fostering real-time engagement, and enhancing brand credibility and trust through sentiment analysis and social listening tools. Additionally, 4IR technologies have democratized event marketing, enabling aftermarket businesses to reach global audiences and engage consumers in real time through virtual events, webinars, and live product launches.

Among the myriad of advanced technologies in consumer engagement, virtual reality (VR), augmented reality (AR), and mixed reality (MR) stand out as pivotal tools (Radu & Schneider 2019:11). These technologies, as elucidated by Radu and Schneider (2019:10), underscore the importance of big data in advertising, sourced from various digital channels, to encompass the extensive information exchanged between consumers and organizations. Anagnostakis, Pappa, and Kypriotelis (2021) delve deeper into these digital touchpoints, highlighting technologies such as facial recognition software, RFID technology, touchscreen technology, and various sensory and imaging technologies. They emphasize how these technologies facilitate consumer interaction with advertising, generating vast amounts of data that require analysis for optimal targeted communication effectiveness. Furthermore, the 4IR has revolutionized marketing communication through the integration of AI-driven analytics, enabling targeted and personalized advertising campaigns tailored to specific consumer segments. Additionally, 4IR technologies have democratized event marketing, allowing aftermarket businesses to reach global audiences and engage consumers in real time through virtual events, webinars, and live product launches.

People

Interactions involving people within the automotive aftermarket have remarkably been changed through the 4IR, ushering in a new era of personalized engagement and trust-building. Sales personnel are now empowered with comprehensive data and insights, facilitating tailored interactions and relationship-building through advanced tools such as CRM systems, AI-driven analytics, and real-time communication platforms (Agnihotri 2021:24). Concurrently, 4IR innovations have redefined traditional word-of-mouth referrals into influential digital endorsements, amplified through social media platforms, online reviews, and influencer marketing, shaping consumer perceptions and purchase decisions within the automotive aftermarket. The emergence of experts and influencers in online forums and social media communities' further influences consumer attitudes and preferences, guiding their brand choices (Giuffredi-Kähr Petrova & Malär 2022).

Post-purchase interactions and customer support have also been enhanced through the implementation of technologies such as chatbots, virtual assistants, and predictive maintenance solutions, improving service efficiency and overall satisfaction (Adamopoulou & Moussiades 2020:373). By leveraging data insights, automation, and a holistic approach, aftermarket organizations can proactively address consumer inquiries, troubleshoot issues, deliver value-added services, and foster long-term relationships with customers, driving sustainable growth in a digital marketplace and enhancing brand loyalty and advocacy.

Processes

The process is a crucial component of the marketing mix, encompassing all actions, plans, methods, and sequential stages undertaken to supply a target market with a product (Devi, Devi & Meitei 2020:115). This element is foundational and intricately linked to an organization's value chain. Meanwhile, traditional approaches to positioning have experienced significant evolution with the emergence of 4IR technologies. This transformation empowers aftermarket enterprises to leverage data analytics, market insights, and digital platforms to craft compelling brand narratives and communicate unique value propositions to consumers (Kusumawati et al 2021:484).

A pivotal facet of 4IR-driven positioning lies in amalgamating customer perception with product attributes to craft compelling value propositions that cater to evolving consumer preferences and needs (Saqib 2020:143). Leveraging data analytics, sentiment analysis, and social listening tools empowers aftermarket enterprises to gain deeper insights into consumer perceptions, attitudes, and behaviours, allowing them to refine product features, messaging, and positioning strategies accordingly.

Positioning

Traditional approaches to positioning have significantly evolved with the emergence of 4IR technologies, enabling aftermarket enterprises to utilize data analytics, market insights, and digital platforms to construct compelling brand narratives and convey unique value propositions to consumers (Alpert & Gatty 1969). This evolution is driven by the changing landscape of digital transformation, which reshapes how organizations position themselves through digital technologies. Key enablers of the 4IR, such as IoT, cloud platforms, big data, and analysis, empower organizations to leverage data for developing new products and services, improving consumer segmentation, and refining

positioning and pricing strategies (Aigbavboa, Ebekoziem, & Mkhize 2023:6). Sophisticated segmentation techniques and persona-based targeting enable businesses to identify specialized market segments and customize positioning strategies, enhancing brand relevance and fostering differentiation. Furthermore, 4IR technologies facilitate real-time feedback loops, enabling organizations to adapt their positioning strategies to evolving market dynamics and consumer feedback, nurturing brand resonance and fostering loyalty in the automotive aftermarket landscape.

Physical Evidence

Physical evidence, encompassing tangible aspects of a business's environment, has been significantly impacted by the 4IR, fostering technological advancements, particularly in the realm of the Internet of Things (IoT), which have transformed customer interactions and service delivery (Natchakorn 2022:138). Organizations must reassess and modernize their physical evidence strategies to align with evolving consumer expectations and market dynamics (Chandra & Latwal 2021:2). Embracing technological advancements and integrating them into physical evidence strategies is essential for organizations to remain competitive and meet the evolving needs of their customers in the digital age.

CONCEPTUAL FRAMEWORK

A conceptual framework is a defence for why particular research should be undertaken. The conceptual framework “(1) describes the state of known knowledge, usually through a literature review; (2) identifies gaps in our understanding of a phenomenon or problem; and (3) outlines the methodological underpinnings of the research project” (Varpio Paradis Uijtdehaage & Young, 2020:990). The following set of hypotheses is derived from the literature review on the variables of the study and indicated in the proposed conceptual framework.

H1: The extended marketing mix has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H2: The choice of product has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H3: Price has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H4: Place or distribution has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H5: Promotion has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H6: People have a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

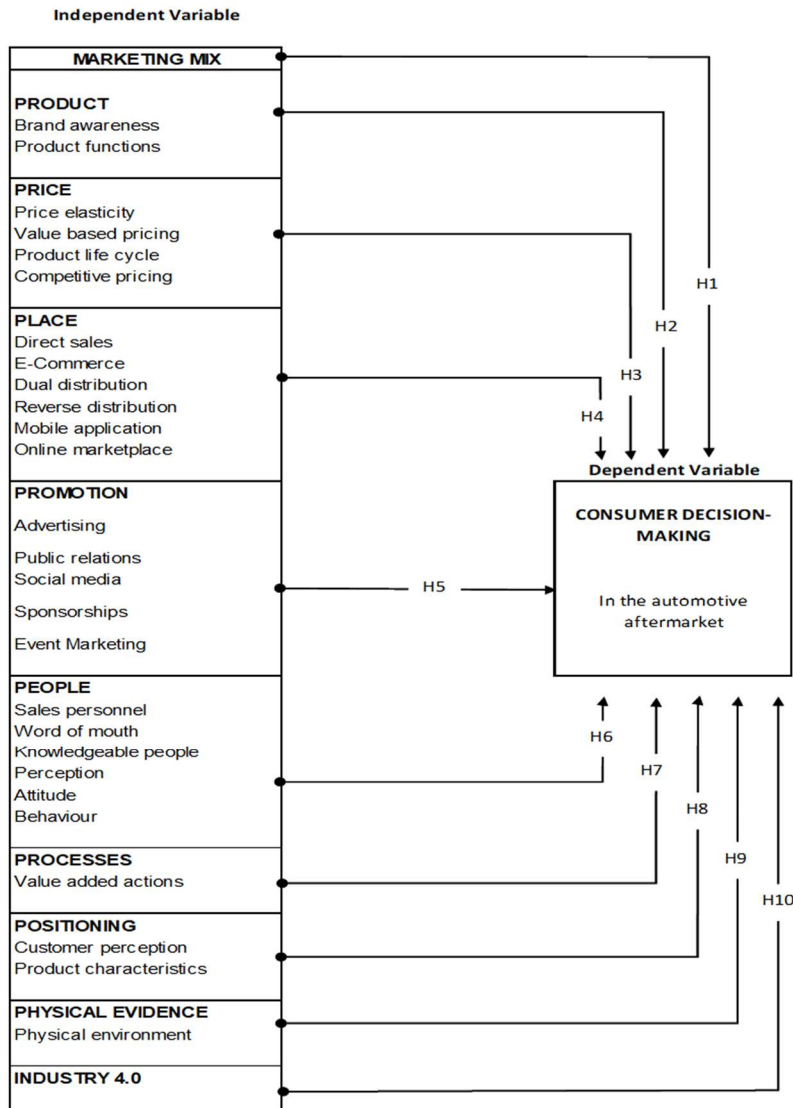
H7: Processes have a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H8: Positioning of a product has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H9: Physical evidence has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

H10: The 4IR has a significant positive influence on consumer decision-making of branded and generic products in the automotive aftermarket.

Figure 1: Proposed conceptual framework of the influences of the 4IR, incorporating the extended marketing mix, on consumer decision-making in the automotive aftermarket



RESEARCH DESIGN AND METHODOLOGY

This research will adopt a positivistic perspective and employ a quantitative research approach to investigate several hypotheses. The targeted group will include individuals aged 18 to 60 who own a vehicle, with the sample comprising customers who utilize aftermarket automotive services. A pilot study involving 30 respondents will be conducted to test the initial wording, and the length of the questionnaire and to test for clarity of concepts and definitions used in the questionnaire. Given that this research will span various provinces in South Africa, the quota sampling technique will be utilized. Quota sampling is a non-probability sampling method wherein the sample composition mirrors specific socio-demographic quotas (such as region, gender, and age) to represent the population of interest (Lamm & Lamm, 2019:55).

A web-based questionnaire will serve as the data collection method for this research project, allowing the researcher to gather information from a larger sample size (Ruel, 2018:3). Individuals who own vehicles and meet the research criteria will be invited to participate through platforms such as Facebook, Instagram, LinkedIn, and Whatsapp Business. Sponsored advertisements will be strategically planned to attract participants within the age range of 18 to

60, as these platforms require users to provide their birthdate upon registration. Interested respondents will be provided with a link to access the online questionnaire.

The questionnaire will primarily consist of closed-ended questions structured to gather demographic information and categorize respondents. Nominal scale questions will be used to collect data on factors such as age, region, economic status, preference for branded or generic automotive products, buying habits (online or in-store), and tendencies towards do-it-yourself (DIY) or do-it-for-me (DIFM) purchases, as well as market influences like communication media usage. The questions will be designed based on insights from the literature review, utilizing scaled items from existing instruments or constructing new ones as needed. The questionnaire will employ a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) to measure the listed factors. To facilitate data collection and analysis, the study will utilize the QuestionPro software program. Participants will be informed about the use of their information in accordance with the Protection of Personal Information Act (POPI Act) and given the option to consent or decline participation. Those who consent will proceed to the questionnaire, while non-consenting individuals will be redirected to a page thanking them for considering the study.

Data Preparation and Analysis

The primary data for this study will be recorded using the QuestionPro research platform, which allows for flexibility in data alteration, coding, and collection to facilitate further analysis. Subsequently, software programs like SPSS Statistics will be utilized to analyse the collected data. Multiple regression analysis, a statistical method well-suited for examining relationships between one dependent variable and multiple independent variables, will be employed. This approach also offers the advantage of identifying and eliminating non-significant independent variables from the analysis. To assess the strength of relationships between the independent variables (product, price, place, promotion, people, processes, positioning, and physical evidence) and the dependent variable of consumer decision-making, statistical methods such as Pearson's Correlation Coefficient will be employed. Additionally, Analysis of Variance (ANOVA) will be used to compare means between variable groups, and Structural Equation modelling (SEM) will be applied to incorporate latent variables and account for non-experimental data. The questionnaire will undergo pre-testing to ensure its effectiveness, and construct validity will be evaluated using Exploratory Factor Analysis (EFA). Reliability will be assessed through Cronbach's alpha coefficient, which measures the consistency of results produced by a measurement tool across repeated uses. Cronbach's alpha values ranging between 0.70 and 0.90 will be considered acceptable for reliability assessment.

RESEARCH CONTRIBUTION

This study holds significant implications for both academia and industry. Firstly, it contributes to the existing body of literature on consumer behaviour within the automotive aftermarket, particularly in the context of the 4IR. By examining the interplay between branding strategies, consumer perceptions, and market competition, this research sheds light on how technological advancements are reshaping consumer decision-making processes. Additionally, the study offers practical insights for aftermarket businesses, informing their branding strategies and marketing approaches to effectively navigate the evolving landscape shaped by the 4IR. Understanding the factors influencing consumer behaviour in this context is crucial for businesses to remain competitive and adapt to changing consumer preferences and market dynamics.

LIMITATIONS OF RESEARCH

The limitation of the study will be that research will only be conducted in South Africa and cannot be representative of the African continent. Further limitations are that the study is focussing on the automotive aftermarket and not on the complete automotive industry.

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ORGANIZATIONAL CITIZENSHIP BEHAVIOUR AND EQUITY ON ORGANIZATIONAL COMMITMENT IN ZIMBABWEAN SMEs

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ABSTRACT

Small and medium enterprises (SMEs) are the stronghold of economies and societies worldwide. In Zimbabwe, as in any other country, there is a realization that SMEs are innovative, flexible, and require low startup capital. There is an increased interest in pursuing SMEs as a poverty reduction strategy and as a roadmap to higher living standards. SMEs in Zimbabwe are divided into two sectors, namely the service and the manufacturing sector. Most research that has been done on the influence of employee perception of equity (EPE), and organizational citizenship behavior (OCB) on organizational commitment (OC) has been on large organizations, and little attention has been paid to SMEs. Studies on employee perception of equity and organizational citizenship behavior have not filtered down to SMEs in developing countries. The primary objective of the study is to investigate the influence of OCB and EPE on OC in Zimbabwe's SME sector. It also sought to ascertain the kind of relationships between OCB and OC and EPE with OC. A quantitative research method was used. 300 structured questionnaires were distributed to SMEs in five major cities. Data was analyzed using exploratory factor analysis (EFA) and structural equation modeling (SEM). The data was collected from SME employees. The findings of this study show that there is a significant positive influence of OCB on OC in the Zimbabwean SMEs. There is a significant strong positive influence of EPE on OC. There is also a significant positive relationship between employees' OCB and their OC in Zimbabwe's SME sector. Given that today's business environments for SMEs are characterized by high levels of competition, lack of finance, and uncertainty, it is recommended that SME managers should adopt good and proper management styles so that they can make good decisions. Scanning the environment is also necessary for competitive advantage not only for SMEs but also for large firms.

Keywords: small and medium enterprises, organizational citizenship behavior, employee perception of equity, organizational commitment, equity theory.

INTRODUCTION

The study investigates the effects of organizational citizenship behavior (OCB), employee perceptions of equity (EPE) on organizational commitment (OC) in Zimbabwe's SME sector. In many countries, SMEs play a significant role in local communities by providing employment opportunities and social stability (Biggs & Shah, 2006; Ogunshe, 2023;). The importance of OCB lies in its potential positive consequences and effects on work outcomes. Research has provided considerable evidence that OCB, among others, breeds positive perceptions of equity, enhances OC and eventually prompts employee intention to stay in the organization (Park, Ellis, Kim & Prideaux, 2010; Orzhel, Trofymenko, Porkuian, Drach, Halhash, and Stoyka, 2023). On the other hand, the received wisdom in human resource management literature is that most of the labour disputes emanate from workers' perception of inequity (Nicklin, Greenbaum, Mcnall, Folger & Williams, 2011). This is so because perceived inequity can affect attitudes and behaviors in a variety of ways, which eventually precipitates labor disputes or even strikes (Colquitt, Conlon, Wesson, Porter & Ng, 2001). It is further argued in literature that perceived inequities at the work place also impacts negatively on job performance, cooperation with coworkers, work quality, and commitment of employees (Cropanzano, Howes, Grandey & Toth, 1997). Notable in the extant literature is the fact that when workers' commitment to their organization is lacking, turnover intention or turnover is prevalent (Gono, 2009). Moreover, researchers suggest that turnover intentions or turnover should be reduced or avoided by organizations since it is more costly to replace an employee than to retain one (Currivan, 1999; Carson & Gilmore, 2000).

LITERATURE REVIEW

This study reviews literature on the equity theory, organizational citizenship behavior, employee perception of equity, and organizational commitment.

Equity Theory

According to Gregory and Albritton (2010), equity theory which originated from the discipline of psychology is based on cognitive dissonance theory which was developed by Festinger in the 1950s (Kinicki & Kreitner, 2008). The equity theory is a model of motivation that explains how people strive for fairness and justice in social exchanges or give-and-take relationships. The equity theory theorized that some people become very upset over the slightest inequity whereas others are not disturbed at all. Research has shown that people respond differently to the same level of inequity due to individual difference called equity sensitivity (Steinbeis & Singer, 2013).

Organizational Citizenship Behaviour (OCB)

Interest in OCB can be traced back to Barnard (1938), who first pointed out the magnitude of cooperative efforts in organizational operations. Robbins and Judge (2011) defined OCB as “discretionary behaviour that is not part of an employee’s formal job requirements but that nevertheless promotes the effective functioning of the organization”. Successful organizations need employees who will do more than their usual job duties, who will provide performance beyond expectations. Employees who engage in “good citizenship” behaviors help others on their team, volunteer for extra work, avoid unnecessary conflicts, respect the spirit as well as the letter of rules and regulations, and gracefully tolerate occasional extra work (Cho & Johanson, 2008). OCB has been conceptualized as a multi-dimensional construct (Yildirim, Uzum & Yildirim, 2012). Podsakoff, Whiting, Podsakoff & Blume (2009) pointed out that, although researchers use different evaluative dimensions, the most common measurement method is the five dimensions first proposed by Organ (1990), namely altruism (thinking of others, selflessness, and helpfulness), conscientiousness, sportsmanship, courtesy and civic virtue. Conscientiousness is a discretionary behaviour in which employees carry out their work well beyond the minimum required level (Yoon & Sur, 2003). Courtesy mainly concerns behaviours that determine in advance the issues likely to create problems for other workmates, and the proposing of solutions to help them or to pre-emptively prevent such problems from occurring (Chiang & Hsieh, 2012). Civic virtue (organizational virtue) incorporates supporting the development of the organization, learning about and exerting efforts to inform oneself about recent developments, business methods and company policies (Yildirim et al., 2012). Sportsmanship consists of actions where employees refrain from complaining about trivial grievances (Rego, Ribeiro, Cunha & Jesuino, 2011). The current study will conceptualise OCB as a composite construct, following the recent works of Jung and Yoon (2012), who did not deal with OCB as multidimensional but as a composite construct.

Employee Perceptions of Equity (EPE)

Equity is seen as a determinant of organizational efficiency and effectiveness (Greenberg, 2009; Van Dijke, De Cremer, Mayer & Quaquebeke, 2012). The study of justice or fairness has been a topic of philosophical interest that extends back at least as far as Plato and Socrates (Colquitt, Colon, Wesson, Porter & Ng, 2001). Research into employee perceptions of equity has consistently demonstrated that people care about fair treatment and when individuals perceive that they are treated fairly, they express greater satisfaction with social relationships (Robbins & Judge, 2011). Kinicki & Kreitner (2008) defined equity as the perception of being treated fairly at the workplace. As a phenomenon, employees always anticipate fair treatment at the workplace and will respond in a certain way if they perceive unfairness. Unfairness results in labour disputes, strikes and high turnover ratio (Cohen-Charash & Spector, 2001). Thus, if employees perceive the ratio to be equal to that of others, then a state of equity is said to exist, and this will consequently result in OC. However, if the ratio is unequal then the employees experience equity tension. Consequently, when employees see themselves as under-rewarded, the resultant tension creates anger (Janssen, 2001). Inequity leads to negative consequences within the organization, and equity results in the smooth running and functioning of the organization.

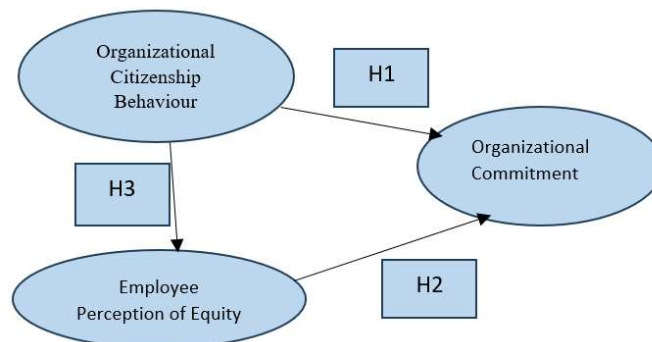
Organizational Commitment (OC)

According to Fehr (1988, p. 557), “the search for a definition of commitment carried out in psychology and other related disciplines has been marked with conflict, confusion and disagreement”. Nevertheless, commitment has been seen as the willingness or intention to continue maintaining the relationship into the future (Yamaguchi, 2013). Drawing from the extant literature, it is noted that, by and large, committed individuals believe in and accept organizational goals and values. This means that the individuals will be willing to remain with their organizations and devote considerable effort towards the achievement of their organization’s goals (Cater & Zabka, 2009). Researchers have proposed three components involved in OC, namely affective or emotional commitment, continuance or calculative or instrumental commitment and normative or moral commitment (Meyer & Allen, 1997; Morrow, Macelroy & Scheibe, 2012). There is increasing concern over how organizations can establish and restore OC among employees, specifically affective OC (AOC), which is a highly valued employee attitude (Morrow et al., 2012). It focuses on an employee's identification with and involvement in an organisation and emphasises the bond between the employee and the organisation (Allen & Meyer, 1990). The second component of OC, according to Allen and Meyer (1990), is normative commitment. Normative commitment means that partners stay in the relationships because they feel they ought to (Meyer, Stanley, Herscovitch & Topolnytsky, 2002). The third component of OC is called calculative or instrumental or continuance commitment. Calculative commitment is the extent to which partners perceive the need to maintain a relationship because of the significant anticipated switching costs or lack of alternatives (Meyer & Herscovitch, 2001). Allen and Meyer (1997) suggested that calculative commitment is a sort of negatively oriented type of motivation. In this regard, an employee has a motivation to continue the relationship because they cannot easily replace their current organization and because they cannot obtain the same resources and outcomes outside their current organization (Ruyter, Moorman & Lemmink, 2001). Thus, calculative commitment is determined by the costs that an employee associates with leaving the current organization.

THE PROPOSED RESEARCH MODEL

Drawing from the literature review, in particular the theoretical and empirical literature aforementioned, a research model is conceptualized. Hypothesized relationships between research constructs are developed thereafter. In the conceptualized research model, OCB and employee EPE are proposed to be the predictors of OC. OC is posited to be the outcome variable. Figure 1 illustrates this conceptual research model.

Figure 1: The research model



Relationship Between Organizational Citizenship Behaviour and Organizational Commitment

Greenberg (2009) acknowledges that there is a broader impact of OCBs on organizational effectiveness, which leads to organizational commitment at workplaces. It is important to note that when employees are being treated fairly at work they are more willing to engage in OCBs, managers are encouraged to make and implement employee-related decisions in an equitable fashion (Chiang & Hsieh, 2011). Empirical evidence from organizational behavior literature indicates that organizations that have employees with good citizenship behavior outperform those that do not have

such employees (Jain & Cooper, 2012; Jung & Yoon, 2012). As a result of organizational citizenship behaviors, SME employees bring their entire selves (physical, mental, emotional, and spiritual) to the company, and regard their work as a mission and more than as a mere job (Jain & Cooper, 2012). Eventually, this in turn will likely equip them with the enthusiasm to pursue extra citizenship behaviours at work. Thus, an association between SME employees' citizenship behaviour and their organizational commitment can be conjectured. Previous studies have also provided support for the positive influence of organizational citizenship behaviour and organizational commitment (Chiang & Hsieh, 2011). Accordingly, it is expected in this study that employee organizational behaviours are likely to lead to organizational commitment in the SMEs sector in Zimbabwe. Therefore, drawing from this deliberation, H1 is proposed as follows: **H1:** Organizational citizenship behaviours have a significant positive effect on their organizational commitment in the Zimbabwe's SME sector.

Relationship Between Employee Perception of Equity and Organizational Commitment

When employees perceive fairness at the workplace, they are likely to develop a strong positive view toward their organization. Such a strong positive attitude is likely to arouse employees' emotional attachment to their organization. Consequently, the stronger the perceived fairness, the stronger the positive attitude and emotional attachment the employee has to the organization, hence the stronger organizational commitment. It is believed that when employees put effort into their workplace and that effort is fairly rewarded, commitment to that organization will result (Almar, 2005). Such employee perception of equity is likely to motivate and induce them to be loyal to that organization and eventually have long-term organizational commitment. Equity theory has been used in numerous human resources studies to substantiate this reasoning (N'Goala, 2007). In addition, prior empirical studies have supported a positive linkage between employee perception of equity and organizational commitment (N'Goala, 2007). Similarly, when SME employees perceive their rewards to be fair or equitable when compared to their effort they are likely to be committed to that organization. Therefore, based on the aforementioned theoretical reasoning and empirical evidence, this thesis posits that: **H2:** Employees perceptions of equity have a significant positive effect on their organizational commitment in the Zimbabwe SME sector.

Organizational Citizenship Behavior and Employee Perception of Equity

Empirical evidence indicates that work attitudes play a relatively small role in employee tenure or turnover intentions (Hom & Griffeth, 1995). On the other hand, empirical evidence entails that employees with organizational citizenship behaviors always feel wanted and act as part of the organization and will opt for staying on the job (Mitchell, Holtom, Lee, Sablinski & Erez, 2001). The extant organizational behavior literature indicates that, such innovative and spontaneous behaviors by employees can greatly contribute to the cooperation and performance of an organization and ultimately high intention to stay on the job (Hom & Griffeth, 1995). Various other theories have been developed to authenticate the above assertion such as the relational exchange theory, affect theory, power-dependence theory, relational cohesion theory and leader member exchange (LMX) theory. In this study, social exchange theory (SET) provides the theoretical ground for LMX theory that is chosen and used because of their relevance to the current study in that OCBs lead to employees opting to stay on the job and reduce turnover intention. Therefore, based on the aforementioned theoretical reasoning and empirical evidence, this thesis posits that: **H3:** Organizational citizenship behavior has a significant positive effect on employee perception of equity on the job in Zimbabwe SME sector.

RESEARCH METHODOLOGY

Research scales were operationalized mainly on the basis of previous work. Minor adaptations were made in order to fit the current research context and purpose. Seven-item scales were adapted from the previous works of Jung and Yoon (2012) were used to measure OCB. Six questions were adapted from Janssen (2001) to measure employee EPE. A seven-item scale adapted from Powell and Meyer (2004) was utilized to determine OC.

Tests of Measures and Accuracy Analysis Statistics

SPSS 28.0 and AMOS 28.0 were used to carry out the statistical analysis. Confirmatory factor analysis (CFA) was

performed to examine the reliability and convergent and discriminant validity of the multi-item construct measures. All the factor loadings are above 0.5, which shows a high validity of the measurement instruments used. Overall acceptable CFA model fit indices used in this study included: the $\chi^2/(\text{df})$ (Chi-Square/Degree of Freedom) value equal to or less than 3.00, the CFI (Comparative Fit Index) value equal to or higher than 0.90, Tucker and Lewis Index (TLI) value equal to or higher than 0.90, the Incremental Index of Fit (IFI) value equal to or higher than 0.90, and the Root Mean Square Error of Approximation (RMSEA) value equal to or less than 0.08. Recommended statistics for the final overall model assessment showed an acceptable fit of the measurement model to the data, that is: $\chi^2/(\text{df}) = 2.69$; GFI= 0.91; AGFI= 0.86; CFI = 0.98; TLI = 0.97; TLI = 0.97 and RMSEA = 0.061.

Reliability and Validity

Three methods, namely Cronbach's alpha test (Cronbach α), composite reliability test (CR) and average value extracted (AVE) test were used in the study to check on the reliability of the research measures. Table 1 shows the results of these three tests used to check the reliability of the research measure.

Table 1: Accuracy analysis statistics

Research Constructs	Descriptive Statistics*		Cronbach's Test		C.R.	AVE	Factor Loading	Highest S.V
	Mean	SD	Item-total	α Value				
OCB-1	5.58	1.666	0.939	0.983	0.983	0.922	0.946	0.760
OCB-2			0.962				0.967	
OCB-3			0.952				0.963	
OCB-4			0.953				0.966	
OCB-5			0.945				0.960	
EPE-1	5.52	1.735	0.950	0.987	0.987	0.931	0.960	0.762
EPE-2			0.955				0.961	
EPE-3			0.950				0.962	
EPE-4			0.953				0.959	
EPE-5			0.958				0.961	
EPE-6			0.957				0.974	
OC-1			0.958				0.965	
OC-2			0.960				0.963	
OC-3			0.961				0.966	
OC-4	5.47	1.822	0.967	0.993	0.992	0.937	0.970	0.760
OC-5			0.965				0.967	
OC-6			0.965				0.969	
OC-7			0.967				0.971	
OC-8			0.966				0.970	
OC-9			0.969				0.974	

Note: OCB= Organizational Citizenship behaviour; EPE= Employee perception of Equity; OC=Organizational Commitment ; C.R.: Composite Reliability; AVE: Average Variance Extracted; S.V=Shared

The internal reliability of each construct was assessed using the standardized Cronbach's coefficient alpha. A higher level of Cronbach's coefficient alpha demonstrated a higher reliability of the scale. The results of scale reliability tests are shown in Table 1. Further, the item-to-total correlation values ranged from 0.939 to 0.980, which were above the cut-off point of 0.5, as recommended by Anderson and Gerbing (1988). Cronbach's alpha value that is equal to or greater than 0.7 indicates satisfactory reliability (Blunch, 2008). Table 1 indicates that the Cronbach's alpha coefficients ranged from 0.983 to 0.993. This means that all the Cronbach's alpha values exceeded the recommended threshold of 0.7 (Hair, Bush & Ortinau, 2000) and confirms that the measures used in this study are

reliable. The internal reliability of each construct was also evaluated using the composite reliability (CR) index test. According to the literature, a composite reliability index that is greater than 0.7 depicts an adequate internal consistency of the construct (Hair, Anderson, Tatham & Black, 2006). The results in Table 1 indicate that composite reliability (CR) indexes were between 0.983 and 0.993. These values exceeded the estimate criteria used by previous literature (Hair, Babin, Anderson & Tatham, 2010) thus affirming satisfactory composite reliability. Recommended statistics for the final overall model assessment showed an acceptable fit of the measurement model to the data. The ratio of chi-square over degree-of-freedom was 2.80. This value is less than the recommended threshold of less than 3.0 and, therefore, confirms the model fit. Additionally, GFI, AGFI, CFI, TLI, and RMSEA values were 0.89, 0.88, 0.96, 0.98, and 0.060, respectively. All these model fit measures were above the recommended accepted threshold value of greater than 0.8 for GFI, AGFI, CFI, TLI and less than 0.8 for RMSEA (Anderson & Gerbing, 1988), which suggested that the proposed conceptual model converged well and could be a plausible representation of the underlying empirical data structure collected in Zimbabwe. Since the model fit was acceptable, the study proceeded to test the research hypotheses. The corresponding coefficients of the research hypotheses that posited the existence of positive relationships between the variables and outcome consequences were then observed.

Table 2: Results of structural equation model analysis

Hypothesis Statement	Hypothesis	Path coefficient	Results
OCB → Organizational Commitment	H1	0.819***	Supported
Employee Perception of Equity → Commitment	H2	0.958***	Supported
OCB → Employee Perception of Equity	H3	0.888***	Supported

Structural model fits: $\chi^2/df=2.80$; GFI=0.89; AGFI=0.88; CFI= 0.96; TLI=0.98; RMSEA=0.060.

In Table 2, all the hypotheses are significant and strong because all the path coefficients are greater than 0.5. The highest path coefficient is EPE and OC, which is 0.958, showing statistical significance indicating that in organizations where employees' perceptions of equity are high, OC is also high (Almar 2005). The lowest path coefficient is OCB and OC, which is 0.819, slightly lower than the highest path coefficient. This shows that all the path coefficients are significant.

DISCUSSION OF RESULTS

(H1) posited that there is a significant positive influence of employee OCB on OC in the Zimbabwean SMEs. From the result of the path there is a strong relationship between these two constructs (p-value < 0.001). Robbins and Judge (2011) emphasized that successful organizations need employees who will do more than their usual job duties and who will provide performance beyond expectations, which ultimately leads to OC. Such innovative and spontaneous behaviors by employees can greatly contribute to the cooperation and performance of the SMEs (Yoon & Sur, 2003; Yildirim et al., 2012). Therefore high OCB is associated with high OC. **(H2)** posited that there is a significant strong positive influence of EPE on OC (p-value < 0.001). Research consistently finds that people care about fair treatment and when individuals perceive that they are treated fairly, they express greater satisfaction with social relationships and consequently greater commitment (Robbins & Judge, 2011). Therefore, the greater the EPE the greater the OC in return. **(H3)** posited that there is a significant positive relationship between employees' OCB and employee perception of equity in Zimbabwe's SME sector. The path, p-value shows there is a significant relationship between these two factors (p-value < 0.001). Evidence indicates that organizations that have such employees with strong OCB outperform those that do not have such employees (Jain & Cooper, 2012; Jung & Yoon, 2012). Managers need to reduce absenteeism, turnover, and deviant workplace behaviors and instill a strong sense of OCB. In this way, employees will, in the long run, feel wanted and part of the organization and will opt to stay in the organization.

RECOMMENDATIONS FOR SMEs' MANAGERS AND GOVERNMENT

Practical recommendations are made to the managers in the SME sector to adopt professional codes of conduct at their workplace. Given the important contribution that SMEs make to a nation's economic growth and the role that they play in the reduction of poverty, it is important that these enterprises are provided with some suggestions to assist in improving their EPE, OCB, OC, and ultimately their ITS. It is recommended that policymakers and academics assist

SME owners/managers through education programs that will equip them to draft plans and strategic policies to position themselves for competitive advantage in the business world. Owners/managers of SMEs seeking to improve their performance, therefore, need to constantly monitor and evaluate the progress in goal achievement.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study makes significant contributions, and even though due care was taken to achieve rigor, there are some limitations that open up avenues for further research. Subsequent research could replicate this study in broader sampling contexts that include all the SMEs in Zimbabwean cities or a comparative analysis between Zimbabwe and other countries such as South Africa, Malawi, and Tanzania. The other limitation is that the data were cross-sectional. Future research efforts should investigate outcomes of OCB and EPE, such as job satisfaction, workplace spirituality, and organizational support. There is no best theory that is applicable to this study. Future research should try to include other theories for this same model, such as the Dependency theory and the Game theory, in order to evaluate the outcomes.

CONCLUSION

The equity theory was used to explain the relationships between the four variables in which employee intention to stay is the ultimate variable. Structural equation modeling was used to analyze the data using Amos 28.0. The study showed that there is a positive relationship between all five hypotheses. The results of this study show that there is a strong positive relationship between OCB, employee EPE, OC, and, ultimately, employee ITS. It, therefore, means that the more SMEs improve their equity perceptions, citizenship behaviors, and OC, the more the employee will be satisfied and opt to stay on the job.

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AN EMPIRICAL ASSESSMENT OF THE ANTECEDENTS AND OUTCOMES OF ELECTRIC VEHICLE ADOPTION: EVIDENCE FROM SOUTH AFRICA

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ABSTRACT

The purpose of the study was to investigate perceptions towards the possible acceptance of electric vehicles (EVs) in an emerging market such as South Africa. Data was collected in Johannesburg, South Africa from 380 respondents and analysed in SPSS 29 and AMOS 29 where descriptive statistics and hypotheses testing were conducted respectively. Key findings establish that potential customers trust and value EVs making them a feasible alternative for fuel-powered vehicles. However, it is important to note that concerns are raised about the potential risks associated with introducing such vehicles to the South African motor vehicle market. The study proposes future research direction on the subject.

Keywords: perceived usefulness, risk, value, trust, intention, electric vehicles.

INTRODUCTION

Electric vehicles (EVs) have emerged as a transformative technology in the automotive industry, promising substantial environmental and economic benefits. In recent years, the adoption of EVs has accelerated, driven by advancements in battery technology, government policies, and increasing consumer awareness of environmental issues (Forsythe, Gillingham, Michalek & Whitefoot, 2023). EVs are widely acknowledged as a key solution for achieving sustainable transportation and as a result, numerous countries have implemented policies and initiatives to encourage the adoption of EVs (Xu, Wang & Zhao, 2021). Furthermore, Xu et al. (2021) adds that despite these efforts, consumer awareness and acceptance of EVs remain suboptimal, hindering the initial market penetration rate of these vehicles. Companies like Tesla and BYD (Build Your Dreams) have been at the forefront of this revolution, setting new benchmarks in innovation and market penetration. One of the leaders in the EV market, Tesla, has become synonymous with electric vehicles. Since 2021, Tesla's Model 3 became the best-selling EV globally, with over 800,000 units sold (Morris, 2021). Tesla's Gigafactory in Nevada is one of the largest lithium-ion battery production facilities in the world, contributing significantly to reducing the cost of batteries and, consequently, EVs (Shirouzu & Lienert, 2020). Moreover, Tesla's continuous software updates and advancements in autonomous driving technology keep it at the cutting edge of automotive innovation (Hertzke, Müller, Schaufuss, Schenk & Wu, 2021). BYD, a Chinese automaker, has also made significant strides in the EV market. Founded in 1995, BYD initially focused on rechargeable batteries before expanding into the automotive sector (Miller, 2023). As of 2021, BYD is one of the world's largest manufacturers of electric vehicles, including buses, trucks, and passenger cars (Miller, 2023). The company's focus on vertical integration, controlling most aspects of its supply chain, has allowed it to maintain competitive pricing and quality (McKinsey & Company, 2021). BYD's efforts have been instrumental in China becoming the largest EV market globally, with more than 1.3 million units sold in 2020 alone (International Energy Agency, 2021). Emerging markets which include; China, India and Brazil are intensifying their fight against environmental degradation and are increasing emphasis on electric vehicles (Wu & Zhang, 2017; Jaiswal, Kaushal, Kant & Singh, 2021). This present study under investigation also looks at an emerging economy (South Africa) as far as the viability, feasibility and practicality of introducing EVs is concerned. The objectives of the present study are therefore to investigate the relationship between the value perception of EVs in relation to perceived usefulness, trust and risk. Additionally this study seeks to understand the impact that perceived value would have on the intention to use EVs.

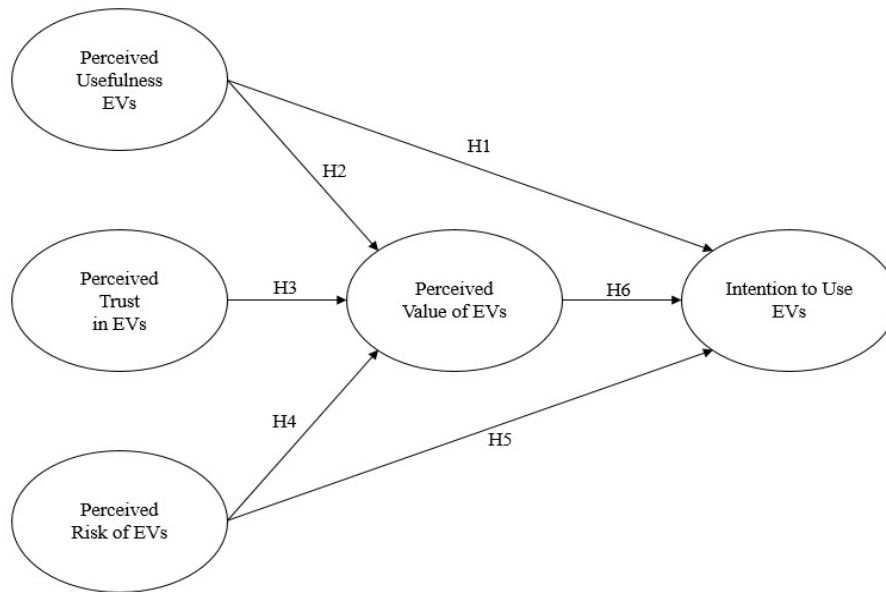
Problem Statement and Gaps

Despite the rapid advancements and growing market presence of EVs, several challenges hinder their widespread adoption. One of the primary issues is the perceived high cost and limited range of EVs compared to traditional internal combustion engine vehicles. Additionally, the infrastructure for charging EVs remains underdeveloped in many regions, contributing to range anxiety among potential buyers. Furthermore, the environmental impact of battery production and disposal raises concerns about the long-term sustainability of EVs. While the cost of EVs has decreased over the years, they still represent a significant investment for many consumers. Research is needed to explore ways to further reduce costs through economies of scale, advancements in battery technology, and government incentives (Li, Castellanos, Maassen & Chowdhury, 2021). Another issue is charging infrastructure. The availability and accessibility of charging stations are critical to the adoption of EVs. There is a need for comprehensive studies on the optimal deployment of charging infrastructure, especially in urban and rural areas with different demographic and geographic characteristics (Neaimeh, Salisbury, Hill, Blythe & Scoffield, 2020). More research is needed to examine how different demographic groups perceive EVs and what incentives might encourage broader adoption (Rezvani, Jansson & Bodin, 2015). This in particular is the specific research problem that the present study seeks to explore address and address. Studies focusing on these innovations can help identify new opportunities for enhancing the performance and appeal of EVs (Chan, Wong & So, 2021). From an emerging market context such as South Africa very little is known regarding customer perceptions towards EVs thus this study attempts to address this gap.

Theoretical Underpinning

The research utilized the Technology Acceptance Model (TAM) developed by Davis in 1986. This model was considered pertinent to the study as it examined how consumers would adopt a newly introduced technology in the market. The TAM is recognized as the most authoritative framework for explaining users' acceptance of new technology (Lee, Hsieh & Hsu, 2011).

Figure 1: Conceptual Model: Modified Technology Acceptance Model



Source: The Authors (2024)

REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESES

Perceived Usefulness of EVs and Intention to Use EVs

Perceived usefulness is directly and positively associated to the intention to use EVs (Huang, Lin, Lim, Tseng & Zhou, 2021). Perceived usefulness is the degree to which individuals think that using a specific technology will enhance their workplace productivity and help them achieve valuable objectives (Davis, 1989; Huang et al., 2021; Liu, Hong, Zhu, Yan, Qi & Liu, 2018). Jaiswal et al. (2021) support the assumption that perceived usefulness influences intention to use technology positively. Based on the literature provided, the following hypothesis is proposed:

H1: Perceived usefulness of EVs is related to intention to use EVs.

Perceived Usefulness of EVs and Perceived Value of EVs

Perceived usefulness is defined as the degree to which an individual believes that a particular technology is superior to existing alternatives (Venkatesh, Morris, Davis & Davis, 2020). Perceived value refers to the consumer's overall assessment of the effectiveness of a product on the basis of the observations of what is gained and what sacrificed (Zeithaml, 1988; Zhang, Wang, Wan, Zhang & Zhao, 2022). Perceived usefulness influences attitudes, value, and trust towards the usage of technology (Venkatesh & Bala, 2008; Venkatesh et al., 2012). The ease of use of autonomous vehicles, which function without human control, influences their perceived usefulness (Kaur & Rampersad, 2018). These vehicles, similar to electric cars, represent a shift from traditional vehicles, making the comparison pertinent. A technology's perceived usefulness is crucial in determining its value and efficiency as experienced by the user (Venkatesh et al., 2020). Based on the aforementioned evidence, the following two hypotheses were proposed:

H2: Perceived usefulness of EVs is related to the perceived value of EVs.

Perceived Trust in EVs and Intention to Use EVs

Zhang et al. (2022) proposed that perceived trust and perceived value are both key factors that ultimately result in the intention to accept EVs. Trust in a technology significantly influences its perceived usefulness (Gefen & Straub, 2004) which could ultimately lead to the intention to use it. The notion that perceived trust in EVs impacts the intention to use them is supported by Xu et al. (2021) who also adds that trust in EVs is also impacted by the driving experience and satisfaction. The intention to pay for EVs can be predicted through the level of trust that potential customers will have in the vehicles Ng, Law and Zhang (2018) with Chun, Chinen and Matsumoto (2023) stating that perceived green value of EV leads to the intention to purchase EVs. Based on the above-mentioned literature, the following hypothesis is proposed:

H3: Perceived trust in EVs is related to the intention to use EVs.

Perceived Risk of EVs and Perceived Value of EVs

Hu, Zhou, Wang, Gao and Zhu (2023) posit that a relationship exists between perceived risk and value when it comes to EVs. Kim, Oh, Park and Joo (2018) went further to suggest and later confirm that the perceived risk associated with EVs negatively affects the value perception of EVs. The issue of EV risk was further broken-down by Vishwakarma, P. (2024) who specifically made the connection between changing and range risk as well as physical and safety risks impacting the value perception of EVs. Based on the literature provided, the following hypothesis is proposed:

H4: The perceived risk of EVs is related to the perceived value of EVs.

Perceived Risk of EVs and the Intention to Use EVs

The intention to eventual accept of EVs is associated with some level risk (Samarasinghe, Kuruppu & Dissanayake, 2024). Jaiswal et al. (2021) support the notion that the consumers' perception of risk linked to EVs is associated with intention and acceptance of these vehicles. Potential customers should keep in mind the risk factor when considering

EVs. It is suggested that the perceived risk linked to electric vehicles lowers customer’s willingness to accept them (Adu-Gyamfi, Song, Obuobi, Nketiah, Wang & Cudjoe, 2022). Based on the literature provided, the following hypothesis is proposed:

H5: Perceived risk of EVs is related to the intention to use EVs.

Perceived Value of EVs and the Intention to Use EVs

The perception that a technology possesses some value leads to customers’ intention to use it (Hajiha, Shahriari & Vakilian, 2014). This idea is supported by Vishwakarma (2024) suggest that there is a close association between perceived value and intention to use EVs. Other scholars such as Wang et al. (2022) also consider the perceived value of EVs to directly impact the customer’s intention to purchase them, however this is not a direct relationship as they also have to perceive EVs as easy to use. Chun et al. (2023) suggests that perceived green value lead the customer’s intention to purchase EVs. Based on the literature provided, the following hypothesis is proposed:

H6: Perceived value of EVs is related to the intention to use EVs.

RESEARCH METHODOLOGY

The study took a quantitative approach adopting the survey method. A total of 380 respondents obtained from the central business district of Johannesburg, South Africa provided feedback regarding their perceptions on the introduction of EVs to the South African market. These participants were randomly selected through non-probability sampling, a form of convenience sampling. Participation was voluntary and no incentives were provided to respondents. The questionnaire comprised of demographic questions and Likert-scale questions on perceived usefulness of EVs (Davis, Bagozzi & Warshaw, 1989), perceived trust in EVs (Chen, 2010), perceived risk of EVs (Chen & Chang, 2012), perceived value of EVs (Chen & Chang, 2012) and the intention to use EVs (Kanchanapibul, Lacka, Wang & Chan, 2014). Data obtained from the survey was collected over a two-month period and processed in SPSS 29 and AMOS 29 respectively in order to generate the sample profile and test the proposed hypotheses. In AMOS 29 hypotheses were tested through structural equation modeling in order to establish the causal effect of antecedents (perceived value of EVs, perceived trust in EVs, perceived risk of EVs, and perceived value of EVs) on the consequent (intention to use EVs) through checking directional paths (+positive/ -negative) and levels of significance (p-values). The findings from the study are presented in the following section.

RESULTS AND DISCUSSION

The study’s findings are presented in this section, starting the sample’s profile followed by the reliability checks and hypotheses results. The sample profile is presented in Table 1 below.

Table 1: Sample Profile

Age	Percentage
18-19	33.4
20-25	66.6
Total	100
Gender	Percentage
Male	46.6
Female	52.6
Prefer not to say	0.8
Total	100
Employment Status	Percentage
Studying	64
Working	15
Self-employed	14
Not working	7
Total	100
Access to a Motor Vehicle	Percentage
Yes	35
No	65
Total	100

It can be observed in Table 1 above that most of the respondent are between the ages of 20 to 25 with females and male participation evenly distributed. The majority of the respondents were not employed while those employed accounted for about a third of all respondents. Only a third of the entire sample had access to a motor vehicle.

Table 2: Accuracy Analysis Statistics

Construct	Mean	Standard Deviation	Cronbach Alpha (α)	Average Variance Extracted
Perceived Usefulness EVs	3.910	0.799	0.855	0.632
Perceived Trust in EVs	3.878	0.771	0.949	0.680
Perceived Risk of EVs	3.870	0.800	0.916	0.802
Perceived Value of EVs	3.900	0.774	0.885	0.567
Intention to use EVs	3.916	0.764	0.877	0.547

Model Fit: Chi-square (CMIN/DF) = 2.389, Goodness of Fit (GFI) = 0.911, Normed Fit Index (NFI) = 0.955, Relative Fit Index (RFI) = 0.936, Incremental Fit Index (IFI) = 0.973, Tucker Lewis Index (TLI) = 0.961, Confirmatory Fit Index (CFI) = 0.973 and Root Measure Standard Error (RMSEA) = 0.061

As presented in Table 2 above, all constructs generated Cronbach's alpha values that were above 0.7, which is essential in confirming data reliability. In terms of validity, the average variance extracted ranged from 0.547 to 0.802 exceeding the required threshold of 0.5. The mean values and standard deviation values show that the data is normally distributed with mean values being close to each other (ranging from 3.878 to 3.916) and while the standard deviation values were all between the range of -2 to +2. The following section presents the findings from hypotheses testing in table 3. This is then followed by a discussion. It can also be observed that model fit is also acceptable with the GFI, NFI, RFI, IFI and TLI also exceeding the required threshold of 0.9, the CMIN/DF being lower the necessary value of 3 for robustness of model fit and last the RMSEA being between the 0.06 to 0.08. The hypotheses outcomes are presented in the following section in Table 3.

Table 3: Hypotheses Results

Hypothesis	Path Coefficient	P-Value	Outcome
H1 PU → INT	0.182	***	Supported and significant
H2 PU → PV	0.489	***	Supported and significant
H3 PT → PV	0.248	***	Supported and significant
H4 PR → PV	0.274	***	Supported and significant
H5 PR → INT	0.232	***	Supported and significant
H6 PV → INT	0.466	***	Supported and significant

*P-value level of significance is 0.001 (***)*

Perceived usefulness of EVs (PU), perceived trust in EVs (PT), perceived risk of EVs (PR), perceived value of EVs (PV) and the intention to use EVs (INT).

The first hypothesis, H1 (perceived usefulness of electric vehicles and intention to electric vehicles) produced a path coefficient of 0.182 and a p-value of 0.01 as denoted by (***) . This relationship was both supported and significant and suggested that the more potential buyers of EVs perceived them to be useful the more likely they would be to purchase them. Gani, Rahman, Bag and Mia (2024) support this finding. However, it is important to note that this was the weakest of proposed relationship. This therefore implies that marketers should not take for granted that perceived usefulness of a product/ technology will automatically lead to intention to purchase/ use as they may be more pertinent issues influencing customers. The second hypothesis, H2 (perceived usefulness of EV's and perceived value of EVs) produced a path coefficient of 0.489 (supported) and a p-value lower than 0.01 (significant) as denoted by (***) . This means that the more these potential customers (prospects) perceive the vehicles to be useful, the more there are likely to see value in them. The third hypothesis, H3 (perceived trust in EVs and perceived value of EVs) produced a path coefficient of 0.248 and a p-value of 0.01 as denoted by (***) . This relationship was both supported and significant suggesting that potential customers perceived EVs to be trustworthy and this would likely present value to them as potential customers.

The fourth hypothesis, H4 (perceived risk of EVs and perceived value of EVs) produced a path coefficient of 0.274 and a p-value of 0.01 as denoted by (***) . This relationship was supported and significant. Prospects perceived EVs to be risky despite the likelihood of them providing value and this was confirmed through empirical testing that perceived risk and perceived value are indeed related. The fifth hypothesis, H5 (perceived usefulness of EV's and intention to use EVs) produced a supported path coefficient of 0.232 and a significant p-value of 0.01 as denoted by (***) suggesting that perceived usefulness of EVs was positively and directly related to prospects intention to use them. The therefore meant that the more view them as useful, the more likely they will intend to use them. The sixth hypothesis, H6 (perceived value of EV's and intention to use EVs) produced a path coefficient of 0.466 and a p-value of 0.01 as denoted by (***) . This relationship is both supported and significant suggesting that if consumers perceive EVs to be useful to the will likely intend to use them. The following section presents the significance and contribution of the study.

CONTRIBUTION AND SIGNIFICANCE OF THE STUDY

This study contributes to how acceptance of new technology is accepted when it comes to EVs being introduced to an emerging market, in this case South Africa. The contribution is two-fold. First, a unique version of a modified technology acceptance model using risk and value was used to measure customer perceptions. This therefore makes it one of the very few if not the only study that explores these specific issues within this particular context. It is important to note that EVs are considered to present value and ultimately useful, but the respondents made it very clear that the potential risk that they present should not be ignored. In the following section, the conclusion and research direction are presented.

CONCLUSIONS AND FURTHER RESEARCH DIRECTION

As much as the concept of EVs is established in major global economies, it is still a very new concept for emerging markets such as South Africa with most not even have seen a Telsa or BYD yet alone driven or owned one. This study makes an attempt to comprehend perceptions of potential customers of such vehicles and maybe make the case for the feasibility of their introduction into the South African market. An established framework with some modifications to fit the context of the present study was employed to investigate these perceptions which include' perceived usefulness, trust, risk, value and intention to use EVs. More research is needed to better understand the how such technology would be of use to emerging markets. Possible future research direction from at theoretical perspective could measure the moderation effect of perceived value of EVs on the relationship between perceived risk of EVs and intention to use EVs.

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CHINA'S BELT AND ROAD INITIATIVE (BRI) AND ITS EUROPEAN JOURNEY

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ABSTRACT

The Chinese Belt and Road Initiative (BRI) has been promoted throughout the world since its inception in 2013 and has had overwhelming support alongside conflicting responses from across all continents. The 'global south' has embraced the economic infrastructure projects which have much to gain from the investment and projects joined the initiative. At the same time the G nations (mostly western) have seen it with suspicion and a Chinese endeavour to spread its power and influence. They also raise concerns about weaker nations being caught in a "debt trap" as a result of this initiative. Nonetheless more than 146 nations have joined the initiative and whatever the suspicions harboured, the BRI is an economic reality. China is of course seeking to be a global power through economic expansion and collaboration, and it seeks to position itself as the hub of global supply and manufacturing chains. It also needs to involve its second-tier provinces to both domestic and international markets via transnational infrastructure. Searching for new economic growth driver is now becoming a more urgent matter for the central government of China after 35 years of high growth and economic reforms. There may have been a shift of the motivation of BRI from its initial launch. Nonetheless the economic focus has not faded.

Keywords: China, EU, BRI, soft power, political initiative, 16+1 CEEC, Australia-China relations.

INTRODUCTION

The Belt and Road Initiative (BRI) was originated in 2013 when the Chinese leader Xi Jinping (Miao 2021) announced its creation on a State visit to Kazakhstan. Its initial aim was to utilise access productivities in China. Built on the shoulders of the original Silk Road connection to the world, it had the intention of being both broader in scope and deeper in its investment outlay. "The vast collection of development and investment initiatives was originally devised to link East Asia and Europe through physical infrastructure. In the decade since, the initiative has expanded to Asia, Europe, Africa, Oceania, and Latin America, significantly broadening China's economic and political influence (McBride et al 2023, Miao 2019)". It had a strong infrastructure approach (Kostecka-Tomaszewska & Czerewacz-Filipowicz 2019) and according to one observer it was deemed to be a "game changer" for investment development between Asia and Europe (Amighini 2018).

The economic expansive nature of the initiative as well as providing an important impulse to the global economy attracted positive response at the start. The BRI was providing infrastructure facilities and activities to many developing countries and provided the means in which communication and trade would be enhanced. Politically the BRI was an important economic policy in the Xi Jinping's domestic economic. Searching for new economic growth driver is now becoming a more urgent matter for the central government of China after 35 years of high growth (Estaeaban & Li 2017) and economic reforms (Xi 2015). There may have been a shift of the motivation of BRI from its initial launch. Nonetheless the economic focus has not faded.

As the BRI began to take shape, involving many nations and in many respects extending China's importance and reach across the globe, in some quarters it began to attract concern, and this was especially the case in the US under Obama and later in the Trump and Biden administrations. Democrat President Biden has continued the sceptical

approach of his predecessors towards the BRI but had little in the way of a viable and realistic alternative proposal and moreover was troubled by its dependence on the Chinese goods and Chinese economy.

BACKGROUND TO THE BRI

The initial aim of BRI was to access productivities in China, (Sielker & Kaufmann 2020, Miao 2021). The initiative according to Xi and evident in its concept was to better connect Asia, European and African continents. When the BRI was announced several countries immediately took a nuanced and cautious approach. In part it was not understanding its economic benefit especially through growth of Foreign Direct Investment (FDI) (Miao 2021) as well as its scope and intent. There was of course the concern with Chinese prowess around the world. This was evident in parts of the European Union (EU) and especially the US. Some of this negativity has also reached the point of accusations of Chinese actions which have conspiratorial dimensions. Nonetheless by 2020 “almost all the European states have entered into one or another form of formal cooperation under the disguise of the BRI according to one view (Sielker & Kaufmann 2020)”. The BRI is not a single megaproject but a continuously growing initiative with a large portfolio of projects for:

1. Rail, road, sea and airport infrastructure;
2. Power and water infrastructure;
3. Real estate contracts and more recently;
4. Digital infrastructure

China needs to build on an increasing institutionalised, contractual and structured cooperation with other states (Sielker & Kaufmann 2020. It is a much larger ambition which involves more than 140 countries and international organisations, 60 per cent of the world population (Esteban and Li, 2017). With this initiative 3 major topics of debate have been sparked of interest to this paper:

1. China uses BRI as a diplomatic strategy;
2. BRI is a new Chinese economic policy;
3. BRI combines both economic and geostrategic motivations (Esteban and Li, 2017)

SCOPE AND BREADTH OF THE BRI

By December 2023, the number of countries that were part of the BRI on the basis of undertaking Memorandum of Understandings (MoU) with China amounted to between 146 to 151 countries. The countries (excluding Palestine) of the Belt and Road Initiative (BRI) were spread across all continents (GFDC 2024):

1. 44 countries are in Sub-Saharan Africa
2. 34 countries are in Europe & Central Asia
3. 25 countries are in East Asia & Pacific (including China)
4. 22 countries are in Latin America & Caribbean
5. 19 countries in Middle East & North Africa
6. 17 countries in the EU
7. 8 countries of the G20
8. 6 countries are in Southeast Asia (GFDC 2024)

THE BRI AND EUROPE

According to one observer, “over two-thirds of European Union (EU) member countries have formally signed on to BRI with large Chinese infrastructure investments responsible for projects such as the renovated port of Piraeus in Greece and the Budapest-Belgrade railway in Hungary (McBride 2023).” Beijing has also funded several projects on the continent in non-EU countries. These separate investments have “made it harder for the EU to craft a united approach to China (McBride 2023)” as different European nations assess their economic relations with China and make their own assessment of their needs and the extent of their involvement in the initiative.

Hungary was the first European country to sign on to the BRI. Italy the only G7 nation to join the initiative did so in 2019. With a centre-left government in power at the time, Italy joining the BRI was seen as one of the US key allies breaking ranks and receiving both public and behind the scenes rebuke by the US. In September 2022, the new right wing Merloni government came to power with a promise to withdraw from the BRI which it did in December 2023. In July 2023, Italy's defence minister, said joining China's BRI had been a mistake by Italy:

“The decision to join the [new] Silk Road was an improvised and atrocious act...that boosted China's exports to Italy but did not have the same effect on Italian exports to China” (Tondo 2023).

France made no secret of its opposition to BRI and in 2018 Macron on a visit to China made the assertion that the BRI could make partner countries “vassal states”. The leadership of the European Union (EU) equally had its doubters and in December 2021, it announced the Global Gateway, a \$US300 billion infrastructure investment program explicitly meant to rival BRI. It was obvious to those that were paying attention, this commitment was but a ‘drop in the ocean’ compared to BRI. It is a common concern by critics of the BRI such as the EU that China is using BRI funds to gain influence in Balkan countries hoping to become EU members such as Serbia, thereby providing China access to the heart of the EU's common market. China's relationship with Serbia is very close and bonds with the fact that Serbia is also very close to Russia.

In 2022 the European Parliament reported that:

“The Belt and Road Initiative (BRI) serves as the main framework for expanding China's economic presence in the region and enables it to access key land and maritime routes. Loans and investments in undertakings further enhance China's position and create dependencies, even debt-traps, for the six Western Balkan states” (European Parliament 2022).

The question of the “debt traps” would become the argument of concern though it was more a question of the distrust of China. From the seven States in the Balkans a hand of concrete economic cooperation and assistance is better than empty promises – a much felt sentiment in the Balkans given the delay and excuses on delaying membership of the European Union to almost every country in the Balkans.

BRI AS A POLITICAL INITIATIVE?

While BRI was announced Xi that it was an economic initiative its geo-political repercussions could not be ignored (Esteban and Li 2017). The G7 nations, led by the US, saw it with suspicion and rivalry and have from the outset sought to counter it with accusations of ‘debt traps’ as well as propose counter initiatives, few of which have been successful. The European Union leaders have shifted from a more positive attitude at the time of its announcement to hostility especially since Covid (Miao 2021). Miao (2021) noted this change of attitude by analysing media discourse of EU countries' perception. In the more recent years debates have focused on its rational. There is evidence that China may have been blind to some ‘soft power’ consequences in its promotion of BRI but they were disappointed that the initiative was maligned by those who saw it as a threat to their economic hegemony.

According to one view, the approach taken by China in Europe in developing arrangements and MOUs on the BRI has resulted in an east-west divide (Sielker and Kaufmann 2020). Former German Foreign Affairs Minister Sigmar Gabriel in 2017 warned that that China's involvement in Central-Eastern Europe (CEE) is violating the principle of ‘one Europe’. Without a united single strategy towards China, “China will succeed in dividing Europe. (Jakimow, 2019)”. According to one scholar, the EU had not responded to China's BRI through the flow of investments well given that the key European states, such as France and Germany, become increasingly critical of China's engagement and the South, South-Eastern (SEE) and CEE are engaged in ‘revising their economies (Jakimow 2019).

ECONOMIC BENEFITS FOR EASTERN EUROPE

The 16 + 1 is an agreement between China and 16 central and eastern European countries (CEECs), including 11 EU Member States and five Western Balkan countries under the 16+1 cooperation format. It is an evolving arrangement and is an innovative approach to regional cooperation. Sielker & Kaufmann (2020) noted that Eastern European states tend to have the highest degree of formal cooperation as official BRI members whereas the North-West Europe is more diverse.

China has attempted to present the economic benefits not only just to the Eastern European countries but also those which are less prone to cooperate with China by trying to emphasise the win-win nature of BRI and it has sought to present the BRI as an opportunity instead of a threat (Esteban and Li 2017). Through increasing trade and financial relations with the countries along the routes of the New Silk Road (BRI) China hopes to consolidate the development with a win-win logic (Esteban & Li 2017). Infrastructure is a major avenue for China forging FDI into EU (Miao, 2021) and land transportation is the backbone of the BRI. Significant railway connections between China and Eurasia have been built. For instance, the Yiwu-London rail line was launched in January 2017 and there are 39 lines directly connecting 17 Chinese cities with 15 European cities (Esteban & Li 2017).

BRI AND RUSSIA

Initially the Russian position on BRI was nuanced when Xi first announced it, concerned that Beijing's plans might outshine Moscow's vision for a 'Eurasian Economic Union' and impinge on its traditional sphere of influence (McBride 2023). But given the close relationship developed between China and Russia over the last decade, it is no surprise that Russia has embraced BRI fully. The Ukraine War and China's recent endorsement of the Russian approach in its proxy war with the US/NATO provided the context of Vladimir Putin endorsing BRI as a project of cooperation. In a recent interview Putin stated on this matter: "The main advantage of the cooperation concept proposed by China is that within the framework of cooperation, no one imposes anything on others" (Reuters 2023). Another aspect within this framework is the closeness and economic support of the BRICS (Brazil, Russia, India, China and South Africa). As the voice of the 'global south' through the BRICS is becoming louder and growing in number, the BRI will have a greater fertile ground on which the BRI will be seen in greater positivity and less concerned by the alarmist views from the west.

CHINA AND THE SOFT POWER

Curran (2016) referred to the BRI as 'China's Marshall Plan' which gives some sense of its significance and importance. Yet to call it a Marshall Plan is misleading. The circumstances, background and political importance of rebuilding nations destroyed by the Second World War are entirely different scenarios. The only commonality in this example is the benefit to the originating nation. In the case of the Marshall Plan to the US; in the case of the BRI to China.

The element of double standards applied by the western world on Chinese intentions with the BRI is soaked in hypocrisy. The key message is "we must not let China succeed in anything that promotes it to be bigger and stronger" and there is a realisation that China's increasing economic influence has caused anxiety in many countries (Esteban & Li 2017) to snip it in bud would eliminate a great deal of uncertainties. Different from the US, China plans to assume the world leadership role with a different approach to the US military power approach. China through its 'soft power' approach and pushing more economic prosperity for a global common good, is playing a new role on the international world stage. Jakimow (2019) also argues that China used de-securitisation as its key strategy of soft power politics.

Whenever China presents an initiative to the world, there has always been some level of distrust, seeing some conspiracy lurking in the background and to some extent a double-standards approach. It is worth understanding that Chinese culture is very different from that of the west. Much of the culture values and beliefs are not shared by the rest of the world. The system that runs the machine of 1.4 billion people is different, which is not comprehended in its internal mechanisms. An old dictum is if we don't understand it, we can't trust it. But this cannot be the way forward.

IN OUR OWN BACKYARD – AUSTRALIA DECIDES TO REJECT THE BRI

In the early days of the BRI and its former denomination 'One Belt One Road', Australia was more positive about the initiative and even indicated its intention to cooperate if not join. As recently as 2017, Australia through its then Trade Minister just prior to attending the first Belt and Road Forum stated: "Australia supports the aims of initiatives such as the Belt and Road that improve infrastructure development and increased opportunities in the Asia-Pacific region (Laurenceson & Golley 2019)." Some months later, the then Prime Minister Malcolm Turnbull noted "we look forward

to working with China on the Belt and Road Initiative projects... Global infrastructure investment is a good example of where countries should work together” (Laurenceson & Golley 2019). However, the mood began to change in 2018 and in part as a result of the competing investments coming from China in the Pacific Islands.

By 2018 the Australian government began placing conditions on its observations of BRI and began alerting that with infrastructure (BRI) focus has been the wide-spread allegations that Beijing is using ‘debt trap diplomacy’ and alongside this the Australian Foreign Affairs Minister at the time warned “we want to ensure that they [Pacific islands] retain their sovereignty...that they are not trapped into unsustainable debt outcomes. The trap can then be a debt-for-equity swap and they have lost their sovereignty (Laurenceson & Golley 2019).”

Despite the political mood change, the State of Victoria under the Premiership of Dan Andrews either was prepared to ignore or was unaware of the political sentiments in the national government on relations with China that it went ahead with a framework agreement with the BRI which they signed in October 2019. From 2018 onwards Australia’s relations with China had declined significantly and the trade consequences include restrictions, tariffs or otherwise on Australian beef, barley, cotton, lamb, resources, seafood, sugar, timber, and wine exports to China and the deterring of Chinese students to study at Australian universities, the alleged cyber-attacks coming from China, and the alleged Chinese interference in the Australian political system (Varano 2021). In line with the tensions between Australia and China, in April 2021, the Australian federal government directed the dissolution of Victoria’s BRI agreement, concluding that it was “inconsistent with Australia’s foreign policy or adverse to our foreign relations.” The enactment of the Commonwealth’s new foreign veto laws is the first of its kind, in that it empowered a country to cancel a signed BRI agreement (Varano 2021).

Since the cancellation of the Victorian agreement, Australia has remained either indifferent or hostile to the BRI and especially when it would emerge in the neighbouring Pacific Islands. In the view of one observer the changed Australian approach can be put down to the following:

“This change can be attributed to several factors, including the influence of the United States, the presence of a conservative and xenophobic culture within Australian society, the longstanding policy of maintaining cold political relations and hot economic ties between Australia and China, and the political struggle between political parties in Australia (Pan & Yi 2024).”

THE US RESPONSE TO BRI

Almost from the outset the US saw the Chinese BRI as a threat to its hegemony especially given the Obama “Pivot to Asia” which had been announced during the 2012 US elections. As a report for the Council for Foreign Relations noted:

“The Belt and Road Initiative, Chinese President Xi Jinping’s signature foreign policy undertaking and the world’s largest infrastructure program, poses a significant challenge to U.S. economic, political, climate change, security, and global health interests (Independent Task Force Report, 2021).”

In 2021, the Biden administration along with the G7, launched the Build Back Better World Initiative (B3W) an infrastructure investment program conceived to compete with BRI. But more honest analysts acknowledge that its lack of financing prevents it from acting as a serious challenger to the BRI.

A revealing recent critical assessment from one observer was that:

“What the US and China’s other strategic competitors have so far failed to understand is that while the BRI is a flawed model with often-questionable outcomes, it is usually the ‘least worst’ (and sometimes only) route to financing major infrastructure projects for participating countries (Barr 2024).”

What is argued by Barr is that in order to counter the BRI, Washington along with its loyal allies have proposed countless initiatives over the last decade, none of which have taken off or been genuine attempts to establish an equivalent to the BRI. These initiatives are what can be defined as real forms of ‘economic diplomacy’ which in the west have been dismissed in the pursuance of strong arm ‘diplomacy’!

What created even greater anxiety from the US was its over overreliance on Chinese supply lines especially during Covid and the need for economic ‘de-coupling’! As a Harvard Business paper highlighted:

“For U.S. politicians and the public, shortages of N95 masks and other key medical equipment at the beginning of the coronavirus crisis highlighted just how dependent the United States had become on

production in China. The Trump administration's aggressive policy toward China was broadly popular, despite potential negative side effects. In the first 10 months of 2020 the exact phrase "decouple from China" or "decoupling from China" appeared in three times as many articles as in the previous three years combined (Black & Morrison 2021)."

The coming period in the US with Presidential elections upon us irrespective of the winner will not change its policy towards the BRI and if at all possible, will seek to render it even more difficult. At bottom, the BRI is challenging the US and the West's primary role in the world which is sounding the need to acknowledge China's position and role as a leading power in what is now a multipolar world. The BRI is a part of this global outreach by China.

CONCLUSION

China's grand vision of the world-changing BRI will have its geo-political resistance and its detractors but what can be said of the almost 150 countries that are a part of this initiative? There must be activity offering economic and social improvement and benefit to these nations. In whatever way the BRI is understood, the overarching theme that emerges is the competitive geo-political rivalry and competition rather than a clear and honest assessment of the merits or otherwise of the BRI. Over the last decade many of the Chinese initiatives have been tainted by the hand of politics whether it be BRI, Huawei, Covid or other. As the world sees a standoff between China and the US (alongside its allies) no longer is the American century so clearly of benefit to the many countries that once upon a time looked to the US for leadership and economic progress. While the times are different there are clearly different strategies at play in the world, the standoff between these two different strategies is now a more even contest. Being offered something economically to dozens of nations is better than nothing and this is hard to beat! It is a sad reflection on geopolitical matters that every initiative that emanates from China is seen as some sort of power grab or hegemony seeker. The tide is turning and RI will evidently be part of this change.

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SOCIAL ECONOMY DYNAMICS: EXPLORING BUSINESS MODELS FOR SUSTAINABLE CHANGE

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ABSTRACT

The study aims to discern and categorize Social Economy Initiatives (SEIs) based on significant differences in their business model (BM) dimensions framed in the relationship of backstage and front stage from Osterwalder and Pigneur (2011)'s CANVA model. Through comprehensive data analysis and statistical testing, the study tested a taxonomy – PIM model —, expanding its understanding and applicability. The validity of the PIM model is based on the consolidated literature on generic strategies. Results reveal multivariate profiles of SEIs, reflecting their diverse organizational dynamics and challenges within the social economy landscape. The findings offer insights for policymakers, investors, and practitioners to enhance support mechanisms and fortify the social economy ecosystem, empowering SEIs to drive positive social change and sustainability.

Keywords: social business model, social economy, social innovation, taxonomy, sustainable development.

INTRODUCTION

Sustainable development is based on three pillars that balance and complement each other: society, environment, and economy (Boons & Lüdeke-Freund, 2013; Tate & Bals, 2018). The environment is the source of life and resources that sustains social structures. The economy is the system of decisions about the use of resources for the production and reproduction of social life. In this sense, environment and society are the fundamentals of the economic problem (Krugman & Wells, 2023) and the increasingly comprehensive and severe crises are symptoms of the excessive importance attributed to economic pillar (Tate & Bals, 2018).

The interest in social investment has been increasing (Dupain et al., 2021). Social investment makes services of collective interest more efficient, creates savings, and increases the capacity and variety of social responses (Cabral et al., 2019). Sustainable practices have been rewarded with greater willingness to pay and greater customer loyalty. Investors and regulators also intensify the pressure on companies, as pointed out by de Freitas Netto et al. (2020). According to Claro and Esteves (2021), the Business and Sustainable Development Commission foresees business opportunities estimated at US\$ 12 trillion annually by 2030 for companies aligned with sustainable development goals. There is hope, but there is also pressure that social economy can be a source of insights to allow a transition in the production and consumption paradigm (Ciccarino & Rodrigues, 2023).

Although there are many ways to benefit society, not all focus on delivering social values and compromising sustainable development. The social pillar of sustainability can probably guide the environmental and economic pillars in a cause-and-consequence dialectic because humans are social beings (Hossain et al., 2017). This importance is scarcely recognized, and it is the less scientifically developed pillar (Tate & Bals, 2018). Additionally, interest in strategies and business models capable of achieving sustainability is relatively recent and still underdeveloped (Bignotti & Myres, 2022; Lüdeke-Freund et al., 2018; Lüdeke-Freund et al., 2024). Literature is still grounded in the conventional business, with few models built upon social or sustainable literature, increasing the bias in analysis (Lüdeke-Freund et al., 2024). Scholars have been advocating for meso-level investigations, which would likely be country-specific (Bignotti & Myres, 2022; Doherty & Kittipanya-Ngam, 2021). The same multidimensionality that

enhances the problem-solving expectations poses a consolidation issue (Lüdeke-Freund et al., 2018; Nidhisha et al., 2024) and there is also little consensus on the boundaries and characteristics of SEIs (Bignotti & Myres, 2022; Defourny & Nyssens, 2021; Dwivedi & Weerawardena, 2018; Kamaludin et al., 2024). This aspect can undermine the creation of supportive structures and the provision of managerial tools appropriate for the social economy (European-Commission, 2016). Many social enterprises struggle with financial sustainability, with a high rate of failures reported, especially within the first few years of operation (Kamaludin et al., 2024).

Taxonomies provide an effective method for organizing the numerous predictors and dimensions involved in a complex phenomenon (Carneiro et al., 1991; Peixoto, de Alcantara, et al., 2022) studied through the lenses of literature in a pre-paradigmatic stage (Hossain et al., 2017; Kamaludin et al., 2024). This approach can streamline the vast array of potential combinations into a more manageable set (Humbrick, 1980), capturing their simultaneous and interactive dynamics. A taxonomy is a tool to organize dispersed knowledge, resulting in a framework for theoretical consolidation (Venkatraman & Prescott, 1990).

This study aims to test a taxonomy of SEIs for classification and business model description, understanding underlying dimensions and relationships. Because the method of building taxonomies is context-based (Humbrick, 1980) it is important to verify if the same patterns will emerge from a different sample. In this sense, this study aims to answer how SEIs and investors can analyse social business models to achieve better results. This research question should enable improvements in funding access and secure the enduring positive social impact. It delves into the intricacies of various social economy initiatives (SEIs) from the United Kingdom, ensuring the context delimitation aforementioned and allowing a deeper exploration of distinguish dimensions.

PIM model is the taxonomy proposed by Ciccarino et al. (2022). It has three profiles: Persistent SEI (P), Innovative SEI (I) or stuck in the middle (M). Assuming that business models are more generic than strategies (Teece, 2010), it is an appropriate thinking to consider the commitments and constraints needed to carry out persistent or innovative profiles. Thus, it is possible to have features of both profiles simultaneously, but this will lead to underperformance being stuck-in-the-middle (Porter, 1980; Zott & Amit, 2007). Therefore, providing a reliable way to analyse business model can help to outline structuring strategies.

THEORETICAL BACKGROUND

Social organizations are not isolated, they exist in contexts. The social economy is the context where SEIs and other social organizations provide goods and services, including insurance and financing, to meet social needs through the market. The organizations that make up the social economy must be privately owned, formally constituted, with decision-making autonomy and freedom of affiliation. Their main distinction is that the distribution of eventual profits and decision-making are detached from the capital. It includes private organizations focused on the provision of social services, whose surpluses cannot be appropriated by the economic agents that create, control, or finance them (Defourny & Nyssens, 2021) The legal system defines what is part of the European social economy in contrast to the American school, which uses profit for classification (Defourny & Nyssens, 2010). This lessens the tension between economic and social goals, so popular in literatures such as social entrepreneurship (Dwivedi & Weerawardena, 2018). However, the lack of consensus on the boundaries and characteristics of SEIs poses challenges in how to enable their development, and hinders progress that conduct to practical application and to longitudinal data collection (Bignotti & Myres, 2022; Kamaludin et al., 2024).

For a SEI to attract investment, it must demonstrate its social value, business model innovation, and sustainability. Yet, accessing these parameters is challenging for both initiatives and investors tasked with evaluating them. The existing literature also lacks practical tools and techniques to effectively mediate the relationship with investors, despite the pressing demand for increased accountability and transparency (Barki et al., 2020).

Business models are more generic than strategies (Teece, 2010) and a popular research unit. Unfortunately, it is very mentioned in social studies but not operationalized (Boons & Lüdeke-Freund, 2013; Lüdeke-Freund et al., 2024). The Business Model Canvas is a strategic management tool used to visualize and develop new or existing business models. It makes a division between the “front stage” and the “backstage” of a business. The front stage represents the customer-facing elements of the business, including knowing your target audience and delivering an innovative value proposition. On the other hand, the backstage encompasses the internal operations and structure

required to deliver value. This includes key resources, activities, and partnerships. Understanding and effectively managing both the front stage and the backstage of the business is crucial for creating a sustainable business model (Osterwalder & Pigneur, 2011). This framework is also useful to delineate social business models, especially if connected to strategic thinking. Because it is a well-defined framework, it favours building common language and fosters systematic analysis. It can also improve benchmarking and decision-making, enhance innovation and the solution of social problems (Menter et al., 2020).

Zott and Amit (2007) consider two categories for entrepreneurial business models: focusing on efficiency and focusing on innovation. The first prioritizes reducing costs and increasing the operation efficiency and reliability. They are good in resource scarcity situations. The second generates superior performance sustainably, even with variations in resources availability. Although the categories are not mutually exclusive, the authors point out that trying to combine both is counter-productive, something in line with the performance of the stuck in the middle organizations of Porter's (1980) generic strategies.

Porter (1980) recognized three generic strategies adopted by organizations to place themselves in the competitive arena. Significant commitment and the right organizational structure are needed to carry out any of them. While it is possible to go for more than one generic strategy at the same time, it usually leads to underperformance. The organization that seeks to get strategic benefits from more than one generic strategy must deal with conflicting priorities, hence are named as Stuck in the Middle. They lose the opportunity to choose the most appropriate strategy for themselves, dispersing efforts to cope with different control procedures and with the different leadership styles needed. Then, different generic strategies are suited to different resource and capacity bases.

All classifications are derived from observing patterns and deal with the structured organization of attributes or elements in an organizational concept (Venkatraman & Prescott, 1990). Each classification is contingent on the context and circumstances from which they emerge (Carneiro et al., 1991; Humbrick, 1980), being generalizable through the consistency of the study's replication (Dess & Davis, 1984)(Dess & Davis, 1984) or by the identification of statistically generalizable forms of testing (Miller & Dess, 1993).

The social entrepreneurship literature does not offer consensual, consistent, and empirically tested measures and criteria that allow comparison between SEI (Erpf et al., 2019; Kamaludin et al., 2024). The available classifications are, in general, conceptual and lack empirical tests (Bignotti & Myres, 2022; Macke et al., 2018), qualitative approaches are more usual, mainly case studies (Erpf et al., 2019; Kamaludin et al., 2024).

The PIM model is a taxonomy based on the social entrepreneurial literature to offer a classifications structure, helping theoretical consolidation. The taxonomy is statistical generalizable and offers a structure for further replication because it helps patterns identification. Resulting analysis can improve the search for the best viable option for social problems' treatment. The model was developed embedded in the Portuguese Social Economy to fill the context requirements of the methodology. However, this delimitation that allowed deepening the discussion, offering more comprehensive descriptions of each profile also represented a research limitation with a small sample.

The taxonomy is in line with Zott and Amit' (2007) business model study and Porter's generic strategies (1980), enhancing its validity. The business model was used as a framework for literature review and to make up the online survey. PIM model can distinguish and classify SEIs by significant differences in their business model factors and in their access to funding. (Osterwalder & Pigneur, 2011) The PIM profiles where SEI business models are classified form an acronym.

The Persistent SEI has the lowest resource's availability and capacity for innovation, with less access to investment. Their degree of value proposition innovation and innovation capacity can represent the creation of new combinations to overcome resource constraints and social goal difficulties. The Innovative SEI has resource availability and innovation capacity. It presents the highest innovation level in the value proposition with the best relation between structure and scale. Finally, the Stuck in the middle (henceforth S. Middle) has the least innovative value proposition, serving fewer beneficiaries proportionally to its structure. S. Middle tends toward underperformance due to mixing different orientations in the same strategy.

METHODOLOGY

The questionnaire developed by Ciccarino (2020) was translated from Portuguese to English and revalidated by consulting scholars. It is based on previously tested and published scales related to the social entrepreneurship research field and framed in the (Osterwalder & Pigneur, 2011) business model analyses. It aimed to favour consensus (Lüdeke-Freund et al., 2018) while offering theoretical suitable structure to further replication (Venkatraman & Ramanujam, 1986). The sample was collected between March and September 2023 in the United Kingdom. The online survey was available to any SEI that wished to participate and relied on the support of a hired intermediate to reach them. It is important to highlight that the focus was not on statistics for the population, but on verifying whether the PIM profiles emerged from another sample with the same geographic limitation as the previous study. A T-test was performed to for assessing the adequacy of the sample size in detecting significant effects or relationships between variables (Hair Jr et al., 2010).

The study aims to discern and categorize Social Economy Initiatives (SEIs) based on significant differences in their business model factors according to main dimensions. The hypotheses are conditioned by the methodology for creating taxonomies (Carneiro et al., 1991). The anticipation is that by amalgamating business model elements with contextual factors, SEIs can be classified and grouped based on their resemblances, thus reflecting multivariate profiles (Humbrick, 1980). The critical dimensions for classification and the resulting profiles should be aligned with the findings from prior research (Ciccarino et al., 2022). However, the emergence of such profiles cannot be predetermined, leading to the formulation of the first hypothesis (H1): there exist at least two distinct profiles of SEIs shaped by business model factors (H1a) and funding accessibility (H1b). Classifications within a taxonomy are deduced from pattern observation (Venkatraman & Prescott, 1990) and are contingent upon contextual nuances (Humbrick, 1980), their generalizability resting on statistically sound testing methods (Carneiro et al., 1991). Consequently, the second hypothesis (H2) posits that the means of at least two profiles are significantly different.

The common method bias (CMB) was addressed through Harman's single factor test, using exploratory factor analysis (EFA), complemented by comparison with social entrepreneurship benchmarks. It is an important step to assess questionnaire adequacy and the resultant sample quality (Podsakoff et al., 2003). Another EFA summarized variables, retaining only statistically significant ones (factor load > 0.6) and grouped them based on literature criteria. The criteria utilized were Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) superior to 0.6, and Bartlett's Test ($\alpha < 0.05$). Orthogonal factors were created through summed scales to maintain original variable values and compensate for measurement errors. They should meet Cronbach's Alpha superior to 0.6 to suggest reliability. The EFA allowed verifying if the variables are grouped according to the literature and according to the previous study (Hair Jr et al., 2010). Cluster analysis identified internally homogeneous, externally heterogeneous groups using hierarchical and K-means algorithms, validated by MANOVA. Internal homogeneity was tested by Box's M ($\alpha > 0.05$) and Levene's tests ($\alpha > 0.05$), while cluster suitability was assessed by Pillai's Trace and Wilks Lambda tests ($\alpha < 0.05$), with differences described using centroid analysis and Bonferroni's post hoc test ($\alpha < 0.05$) (Carneiro et al., 1991; Hair Jr et al., 2010).

ANALYSIS AND RESULTS

Test-T offers a straightforward method to evaluate whether our sample size provides sufficient statistical power to yield meaningful results. This section describes the sample, providing detailed contextualization, often missing in existing literature (Bignotti & Myres, 2022). The research delves into the landscape of social economy initiatives (SEIs), drawing insights from a robust dataset comprising 285 valid cases. The age range of participants spans from 22 to 73 years, with an average age of 48 years and a mode of 32, reflecting a broad spectrum of experiences and perspectives. Gender representation is balanced, with 45.3% male and 53.3% female respondents. Notably, a significant proportion of the sample (81.8%) holds a degree equivalent to or higher than a college degree. Following the study intention, all respondents occupy high hierarchical positions within their respective organizations. Experience in social economy ranges from 0 to 45 years, 42.46% of the sample possesses between 2 and 5 years of experience.

As found in the first study, the sample surveyed comprised a range of SEIs, balancing both new (i.e., up to five years, according to GEM) and established organizations (i.e., above five years, according to GEM). The age of SEIs varied from 1 to 200 years, with a majority falling under the category of mature organizations (63.51%), including

some over a century old (15 SEIs). This indicates a dynamic and well-established social economy market. Responses from the survey suggest that this market experiences moderate to low levels of competition and uncertainty, which fosters collaboration and resilience among SEIs, aligning with existing literature.

The total number of volunteers mobilized by SEIs in the sample is 152,483, and they generate 17,018 jobs. The composition of the workforce varies widely, with an average of 8.96 volunteers for each employee. However, the most common ratio is one volunteer per employee, with 33 cases representing this scenario. The most extreme case observed involves 3500 volunteers for each employee. Bacq and Eddleston (2018) found a positive correlation between the number of full-time employees and the scale of impact on society generated by the organization. The same correlation is true in this sample (Pearson Correlation = 0.681 $\alpha < .001$).

In terms of geographical reach, SEIs operate across various scales, with the majority serving locally (42%), followed by regional (25%), national (22%), international (4%), and global (7%) levels. These models encapsulate the core principles guiding the initiatives, delineating their approach towards achieving both social and economic goals. A significant portion operates as full non-profits, prioritizing social impact. They don't recognize any economic goal (52%). Hybrid organizations that balance social and economic goals correspond to 29% of the sample, and 19% are social services in complementarity with government.

Information regarding access and support was collected using a Likert scale ranging from 1 to 5 points, where 1 signifies no support or access and 5 represents full support or access. According to the data, the number of SEIs working in collaboration with the government contradicts the notion that the majority of SEIs experience limited government support (mode = 2). Additionally, the data suggests partial support from legislation and regulations (mode = 3) and partial access to public funding (mode = 3). This implies that while there may be some acknowledgment of SEIs within public discourse, concrete support mechanisms may be insufficient, potentially impeding their growth and impact.

The data also aligns with theory regarding funding challenges (Bacq & Eddleston, 2018; Dwivedi & Weerawardena, 2018; Kamaludin et al., 2024). The majority of SEIs rely on public investment (mode = 3) and on donations (mode = 4), with donations being the primary source of financial capital in the sample. SEIs receive partial support from social incubators (mode = 3), but encountering barriers when dealing with banks, evidenced by limited support (mode = 1) and limited access to special credit lines (mode = 1). This limited support from banks could present challenges for SEIs in accessing financial services and capital necessary for their operations and expansion. In this context, support from social incubators could prove pivotal. However, there remains room for improvement in this domain. The involvement of incubators and accelerators has the potential to enhance access to venture capital, mobilizing funds from enterprises towards social causes. SEIs perceive limited access to such investment (mode = 1), whereas they indicate partial access to private funding (mode = 3). This dataset offers a comprehensive glimpse into the landscape of social economy initiatives (SEIs) in the UK, covering their operational dynamics, challenges, and support systems. Such detailed contextualization is crucial for informing discussions about the proposed classification (PIM model).

As a result of the T-test for assessing the adequacy of the sample size in detecting significant effects or relationships between variables, the variables related to number of employees and volunteers were kept in a side. They did form a factor together representing the human resources available (factor load = 0,983 and 0,983 respectively; Cronbach's Alpha = 1), but there is too much variance. The sample size was fit for the other 60 variables. This step helps to conform to the premise of independent observation needed to perform the hypothesis tests in this study.

Harman's single factor technique evaluated the adequacy of data collection. After three sequences of tests, the variation in the first factor never passed 12%, well below the parameters reported in the literature (Bacq & Eddleston, 2018). Maintaining only the variables useful to analyse the BM of the EFA suggests that all the remaining 47 variables are significant to discuss the topic (KMO = 0.743 and Bartlett's Test $\alpha < .001$). When carrying out the entire methodology, the results found did not clearly determine the two main clusters, mixing characteristics of the profiles from the first study. It was necessary to analyse the distribution of cluster cases, considering the individual variables of each dimension. It was realized that the problem was related to access to resources. The variables that were not significant to classify the cases into different groups were excluded, according to the results of the F-Test and the Levenne test. This change improved the explained capacity of the factor from 56.097% to 58.612%.

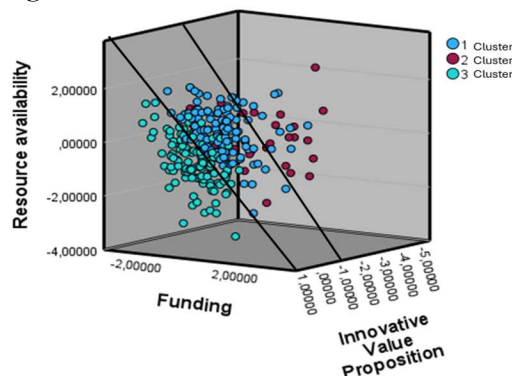
The EFA selected significant variables following the literature. It highlighted similar results as the previous study, including more variables which have been significant, but didn't form factor. Only one variable "Support of Banks" was not included in the model, despite its prior importance. Analysing the sample, most of the cases report "Limited Support" (mode = 2; mean = 2.08; standard deviation = 1.107 < 1.5). In 5-point Likert Scales, this pattern means low variance, making this a weak indicator to classify cases. It is interesting to highlight that other variables related to funding were also excluded from the analysis for the same problem. SEI has special low access to venture capital (mode = 1.5; mean = 1; standard deviation = 1.081), and to public funding is moderated (mode = 3; mean = 2.85; standard deviation = 1.302 < 1.5). This finding supports the analysis present in the prior section regarding difficulties to accessing funding in the regular market (Bacq & Eddleston, 2018; Dwivedi & Weerawardena, 2018; Kamaludin et al., 2024). The consistency of the results highlights the importance of these dimensions to analyse social business models, connecting the literature with practice.

The next step was to verify if these dimensions would classify cases, connecting similar cases in significantly different groups. In line with the findings in the previous study (Ciccarino, 2021), the hierarchical cluster analyses highlights three main clusters in the Agglomeration Schedule (the largest gap between cases 282; 314-285=29), considering average linkage between groups. Therefore, the K-means analysis was performed to three clusters. The five dimensions were significant to form the clusters (ANOVA F-Test $\alpha < .005$). All the 285 cases were classified, and the sample was homogeneously distributed across the three clusters. No profile holds an absolute majority of cases (cluster1= 121 cases; cluster 2= 35 cases; Cluster 3= 129 cases).

Analysing the classification adequacy of the PIM, the Box's M test indicates that the assumption of equality of covariance matrices between groups was violated (Box's M test, $\alpha < 0.001$). The assumption becomes valid if the innovation dimension is eliminated (Box's M test $\alpha = 0,344$), but all other tests remain the same. On a univariate level, the dimension does not present any problem (F-test = 351.544 $\alpha < 0.01$) dividing the clusters appropriately (Bonferroni's post hoc test $\alpha < 0.1$). Therefore, all the five dimensions were kept. The individual homogeneity of each dimension in the cluster classification was significant using the Levene test (Levene test, $\alpha > 0.05$) except for the dimensions "Innovative Value Proposition" (Levene test, $\alpha < 0.01$) as expected due to explained above. On the other hand, the Tests of Between-Subjects Effects (Test F) shows the importance of this dimension. The test analyses if there are differences among the group means on the combined dependent variables, being used to assess the overall significance of the effects of the classification per se on its dimensions. This effect is like an unexplained variance that can happen by chance. The "Innovative Value Proposition" dimensions have the largest value (F-test = 351.544 $\alpha < 0.01$), almost four times the value of the next larger dimension. It suggests that this dimension is important to explain the variance despite the classification.

Therefore, there is sufficient evidence to conclude that the clusters differ significantly regarding the combined variation of the dependent variables (Pillai's Trace and Wilks Lambda tests $\alpha < 0.001$). It suggests the classification's adequacy because the clusters are distinct. In this sense, MANOVA supports the first hypothesis (H1) the adequacy of the classification to highlight at least two PIM's profiles. Figure 1 expresses the clusters that represent PIM's model profiles, considering the dimensions with biggest F-test (see Table 1) The three groups can be easily identified with elements from the S middle crossing the space, as predicted by literature (Porter, 1980; Zott & Amit, 2007).

Figure 1: Cases classification in three clusters



Source: IBM SPSS Statistics 29

Table 1: Corresponding matrix in quartiles and post-Hoc test

Dimensions	F-test	Innovative	S.Middle	Persistent	Effect Rank	First Study
Resource availability	38.894	Q3	Q2	Q2	1 > 2 > 3	1 > 3 ; 2 > 3
Innovation capability	10.437	Q3	Q2	Q2	1 > 2; 1 > 3	2 > 3 ; 1 > 3
Funding	34.998	Q3	Q2	Q2	1 > 2; 1 > 3; 2 > 1	2 > 3
Support in the ecosystem	3.178	Q2	Q3	Q3	3 > 1	not analysed
Innovative Value Proposition*	101.35	Q2	Q1	Q3	3 > 1 > 2	1 > 3 > 2

* Post-hoc Bonferroni test, $\alpha < 0.1$

Source: Authors

The cluster's centroid analysis and Bonferroni's post hoc test ($\alpha < 0.05$) were used to describe differences among profiles. The classification structure was analysed from the centroids of the clusters, to verify how mutually exclusive the identified profiles are and the significance of their effects' relationship (Post-hoc Bonferroni test, $\alpha < 0.05$). The classification was consistent with the results of the prior study (Ciccarino et al., 2022). The post-hoc Bonferroni test supports the second hypothesis (H2). "Resource availability" and "Innovative Value Proposition" distinguished the three clusters, while the other dimensions differentiated at least two clusters, as shown in Table 1.

The biggest improvement was that the two main SEI profiles (i.e., Cluster 1 = Innovative SEI; Cluster 3 = Persistent SEI), are distinguished by all the five dimensions. This frailty in the prior study can be due to the small sample size, almost three times smaller than the current one. Persistent SEI has overall worst backstage than the other SEIs. Innovative SEI has better conditions to foster innovation and the S. middle is distinguished by its less innovative value proposition. In this sample, S. middle innovate around nine times less than the others. The most considerable difference between PIM from Portugal and from the UK is in the Persistent SEI. This study found that Persistent SEI can receive more support from its ecosystem in the form of legislation and regulations, social incubators, and networks. It was not possible to analyse this dimension in the prior study. Additionally, this sample suggests that Persistent SEI can deliver a value proposition more innovative than the Innovative SEI. These two effects warrant thorough examination in future studies. It is important to remember that this dimension had a greater margin of error than the others and does not have the same potential to adequately separate the profiles (Post-hoc Bonferroni test, $\alpha < 0.1$).

Literature suggests that innovation can result from efficient business model's efficiency. In this sense, Persistent SEI innovate while making the most of available resources (Ciccarino, 2023; Khan, 2016) or build solutions based on community strengths (Simón-Moya et al., 2012). Therefore, it makes sense that the innovation of the value proposition is not the dimension that differentiates whether an SEI is persistent or innovative. The issue in differentiating Innovative from Persistent SEI is in what motivates innovation (Zott & Amit, 2007). Innovative SEI should have an innovation-driven business model building innovation capacity, tolerating risks, and seeking opportunities. This kind of business model is flexible and values learning. While the quantity and depth of innovation are valuable metrics to provide a snapshot of the current business model's inventiveness. It doesn't guarantee innovative behaviour. A highly innovative model today can become stagnant tomorrow. Innovative capacity is a more forward-looking measure. It reflects the business's potential to sustain and evolve its model in the face of future challenges and opportunities (Fagerberg, 2004; OECD, 2004).

Persistent SEIs should adopt an efficiency-driven business model, in contrast to the innovation-focused approach of Innovative SEIs. This business model is concerned with standards and improvements, saving resources. Therefore, it is more conservative, taking less risks, and seeking compliance. Because it is hard to cut costs and go for innovations simultaneously, so S.Middle tends toward underperformance. This business model is an undefined mixing of different orientations. The innovation capacity analysis is overlooked in the innovation literature (Peixoto, Paula, et al., 2022) and in social business models (Bignotti & Myres, 2022). The business model's different patterns can be better understood by examining significant descriptive variables.

Finally, classifications from a taxonomy are derived from observing patterns (Venkatraman & Prescott, 1990) and are contingent on the context and circumstances from which they emerge (Humbrick, 1980). Therefore, some differences can be due to different contexts. The UK economic and business conditions are quite different from the Portuguese (GEM, 2019) and it probably reflects in each social economy (Defourny & Nyssens, 2021; Harvie & Ogman, 2019). Additionally, the investment thesis that supports the Portuguese social economy is conservative. It

tends to reinforce SEIs with better backstage and give small consideration to its social value creation process. In other words, Innovative SEI and S middle have bigger probability to be funding in Portugal because of their organizational structure, especially if they have been funded before (Ciccarino et al., 2022). It is possible to summarize the PIM model based on its dimensions, based on its emergence from different samples through exploratory analysis. Table 2 presents the patterns identified of its dimensions.

Table 2: PIM Framework

Business model dimensions	Innovative	S.Middle	Persistent
Resource availability	Moderated to high	Moderated to high	Low
Innovation capability	Moderated to high	Moderated to high	Moderated to low
Support in the ecosystem	Moderated to low	Moderated to high	Moderated to high
Funding	Moderated to high	Not low	Moderated to low
Innovative Value Proposition	Moderated to high	Low	Moderated to high
Business model's orientation	Innovation-driven	Stuk in the middle	Efficiency-driven

CONCLUSION

The comprehensive exploration of social economy initiatives (SEIs) in the UK presented in this study unveils a rich tapestry of organizational dynamics and challenges within the social economy landscape. The sampled SEIs, ranging from nascent ventures to well-established entities spanning up to two centuries, reflect a diverse and dynamic sector. The prevalence of mature organizations underscores the robustness of the social economy market, while moderate to low levels of competition and uncertainty foster a collaborative and resilient environment among SEIs, in line with scholarly discourse (Defourny & Nyssens, 2021; Dwivedi & Weerawardena, 2018). SEIs operate across various scales, with a majority serving locally, indicating their deep-rooted engagement with communities. However, despite their vital contributions, SEIs encounter notable challenges in accessing support and resources, as evidenced by the perceived levels of governmental support and limited access to financial instruments following the literature (Dwivedi & Weerawardena, 2018; Kamaludin et al., 2024). The study underscores the imperative for enhanced support mechanisms and collaborative efforts to fortify the social economy ecosystem, empowering SEIs to realize their full potential in driving positive social change.

This paper discussed relevant elements for the analysis of social business models. A taxonomy allows for contextual analysis by considering specific dimensions relevant to the social economy. At the same time, it supports classification and comparison, highlighting generic features that can be generalized across different settings. This balance between contextual specificity and generalizability enhances the utility of the taxonomy in theory and practice. Moreover, the delineation of distinct business models elucidates the core dimensions, providing guidance for social organizations and investors.

This study expanded the dimensions that constitute the PIM model, describing their importance in differentiating business models. We also proposed a framework to summarize and facilitate the use of PIM in qualitative and quantitative studies. The methodology used to create the PIM model was replicated in the sample of this study, verifying that the same patterns have emerged from the data. The two proposed hypotheses were supported by statistical tests, ensuring the reliability and generalizability of the results. Explanatory data analysis and the consistency of the results obtained indicated the validity of the model, connecting the literature with practice. The results can help to shed light on social business model dynamics structuring dispersed knowledge. Additionally, the PIM model can help to outline structuring strategies, facilitating their dissemination, and clarifying how initiatives can improve their business models, making them more efficient, sustainable, and attractive to investors. By improving the access to funding, social initiatives' survival chances can improve ensuring that the social impact delivered will last.

Since the PIM model has proved useful, future studies should replicate it, enlarging the knowledge about social business models. This effort can help to identify underlining patterns to structure the knowledge needed for a more profound understanding of social strategies. This paper relies on the thesis that the social pillar of sustainability can probably guide the environmental and economic pillars fostering the changes needed to face challenges such as climate change. Therefore, encourages all efforts to expand the knowledge about the available strategies and

innovation opportunities. This study focuses on SEIs, but they are part of the social economy, thus do not totally represent it. Regarding the taxonomy, some aspects of the PIM need to be better understood through in-depth qualitative studies or through its replication in new contexts, such as the role of Banks as enablers to Persistent and innovative SEIs. Evidence regarding progress in innovation, productivity, and entrepreneurship should be considered sparingly and deserves to be deepened through further studies. Understanding the business model is a step to delineate better strategies, but there is much to explore in this topic. Studies that look at the different types of relationships between social initiatives, their survival, and innovation in other ecosystems would also be interesting.

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EXPLORING THE PERCEIVED RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND COMPLIANCE PROGRAM

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ABSTRACT

A compliance program is not limited to a legal requirement or penalties and fines associated with non-compliance. For its implementation, behavioral changes are necessary to minimize the risk of integrity, that is, for a compliance program to be effective, it is necessary to internalize values for the formation of an Organizational Compliance Culture (OCC). This study aims to analyze how different elements of the organizational culture influence the implementation of a compliance program. Although the guidelines of a compliance program are standardized in the legislation, its implementation process may vary according to different organizational cultures. Therefore, in this work, based on descriptive-analytical research, with a qualitative approach, semi-structured interviews were carried out with ten compliance specialists chosen according to convenience and accessibility, who met the following condition: they are compliance professionals with at least 5 years of experience in implementation processes of compliance programs. The analyzed cases showed seven elements of a OCC that contribute to the internalization of practices and behaviors: being compliant, example with responsibility, aligned speech and practice, clear rules of the game aligned with values, whistle blowing with protection, punishment with equity and grounded results in values. The results identified organizational culture as a key driver to guide organizations in internalizing the values of a culture of integrity, and that the cultural maturity of the organizations studied is not related to the degree of formalism and certification of the compliance program, but rather to the application of these seven elements of a OCC. Researchers, managers, and consultants should consider that, although the guidelines of a compliance program are standardized in the legislation, for it to be effective, it is necessary to internalize values for the formation of an Organizational Compliance Culture (OCC).

Keywords: organizational compliance culture, culture of integrity, culture maturity, organizational culture.

INTRODUCTION

Corporate responsibility in combating corruption has been growing around the world, with legal systems now requiring the development of integrity or compliance programs to regulate organizations (Durães & Ribeiro, 2020), “a set of rules, standards, ethical and legal procedures, once implemented, will be the guideline that will guide the institution’s behavior in the market in which it operates, as well as the attitude of their employees” (Candeloro et.al., 2012, p. 454).

Research that analyzes the growing demand for compliance identifies that it is the result of the strong need for corporate practices that ensure ethical cultures in organizations, with more transparency and reliability in carrying out business (Manzi, 2009; Cardoso, 2013; Nascimento, 2019). Despite the existence of standards with detailed guidelines for the implementation and maintenance of a compliance or integrity program, its sustainability demands that it not be limited to legal requirements, or to penalties and fines associated with lack of compliance (De Melo & De Lima, 2018; Zanetti, 2016).

Compliance is obtained from the behavior of individuals and needs to consider human motivation in its essence (Lopes et.al, 2014; Altamuro, 2021, Willink, 2021). For a compliance program to be effective, it cannot just be restricted to compliance procedures and standards (Verhezen, 2010; Levorato, 2018), values must be internalized to form a culture of integrity (Thai & Lumbreras, 2023).

Although some research shows that organizational culture plays an important role in promoting compliance (Amankwa et al., 2021; Karlsson, 2022), we know little about how this relationship works.

Therefore, this descriptive-analytical research, with a qualitative approach with compliance experts, aims to identify the elements of an Organizational Compliance Culture (OCC) that contribute to the increasing internalization of integrity practices and behaviors.

THEORETICAL BACKGROUND

The theoretical basis chosen to support this research is centered on organizational culture, culture maturity and Organizational Compliance Culture (OCC); due to the strong connection that these theoretical fronts have with the objective of this research.

Organizational Culture and Culture Maturity

Schein (1992) posits that organizational culture is a set of shared values that influence the behavior of organizational members, and embody artifacts (organizational attributes), values (adopted norms), and assumptions (taken-for-granted beliefs). Values are the forces that determine what actions are deemed acceptable in an organization (Cameron and Quinn, 2011). Organizations balance a series of competing values along a variety of dimensions, which define their cultures (Quinn and Rohrbaugh, 1983).

In this research, to analyze the relationship between organizational culture and the compliance program, we chose the Competing Values Model (CVM) developed by Quinn and Rohrbaugh (1983) and Cameron and Quinn's (2006), Organizational Culture Assessment Instrument (OCAI). The way an organization balances these competing values will help determine its security-related subjective norms and its overall security compliance environment, since employees typically act based on whether their organizational culture condones or condemns specific behaviors (Schein, 1992).

The CVM proposes that organizations balance competing values along two primary dimensions:

- (i) organizational structures (flexibility versus stability): an organization may value stability, control, and order on one end of the continuum, or flexibility and agility on the other end of the continuum (Quinn and Rohrbaugh, 1983).
- (ii) primary focus (internally focused versus externally focused): an organization may have an internal (strong organizational processes) or an external (consumer relationships) value orientation. That is, organizations will either focus internally on their organizations' social and technical systems or adapt to the external environment defined by threats and opportunities (Quinn and Rohrbaugh, 1983).

The intersection of both value dimensions creates four organizational cultural archetypes (Quinn and Rohrbaugh, 1983).

- (i) team cultures, with a collaborative orientation, internal focus and people orientation, participative leadership, interaction between members is facilitated and information processing uses collective mechanisms. Companies with this type of collaborative culture recognize employee satisfaction and commitment, encourage teamwork, communication, trust, and solidarity (Acar & Acar, 2014; Hartnell et al., 2011).
- (ii) entrepreneurial, with external focus and orientation towards the organization, based on values of change and flexibility, growth, encouraging creativity and innovation. Companies with this type of creative culture prioritize risk-taking, initiative and employee autonomy (Berrio, 2003; Barbosa, 2011).
- (iii) hierarchical, with a control orientation that emphasizes stability, bureaucracy, behaviors based on rules and regulations, formality in the informational process and documents, rules, and regulations. Companies with this type of control culture value the order (Gonçalves et al., 2015).
- (iv) rational, with competitive orientation, directive style, the achievement of organizational goals, through a more individualistic and logical information process in the search for the organization's results. Companies with this type of competitive culture seek to aggressively satisfy stakeholder expectations and dominate competitors (Hartnell et al., 2011; Barbosa, 2011).

Culture maturity considers the continuum of evolution from a more elementary and visible dimension of culture (visible artifacts), moving on to a more central and less visible dimension (values practiced within the

organization), through the adoption of unconscious behaviors assumed to be intrinsic to everyday organizational life (Schein, 1992).

Culture maturity models define specific stages that strengthen an organizational culture through progression (Jespersen et al., 2016), and provide precise and objective descriptions of each stage of cultural evolution (Parker et al., 2006; Siuta et al., 2022).

Organizational Compliance Culture (OCC)

The concept of compliance refers to the degree to which individuals adhere to the rules, norms, policies, procedures, guidelines, and any regulations established by an organization. Organizational Compliance Culture (OCC) emphasizes compliance with organizational policies and behavioral standards (Interligi, 2010). The expression compliance derives from the verb to comply, which reflects the context of obedience, compliance, agreement, and consent. According to Blok (2018) the expression should be understood as compliance with/comply to, i.e., "to be in conformity", with the "duty to comply" and "enforce". Therefore, institutions must comply with internal and external regulations imposed on the activities they perform. Compliance programs generally vary depending on the company's structure, type of activity, organizational culture, and the basis for its institutionalization.

According to Blok (2018), we can find compliance programs based on pillars more:

- (i) regulatory, which define their behavior based on coercive obedience to rules, laws, sanctions, and control,
- (ii) normative, focused on social obligation, in which norms specify how things should be done,
- (iii) cognitive, in which the basis of conformity is accepted as truth and there is an internalized understanding of meanings, based on the interpretation of social reality.

Mature compliance programs must migrate from the regulatory to the cognitive pillar, not being limited to legal requirements and regulations, internalizing the different elements of organizational culture, and favoring the commitment and dissemination of integrity standards (Blok, 2018). Organizational culture is a key element in creating a compliance-centric environment (Ifinedo, 2014) and in creating positive security-related subjective norms (Wiley et al., 2020), as the compliance program can act on the real culture – the one that is perceived and practiced by the members of the organization and desired and pursued by leadership (Serafini e Moura, 2019).

The culture of rule orientation reflects authority and compliance. It would signal strong expectations via multiple channels such as internal communications and formal training programs to employees (to ensure compliance with the rules and policies. It seeks stability and control via effective information management and communication processes within an organization (Quinn & Rohrbaugh, 1983). An organization with strong rule orientation would invest a significant amount of time developing and implementing training programs and clearly stated rules to help employees model their behavior, and internalize practices (Boss et al., 2009).

Several studies have related organizational values and Organizational Compliance Culture (OCC), on which we highlight:

- (i) Tyler & Blader (2005) and Tyler et.al. (2007) found that an employee's perception of the legitimacy of the rules and alignment between the organization's values and the employees' values, are the most significant predictors to the three forms of rule adherence: compliance, deference, and rule breaking.
- (ii) Chang & Lin (2007) used the CVM in a study and found that control-oriented cultures (consistency and effectiveness) are significantly associated information security measures (confidentiality, availability, and accountability), but flexible-oriented cultures had a negative or no effect on similar behaviors.
- (iii) Interligi (2010) identified three core dimensions of compliance culture: legitimacy, permeability, and control, and suggested that compliance culture profiles using these dimensions may be used to predict how organizations might need to respond to regulatory reforms.
- (iv) Hu et.al. (2012) develop a behavioral model that integrates the role of top management and organizational culture into the theory of planned behavior to better understand how top management can influence security compliance behavior of employees. Their findings refine the theories about the role of organizational culture in shaping employee compliance behavior,
- (iv) Kam et.al. (2021) evaluated empirically how CVM impact security-related outcomes. They surveyed working professionals in the banking and higher education industries and found that employees who perceived that their

organizations valued stability and control had strong perceived security-related subjective norms and security-related compliance pressures.

(v) Karlsson et.al (2022) analyzed the relationship between perceived organizational culture and information security compliance among Swedish white-collar workers. The authors identified that although cultures with an external focus have a greater capacity to keep up with environmental changes and unforeseen threats, organizational cultures with an internal focus (hierarchical and team cultures) are more suitable for promoting compliance with the organization's internal rules.

(vi) Altamuro et.al. (2022) examined corporate integrity culture in a sample of pharmaceutical companies and found that firms with a weak integrity culture are more likely to have both Food and Drug Administration's (FDA) inspection failures (operational non-compliance) and accounting restatements (financial non-compliance).

METHOD

This study employed qualitative, descriptive analysis based on online semi-structured interviews with ten Brazilian compliance experts chosen according to convenience and accessibility. This chosen group met the following condition: they are compliance professionals with at least 5 years of experience in compliance program implementation processes.

All ten Brazilian private organizations chosen (two with nationally controlled capital and eight multinationals) had in their formal staff a person responsible for the compliance area. According to the implementation time of the Compliance program, they were subdivided into two distinct groups: (i) six organizations with more mature and robust compliance programs, with three of the six having some type of legal certification for their program; and (ii) four with formalized programs, but incomplete and/or in the process of implementation. The interviews, carried out between the months of August and September 2023, were recorded, and transcribed in full, with the formal authorization of the interviewees, had an average duration of 50 to 60 minutes. The elaboration of the interview script was based on the Literature Review and summarized in Table 1:

Table 1: Interview script

QUESTIONS	GOALS
What policies does the Compliance Program include? How is it documented and disseminated? What pillars support the Program? How long has the Program been implemented? Has the Program already undergone any certification? How the Program is formally communicated? How would you describe the role of your organization's leadership in delivering this Program? Does your organization communicate compliance and integrity expectations, such as the organizational code of conduct and other rules of conduct? If so, what frequency. Does your organization provide compliance training? If so, what are the contents and how frequently? Does your organization reward acts of integrity and punish acts that do not comply with compliance rules and internal policies? If so: in what way? Does your organization have formal mechanisms in place for employees to discuss compliance dilemmas and report behavior that does not comply with compliance rules and internal policies without fear of reprimand? If so: which ones? How do you evaluate the effectiveness of the Program?	Understand the interviewees' perception of the Compliance program.
Do you think that the organization's visible artifacts (layout, logos, dress code, calendars, notebooks, diaries, printed material, boards, etc.) favor your current compliance practice? If so, for both internal and external audiences? Do jargons, words, and terms that only members of the organization understand favor and reinforce current compliance practices? What is the most criticized and/or unacceptable behavior within the organization? And the most praised? Are these behaviors aligned with current compliance practice?	Identify the role of different elements of organizational culture in the compliance program.

<p>Do you believe there are behaviors and practices in the organization that should be changed? What would they be? If there were this change, do you believe that compliance practices would be more effective?</p> <p>Does the degree of identification, loyalty, and pride in working in this organization favor the practice of compliance?</p> <p>How do you characterize the leadership profile in the organization you work for? More people-oriented or more results-oriented? Does this profile favor the practice of compliance?</p> <p>Do you think your organization's values and beliefs are aligned with the Compliance Program?</p> <p>In your organization's informal meetings (social meetings, coffee drinks, celebrations) do employees talk about aspects of the Compliance Program?</p> <p>In your organization, is the practice of the Compliance Program more based on values or on regulatory requirements and controls (laws, rules, procedures, and policies)?</p> <p>In your organization, is there a clear definition that compliance should be part of the culture?</p>	
<ol style="list-style-type: none"> 1. The organization is very: <ol style="list-style-type: none"> A. a personal place. It is like an extended family. People seem to share a lot of themselves. B. dynamic and entrepreneurial place. People are willing to stick their necks out and take risks C. result oriented. A major concern is getting the job done. People are very competitive and achievement oriented. D. controlled and structured place. Formal procedures generally govern what people do. 2. Organizational Leadership is generally considered to exemplify: <ol style="list-style-type: none"> A. mentoring, facilitating, or nurturing. B. entrepreneurship, innovation or risk taking. C. no-nonsense, aggressive, results-oriented focus. D. coordinating, organizing or smooth-running efficiency. 3. The management style in the organization is characterized by <ol style="list-style-type: none"> A. teamwork, consensus, and participation. B. individual risk taking, innovation, freedom, and uniqueness. C. hard-driving competitiveness, high demands, and achievement. D. security of employment, conformity, predictability, and stability in relationships. 4. The glue that holds the organization together is <ol style="list-style-type: none"> A. loyalty, mutual trust. Commitment to this organization runs high. B. commitment to innovation and development. There is an emphasis on being on the cutting edge. C. the emphasis on achievement and goal accomplishment. D. formal rules and policies. Maintaining a smooth-running organization is important. 5. The organization emphasizes <ol style="list-style-type: none"> A. human development. High trust, openness, and participation persist. B. acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued. C. competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant. D. permanence and stability. Efficiency, control, and smooth operations are important 6. The organization defines success based on <ol style="list-style-type: none"> A. the development of human resources, teamwork, employee commitment, and concern for people. B. having the most unique or newest products. It is a product leader and innovator. 	<p>Perception of interviewees regarding aspects of organizational culture according to Cameron and Quinn's (2006) Organizational Culture Assessment Instrument (OCAI).</p>

<p>C. winning in the marketplace and outpacing the competition. Competitive market leadership is key.</p> <p>D. efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.</p>	
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Source: Authors and Cameron, K. S. & Quinn, R. E. (2006). Diagnosing and changing organizational culture: Based on the competing values framework. (Rev. ed.). San Francisco, CA: Wiley (Jossey Bass).

Content analysis (Mayring, 2014) was the main method in analyzing the interviews, and we selected two thematic categories, aligned with the literature review and interview questions: (i) Compliance Program: general aspects, and (ii) Organizational Compliance Culture (OCC). Inter-coder reliability checks were used, by coding the same transcripts, and then comparing the results. It was formalized with the interviewees that a topic such as compliance sometimes exposes delicate aspects of the culture of their organizations. Therefore, a term of commitment was signed emphasizing the ethics of the research, the non-disclosure of names, and any information that could denigrate the reputation of the interviewees and their organizations.

FINDINGS

Compliance Program: General Aspects

All organizations studied included the following items in the disclosure and implementation of the compliance program:

- (i) code of business conduct and anti-corruption policy with detailed guidelines to gifts, donations and sponsorships, relationships with public agents and conflicts of interest. The policies were available to all stakeholders and published periodically through communication channels and during training programs.
- (ii) formal training for all employees, informing about its importance and content,
- (iii) reporting channel and/or confidential channel,
- (iv) system of punishments, emphasizing the importance of the control obligation for its execution,
- (v) rites, ceremonies, and formal communication instruments of the program such as: international day to combat corruption, agreement forms, newsletter, digital channels, murals, messages on TVs, QR codes.

The punitive and regulatory nature of the compliance program is evident in the interviews (Blok, 2018). Of the ten organizations studied, only one uses a reinforcement policy with awards for employees who stood out for some practice related to the compliance program:

“We have the compliance highlight, which is a program where we reward people who stand out for some compliance attitude. The regulations are published annually, and the person’s peer or boss can nominate them for a situation in which they have stood out.”

This control and punishment nature of the program is also associated with its effectiveness. For a compliance program to be effective, it cannot just be restricted to compliance procedures and standards (Verhezen, 2010; Levorato, 2018), values must be internalized to form a culture of integrity (Thai & Lumbreras, 2023). We identified that only five organizations studied perceive their compliance program as effective, with the others specifically emphasizing control of compliance with the Anti-Corruption law:

“I do not consider the compliance program to be effective. It only focuses on corruption issues... There is a lack of adequate mapping of politically exposed people, donations and sponsorships and conflict of interest issues, such as: family relationships with employees and family relationships with suppliers.”

Although organizational literature and interviewed experts reinforce the role of communication and leadership support in internalizing a compliance culture (Serafini & Moura, 2019; Hu et.al.,2012), we identified that only two of the organizations studied use a structured annual communication plan for the compliance program with leadership support:

“Leadership does not reinforce compliance practices or set an example of best practices. Leadership does not hinder initiatives but follows the program like other employees.”

“The current leadership is not very engaged in the program’s initiatives. Compliance is not a priority for current senior management, despite considering the issue critical due to the investigation of acts of corruption in the past.”

We therefore identified that although certified programs are considered mature, according to the requirements of the legislation, they do not necessarily have a culture of compliance. Compliance programs are unlikely to be successful when they are based solely on legal interests, rather than creating a culture of organizational compliance (de Melo & de Lima, 2019; Gambini & Leismann, 2021). Organizational culture is a key element in creating positive security-related subjective norms (Wiley et al., 2020; Ifinedo, 2014).

Organizational Compliance Culture (OCC)

Some artifacts (organizational attributes) of organizational culture (Schein, 1992) are manifested in the implementation of compliance programs in the organizations studied. Regarding visible artifacts of compliance programs, we highlight:

- (i) Offices with an open space layout, reinforcing transparency and accessibility to information relating to the program.
- (ii) Public documents and employee orientation materials such as charters, boards, signs, notebooks, calendars, planner, tray paper, banners, screen protectors, table, and bathroom stickers with QR code from the reporting channel with specific compliance content.
- (iii) Messages and slogans that reinforce desired behaviors and those to be avoided ("Prejudiced jokes are not funny"; "If flirting bothers you, it's not flirting").
- (iv) Storytelling which express idealized and socially acceptable behaviors relating to the culture of compliance: "Stories about employees, who did business ethically to promote growth", "Stories from the organization's leadership and founder who illustrate how to act correctly or how to treat people with respect".
- (v) Jargon with expressions and messages that reinforce the practice of compliance, such as: "Improving little by little every day"; "The Great way of working"; "One for all and all for one"; "Ahead together"; "Do the right thing"; "Compliance is here for you, every day."

Regarding valued attitudes and behaviors (Schein, 1992), we identified aspects of the culture of rule orientation and culture of control (Cameron and Quinn, 2006; Quinn & Rohrbaugh, 1983), which is characterized by the prioritization of stability and control focusing on the internal environment and integration, confirming that these cultures are more suitable for promoting compliance with the organization's internal rules. The interviews showed that in five organizations analyzed, a culture with a control orientation over the strategic focus predominated, in which permanence and stability are valued, as well as efficiency, control and constancy of processes (Kam et al., 2021; Karlsson et al., 2022; Chang & Lin, 2007). In these cultures, the most valued professional profile is results-oriented, related to respect for differences, collaborative work, and assertiveness; and the most criticized behaviors are related to aggressiveness, harassment, and non-inclusive behaviors. The organizations clearly stated rules to help employees model their behavior, and internalize these practices (Boss et al., 2009).

Eight of the organizations evaluated present values aligned with the compliance program, such as: integrity, ethics, justice, honesty, respect, teamwork, and transparency. These results reinforce the organizational literature that identifies that:

- (i) core dimensions of compliance culture as legitimacy, permeability, and control, may be used to predict how organizations might need to respond to regulatory reforms (Interligi, 2010),
- (ii) employee's perception of the legitimacy of the rules and alignment between the organization's values and the employees' values, are the most significant predictors to the three forms of rule adherence: compliance, deference, and rule breaking (Tyler & Blader, 2005 Tyler et al., 2007).

The following excerpt from the interview illustrates this context:

“In training, leaders bring examples of moments when culture was part of the solution to the problem. They focus on how to solve problems in accordance with the pillars of the company’s culture.”

Seven of the experts interviewed believe that there is concern and desire on the part of their organizations for compliance to favor the development of a more ethical culture, which reinforces the alignment of the organization's core values and its practices. However, in only three organizations analyzed, the interviewees illustrated examples in which we can identified that the compliance program is based on values:

“The company’s values are aligned with the compliance program: ethics in commercial relations and dealings with employees. On a day-to-day basis, the company’s founder strongly reinforces issues of innovation and customer focus, without leaving aside ethical issues.”

When questioning interviewees about the elements of organizational culture that contribute to mature compliance programs (Blok, 2018), we identified seven items, summarized in table 2, as following:

Table 2: Elements of Organizational Compliance Culture (OCC)

ELEMENTS	MEANING
1. Be compliant	At OCCs, we identify that it is important: to do what is right; act with ethics and integrity; follow internal and external rules; act with respect, treat everyone equally; work as a team; work with transparency; and be an example.
2. Example with responsibility	In OCCs, leadership is an example to follow, a model of conduct, a reference for behavior aligned with the organization's compliance practices. “Tone at the top” or “Tone from the top” occurs.
3. Aligned speech and practice	In OCCs, discourse and practice are aligned, and organization members have internalized shared values. “Walk the walk”, “Talk the talk” or “Walk the talk” occurs.
4. Clear rules aligned with values	OCCs establish what is accepted and what is not accepted by the organization, in accordance with its values. Compliance practices are part of the “rules of the game” in a clear, objective way, reinforced through training, workshops, leaflets, stories, jargon, etc.
5. Whistle-blowing with protection	OCCs provide formal, reliable, and safe mechanisms for reporting wrongdoings or questionable acts that do not comply with organizational rules.
6. Punishment with equity	OCCs apply the same punishment rule to everyone, regardless of job title, position, status, power or authority.
7. Values based results	In OCCs, compliance is part of the development plan and employee performance evaluation. They do not just evaluate “what” was achieved, but “how” the results were achieved.

Based on the seven elements that make up the OCC, we identified different culture maturity stages. The first observation made from the interviews presents us with a paradoxical situation: organizations with complete, robust, and certified formal compliance programs are not always at high stages of culture maturity. In the interviews, we identified three organizations with these characteristics that present low levels of cultural maturity, which do not include elements 1, 3, 5, 6 and 7 of an OCC.

Finally, we identified that the cultural maturity of the organizations studied is not related to the degree of formalism and certification of the compliance program, but rather to the application of the elements that make up the OCC.

FINAL CONSIDERATIONS

This study aims to contribute to organizational studies by:

- (i) shedding light on the association between organizational culture and compliance program,
- (ii) filling an academic gap regarding elements of an Organizational Compliance Culture (OCC),
- (iii) identifying in a simple and objective way, the seven essential elements for an Organizational Compliance Culture (OCC), which must be considered to internalize practices and behaviors of a culture of integrity and compliance in organizations.

Therefore, the identification of the elements of an OCC favours the implementation of compliance programs in order to guide organizational policies, contributing to a process of changing the mindset of employees in which commitment to ethical behaviours is not the result of controls and punishments. The study also identifies some avenues of opportunity for future research:

- (i) validate the OCC with the leaders of organizations; to provide evolutionary parameters for culture maturity models that lead to the internalization of behaviors representative of a mature culture.
- (ii) validate the propositions of OCC (e.g. theoretical validation, face validation, mixed methods), with the prerogative of creating a culture maturity model that can be used for personalized structured interventions to improve the culture of integrity; (iii) application of the OCAI instrument to create a methodologically strong instrumental model of OCC, based on quantitative research with representative samples from different cultural contexts.

Finally, the study hopes to stimulate further reflection on the importance of organizational culture in compliance programs, which is so dear to contemporary contexts.

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VIRTUOUS PRACTICES: PROPOSITION OF A TYPOLOGY OF HUMILITY CULTURE MATURITY

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ABSTRACT

Although virtuous practices enhance organizational excellence, the virtue and culture of humility are little studied in the field of management due to their conceptual challenges. In order to cover this gap, this theoretical-exploratory study proposes a typology of humility culture maturity (THCM) that signals a progressive path of this virtue as a value in organizations. The methodological approach adopted is anchored in a theoretical foundation derived from Schein's (2010), Galbraith's (1983), Maldonado et al.'s. (2018) and Owens et al.'s (2013; 2015) models. The combination of these theories makes it possible to suggest a continuum of 5 stages of culture maturity reflecting different behaviours: rhetorical (unconcerned), embryonic (reactive), stimulated (obligatory), full (voluntary) and virtuous (unconscious), where humility practices are conducted in an organic way and internalized into virtuous actions, in a demonstration of culture maturity. By proposing an unpublished progressive and objective typology, the study broadens the understanding of the culture of humility, and makes its analysis more useful, filling an instrumental gap in the management literature and contributing to organizational excellence.

Keywords: humility, virtue, humble behavior, culture maturity.

INTRODUCTION

In a context where organizational scandals have become frequent (Ghoshal, 2005), organizations are urged to adopt organizational precepts based on virtuous actions (Argandona, 2015), which express noble behavior and excellence (Comte-Sponville, 2001), creating space to reconsider the role of virtuousness in organizational environments (Rego et al., 2010). Research associating corporate culture and values is vast in the field of management (Hartog & Dickson, 2017; Schein, 2010), but most do not consider how this relationship can be affected by the adoption of the virtue of humility (Owens et al., 2011) as a corporate cultural value (Schein et al., 2018). The only recent attention to the subject (Cuenca et al., 2022a) is justified by many authors who claim that humility is a virtue that has been little studied in the organizational environment due to its conceptual and methodological challenges (Anand et al., 2019). Humility can be introduced as a cultural value in a progressive and continuous way, and tends to advance in an increasing regime, integrating all its practices (Maldonado et al., 2018; Vera & Rodriguez-Lopez, 2004), in order to advance to a stage of internalization where humility practices are conducted organically, and assumed as adequate by the members of the organization, in a testament to culture maturity (Schein, 2010). Because it is a virtue with conceptual complexity that advances progressively, the introduction of humility in the corporate world requires alternative options to the traditional factors of cultural diffusion, demanding structured interventions based on objective instrumental support that brings specific simplifications to its virtuous essence (Jespersen et al., 2016; Ruberton et al., 2017), in order to enable its internalization path. This defines the key question of this research: how does the proposition of typology of humility culture maturity (THCM) show a path of internalization of humble behaviors in organizations? Therefore, considering the specificity and complexity of the humility construct, and the lack of studies in the organizational context, especially on the subject of the humility culture maturity, the main objective of this exploratory study is to propose a theoretical typology of humility culture maturity (THCM) that signal a progressive path of this virtue as a value in organizations, in order to help analyze the humility culture maturity and virtuous practices in different organizations. To achieve this objective, a methodological approach anchored in a theoretical foundation and based on the configuration of culture maturity models, such as those of Parker (2006) and Rocha et al. (2023), is adopted for the creation of the THCM, in order to promote the proposition of stages of humility culture maturity, filled with a conceptual framework specific to humility. The importance of this study lies in the fact that humility is essential for management and business because it promotes organizational excellence (Argandona, 2015), making it an opportune

virtue for dealing with ethical scandals and corporate fraud, with space for introduction and evolution in different organizations. In addition, the incorporation of the virtue of humility as a cultural value results in a source of competitive advantage for the organization as it introduces specific norms of conduct (Maldonado et al., 2018), aimed at learning (Vera & Rodriguez-Lopez, 2004), creativity (Hu et al., 2018), and strategic collaboration (Zhou et al., 2022), fronts which facilitate the introduction of new practices, in a virtuous circle. In this sense, the study aims to contribute to organizational studies by: (i) shedding light on the association between the constructs of organizational culture and humility, (ii) filling an academic gap regarding an instrument of culture maturity focused on the virtue of humility based on the theoretical construction of the THCM, and (iii) signalling a roadmap for the evolution of the culture of humility that can act as an analytical compass for organizations interested in virtuous practices. Finally, this article is organized into five parts: in addition to this introduction, the second part presents the theoretical background that supports the configuration of the proposed typology. The third part details the construction of the THCM, while the fourth part presents the implications and opportunities for future research. The last section presents the final considerations of this work.

THEORETICAL BACKGROUND

Virtuous Practices

Understanding the concept of virtue involves studying Cameron and Winn (2012), who present the attributes of virtuousness: (i) the human inclination towards goodness, (ii) disinterest in the pursuit of rewards and (iii) the promotion of sustainable positive energy, with virtuous behaviors being amplified when experienced. The authors emphasize that the individual development of virtues is based on 3 main components: (i) reason, which helps us to understand what is good - either through study, examples or self-reflection; (ii) will, which involves the desire and motivation to act virtuously; and (iii) feelings and emotions, which can facilitate practices and make the habit easier and more pleasurable to carry out. Thus, in favorable cultural contexts that stimulate reason and will, the repetition of humility practices will create a healthy habit, fostering the ease and spontaneity of the development of virtue in individuals. The introduction of virtuous practices into organizational philosophy has been advocated by organizational theories (Cunha & Rego, 2015). Such practices become qualities of the organization and help develop its moral muscle when manifested collectively (K. Cameron & Winn, 2012), so that as organizations develop cultural perspectives that encourage the expression of virtuous behaviors - moral compasses - they become properly virtuous and endowed with a morally rich environment capable of producing a positive impact, both within and outside their borders. Making virtuous values explicit is effective if it translates into virtuous practices on the part of the leadership, which are reflected in the members, avoiding a dissonance between declared virtuous values and vicious practices, opening up space for the maturing of virtues and the consolidation of a virtuous cultural philosophy (Cunha & Rego, 2015).

Humility in Organizations

Humility has three connected and distinct dimensions: self-awareness, openness to others, and transcendence of self for others, involving a sophisticated awareness of one's own strengths and weaknesses, an active engagement with others and a consideration beyond oneself (Nielsen et al., 2010; Davis et al., 2011). More than being modest, humility makes people aware of their imperfections, open to new ideas, holistic and appreciative (Tangney, 2000), revealing itself as a virtuous middle ground between arrogance and a lack of personal self-worth (Cunha & Rego, 2015), conceptions that result in humility being treated as the virtue of temperance (Peterson & Seligman, 2004). Humility is also perceived as a characteristic that is attentive to human limits and is manifested by a virtuous triad of behaviors: (i) the ability to assess oneself accurately, (ii) seeing others in an appreciative way, and (iii) learning from others, being open to new ideas, feedback and advice (Owens et al., 2011). Measurement scales for humility are suitable instruments for a utilitarian understanding of the phenomenon of humility, and although there are numerous scales in the literature for measuring individual humility, there is no consensus on the methodological aspect of which would be the best measure (McElroy-Heltzel et al., 2019). However, the measurement of organizational humility, and its respective culture maturity, is a gap that can be identified in the literature of organizations (Tomei et al., 2022). The importance of humility in management has been substantiated in recent studies (Argandona, 2015; Frostenson, 2016), so that empirical works (Paterson et al., 2023; Hu et al., 2018) have provided support for considering humility as a positive and effective quality for individuals, teams and organizations (Nielsen et al., 2010). In this sense, humility

turns out to be not only an individual characteristic, of leaders or members, but also of the organizations themselves, allowing the introduction of the concept of organizational culture of humility, presented by (Maldonado et al., 2018) whose empirical research seems to be the only one on the subject of humility focused on the organizational dimension (Tomei et al., 2022), demonstrating theoretical relevance as it summarizes 6 norms of conduct of an organizational culture of humility: (i) precise self-assessment and awareness, (ii) tolerance of errors, (iii) transparency and honesty, (iv) openness, (v) employee development, and (vi) employee recognition, reinforcing that only the integrated and systemic presence of all these assumptions is what attests to a culture of humility in organizations. However, this model does not put humility behaviors into a functional perspective, making their practical application dysfunctional, as a utilitarian instrument to organizations, as it inhibits a better understanding of humility from everyday practices, which is more suitable than mere formal declarations of norms of conduct (Vera & Rodriguez-Lopez, 2004).

A temporal analysis of studies on humility in organizations (Cuenca et al., 2022a) reveals: (i) first studies focusing on consolidating the positive concept of humility; (ii) consensus on 3 key behaviors: accurate self-awareness, appreciation of others, learning from feedback; (iii) validity consolidation of the individual humility scale called *expressed humility*; (iv) humble leadership as a source of competitive advantage and favoring organizational excellence; (v) recent focus on the role of humility in the individual and team dimensions, but still without delving into organizational humility; (vi) the dark side of humility, as humble leadership can be seen as a sign of weakness and insecurity, reflected in hesitation and slowness in decision-making, particularly in competitive cultures.

The introduction of the concept of expressed humility by Owens et al. (2013; 2012) represents a milestone in research on humility in organizations as it creates a scale of 11 behaviors that can be effectively observed by others. The individual (i) seeks feedback, even if critical; (ii) demonstrates awareness of own strengths and weaknesses; (iii) recognizes a greater knowledge of the other; (iv) admits error; (v) admits when he does not know how to do something; (vi) perceives the strengths of the other; (vii) is open to new ideas; (viii) is open to receiving advice; (ix) appreciates the contribution of third parties; (x) learns from the other; (xi) praises the other. The approach considers an integrated and systemic view of all behaviors and captures the three virtuosity constructs of humble behavior (Owens et al., 2011), supporting the understanding of humility in organizations. The *expressed humility* instrument is frequently used in management studies published in top business journals, making it recognized in the field of management, and it seems to be the measure of choice for studying humility in studies focused on organizations (Cuenca et al., 2022b). However, the instrument focuses on the individual dimension to the detriment of an organizational approach, limiting discussions about cultural practices and, in this sense, about the proper use of humility culture maturity in organizations.

Culture Maturity

Culture maturity considers the *continuum* of evolution from a more elementary and visible dimension of culture (visible artifacts), moving on to a more central and less visible dimension (values practiced within the organization), and finally reaching a more mature dimension of organizational culture, despite the practical incorporation of cultural assumptions through the adoption of unconscious behaviors assumed to be intrinsic to everyday organizational life (Schein, 2010). In this way, culture maturity is an evolution of the organizational culture to the deepest level of penetration of unconscious assumptions, a level at which the behaviors and organizational practices that translate this culture become incorporated, become organic, no longer strange, and are assumed as appropriate by the members of the organization, in a testament to internalization and culture maturity. In this state of culture maturity, the members' behavior begins to reflect organizational excellence (Argandona, 2015) under attitudinal regimes that express the ethics of responsibility and no longer the ethics of obedience perpetrated by reinforcements under punishment or rewards (Galbraith, 1983), as they unconsciously assume the organization's cultural assumptions, in a responsible and voluntary regime, and no longer out of a compulsory duty, signalling that behavioural regimes also need to progress in order to achieve the highest level of culture maturity. Thus, for this cycle to be continuous and favor increasing levels of humility, it is necessary to accept that the existence of this virtue is not dichotomous - either you are humble or you are not - but a question of the degree of humility in a given path (Kupfer, 2003). There are 5 central elements that favor the development of humility in organizations: (i) structured interventions wrapped in the meaning of humility that tend to stimulate the incorporation of similar behaviors (Ruberton et al., 2017); (ii) organizational values, core elements of organizational culture guiding organizational behavior and practices (Diana et al., 2021); (iii) the role of leadership, which is central to spreading a culture of humility, influencing the actions of members, the adoption and maturing of new habits and humble behaviors (Schein & Schein P. A., 2018), reinforcing the identity of a virtuous

organization; (iv) role of organizational communication, striving for a frank and truthful approach (Maldonado et al., 2018), an approach that flows in all directions, reproducing the assumptions of humility and being a lever for propagating the practices desired by the organization, promoting a close alignment between the declared value of humility and the daily behaviors of humility (Vera & Rodriguez-Lopez, 2004); e and (v) cultural process-building factors that can be applied to a culture of humility, such as rituals, conspicuous symbols and training (Tomei et al., 2022). Humility, like all organizational values, can be acquired within the daily life of these organizations, and its practices, when internalized in their culture, serve as a key success factor and source of competitive advantage (Maldonado et al., 2018; Maldonado & Vera, 2019). However, this is a multidisciplinary concept (Frostenson, 2016) and based on the theoretical conceptions presented here, it can be inferred that the cultural value of humility is particular and distinct from other values, to the point of not needing instruments other than the traditional ones that build an organizational culture, since humility: (i) has its own subjectivity and conceptual diversity; (ii) is little explored in the organizational dimension; (iii) is a virtue that is not dichotomous and advances progressively; (iv) is associated with virtuous behaviors that are particularly amplified when experienced; (v) demands structured interventions based on objective instrumental support that brings specific practical simplifications to its virtuous essence. Given the peculiar characteristic of humility as a cultural value, it is possible that the presentation of a theoretical cultural typology in the form of a specific instrument that exposes organizational characteristics and humble behaviors, put into functional perspective and related to the cultural evolution of humility, under a progressive regime and under objective tutelage, would be useful in highlighting a trajectory of cultural maturation towards the internalization of organizational humility. Culture maturity models are valuable tools for monitoring the evolution of a culture, because they: (i) define specific stages that mark the completeness of a given construct (Wendler, 2012), usually 5 stages (Rocha et al., 2023), (ii) design typologies and indicators that strengthen an organizational culture through progression (Jespersen et al., 2016), (iii) trace the evolutionary perimeters of different contingent moments of a given construct (Siuta et al., 2022), (iv) provide precise and objective descriptions of each stage of cultural evolution (Parker et al., 2006), (v) are useful for developing personalized structured interventions to improve culture maturity (Spagnoli, Vlerick, et al., 2023), and (vi) offer a comprehensive conceptual framework that gives credibility and multidimensionality to the cultural progression (Spagnoli, Jacxsens, et al., 2023). The phenomenon, mainly studied from the perspective of culture maturity, is represented by safety culture, largely due to its conceptual precision (Rocha et al., 2023), so that the absence of a typology of humility culture maturity, which can signal a structure of evolutionary parameters of a culture, inhibits a program of development of changes within the organization itself, along the lines recommended by Domańska-Szaruga (2020). The studies that propose the creation of culture maturity models (Hudson, 2001; Jespersen et al., 2016; Parker et al., 2006; Rocha et al., 2023) define specific stages and typologies that assess the completeness of the analyzed construct through various sets of multidimensional criteria (Wendler, 2012), and the adoption of a particular conceptual framework and indicators particular to the humility construct naturally come to represent the configuration of a culture maturity model specific to humility. Considering, based on the theoretical foundations presented, the difficulties of (i) understanding the concept of humility, as it is a complex and multidisciplinary one, (ii) measuring the phenomenon using functional measurement instruments focused on the organizational dimension, and (iii) identifying culture maturity models focused on the humility construct, the article moves on to the methodological design and theoretical propositions of a THCM, which can function as an initial stage in a process of cultural analysis and tends to collaborate with an evolutionary assessment of the culture of humility and, in this sense, with the virtuous practices of a culture of humility in organizations.

PROPOSITION OF A TYPOLOGY OF HUMILITY CULTURE MATURITY - THCM

Considering the main objective of this work, which is to propose a theoretical typology of humility culture maturity (THCM) that signals a progressive path of this virtue as a value in organizations, the methodological approach used for this purpose is based, as a starting point, on 2 fronts: (i) the theoretical foundation of the construct of humility, which points to it as a specific cultural value; and (ii) culture maturity models such as those by Parker (2006) and Rocha et al. (2023), which essentially adopt a procedural path of building stages of maturity loaded with content derived from a conceptual mapping of the theme studied by these models, and the first model has been a reference in the work of cultural maturity and the second one portrays some update of model configuration. Thus, the process of designing the THCM considers 2 stages: (i) proposition of the stages of humility culture maturity, in the light of Schein's (2010) concept of culture maturity and under the tutelage of the behavioral regimes in progression, inspired by Galbraith (1983); (ii) the incorporation of objective descriptions that include a conceptual framework specific to humility based on 2 models: norms of conduct of a culture of humility by Maldonado et al. (2018) and instrumental

and observable indicators in the form of expressed behaviors by Owens et al. (2013; 2015). Regarding the first stage, the proposition of the stages of humility culture maturity contemplates spectra referenced in this study: (i) the intrinsic characteristics of culture maturity models; (ii) the concept of culture maturity qualified by unconscious assumptions; (iii) a cultural evolution towards the internalization of behaviors, which become unconscious and organic; (iv) behavioral regimes that also progressively evolve towards maturity, from obedient to responsible; (v) the specificity of humility, in terms of being a virtue, having conceptual complexity, and evolving progressively. In this sense, this study proposes a theoretical typology of humility culture maturity (THCM), in a *continuum* of 5 stages: (i) rhetorical culture - there is no alignment between discourse and practice, and there is no concern with adopting a humble behavior; at this stage, it is necessary to recognize the risks of arrogant cultures and toxic leadership within organizations in order to evolve to the next stage; (ii) embryonic culture - the value of humility, although it may be widespread, does not resonate with behavior, which occurs reactively and on impulse, based on a demand; at this stage, it is necessary to take advantage of this embryo of the value of humility so that it can be recognized and developed as a practice that favors the organization; (iii) stimulated culture - the value of humility is disseminated and assimilated through behaviors that take place under the rule of obligation; at this stage we have a great opportunity to advance with the practice of humility as positive behaviors are reinforced and praised and negative ones are pointed out as challenges to be overcome; (iv) full culture - there is broad alignment between discourse and practice, and humble behaviors are adopted voluntarily; at this stage we need to encourage the cycle of knowledge and learning about the culture of humility; (v) virtuous culture - there is absolute alignment between discourse and practice, and humble behaviors take place unconsciously (taken for granted), since behaving in line with the principles of humility is natural to every member of the organization; at this stage, all cultural manifestations (visible artifacts) need to reinforce the advantages of this virtuous culture for organizational identity, organizational excellence and competitive advantage. The first 3 stages do not yet reflect a culture of humility and are associated with the ethics of obedience (Galbraith, 1983), as humble behaviors are only manifested under a regime that moves between unconcerned (rhetorical culture), reactive attitude (embryonic culture), and obligatory (stimulated culture). As progression occurs, the last 2 stages come to reflect a culture of humility and to encompass an ethic of commitment, which is no longer that of obedience, but that of responsibility (Galbraith, 1983) closely linked to humble behaviors, since one deliberately comes to believe in its value and benefits, so that humble behaviors start to happen under a regime of spontaneous volunteering (full culture) that evolves into an organic and unconscious internalization (virtuous culture). In its final stage, this progression reaches a virtuous regime that is conducive to organizational excellence (Argandona, 2015), in a testament to culture maturity (Schein, 2010). Figure 1 shows an illustration of the theoretical proposition of the stages of humility culture maturity, which is particularly suited to this construct due to its virtuous and non-dichotomous nature, the introduction of which in organizations has a progressive content in favour of a path of internalization.

Figure 1: Proposed stages of THCM



The presented structure of the 5 stages of the THCM is designed to reflect the progressive nature of the culture of humility itself, allowing it to incorporate descriptions of an organization in relation to a series of characteristics representative of a culture of organizational humility. Thus, in line with the second stage of configuring

a THCM, this incorporation includes a conceptual framework specific to humility that considers a proposal for convergence of the 2 models referenced, accommodating the translation of the conceptual precepts of the norms of conduct with each description of expressed behavior of humility, under the criterion of similarity of conceptual meaning. The combination becomes useful since we have, on the one hand, a unique conceptual model of organizational culture of humility, with its norms of conduct, and on the other, an instrumental model of humility behaviors, with practical indicators, representative for studies in the field of management, supporting a theoretical structure for the declination in perspective of the stages of humility culture maturity. Figure 2 proposes how each of the instrumental indicators of Owens et al. (2013; 2015) can be conceptually aligned with a theoretical norm of conduct of a culture of organizational humility by Maldonado et al. (2018). The integrated adoption of norms of conduct, translated into cultural precepts, mixed with the indicators manifested by individual attitudes of humility (Figure 2), makes it possible to put behaviors of humility into a functional perspective, and to signal the progressive stages of a culture, with the state of culture maturity, in the virtuous culture (Figure 1), being the moment in time when norms and behaviors are adopted in a responsible, unconscious and organic way (taken for granted), to the benefit of shared excellence and virtuosity.

Once the stages of humility culture maturity have been suggested in the first stage of configuration, it becomes convenient to present these descriptions of cultural precepts and behaviors of humility that make it possible to identify a conceptual framework related to humility, giving rise to the manifestation of an objective portrait of an organization in relation to a series of characteristics and behaviors representative of a culture of organizational humility, showing a trajectory of internalization of humble behaviors, as the behavioral regimes follow one another in dynamics representative of the evolutionary progression of the virtue of humility. Table 1 summarizes and puts into functional perspective the organizational and exemplary characteristics of humility behaviors related to the respective stages, in order to present the theoretical proposition of a THCM. The presented configuration focuses on the role of leadership in the embryonic stage of the culture of humility, highlighting its challenge in reminding followers of the importance of humility, due to reactive behaviors. In the advanced stages of the culture of humility, the focus shifts to the members of the organization, considering that there is a more frequent adoption of humility practices, either erratically, under an ethic of obligation in the stimulated stage, or more voluntarily and unconsciously, in the full and virtuous stages, under the ethic of responsibility. Each cultural typology proposed here reflects a characteristic way of dealing with the cultural value of humility, representing increasing levels of advancement, which combine the adoption of observable humble behaviors with a specific regime of acting - unconcerned, reactive, obligatory, voluntary and unconscious, in a *continuum* of culture maturity towards the internalization of humble behaviors.

Figure 2: Proposed combination of the norms of conduct of the Organizational Humility Culture and its precepts, according to Maldonado et al. (2018) with the instrumental model of Owens et al. (2013; 2015)

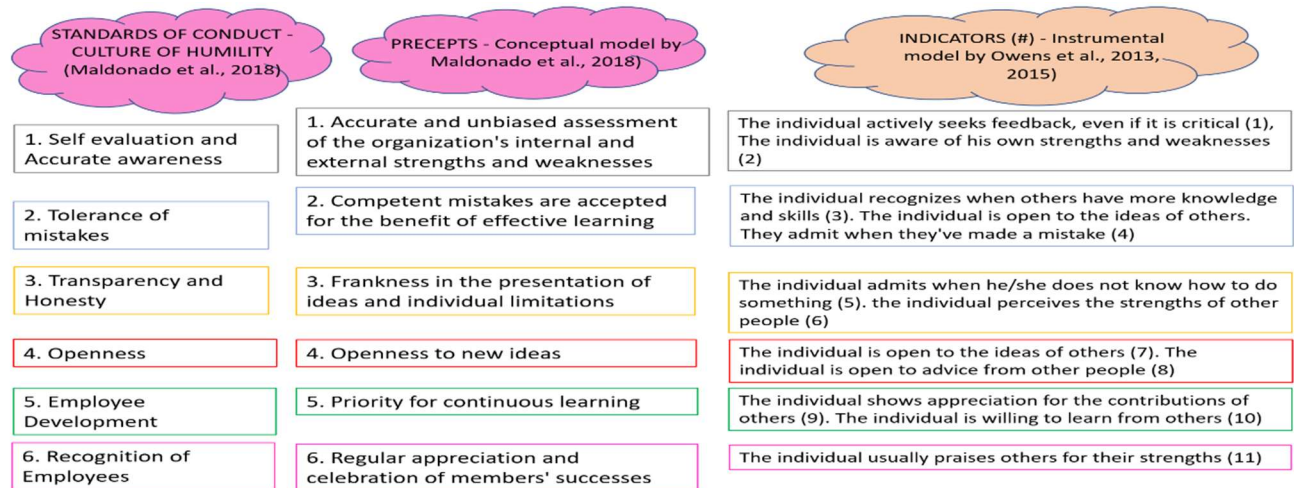


Table 1: Proposition of a Typology of Humility Culture Maturity (THCM): stages of maturity, organizational characteristics and humble behaviors

Stages of Maturity - Organizational characteristics	Humble behaviors
<p>1. rhetorical culture of humility - The declared value is not reflected in organizational practices. Humility is a desire professed by top management. Unconcerned behavior with practices of humility, such as: (i) constructive feedback; (ii) accepting one's own limitations; (iii) recognizing the strengths of others; (v) praise; (vi) willingness to live with counterpoint; (vii) willingness to learn from others; (viii) listening carefully to advice; (ix) openness to different ideas.</p>	<p>There is no concern about what happens in everyday life with regard to humble behaviors: (i) members act in isolation, there is no teamwork and no feedback; (ii) mistakes are usually punished without opening spaces for individual and organizational learning, and gossip adds to the climate of insecurity; (iii) recognition policies are rare, and the practice of praise is seen as a deviation; (iv) communication is veiled and abrasiveness is present in interpersonal interactions; (v) the assumption of responsibility is concealed; (vi) there is a fear of saying "I don't know how to do this" or "I know less than you".</p>
<p>2. embryonic culture of humility - Humility does not advance uniformly in organizational practices. The meaning of humility is timidly widespread among the members of the organization. Humble behaviors are adopted only reactively, as responses to positive and negative reinforcement. There is always a recurring memory or impulse with which the leadership reminds the need to impose practices of humility in the organizational routine.</p>	<p>Leadership: (i) strives to sponsor feedback; (ii) corrects signs of arrogance; (iii) often invites members to explore collective learning by creating teamwork mechanisms; (iv) always remember that it can be natural to make mistakes when seeking to create, renew and innovate; (v) reinforces that there are no demigods in the organization, but actors with limitations that can be overcome with greater openness to the other; (vi) often reiterates the importance of paying attention to the contribution of the other; (vii) works for clarity, transparency of exchanges and mutual advice; (viii); recurrently encourages integrations between the different groups; and (ix) sometimes reinforces the rituals of recognition of achievements.</p>
<p>3. stimulated culture of humility - Humility is reflected in everyday practices, whether by the examples of leadership that emulate reason and sense with the members of the organization, or by protagonism, propagation and encouragement of self-reflection. Manifestations of humility are based on an assumed awareness of obligation and a behavioral duty. Humble practices are aligned with shared beliefs within the organization, as a proactive response from a clear sense of duty. Only some of the norms of a culture of organizational humility are present in the organizational routine because the regime of duty signals the discontinuity of these practices.</p>	<p>The members of the organization: (i) perceive the benefits and commit to the practice of constructive feedback; appreciate listening to advice as the organization encourages the principles of mentoring; (ii) have less difficulty in assuming their own limitations because they perceive that leadership ensures an environment of psychological safety; (iii) think humility is important and hold themselves accountable for transcending and recognizing the strengths of others, for learning from others and working as a team; (iv) tend to maintain temperate interpersonal relationships, being open to different ideas and inhibiting groupthink; (v) are formally encouraged to praise their colleagues, to live with counterpoint and to adopt conciliatory approaches.</p>
<p>4. full culture of humility - Basic assumptions of humility are disseminated, understood and put into practice, in an integrated and systemic way, through manifest and expressed humble behaviors. Humble behaviors are practiced by a voluntary desire of the members of the organization, as they volunteer to act in this way, and they see value in this practice and in this acting, combining reason, genuine interest, and satisfaction. Humble behaviors occur deliberately, leaving behind the ethic of</p>	<p>The members of the organization: (i) actively and attentively listen to each other, with respect and genuine interest in counseling; (ii) foster collaborative relationships that help the search for feedback, even if it is critical; (iii) have a clear assessment of their contributions and limitations and authentically recognize the contributions and strengths of others, encouraging constructive conflict; (iv) stimulate new ideas by forging spaces for face-to-face or virtual socialization; (v) communicate transparently, without fear of their perspectives, mistakes and limitations; (vi) foster teamwork with a focus on the belief in collective</p>

<p>obedience and assuming the ethic of responsibility. The norms of conduct of humility are present in the organizational routine.</p>	<p>learning; (vii) publicly praise and recognize the achievements of others.</p>
<p>5. virtuous culture of humility - Humility is a shared value. The repetition of practices of humility creates habit, and develops virtue. Humility is a value practiced in the dominant culture of the organization and referenced in organizational practices – disseminated in an authentic way by leadership. Humble behaviors occur naturally in everyday life, organically and unconsciously. The norms of conduct of organizational humility are present in everyday life.</p>	<p>The following humble behaviors stand out: (i) evaluations of achievements, derived from the exercise of constructive feedback, are conducted naturally, accurately, objectively and in moderation, without overestimating or underestimating achievements; (ii) feedback is seen as an exercise in development, actively sought and willingly received; (iii) there is no value judgment with regard to individual limitations and imperfections; (iv) mistakes are assumed without fear, and clever mistakes are consciously tolerated for the benefit of learning; (v) interactions are characterized by transparent communication, respect and consideration for others; (vi) recognition, praise and individual appreciation are ritualized, and are recurrent practices; (vii) the strengths of others are usually made explicit, to the detriment of personal exhibitionism; (viii) word of individuals is trusted; (ix) teamwork flows naturally, and there is a real interest in each other's ideas and contributions; (x) collaboration, participation and gratitude for the exchange are valued.</p>

IMPLICATIONS AND FUTURE RESEARCH

Following the assumptions of the culture maturity models, the THCM proposition, based on Schein's (2010) concept of culture maturity and inspired by Galbraith's (1983) conceptions, extends the foundations of the Maldonado et al. (2018) and Owens et al. (2013; 2015) models, presenting 4 fundamental implications for the management of organizational humility: (i) reinforces and dynamizes, in a temporal sphere, the 6 norms of conduct of an organizational culture of humility evidenced in the empirical research of Maldonado et al. (2018); (ii) favors the transposition of the 11 expressed behaviors described in the individual humility model of Owens et al. (2013; 2015), for the understanding of humility in organizations; (iii) it helps to analyze the maturity of the culture of organizational humility and virtuous practices in organizations, since it indicates specific descriptions and behaviors of humility related to each stage of cultural progression towards maturity, providing input for diagnosing underdeveloped and mature fronts (iv) presents a proposal for a unique and unprecedented THCM in organizational literature that fills a gap in management studies dedicated to organizational humility and the humility cultural maturity, opening up a new space for discussion around specific virtuous practices that expand organizational capacities in the face of environments subject to recurring corporate scandals. The proposition of the THCM has the following limitations: (i) the conceptual framework is restricted to the models of Maldonado et al. (2018) and Owens et al. (2013; 2015), although this is a multidisciplinary theme; (ii) the proposed design is applicable to any organizational and cultural context, however, the effectiveness of its application depends on the quality of the diagnosis of the external and internal organizational environment. The study also identifies some avenues of opportunity for future research: (i) validate the THCM with the leaders of organizations that express humility as an essential corporate value; (ii) validate the propositions of behaviours of humility (e.g. theoretical validation, face validation, mixed methods), with the prerogative of creating a culture maturity model that can be used for personalized structured interventions to improve the culture of organizational humility; (iii) design a model of organizational humility culture, with norms of conduct and observable indicators that broaden the universe of constructs - humility is a complex and not very tangible phenomenon - in order to improve the parameters of the THCM; (iv) analyze the influence of national culture on the application of the THCM, based on the management of humility in global organizations.

FINAL CONSIDERATIONS

The proposition of the THCM is suitable for highlighting a growing path of virtuous practices in favor of a culture of humility as it proposes stages of temporal displacement from an unconcerned to an unconscious, virtuous behavioral regime of the humility construct. This is justified: (i) because humility is a non-dichotomous virtue with conceptual diversity, whose introduction into the corporate world requires practical experimentation in a progressive behavioral regime through structured instruments, seeking an alternative proposal to the traditional factors for building an organizational culture; and (ii) because culture maturity models provide evolutionary parameters that outline simplified and objective descriptions of tangible practices for specific stages that lead to the internalization of behaviors representative of a mature culture. The THCM proposition shows more tangible signs of this construct as it merges the descriptions of cultural precepts and humble behaviors with the stages of culture maturity, providing cultural types with distinct and progressive attitudinal regimes, signaling the content of each perimeter of culture maturity and showing a growing roadmap towards the internalization of humble behaviors. In this sense, it is the very way in which the THCM was configured and the utilitarian essence of the instrument of cultural progression proper to humility that answer the main question of this investigation. Considering that virtuous practices lead to organizational excellence and are powerful instruments for preventing ethical scandals and corporate fraud, and in the light of the theoretical propositions of the THCM, it is possible to summarize the main attributes of the instrument: (i) evolutionary progression - the THCM outlines the stages of cultural evolution of humility, and its configuration is particular to the desire for the introduction and evolution of the virtue; (ii) support from theoretical approaches - by drawing on Schein's (2010) concept of culture maturity, on Galbraith's (1983) concepts of the ethics of obedience and responsibility that inspire the behavioral regimes of the typology, on Maldonado et al.'s (2018) unique conceptual model, and on Owens et al. (2013; 2015) methodologically strong instrumental model, the understanding of the culture of organizational humility is broadened by addressing a tangible instrument for empirical validation; (iii) theoretical advance - the configuration of the THCM, based on the articulation of 2 theories and 2 specific models, expands the knowledge around the culture of humility in favor of the construction of theoretical propositions aimed at virtuous practices of humility and its culture maturity; (iv) fostering excellence - the theoretical proposition of the virtuous culture of humility stage tends to highlight the internalization of behaviours of humility as natural and unconscious habits, addressing discussions around organizational capabilities; and (v) organizational development - the instrument helps with analyses of the humility culture maturity, offering objective signs of virtuous practices. Finally, the study hopes to stimulate further reflection on the importance of humility as a corporate cultural value, so that further research can criticize the propositions put forward here and bring them back to higher levels of contribution in the interest of spreading virtuous practices related to humility for the benefit of a culture based on organizational excellence, which is so dear to contemporary contexts.

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LOW-INCOME CONSUMERS' COGNITIVE APPRAISAL, EMOTIONS, AND COPING STRATEGIES: AN ONLINE SHOPPING PERSPECTIVE

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ABSTRACT

This study uses cognitive appraisal theory as the theoretical lens to focus on the lived experiences of low-income consumers and their online shopping experiences. Historically, low-income consumers have not been a focal segment for online retailers due to the assumption of their basket spend being low. However, more low-income consumers are opting to purchase online due to its various advantages, making them an attractive segment for online retailers and calling on a better interpretation of their online shopping experiences. Using in-depth interviews, twenty-five online shoppers were interviewed and asked to share their online shopping experience. The findings reveal that low-income consumers appraise their experiences according to the device used and find the navigation of the platform easy, while the search function leads to difficulties in finding the correct product. In addition, low-income consumers appraise the online shopping process as being convenient and allowing them to save on travel costs. This appraisal leads to positive and negative emotions, because low-income consumers feel satisfied with their purchases but are weary of the delivery and payment risks associated with online shopping, which requires that they utilise different coping mechanisms in managing the risk. The study contributes to understanding low-income consumers' online shopping experiences and contextualises the findings according to cognitive appraisal theory. This provides a deeper understanding to low-income consumers and their online shopping experience and offers online retailers the opportunity to enhance online shopping experiences therefore, ensuring that low-income consumers continue to purchase online.

Keywords: online shopping experience, low-income consumer, CAT.

INTRODUCTION

During the COVID-19 pandemic, consumers' willingness to shop online increased (Shaw, 2022). Although Waqas et al. (2023) predicted that consumers would return to physical store purchasing, the number of consumers shopping online post-pandemic has sustained. Historically, most online shoppers were classified as middle-class consumers (Cavusgil et al., 2018; Couzins, 2021; Cowling, 2023), but the pandemic exposed online retailers to a much larger, more lucrative segment: low-income consumers (Couzins, 2021). Low-income consumers are classified as individuals who earn R4 417–R8 913 (US\$284–US\$573) per month (Publisher Research Council, 2020) and although these consumers are spending less per basket purchase, they are purchasing more frequently, making the consumer group attractive for online retailers (Adams et al., 2024).

Whilst existing research on consumers' online shopping experiences has focused more on middle-class consumers, (e.g., Cavusgil et al., 2018), limited research focusing on low-income consumers and their online shopping experience has been conducted. Instead, research on low-income consumers has centred on their acceptance of technology (Dakduk et al., 2020), purchase behaviour (Roy et al., 2021), and aversion to risk (Abelson, 2018). Although these studies have provided an appropriate context to low-income consumers and their online shopping preferences, this study offers a unique perspective by using cognitive appraisal theory (CAT) as the theoretical lens to interpret their experiences. The CAT is unique in contextualizing the stimuli affecting behaviour, the resultant positive or negative emotions, and the coping mechanisms (Jordan & Prayag, 2022). With the online shopping environment being dynamic and low-income consumers' experiences being different to majority of customers highlighted in current literature, understanding the cognitive and emotional processes and how consumers cope with the processes is

important (Milaković & Ahmad, 2023). Therefore, the aim of the study is to interpret how low-income online shoppers experience online shopping, whether their experiences elicit negative or positive emotions, and how they coped with the experiences. To achieve this aim, the following research questions were formulated: RQ1 - What were the lived experiences of low-income consumers in their evaluation of their online shopping experience? RQ2 - What emotional responses did low-income consumers experience during their online shopping journeys? RQ3- What coping mechanisms did low-income consumers use during their online shopping experiences?

This study provides a deeper interpretation of how low-income consumers experience the online shopping process which, according to Bender and Mattoso (2022) and Roy et al. (2021), is an under-researched domain, as online retailers did not initially perceive low-income consumers as lucrative segments due to their limited spend. Therefore, studies focusing on low-income consumers have been limited, but as low-income consumers are proving to spend less yet spend more frequently compared to other segments, there is a need to interpret their online shopping experiences. This will provide online retailers an opportunity to enhance their online offerings to offer the best possible online shopping experiences.

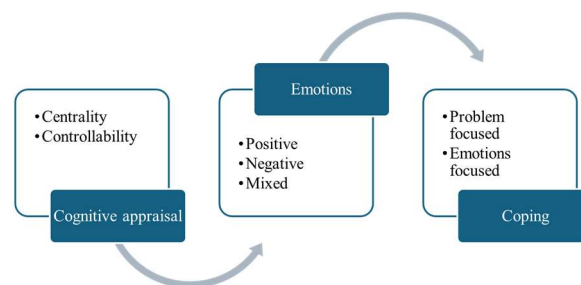
LITERATURE REVIEW

The literature review provides context to the CAT and offers an overview of the online shopping environment and low-income consumers.

Cognitive Appraisal Theory

The CAT was initially developed and used by psychologists to determine how individuals respond to stress (Jordan & Prayag, 2022). This has since evolved to the CAT being applied to research focusing on consumers, owing to the theory being based on the premise that consumers' behaviour is typically a result of their appraisal of a situation, the emotion it elicits, and the coping strategies used (Yi et al., 2022). Milaković and Ahmad (2023) added that the CAT is relevant within a marketing context as a consumer's appraisal of a situation and the resultant emotions can enhance or decrease the probability of a purchase decision being made. The CAT has been utilised in a range of contexts, including tourism (Jordan & Prayag, 2022), impulse buying (Milaković & Ahmad, 2023), and consumer behaviour (Yi et al., 2022). Although these are varying contexts and may have different factors that are relevant to specific contexts, the three overall categories include appraisal, emotions, and coping mechanisms, as shown in Figure 1. Within the context of this study, the appraisal category refers to how individuals assess their shopping experiences, focusing on the devices used and the shopping process (e.g., navigation and search function). The emotional category focuses on whether the online shopping experience elicits positive or negative emotions and, lastly, how low-income consumers cope with the online shopping experiences.

Figure 1: Cognitive appraisal theory



Online Shopping and Low-Income Consumers

Sales in the global online shopping industry are predicted to reach US\$7.3 trillion in 2025. Although sales were significant before the COVID-19 pandemic, the pandemic amplified consumers' willingness to use online shopping channels (Chevalier, 2022; Marketline, 2021). The most purchased online shopping categories include electronic goods, followed by grocery items and apparel (Marketline, 2021) and, given the increase in sales, online retailers have

recognised the importance and potential of online shopping. Increased online sales have been due to a surge in consumers accessing the internet. For instance, according to Labuschagne (2023), there has been a drastic increase in the number of consumers accessing the internet. For example, in 2011, 64.8% of the South African population indicated they did not have access to the internet, with this figure decreasing to 21.1% in 2022.

Previously, retailers often overlooked low-income consumers when establishing an online presence because of assumptions about their limited access to resources (Dakduk et al., 2020). Retailers also perceived difficulties in delivering items to low-income consumers due to their living circumstances (Hosseini et al., 2017). These challenges led retailers to weigh their capabilities, resources, and customer expectations carefully, which contributed to hesitancy in focusing on low-income consumers (Difrancesco et al., 2021). However, the landscape has evolved with the increasing use of mobile devices to access the internet (Marketline, 2021), providing retailers with opportunities to broaden their offerings and include low-income consumers in their strategic focus. The potential of the low-income market for retailers is substantial (Atwal & Bryson, 2023). While low-income consumers traditionally favoured physical shopping experiences, the COVID-19 pandemic accelerated the adoption of online shopping platforms across all demographics, particularly among low-income consumers (Deloitte Digital, 2021). Since low-income consumers are a key target for retailers (NielsenIQ, 2021), understanding their online shopping experiences enables retailers to tailor their marketing strategies effectively (Mishra et al., 2021).

METHODOLOGY

This section provides an overview of the methodology, as guided by Alharahsheh and Pius (2020) in order to develop an interpretive lens to inquiry.

Research Paradigm and Approach

The research aim and areas of interpretation lent themselves to an interpretivist phenomenological research paradigm. This paradigm originated from philosophy and psychology and phenomenology presents a unique opportunity for capturing participants' lived experiences (Korstjens & Moser, 2017). This approach allows for the unearthing of phenomena from the perspective of how people interpret and attribute meaning to their existence (Frechette et al., 2020). This study delved into the lived experiences of low-income shoppers when shopping online. Furthermore, Frechette et al (2020) stated that the main objective of interpretive phenomenology is to uncover or disclose a phenomenon by pulling away layers of absent-mindedness that are present in our everyday existence. A qualitative approach best fits this study, as it relates to the meaning and process of the methodology, which cannot be determined through quantity. A qualitative approach provides a specific understanding of a phenomenon based on the ones experiencing it, but with less generalisation (Saunders et al., 2019). Qualitative research is aimed to attain deep understanding of a specific case with in-depth exploration (Alharahsheh & Pius, 2020) and to discover meaning grounded in human experience (Gill, 2020). Most importantly, qualitative research was selected for this study based on Cobb and Hagemaster's (1987) framework, which emphasises the following elements: 1) considering the social context (low income) where events take place and derive meaning, 2) prioritising the participants' perspectives to gain a deeper understanding of their social world (low-income consumers' online shopping), 3) utilising interviews as a key data collection method, and 5) focusing on discovery and description, with analysis presented through participants' own words.

Participant Selection

Maximum variation sampling plan was used and phenomenon-rich participants were purposively targeted. This purposive approach to participant selection was used because, as explained by Nyimbili and Nyimbili (2024), the researcher selects participants who share common characteristics (low-income consumers) but possess distinct experiences unique to each individual (when experiencing online shopping). The sampling selection was tailored to optimise chances of obtaining maximum variation according to gender, age, educational background, work experience, and online shopping experience (Alharahsheh & Pius, 2020). Staller (2021) agreed, stating there is no logic for qualitative researchers attempting random or probability sampling. The research participants were selected purposively, which is effective when attempting to achieve as much variation as possible. More specifically, the participants were identified by posting an invitation to participate in the study via social media platforms (i.e.,

LinkedIn, Facebook and WhatsApp). Twenty-five shoppers were interviewed, representing maximum variation, even down to the variation of online retailer selection.

Data Collection

There are many qualitative data collection techniques, such as case studies, checklists, interviews, observation, surveys, and online interviews (Morgan & Harmon, 2001). In-depth interviews are usually the primary data collection method in phenomenological research. Individual interviews elicit participants' experiences, which allow participants to remember and relate past events, considering what is meaningful for them, with meaning-making being an essential component of their lived experiences. Interviews are usually unstructured or semi-structured with some guiding questions. For the purpose of this study, semi-structured interviews were considered most apt, not only because semi-structured interviews are commonly used in qualitative, interpretive research (Al Balushi, 2016), but also because the goal of semi-structured interviews is to explore key themes within the everyday lives of participants from their own viewpoints (Tracy, 2019). Content validity for this interview protocol was provided by the CAT (Alharahsheh & Pius, 2020).

Data Analysis

The data analysis consisted of three phases, namely cognitive appraisal, emotions, and coping, as per the CAT. Alharahsheh and Pius (2020) stated that different methods can be used for data analysis and this study employed thematic analysis. With an interpretivist phenomenology paradigm, data is analysed using questions, such as "What is happening here?" and "How is the phenomenon being expressed in this encounter?" These questions were adapted for this study to align with the CAT to determine participants' interpretation of their online shopping experiences during the first phase of data analysis. In the second phase, a sentiment analysis was conducted to determine participants' emotions during online shopping. In the third phase, questions like "How did you cope with the online shopping process?" were used to explore the themes.

Ensuring Rigour

Lincoln and Guba (1985) propose four main criteria to assess trustworthiness in research, which were used in this study towards advancing rigour: credibility, transferability, dependability, and confirmability. Firstly, credibility, according to Stahl and King (2022), relates to whether the findings align with reality. In this study peer debriefing with co-researchers and colleagues was used to offer the field-based researchers objective or what Shenton (2004) refers to as detached feedback on early research processes and, later, on findings iteratively. Furthermore, investigator triangulation was used where more than one researcher made decisions regarding analysis and interpretation (Korstjens & Moser, 2018).

Secondly, transferability assumes that the evidence provided is relevant to specific individuals within a particular context (Lincoln and Guba, 1985). This approach contrasts with the generalisability requirement in quantitative research. This study offers a rigorous, 'thick description' of the experiences of low-income consumers when engaging in online shopping. This survey provides a thorough account of the methods used and the steps taken during the analysis. This comprehensive description allows other scholars interested in applying the findings to other contexts to determine whether transferability could be considered.

Lincoln and Guba (1985) suggest a third element of trustworthiness, known as dependability, which involves establishing confidence in the reliability of the research. In this qualitative study, researchers actively engaged in building trust in the unfolding events through practices like peer debriefing and peer scrutiny, which Stahl and King (2020) argue are strong communicative habits that contribute to building trust. Fourthly, confirmability was achieved according to the advice of Korstjens and Moser (2018) by providing a clear account of the research steps from the project's inception to the creation and presentation of the findings. Furthermore, detailed records of the research process were maintained throughout the study.

FINDINGS AND DISCUSSION

To interpret low-income consumers' appraisal of their online shopping experiences (RQ1), the study wanted to determine which online device is used most. Most participants indicated that they used their mobile phone apps to conduct their online shopping: "I used my phone. Only because I have all the apps on the phone and it is more convenient to carry around wherever I am and go" (P10). Labuschagne (2023) provided context to the finding, stating that the increased access is due to consumers using their mobile phones to access the internet. This finding is supported by a global report indicating that most online shoppers use their phones when shopping (Cowling, 2024). This is due to the convenience that mobile phones offer in accessing the internet, though low-income consumers do not have access to constant internet connections and must purchase data bundles to access the internet (Mzekandaba, 2022). These are often expensive and limit the time spent on the mobile apps, meaning that low-income consumers would want to make use of mobile shopping apps that allow for easy navigation.

To unpack this further, participants were asked about the online shopping process using their phones, with participants indicating that the navigation was easy: "The app is easy to navigate through, adding to the cart is simple and checking out is very straightforward" (P13); and "Well, it was very easy to navigate as the home page shows categories and suggestions, searching and adding to the cart was also easy" (P18). According to Mirhoseini et al. (2021), when developing an online shopping platform, the way in which consumers can navigate and complete a purchase impacts their appraisal of the shopping experience. However, some participants found the online shopping process to be challenging, particularly due to the search functionality: "Searching for items can somehow be a headache but after some time (most of the time), I find what I'm looking for" (P1); and "Searching items can be time-consuming, going back and forth" (P6). The search function on mobile shopping apps is an important consideration for retailers, as it adds to or reduces consumers' time and convenience costs (Xie et al., 2022).

Concerning the motivation for selecting online shopping as their preferred channel, participants revealed they found online shopping a convenient way of buying their items: "I purchased my groceries online because I had too much [*sic*] things to handle on that specific day, and I must say purchasing online is [*sic*] been very helpful and also convenient at the same time" (P4). This supports the finding of Kibuacha (2021), who asserted that consumers purchase items via online shopping channels for the convenience. Momen and Torabi (2021) added that this is due to consumers being under significant pressure in terms of time due to various responsibilities. In addition to convenience, participants appraised the travel-cost savings that online shopping offers: "From a price perspective I save because I don't have a car and it's actually cheaper than Ubering" (P3). According to Mirhoseini et al. (2021), this is consistent with low-income consumers who often have to weigh up the cost of travelling to the store using public or private transportation services compared to the delivery fee. In South Africa, a report found it was cheaper to pay the delivery fee (R35/US\$1.8) than an Uber for the same distance ("It's now cheaper to have groceries delivered", 2022).

Based on the above, the participants appraised their online shopping experiences according to the devices they used (mobiles) and appraised the app's navigation and search functionality. Although there were conflicting appraisals of the navigation and search functionality, it is clearly a very important appraisal in determining the ease of the online shopping experience. Lastly, participants appraised their online shopping experiences based on convenience and the opportunity to save both time and money in travel costs.

The next part of the model deals with emotions. Concerning the emotions participants felt when shopping online (RQ2), they were asked how they felt about the retailer before their online purchase, with majority participants reflecting positive emotions: "I was always satisfied with their service hence me purchasing from them online" (P1). While positive emotions are found to increase the frequency of online shopping and in turn increase sales and loyalty (Cinar, 2020), online retailers should also be aware of the negative emotions that consumers may face when shopping online. One source of potential negative emotion is delivery risk: "I didn't trust them because I get to pay first and I didn't know if I was going to get my orders" (P6).

According to Makhitha and Ngobeni (2021), delivery risk is still a major concern for consumers, acting as a major barrier to online shopping. Olotewo (2018) added that, historically, low-income consumers would opt to purchase products from physical stores due to the potential delay in delivery and negative delivery experiences. To uncover the emotions relating to delivery, participants were asked an additional question about the delivery length and how they felt during this period. Most participants indicated that their products were delivered in less than 24 hours

and were satisfied with receiving updates about their deliveries: “It maybe took less than an hour. I was happy my order was accepted and I didn’t really think about it too much till I started receiving updates so I could do other things while I waited for it to arrive” (P22). To conclude their sentiments about the retailer, the participants were asked how they felt about the retailer after the purchase. All participants indicated they were satisfied with the online retailer: “I felt very good and confident, especially after the first delivery” (P5); and “I was so happy and satisfied with their service to be honest and I am definitely going to use the app and order again” (P8). This revealed that although some consumers may be sceptical in placing online orders due to the potential delivery risk, if the retailers provide communication in the form of delivery updates, the scepticism diminishes and consumers feel more confident in placing orders with the online retailer resulting in positive emotions. Cinar (2020) added that positive emotions are vital to increasing the online purchasing frequency, which increases sales and loyalty.

The last part of the model deals with consumers’ coping mechanisms after the online shopping experience (RQ3). Some participants indicated that due to the problems associated with online shopping for groceries specifically (e.g., poor service, administration, availability of products, and tangible elements), they coped by opting to shop at physical stores: “Personally, I feel in-store is better than online because in-store you can be able to touch and feel products, you can check expiry dates and the quality of the products plus you get the products immediately” (P23); “Personally, I feel in-store is better because you can get what you buy immediately” (P4); and “Online just doesn’t show everything and the admin just bores sometimes ... in the store, you get to see everything, even those on sale, so you are saving” (P7). This demonstrates that consumers cope with the problems posed by opting to purchase in the physical store. According to Tshidulko (2023), this is very common with groceries, which are generally perishable and consumers opt to see the grocery items in person. However, only one participant indicated a preference for online shopping, as it allows for better coping with monetary costs: “The online shopping experience is very limiting in a good way and convenient. I prefer this sometimes for when I don’t want to overspend; being at a physical store at times might be draining and time-consuming; you also find yourself overspending on your budget because you see other products you never planned to purchase.” (P10)

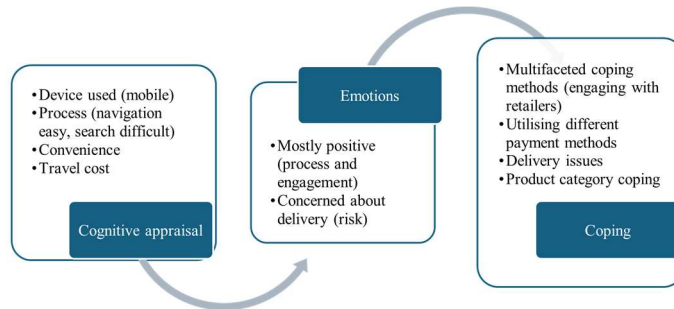
Concerning the non-monetary costs of online shopping, the participants revealed: “I think the online shopping experience cuts out the time spent looking for products in-store and this helps in saving time to do other things. The experience is also very different as there is less human interaction involved” (P17); and “I don’t have to stand in long queues it saves my time and energy” (P15). These findings are consistent with Waqas et al. (2023), who reported that consumers select online shopping due to the benefits, such as lower prices, convenience, and time-saving.

The coping findings seem somewhat ambiguous and multifaceted. While lower-income consumers are predominantly concerned with delivery and payment risks when shopping online (Bender & Mattoso, 2022), it appears the product category plays a role. Participants indicated that they cope with incorrect deliveries of non-perishable items (e.g., cleaning products) by informing the online retailer: “My last order wasn’t, unfortunately, and I let them know. It did leave me a bit irritated but it’s only ever happened once. If it does happen again, I’ll have to reevaluate services. I’m always up to using and learning about new services.” (P3). This suggests that consumers have a level of tolerance when purchasing non-perishable items. In addition, the participants appeared to cope with delivery risk by scheduling their deliveries, indicating that participants play an active role in the service delivery process: “What I appreciate about this app is that one can schedule when and what time you want your grocery delivered. The waiting period is easy and quick because you are always notified with each and every process of your shopping to when your grocery is delivered to your doorstep.” (P10)

According to Rao (2019), being actively involved in the service delivery process – for instance, by selecting a delivery time – enhances customer satisfaction. Participants were asked how they cope with the risk of their payment details being shared, which is one of the most significant deterrents to online shopping (Pusatli & Akman, 2020). Participants indicated that they prefer using alternative payment methods, such as electronic fund transfers (EFTs): “I personally prefer the EFT payment process because SecureEFT has a Comodo SSL encryption certificate, which gives our payment processing service an extremely high level of security” (P11); and “I paid via EFT because paying [via the] website has gotten my bank account hacked” (P13). This indicates that instead of avoiding online purchasing, consumers opt to cope by using alternative payment methods they regard as more secure. This finding is consistent with research by Bender and Mattoso (2022) on low-income consumers in Brazil, where consumers opt for online retailers who offer a range of payment options.

Based on the above it appears participants' coping mechanisms depend on the product category being purchased. For instance, participants were more reluctant to take risks when the items were more perishable in nature, but coped with the risk by selecting their delivery schedule. Furthermore, in coping with the risks associated with making payments online, the participants selected the payment method they were most comfortable with.

Figure 2: Findings contextualised to the CAT



The findings, as summarised in Figure 2, reveal that participants use their mobile devices when shopping online and experience the online shopping process as a convenient and easy way to purchase items and save on travel costs, compared to going to a physical store. In turn, this elicits both positive and negative emotions, where participants are positive and satisfied with the process of shopping online and the engagement they receive from the online retailer, but are concerned with the delivery risks associated with online shopping, which elicit negative emotions. In conclusion, the coping mechanisms were multifaceted, where participants utilised varying coping strategies that resulted in them engaging with the retailers and participating in the delivery process by scheduling their own deliveries. However, this depended on the product category, meaning that consumers apply different coping strategies for different purchases. In addition, to cope with the payment risk, low-income consumers select the payment method they are the most comfortable with.

MANAGERIAL IMPLICATIONS

The findings reveal that low-income consumers appraise online shopping as relatively easy, using their mobile phones to make purchases. However, participants indicated that the search functionality can negatively impact their shopping experiences. Overall, participants' emotions towards their online shopping experiences were positive, and despite being aware of potential risks (e.g., delivery risks, payment risks), they coped by opting to report incorrect deliveries, selecting suitable delivery times, and considering different payment options.

Based on these findings, to satisfy the low-income consumer segment and enhance their shopping experiences, online retailers should (1) ensure their online shopping platforms, particularly phone apps, are user-friendly, as these are the devices that low-income consumers utilise the most when shopping online. In addition, the navigation should be easy and not frustrate users, meaning that the products should be categorised accordingly. Lastly, the search function should be developed with users in mind, and products should be labeled correctly for the search to be effective; (2) develop mobile apps that are not data-heavy, as low-income consumers often purchase costly data bundles. To achieve this, online retailers could utilise low-resolution images and avoid the overuse of multimedia; (3) allow low-income consumers to schedule delivery times that are convenient to the consumers (e.g., after working hours) and provide frequent updates regarding their deliveries and (4) manage the payment risk by continuing to offer a range of payment options, so that consumers can select the payment option they feel comfortable with (e.g., EFTs, online payments, third-party secure platforms).

In summary, to attract low-income consumers, online retailers should ensure the online shopping process is seamless and offers convenience to consumers in the form of process and delivery. If online retailers can provide this, low-income consumers will feel positive towards online retailers, which will result in more effective coping.

CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

This study revealed that low-income consumers find online shopping easy and convenient, but feel uneasy when it comes to the delivery and payment of their purchases. To cope with the uneasiness, low-income consumers apply different coping mechanisms, which online retailers should understand to create an online platform that attracts low-income consumers. Utilising CAT, the study contributes to understanding how low-income consumers experience online shopping and provides online retailers with strategies that could enhance their online shopping experiences. However, the study is not without limitations. The study was conducted in Gauteng, South Africa, and cannot be generalised outside of these parameters. Moreover, the study does not focus on specific online retailers, thus the findings cannot be generalised to all online retailers. Future research could focus on comparing online shopping experiences dependent on devices (e.g., laptop or tablet) to determine if the experiences differ. In addition, specific age categories could be studied to determine whether experiences differ depending on how familiar the participants are with the online shopping process and, lastly, the study could be conducted from a quantitative perspective to generalise the findings.

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BEYOND LIKES: EXAMINING THE EFFECTIVENESS OF BEAUTY INFLUENCERS ON CONSUMER INFORMATION ADOPTION

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ABSTRACT

This research investigates the under-explored area of social media influencers (SMIs) and information adoption in emerging markets' beauty industry. South Africa specifically has one of the fastest growing beauty industries in this market. Given consumers' reliance on SMIs for beauty product information, the study employs the Information Adoption Model to assess how SMIs influence consumer behavior. Using online surveys and SEM, the study (n=242) reveals that source credibility is key to perceived information usefulness, which in turn drives information adoption. Beauty brands are advised to collaborate with credible SMIs that resonate with their target market and to actively engage with consumers online to build trust. These findings support the IAM model, suggesting consumers in emerging markets adopt information from SMIs when perceived as useful and credible.

Keywords: Information Adoption Model (IAM), Social Media Influencer (SMI), Social Learning and Exchange Theory, beauty industry.

INTRODUCTION AND BACKGROUND

The advent of social media has reshaped the marketing landscape, necessitating adaption from brands across all industries. One strategy that has emerged is the utilization of third-party endorsements, with social media influencers (SMIs) at the forefront of this approach (Kofi, Donkor & Nana, 2019; Utian-Preston, 2019). The beauty industry (comprising of four segments: cosmetics, skin care, personal care, and fragrances) exemplifies this phenomenon (Statista, 2022a). Valued at over \$530 billion (Statista, 2022b), it represents a significant contribution to global economy. Emerging markets like South Africa, with a market size of \$3.6 billion, are experiencing growth of 5% per year (Euromonitor, 2019). This growth can be attributed to several factors, including the introduction of products catering to local needs (e.g. ethnic hair care), the expansion of natural and sustainable ingredient-based ranges, and the growing men's grooming segment (Research and Markets, 2019). Within the emerging market of South Africa, the industry is competitive with major players such as Unilever Pty (Ltd), Colgate-Palmolive Pty (Ltd) and Procter and Gamble Pty (Ltd) (Euromonitor, 2019). The fiercely competitive nature of this industry compels beauty brands to reevaluate their marketing strategies to capture consumer attention (Araigy, 2018). Within emerging markets, consumers are characterized by their high rates on online content consumption. South Africans, for example, spend 56.8% of their waking hours to screen time, placing them at the top globally, followed by Brazilians, Filipinos, Colombians, and Argentineans (Fraser, 2024). This high level of engagement with online platforms presents a significant opportunity for beauty brands to leverage SMIs to drive product information adoption (Kofi et al., 2019). Beauty consumers, in particular, actively seek online beauty information, relying on SMIs for tutorials, product recommendations, and insights into current trends. Unlike traditional celebrity endorsements, SMIs are perceived as relatable figures, fostering a sense of trust with consumers and providing brands with a competitive advantage. Understanding the impact of SMIs on information processing and adoption is crucial, considering the amount of information consumers encounter on social media platforms (Hauptmann, 2019; Koetting, 2018). This study adopts the Information Adoption Model (IAM) developed by Sussman and Siegal (2003). The IAM integrates the Technology Acceptance Model (TAM) and the Elaboration Likelihood Model (ELM) to investigate the relationship between perceived usefulness of information presented by SMIs and its subsequent adoption, potentially leading to product adoption within the beauty industry. By effectively harnessing the power of SMIs, beauty brands can leverage the

trust and information advice they provide to navigate the competitive landscape and achieve sustained success (Koetting, 2018).

PROBLEM STATEMENT

The beauty industry acknowledged the effectiveness of social media influencers (SMIs) as a marketing tool, generating more trust compared to traditional marketing (Utian-Preston, 2019; Bartosik-Purgat, 2018). This is relevant considering that nearly 36% of consumers actively seek online beauty information before purchase (Koetting, 2018). SMIs play a critical role in sharing useful information online (Sharma & Albus, 2018). However, existing research on SMIs and information sharing primarily focuses on Western markets (Erkan & Evans, 2018; Gashi, 2017). The growing beauty industry in emerging markets along with increased social media use (Statista, 2002b; Fraser, 2024), necessitates further exploration of the SMI-information adoption link in these contexts. This is especially true for African consumers, who demonstrate a higher level of trust in both SMIs and word-of-mouth, with over 60% influenced by SMIs for purchase decisions (Utian-Preston, 2019). South Africa, as an emerging market, presents an ideal market to conduct the study as a) South Africans have the highest global screen activity with 28 million active social media users; b) eWOM plays a major role in purchase decisions in this market; c) increased consumer distrust of brands, d) underutilized SMI potential within this market and e) this market has a rapidly growing beauty industry (Fraser, 2024, Cooper, 2020; Roberts-Lombard & Parumasur, 2017; Bratt, 2019; Samuely, 2022; Statista, 2022b). Limited data on successful SMI marketing strategies in South Africa creates uncertainty regarding their efficacy. Current campaigns by beauty brands reveal cautious adoption, with only a few actively engaging SMIs. This highlights the need for research on the effectiveness of SMIs on information adoption within this market (Bratt, 2019). The IAM has proven effective in previous social-media based studies (Bueno & Gellego, 2021). By adopting the IAM to the South African context, this research aims to determine how SMIs influence consumer information adoption. These insights will enable beauty brands to refine their SMI strategies, navigate the competitive landscape, and foster information communication with consumers.

RESEARCH OBJECTIVES

This study, framed by the Sussman and Siegal (2003) Information Adoption Model, investigates the influence of social media influencers (SMIs) on information adoption within the beauty industry. To achieve this, the following secondary objectives are set:

- Examine the relationship between the perceived argument quality and source credibility of SMIs in the beauty industry, and the subsequent perceived usefulness of the information they provide to consumer; and
- Determine whether the perceived usefulness of the information received from beauty industry SMIs leads to information adoption by consumers, as predicted by the Sussman model.

LITERATURE REVIEW

This study focuses on the early stages of the consumer decision-making process, where consumers seek information to address a need (Roberts-Lombard & Parumasur, 2017). Social media influencers (SMIs) play an important role in fulfilling this need by providing product and brand information and options, which is essential in the beauty industry (Solomon, Bamossy, Askegaard & Hogg, 2016; Lou & Yuan, 2019). Social Learning Theory (SLT) by Bandura (1977) underpins this research.

Social Learning Theory (SLT)

The SLT posits that consumers learn through observing others' behavior (in this case, online SMI behavior). This learning influences consumer response to brands, potentially leading to information adoption or rejection (Bandura & Walters, 1977; Kretchmar, 2019; Stewart, 2021). Four key elements are required for social learning (Kretchmar, 2019; Ata, 2018; Solomon et al., 2016; Deaton, 2015): a) attention: Consumers must be captivated by the SMI's content or information; b) retention: Consumers must be able to understand and retain the information provided by the SMI; c) Motor reproduction: This element requires that the consumer can replicate or translate the behavior or information into action, potentially adopting it for further processing (e.g., purchase); and d) motivation and reinforcement: Consumers need motivation or reinforcement to adopt the information. SMIs often receive praise (reinforcement) for

their context, potentially influencing consumer action. Social media platforms facilitate attention and retention, driving social learning (Kretchmar, 2019). Given SLT's focus on cognition, the Information Adoption Model becomes a necessary framework for studying SMIs and information adoption (Sussman & Siegal, 2003).

Information Adoption Model (IAM)

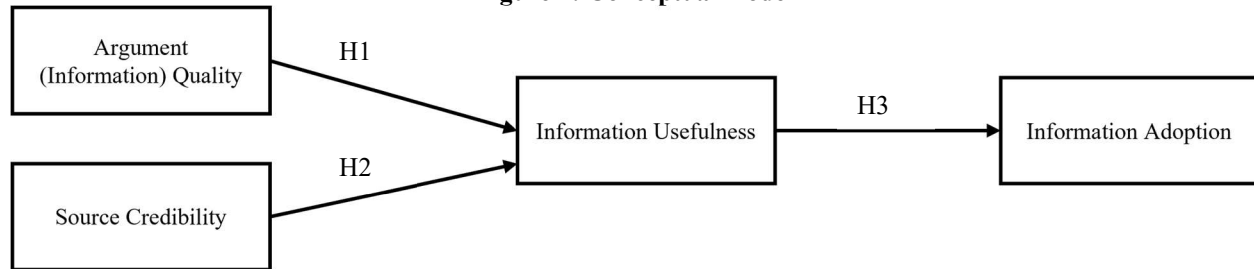
The IAM by Sussman and Siegal (2003) offers a framework for understanding consumer information adoption. It builds on two existing models the Technology Acceptance Model (TAM) and the Elaboration Likelihood Model (ELM) (Tseng & Wang, 2016). The TAM, developed by Davis (1985), focuses on factors influencing technology adoption, including perceived usefulness (efficiency) and ease of use (Abu-Dalbouh, Al-Buhairy & Motiry, 2017). However, TAM is limited in a social media context as it does not account for pre-existing social media adoption and the social influence aspects (Tseng & Wang, 2016; Liao, Wu, Le & Phung, 2022). The Elaboration Likelihood model, developed by Petty and Cacioppo (1986), incorporates the "social" aspect of persuasion, considering central (argument quality) and peripheral (source credibility) routes (Sussman & Siegal, 2003). In an SMI context, information quality and source credibility become crucial for persuasion (Vo & Wu, 2022). However, the ELM fails to consider information usefulness, a key element in adoption theories (Sussman & Siegal, 2003). The IAM addresses these limitations. Sussman and Siegal (2003) argue that consumers process information through either the central route (focusing on argument quality) or the peripheral route (relying on source credibility). From an SMI perspective, the central route requires persuasive arguments, while the peripheral route emphasizes SMI credibility (Mensah, Adams, Adjei & Mwakapesa, 2021). Both elements influence perceived information usefulness, ultimately determining information adoption (Erkan & Evans, 2016). The following discusses the IAM constructs measured in this study.

- **Argument (Information) Quality:** In the context of this study, argument quality refers to the persuasiveness and comprehensiveness of the information provided by SMIs (John & De'Villiers, 2020; Nadlifatin, Persada, Munthe, Ardiansyahmiraja, Redi, Prasetyo, & Belgiawan, 2022). High-quality arguments are deemed relevant and complete, fostering consumer understanding and perceived usefulness (Sohaib, Hui & Akram, 2018; Sa'ait, Kanyan & Nazrin, 2016).
- **Source Credibility:** Consumers are often faced with new brands, making them rely on source credibility to assess information value (Sussman & Siegal, 2003; Thomas, Wirtz & Weyerer, 2019). This construct focuses on perceived truthfulness which is crucial in online environments lacking physical cues (Lin, Jan & Chuang, 2019). Expertise and trustworthiness are key elements of credibility, reducing consumer risk and uncertainty (Tillmann, 2018; Lou & Yuan, 2019). Consumers will deem a SMI to be credible if they have many followers and are seen as experts in the field (Ismagilova, Slade, Rana & Dwiveldi, 2020).
- **Information Usefulness:** This refers to a consumers' perception of the information's value and positive impact on their lives (Erkan & Evans, 2016). Information must be deemed useful to be adopted and satisfy a specific need (Sussman & Siegal, 2003; Upadhyay, Khandelwal, Nandan & Mishra, 2018). High quality of information shared, and source credibility contribute to perceived information usefulness (Argyris, Wang, Kim & Yin, 2020).
- **Information Adoption:** This construct represents the internal process by which consumers accept and integrate information from SMI's into their decision-making (Erkan & Evans, 2016; Arumugam & Omar, 2015). Information perceived as useful and valid is more likely to be adopted by consumers (Erkan & Evans, 2016).

Based on the above, the following hypothesis has been developed for the study as shown in Figure 1:

- H1: Argument quality has a significant and positive relationship with the usefulness of the information provided by the SMI.
- H2: Source credibility has a significant and positive relationship with the usefulness of the information provided by the SMI.
- H3: The usefulness of the information provided by the SMI has a significant and positive relationship with the adoption of the information.

Figure 1: Conceptual model



Source: Sussman and Sigal (2003).

RESEARCH METHODOLOGY

This study adopts a positivistic, quantitative approach to test hypothesis using objective data (Longbottom & Lawson, 2017; Malhotra, 2020). A descriptive research design was utilized through surveys to describe consumer behavior related to SMIs (Saunders, Lewis & Thornhill, 2019). Secondary data from academic sources (journal articles, syndicated data, industry reports) informs the theoretical framework, focusing on the IAM and SMI use in emerging markets (Wiid & Diggins, 2021). Primary data were collected through online self-administered questionnaires to understand the information adoption in the beauty industry provided by SMIs. The population for the study included South Africans who use social media at least once a month (on any device). The sample included South Africans between the ages of 18 and 65 who used social media at least once a month and who follow any SMI in the beauty industry. A non-probability snowball sampling technique was used due to the absence of a sample frame. An online questionnaire on a Google form was distributed via social media platforms (Instagram, LinkedIn, and Facebook) as they are the most widely used social media sites in South Africa (BusinessTech, 2019). Online surveys were chosen due to the study's focus on social media and the need for data sets (Malhotra, 2020). The self-administered survey format ensures cost-effectiveness and minimizes interviewer bias (Hair, Celsi, Oritinau & Bush, 2013). The questionnaire link was posted on the researcher's social media accounts, targeting those who met the screening criteria. Respondents were encouraged to share the link with others who fit the criteria, similar to previous studies by Araigy (2018) and Al-Qatami (2019). The questionnaire included a cover page with study information, screening questions (which included being a South African citizen; between the ages of 18 and 65; using social media at least once a month and following at least one beauty SMI for at least six months), and details on anonymity and informed consent. Ethical clearance was obtained from the researcher's institution. Section A of the questionnaire obtained demographic information about the respondent and their social media usage. Section B of the questionnaire used pre-coded Likert-type scale items (1 = strongly disagree to 5 = strongly agree) measuring the constructs of the IAM. The scales were adopted from the studies of Erkan and Evans (2016); Park and Lin (2019); Hu, Zhang and Wang (2019); Sokolova and Kevi (2020); and Ki and Kim (2019). The questionnaire was piloted with 30 respondents to ensure question clarity. No changes to the IAM scales were required. Data from 242 useable questionnaires (after cleaning) was analyzed using SPSS and AMOS versions 27. Analysis methods included descriptives, Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM).

RESULTS AND FINDINGS

This section presents the demographic profile of respondents, their social media and SMI usage, and the results of the statistical analysis.

Demographic and Social Media Usage Profile of Respondents

The results of Section A of the questionnaire showed that the majority of respondents were females (86.4%) between the ages of 18 and 29 (79.3%). Most held a university degree (68.2%) and were employed on a full-time basis (46.2%). Instagram was the primary platform for following beauty MSIs (85.5%). Respondents primarily viewed SMI posts for tutorials (32.2%), and to learn about new beauty products (31.4%). Skincare and cosmetics were the most popular SMI posts followed (47.7% and 37.7%, respectively).

Confirmatory Factor Analysis (CFA)

A CFA was conducted to assess the validity of the measurement scales adopted from previous studies. Before running a CFA, data normality and suitability was confirmed (Pallant, 2020). As per the parameters suggested by Byrne (2010) and Malhotra (2020), data can be considered normally distributed if skewness and kurtosis are between the absolute values of 2 and 7. Based on this criteria, data were normally distributed. For data to be considered suitable for a factor analysis, there sample size should be between 150 and 300 (Pallant, 2020; Tabachnick & Fidell, 2007). As the sample size for this study was 242, it was appropriate for factor analysis. All coefficients were examined and above the 0.3 level indicating that the data is furthermore suitable for factor analysis (Watkins, 2021). Bartlett's test of sphericity (0.000) and the KMO (0.960) further confirmed data adequacy (Pallant, 2020). The maximum likelihood estimation, as suggested by Fabrigar, Wegener, MacCallum and Strahan (1999), with a four-factor solution (matching the IAM constructs) resulted in acceptable model fit after removing one item each from the Argument Quality and Information Adoption scales. Table 1 presents the CFA results, including factor loadings, convergent validity (AVE), composite reliability (CR), and the Cronbach Alpha values for internal consistency. Fornell and Larcker (1981) criteria for validity and reliability were met where the AVE should be >0.5; and the CR and Cronbach α should be >0.6.

Table 2: CFA – Factor loadings, Convergent validity and Composite reliability

Items/Factor	Factor loading	AVE	CR	Cronbach's α
Argument Quality (10 items)				
The information shared by my favourite beauty SMI				
is relevant	0.850	0.713	0.973	0.950
appropriate for me	0.867			
is applicable to me	0.854			
persuasive	0.685			
is current	0.813			
is shared at a useful time	0.824			
provides sufficient reasons to support their opinions	0.861			
includes all the necessary useful information required	0.918			
has sufficient detail	0.919			
has sufficient scope/range	0.831			
Source Credibility (11 items)				
When looking at my favourite beauty SMI page I find he/she is qualified	0.826	0.805	0.987	0.970
I find that my favourite beauty SMI is efficient	0.927			
When looking at my favourite beauty SMI page I find he/she is experienced	0.928			
The content shared by my favourite beauty SMI makes me think they are knowledgeable	0.940			
The content shared by my favourite beauty SMI makes me think they are competent	0.909			
The content shared by my favourite beauty SMI makes me think they are an expert	0.767			
I believe my favourite beauty SMI	0.866			
My favourite beauty SMI cares about his/her followers	0.937			
believe my favourite beauty and personal care social media influencer	0.866			
My favourite beauty SMI cares about his/her followers	0.937			
My favourite beauty SMI gives me a sense of trust	0.927			
My favourite beauty SMI is honest	0.916			
My favourite beauty SMI is sincere	0.907			
Information Usefulness (5 items)				
I think that my favourite beauty SMI is useful	0.922	0.878	0.973	0.973
I think that my favourite beauty SMI is informative	0.931			

Items/Factor	Factor loading	AVE	CR	Cronbach's α
The information shared by my favourite beauty SMI is valuable	0.928			
The information shared by my favourite beauty SMI is informative	0.953			
The information shared by my favourite beauty SMI is helpful	0.950			
Information Adoption (5 items)				
My favourite beauty SMI makes it easier for me to make beauty purchase decisions	0.876	0.779	0.946	0.945
My favourite beauty SMI enhances my effectiveness in making beauty purchase decisions	0.914			
My favourite beauty SMI motivates me to make beauty purchase decisions	0.923			
I closely follow the suggestions made by my favourite beauty SMI	0.836			
I agree with the opinions suggested by my favourite beauty SMI	0.860			

Authors' own compilation

Building on the confirmed factor structure (Table 1), Table 2 presents the correlation matrix used to assess discriminant validity. Discriminant validity is ensured when the square root of AVE for each construct (bolded values on the diagonal) is greater than the correlation values between constructs (Ab Hamid, Sami & Sidek, 2017). As shown in Table 2, discriminant validity is supported in this study.

Table 2: Correlations and discriminant validity

	Argument quality	Source credibility	Information usefulness	Information adoption
Argument quality	0.844			
Source credibility	0.711	0.897		
Information usefulness	0.657	0.789	0.885	
Information adoption	0.566	0.657	0.841	0.894

Authors' own compilation

The CFA achieved an acceptable fit to the data, meeting the criteria outlined by Malhotra (2020) (CMIN: 2.045; RMSEA: 0.066; GFI: 0.742; AGFI: 0.707; CFI: 0.929, and TLI: 0.923). This indicated a good measurement model, allowing for the subsequent SEM analysis to explore the hypothesized relationships (Wiid & Diggins, 2021).

Structural Equation Model (SEM)

Building on the confirmed measurement model, a structural equation model (SIM) was employed to examine the relationships as per the conceptual model in Figure 1. Table 3 summarizes the the goodness-of-fit indices for the SEM, all meeting acceptable criteria. Table 4 then presents the specific path coefficients used for hypothesis testing.

Table 3: Structural model fit indices

Measure	Acceptable fit	Study value results
Absolute fit indices		
CMIN	CMIN ≤ 3 – considered a good fit	2.317
RMSEA	RMSEA < 0.08 – considered a conservative model fit	0.074
GFI	AGFI ≥ 0.90 – considered an acceptable model fit	0.796
AGFI	AGFI ≥ 0.90 – considered an acceptable model fit	0.754
Incremental fit indices		
CFI	CFI > 0.90 – considered a good model fit	0.941
TLI	≥ 0.90 – considered a good model fit	0.934

Source: Hair et al. (2010); Malhotra (2020)

Table 4: Path coefficient

Path	Standardised	Un-standardised	S.E.	C.R.	<i>p</i>
Perceived usefulness ← Argument Quality	0.627	0.684	0.080	7.835	<0.001
	0.801	0.814	0.088	9.064	<0.001
Information adoption ← Perceived usefulness	0.745	0.772	0.086	8.635	<0.001

Note: S.E. = standardised items, C.R. = critical ratio

The SEM analysis (Table 4), indicated significant results ($p < 0.001$) for all paths, supporting all three hypotheses. Both argument quality and source credibility positively influence information usefulness, with source credibility being a stronger predictor. Consumers are more likely to adopt information perceived as useful. These findings support the IAM proposed by Sussman and Siegal (2003).

DISCUSSION AND RECOMMENDATIONS

The study's demographic and social media findings align with South African social media trends. Instagram is the dominant platform, with young female adults (between the ages of 20 and 35) being the primary users (Media Update, 2020; Roesler, 2022). This aligns with the high viewership of skincare and cosmetics by SMIs reported by respondents, reflecting South African's focus on skincare routines and product ingredients (Hartzenberg, 2019). Therefore, beauty brands are advised to target young adult females on Instagram using video tutorials and short product usage posts (Davis, 2020).

The SEM analysis (Table 4) confirms all hypothesized relationships. Both argument quality and source credibility positively influence information usefulness, with source credibility being the strongest predictor ($B = 0.801$; $p < 0.001$). Information usefulness is also a strong predictor of information adoption ($B = 0.745$; $p < 0.001$). These findings support the IAM by Sussman and Siegal (2003), suggesting that customer prioritize source credibility (peripheral route) before considering argument quality (central route) when evaluating information usefulness (Sussman & Siegal, 2003; Erkan & Evans, 2016). Based on the findings of the study, it is recommended that beauty brands:

- partner with SMIs that resonate with the target market's demographics and interests, ideally those with shared life experiences. Makeup artists with large followings can be particularly credible due to their perceived expertise (Al-Qatami, 2019). Ensure SMIs reflect brand values and transparency through before-and-after results and product/brand knowledge. Online engagement (answering consumer questions during the tutorial through live streams) can further build credibility.
- develop content that is brief, relevant, and addresses consumers needs (Aghakhani, Salehan & Zhang, 2017). Consumers may value information like natural ingredients, but not necessarily in-depth details about the supply chain (Alabi, 2019). Engage (conduct research) with consumers online to understand their context preferences and create high-quality content accordingly (Cyca, 2018).
- To increase information adoption, beauty brands should research consumer needs and ensure SMIs post content that addressed those needs.

By combining these recommendations, beauty brands can increase the adoption of information about their products by consumers through the use of SMIs.

LIMITATIONS AND FUTURE RESEARCH

This study is limited by the use of non-probability snowball sampling, which may introduce bias towards a specific respondent demographic such as those in the researchers' network (Malhotra, 2020). Additionally, the research focused solely on the IAM, neglecting other social and market factors that could influence information adoption. Furthermore, the study only examined information adoption and did not explore its impact on actual product purchase. Future research should incorporate additional elements relevant to emerging markets, such as word-of-mouth

marketing and data access. Expanding the study to investigate consumer purchase intentions based on information adopted from beauty SMIs would be valuable. It is suggested that the study be replicated in other emerging markets to compare the results.

SIGNIFICANCE OF THE STUDY AND CONCLUSION

This study contributes to the understanding of SMIs and information adoption within emerging markets. Emerging markets are characterized by high social media use and reliance on word-of-mouth for information sharing (Fraser, 2024). While most research on SMIs and the IAM focuses on Western cultures (Erkan & Evans, 2018 & Gashi, 2017), this study addresses the gap in emerging markets with distinct cultural and belief systems (MarketLine, 2019). Many existing studies utilize the TAM in emerging markets, but this model is less relevant as technology adoption is already established. The IAM employed in this study overcomes these limitations, by considering the IAM in an emerging markets context (Tseng & Wang, 2016; Liao et al., 2022). Beyond its academic contribution, this research offers practical implications for beauty brands, informing them about how consumers engage with SMIs and adopt brand-related information. The findings reveal that both argument quality and source credibility influence how consumers perceive the usefulness of information, ultimately impacting information adoption. To enhance this perceived usefulness, beauty brands should prioritize collaborating with credible and relatable SMIs through a careful selection process that consider factors like demographics, values, and social media presence. By implementing the recommendations suggested in this paper, beauty brands can leverage the power of SMIs to drive information adoption and achieve success within the competitive landscape of emerging markets.

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DEVELOPMENT OF CLOTHING DECISION-MAKING STYLES FROM PEER COMMUNICATION DURING ADOLESCENCE: A LIFE-COURSE STUDY

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ABSTRACT

There are eight consumer decision-making styles (CDMS) revealing differences in consumer shopping motivations and ultimate buying behaviours. CDMS varies with individuals, products/brands, and with changing situations. However, since the eight CDMS were identified about three decades ago, studies have focused on identifying demographic and cultural differences in CDMS. A few studies have examined CDMS drivers, but rarely from a life-course perspective. This study used a cross-sectional survey to quantitatively collect data from 306 young adult South-Africans, a lucrative clothing market segment for two objectives: 1) identify the developed CDMS related to clothing. 2) Considering that peers contribute to adolescences' developmental outcomes, the study also uses the socialization life-course theory to examine the extent to which peer communication about shopping for clothing during adolescence influences CDMS at young-adulthood. Non-probability purposive sampling method to get young adults was used. For objective 1, factor analyses results revealed six CDMS dimensions among young adult South Africans. For objective 2, structural equation modelling results showed that peer communication during adolescence influenced confused by over-choice, novelty-fashion conscious, perfectionist, price conscious, and quality conscious CDMS dimensions at young adulthood. The theoretical and practical implications are provided.

Keywords: decision-making styles, young adults, peer communication, socialization life-course theory, shopping.

INTRODUCTION

As the growth rate of domestic markets in advanced economies stagnate or slow down, Sun et al. (2024) contend that future marketing opportunities would come from emerging markets, such as South Africa. Opportunities would also come from millennials or young adults, who according to Viljeon (2018), would soon dominate the world's workforce, own and control disposable incomes. Information on the decision-making styles and its drivers among young adults, especially in South Africa is however limited. Consumers approach shopping for various categories of goods and services with varied decision-making styles, which drive their market behaviours and which marketers can use to segment and target them (Nayeem & Casidy, 2015; Helmi et al., 2023). Consumer decision-making styles (CDMS) or shopping orientations as Siu et al. (2001) term it, is defined by Sproles (1985, p. 80) as "a patterned, mental cognitive orientation towards shopping and purchasing, which consistently dominates the consumer's choices resulting in a relatively-enduring consumer personality."

For more than three decades now, Sproles and Kendall's (1986) consumer style inventory (CSI) have been used to identify CDMS. The CSI produced eight CDMS dimensions, namely perfectionist/high-quality conscious, impulsive/careless, recreational/hedonic, habitual/brand loyal, brand conscious, confused by overchoice, novelty/fashion conscious and price conscious, dimensions. These CDMS are motivators behind shopping choices for various product categories, such as clothing (Wang, Siu & Hui, 2004), food (Anić, Rajh & Rajh, 2014), travel (Choudhary & Gangotia, 2017) and everyday products (Nayeem & Casidy, 2015). They vary between countries and level of development (Mehta & Dixit, 2016). The CDMS also reveal differences between consumer groups in different situations. They consist of a personal dimension (e.g., activities, interests, opinions, motives, needs and preferences), a market behavior dimension or general approach to acquiring goods and services (Visser & Du Preez, 2001).

CDMS predict market behaviours, including preferences for information sources, brand preferences, store preferences and even the intention to participate in online group buying (Klein & Sharma, 2018). However, studies on the drivers of CDMS are limited. More so, the study of consumer behaviour, without considering the effects of early-life experiences is according Moschis (2017), a shortcoming in consumer research. Moschis (2017) therefore recommends the use of life-course theories to study consumer behaviour. This study therefore utilized the socialization life-course theory to understand the CDMS related to shopping for clothing of young adults in South Africa. This is in consideration of the fact that CDMS vary in terms of product categories, consumer groups and countries (Mehta & Dixit, 2016).

While Gutter and Copur (2011) view young adults to be the consumer segment between 18-25 years old, Viljeon (2018) consider the young adults in South Africa to be 18-35 years old. Irrespective of their age range and in terms of the fashion and clothing industry, young adults are a large and lucrative market segment with regards to size and spending power (Gentina, Shrum & Lowrey, 2016). In South Africa, they commonly desire and buy clothing (Seopa, 2008). Seopa (2008) reports that a clothing voucher for a young adult South African is at the top of their annual birthday wish list. Mehta and Dixit (2016) advise that consumers, who score high on a clothing decision-making style are likely to have some needs associated to the style, which marketers can use to profitably target and serve them.

PROBLEM STATEMENT AND OBJECTIVES

Sproles and Kendall's (1986) forty-items CSI developed about 3 decades ago, has remained the most widely used instrument to study consumers' decision-making style or the orientation towards shopping (Mehta & Dixit, 2016). Considering however that the scale was tested with a US sample, its generalizability to other countries and to the current technological savvy young adult consumers has been questioned (Lysonski et al., 1996; Mehta & Dixit, 2016; Ma & Hahn, 2023). Testing the instrument in two developed and two developing countries, Lysonski et al. (1996) found the interpretation of the factors in the developing countries difficult compared to validating the factors in the developed countries. As rapid developments and globalization take place in emerging markets, which were previously less developed, the re-testing of the Sproles and Kendall's CDMS instrument was recommended (Mehta & Dixit, 2016). South Africa is an emerging market with a huge market potential, especially from its large number of young adults and middle class consumers (African Economic Outlook, 2014). Of the 53% percent of income earners in Africa, who are between the ages of 18 and 34, most are young adults and live in South Africa and Nigeria.

These African young adults are willing to try various products and brands and it is estimated that they will contribute to more than \$400 billion in total consumption growth in the next decade (African Economic Outlook, 2014). Despite their market attractiveness, information on young adults' decision-making styles in Africa, including South Africa is limited. In addition to this, studies on CDMS generally and over three decades have focused on examining cross-cultural and demographic differences, with a few studies examining its drivers. For example, Isaacson, Jordaan and van Herden (2017) examined the effects of two cultural values and consumer involvement on two dimensions of CDMS and Kamaruddin and Mokhlis (2003) studied the extent to which consumer socialization and social structural factors affect adolescents' decision-making styles.

While the few attempts to understand drivers of CDMS provide valuable insights, Moschis (2017) contends that people's current consumer behaviours often emanate from the socio-psychological events they have experienced when growing up or at adolescence. Based on this notion, the use of life-course theories is suggested for the study of current consumer behaviour, especially as they provide multi-theoretical and multi-disciplinary approaches to study how early-life experiences affect later-life consumer behaviour (Moschis, 2017). The objectives of this study are to therefore 1) investigate whether Sproles and Kendall's eight dimensions of CDMS would be found among young adults in South Africa when adapted to shopping for clothing, 2) use socialization life-course theory to examine the extent to which peer communication about shopping for clothing during adolescence influence young adult South Africans' CDMS.

The socialization life-course theory is selected, because among the socialization agents, such as peers, family and work colleagues, Gentina et al. (2016) contend that the influence of peer communication is a common and strong force behind the formation of young adults' product attitudes and behaviour. More so, the search for identity and the

need to belong during adolescence may make the youth particularly vulnerable to peer influence regardless of culture (Gentina et al., 2016; Robert, Manolis & Tanner, 2006).

LITERATURE REVIEW

Categorizing consumers into different CDMS is of growing importance to marketing and consumer behaviour specialists. While consumer behaviour specialists use CDMS profiles to understand consumers' needs, preferences and shopping behaviour, practitioners use them to segment consumers into various niches for product positioning or into viable and profitable clusters (Lysonski & Durvasula, 2013). Kamaruddin and Mokhlis (2003) conceptually grouped Sproles and Kendall's (1986) eight factors into (a) desirable (perfectionist, price and quality conscious dimensions); (b) undesirable (impulsive and confused by over-choice); and (c) social and hedonistic (novelty/fashion-conscious, brand conscious, recreational and habitual/brand-loyal) dimensions. The undesirable dimensions would be of concern to consumer interest groups, who may want to find ways to address or curb them. To understand, sustainably take advantage of and address any issue about CDMS, it would be important to find the drivers.

Explaining CDMS with Socialization Life-course Theory and Hypotheses Development

Moschis (2007:295) defines the life-course theory as "a multi-theoretical framework that integrates several approaches used in different disciplines (e.g., sociology, history, family and consumer psychology and economics) to study consumer behaviour over the course of people's lives". Life-course theorists view adult and young adult behaviours as a function of experiences at earlier stages of life. Considering that peer socialization is influential in young adulthood life-stage (Gentina et al., 2015), this section discusses the extent to which early-life peer socialization experiences can affect later-life consumer behaviour generally and CDMS particularly.

Socialization life-course theory postulates that as people transit from one role (e.g., student, worker, spouse and parent) to another over the course of their lives, they need to be socialised with skills, which can be acquired from family, peers, the media and work mates (Benmoyal-Bouzaglo & Moschis, 2010). Children for example learn the uses and values of money, get consumption values and learn to act as responsible or irresponsible consumers from their parents or family members (Schiffman & Kanuk, 2004). Ward (1974:2) views these roles as consumer socialization and defines this as "processes by which young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace". Children get socialized with consumption-relevant skills (budgeting, pricing), knowledge (of brand attributes and shopping outlets), and attitudes (toward products, brands, and sales people) that are necessary for direct and indirect (purchase through motivators) enactment of the consumer role.

Even though parents try to teach their children desirable consumption-related skills, Moschis (1987) suggest that as children mature into adolescents they strive for independence from their parents. They then gravitate towards peers and spend more time interacting with peers. Peers become sources of products and market information and consumption role models for emulation (Benmoyal-Bouzaglo & Moschis, 2010). The degree of consumer susceptibility to peer influence; however, depends on the frequency of communication with peers regarding shopping and consumption matters. For example, Benmoyal-Bouzaglo and Moschis (2010) and Duh et al. (2015) found that peer communication about shopping and consumption during adolescence affected materialistic values at young adulthood.

While Benmoyal-Bouzaglo and Moschis (2010) opine that peers influence the undesirable, social and symbolic aspects of consumption, Kamaruddin and Mokhlis (2003) suggest that for decision-making styles, peers influence the desirable, undesirable and social/hedonistic CDMS. Thus, the following hypotheses are formulated:

H1: Young adult South Africans will display more undesirable and social/hedonistic CDMS dimensions than the desirable ones.

H2 Peer communication about shopping for clothing during adolescence will positively influence (a) the desirable (perfectionistic, price and quality conscious), (b) the undesirable (confused by over-choice and impulsive) and (c) the social/hedonistic (novelty/fashion, brand conscious, brand loyal, recreational) CDMS dimensions

METHODS

Sample

The sample was drawn from South African young adults enrolled in undergraduate business courses at a large university in Johannesburg using a non-probability sampling method targeting young adults who were appropriate sample for this study. Using a self-administered questionnaire, the respondents anonymously participated by not providing their names or any personal identification information on the questionnaire. The sample size was 350 students; to whom questionnaires were distributed. Completed questionnaires were received from 306 respondents, giving an 87.4% response rate.

Measures

The scales measuring the constructs for this study were adapted from previous studies' scales that were found to be reliable among young adults across countries. The internal consistency of the scales was however tested with the South African sample. Peer communication during adolescence was measured with Benmoyal-Bouzaglo and Moschis' (2010) scale. The scale was however adapted to relate to shopping for clothing. It was an eight items scale that measured the frequency with which young adults ask or are concerned about how their friends feel about the clothes they buy or are shopping for, during adolescence or between 12 and 18 years old. A five-point Likert scale was used, whereby 1 was never and 5 was very often. The experience when respondents were adolescence was considered, because life-course researchers contend that events experienced during adolescence (13 – 18 years old) have more impact on later-life behaviours (Chase-Lansdale, Cherlin & Kiernan, 1995).

Consumer decision-making styles were measured with Sproles and Kendall's (1986) forty-items scale, but adapted to relate to decision-making when shopping for clothing. For example, an item in Sproles and Kendall's (1986) scale stated that, "getting very good quality is very important to me". This statement was adapted to "getting very good quality clothes is very important to me". To ensure that respondents independently rated the statements that describe their shopping and to minimize items order bias (Mehta & Dixit, 2016), the 40 items were re-ordered and each randomly selected using Hawkins and Tull's (1993) random numbers.

Data Analyses

Descriptive statistics were first conducted to understand the characteristics of the constructs and the profile of the respondents. Exploratory factor analyses were then conducted to initially check how many factors will emerge from the constructs' scales and to detect common method variance (CMV) using Harman one-factor test recommended by Podsakoff et al. (2003). On calculating CMV with this method, principal component analysis with verimax rotation was conducted with all the study's items. Considering that no single factor emerged was indicative of the fact that CMV was absent (Podsakoff et al., 2003). Confirmatory factor analyses were conducted to confirm predetermined construct factors, check the outer loadings, since SmartPLS was used to analyze the data and to assess the convergent validity using the strength of item loadings (Henseler et al., 2015). The relationships between the constructs were tested using partial-least squares (PLS) structural equation model (SEM).

RESULTS AND DISCUSSIONS

Descriptive Statistics, CDMS Factor Structure, Reliability and Validity

Out of the 306 responses received, 58.2% were women. Most of the respondents (86.9%) were between the ages of 18-25 and the rest were between the ages of 26-35.

Decision-making styles of South African young adults (H1)

Sproles and Kendall's (1986) 40 items were analyzed using exploratory factor analysis (EFA). EFA is an unconstrained method (that is, without specifying the number of factors to be extracted) to identify underlying factors or dimensions that reflect what the variables share in common (Hair et al., 2014). To determine what number of factors to extract, Hair et al. (2014) recommend the observation of the Eigen values greater than 1, the percentage of variance explained and scree plots.

The results revealed that 11 factors had Eigen values greater than 1 with 47% variance explained. In addition to this low variance explained, there were cross-loadings of items to wrong factors and problems of interpreting some the factors. Thus, the 11 factors solution was not viable. Even when the analyses were constrained to Sproles and Kendall's (1986) recommended 8 factors, the factor loadings for two of the factors were not interpretable. A scree-plot test was therefore used to identify the optimum number of factors that could be extracted. The scree plot displayed a sharp bend at about the sixth Eigen values, indicating that roughly a six-factor model was adequate. A six-factors constrained confirmatory factor analysis (CFA) was then conducted. A good six-factors solution was obtained after deleting a few cross-loading items and those lower than the recommended 0.4. The six-factors solution is presented in Table 1. Also provided in Table 1 is CFA results for peer communication about shopping for clothing during adolescence.

Table 1: Decision-making styles, constructs' factor loadings, reliability and validity results

Factors	Items	CFA Factor Loading	CR	AVE
Consumer Decision Making Styles	Confused by over-choice		0.71	0.45
	There are so many brands to choose from that I often feel confused	0.44		
	The more I learn about clothes to buy, the harder it seems to choose the best			
	All the information I get on different types of clothes confuses me	0.87		
	Novelty/fashion conscious	0.64		
	I usually have one or more outfits of the very newest style of clothing		0.77	0.54
	I change clothing brands I buy regularly.	0.80		
	I keep my clothing wardrobe up-to-date with the changing fashions	0.60		
	Perfectionists	0.78		
	I really don't give my purchases of clothes much thought or care.		0.82	0.60
	I make special effort to choose the very best quality of clothes.	-0.72		
	When it comes to purchasing clothes, I try to get the very best or perfect choice.	0.80		
	Price conscious	0.81		
	To get variety, I shop at different stores and choose different brands of clothes		0.77	0.46
	I buy clothes as much as possible at sale prices	0.71		
	I look carefully to find the best value for the money when shopping for clothes			
	I take the time to shop carefully for best price of clothes	0.72		
Quality Conscious	0.61			
In general, I usually try to buy the best overall quality of clothing				
My standards and expectations for clothes I buy are very high	0.67			
Getting very good quality clothes is very important to me		0.78	0.54	
Time Conscious	0.65			
I make my clothing shopping trips fast	0.75			
Shopping the stores for clothes wastes my time	0.79			
Shopping for clothes is not a pleasant activity to me		0.81	0.51	
I shop quickly, buying the first clothes or brand I find that seems good enough	0.79			
	0.64			
	0.72			
	0.70			
Peer communication	You asked your friends for advice about buying clothes	0.71	0.85	0.45
	You and your friends talk about buying clothes	0.72		
	You and your friends talk about clothes you saw or heard advertised	0.68		

	You wonder what your friends would think when you were buying clothes for yourself	0.65		
	Your friends ask you for advice about buying clothes	0.62		
	Your friends tell you what clothes you should or shouldn't buy	0.66		
	You go shopping for clothes with your friends	0.65		

Notes: CR = composite reliability; CFA = confirmatory factor analysis; AVE = average variance extracted

Following Kamaruddin and Mokhlis' (2003) grouping of Sproles and Kendall's (1986) eight factors, Table 1 reveals that the South African young adults displayed more, and up to four desirable decision-making styles, when shopping for clothing. The desirable dimensions found are perfectionist, price, quality consciousness and an additional time conscious dimension, which was not one of Sproles and Kendall's (1986) eight factors. Also finding the time conscious dimension among Indian university young adults, Mehta and Dixit (2016) define this dimension as that which is "characterized by the desire to save on time by settling down with the first product or brand that seems acceptable". Hafstrom, Chae and Chung (1992) and Fan and Xaio (1998) also found the time conscious dimension in South Korea and China respectively. This may suggest a common trait in emerging markets, whereby university students do not have much time to spare browsing for many options before buying clothes.

The fact that the South African young adults displayed more utilitarian clothing shopping styles is not uncommon. Martin and Turley (2004) also surveyed UK young adults' (19-25 years old) and found that they were more likely to be objectively, rather than socially motivated to shop. Even in a qualitative study, Noble, Haytko and Phillips (2009) found that majority of young adults reported being conservative in their spending and seek value-for-money. Value-for-money pushes young adults to search the Internet and other retail outlets for the lowest price. When they find it, they feel a sense of accomplishment (Noble et al., 2009). Ma and Hahn (2023) also found that Young adult South Koreans are cautious and value-for-money consumers.

Table 1 also revealed that one undesirable (i.e., confused by over-choice) and one social/hedonistic (novelty/fashion-conscious) CDMS dimension were found among South African young adults. Surprisingly and contrary to Mehta and Dixit (2016), who found that young adults in India and Germany were brand conscious and brand loyal, these two traits were not found in South Africa. While Neuborne and Kerwin (1999) and Lazarevic (2012) also find young adults as fickle and disloyal consumer segments, it is questionable why young adults in South Africa are not brand conscious as expected.

Constructs' Reliability, Validity and Mean Values

Constructs' reliability was assessed using composite reliability (CR), especially as Hair et al. (2014) see CR to be testing reliability more accurately than Cronbach alpha. The CR values are in Table 1 and it shows that the constructs' scales all demonstrated good reliabilities with CRs ranging from 0.71 to 0.86 and greater than the recommended 0.7 (Hair et al., 2014). Constructs' validities were assessed with average variance extracted (AVE) (measuring convergent validity) and Fornell and Larcker's (1981) approach to assess discriminant validity (Table 2) using a correlation matrix.

Table 2: Discriminant validity

	Confused by Over-choice	Novelty/Fashion	Peer Comm	Perfectionists	Price Conscious	Quality Conscious	Time conscious	Mean	SD
Confused by Over-choice	0,673							2.82	0.96
Novelty/Fashion Conscious	0,153	0,732						3.24	0.73
Peer Communication	0,175	0,206	0,671					3.20	0.94
Perfectionists	0,049	0,313	0,161	0,774				3.50	0.90

Price Conscious	0,191	0,270	0,290	0,439	0,680			3.62	0.97
Quality Conscious	0,106	0,401	0,207	0,473	0,222	0,732		3.76	0.95
Time Conscious	0,174	-0,059	-0,054	-0,110	-0,212	-0,069	0,714	2.60	1.10

The AVE results in Table 2 show that some of the AVE values were below the recommended 0.5. Fornell and Larcker (1981), however, state that when some AVE values are lower than 0.4 and CR values are all higher than 0.6, the convergent validity is adequate to claim validity of the constructs. In terms of discriminant validity and as presented in Table 2, the scales were valid with values all lower than the recommended 0.85 (Henseler, Ringle & Sarstedt, 2015).

The means assessed the degree to which the respondents agreed to the statements measuring the constructs. Considering that the constructs were measured on a five-point Likert scale, the mean figures in Table 2 show that respondents did not disagree with any of the statements measuring the constructs. They fairly agreed to most of the statements. The young adults scored higher in the price (M=3.62) and quality consciousness (M=3.76) CDMS. These are desirable dimensions.

Model Fit

Considering that SmartPLS was used to analyse the data, Henseler et al.'s (2015) formula, ($\sqrt{[(\text{average of all AVE values}) \times R^2]}$) was used to calculate the goodness-of-fit (GOF). The GOF was $[\sqrt{(0.499) \times 0.452}] = 0.31$. GOF is attained when the value obtained is greater than or equal to 0.3 (Henseler et al., 2015). Thus, with the value obtained for this study being >0.3 , GOF of the model to the data was obtained. 0.452 was the sum of R^2 or 45.2%. This figure reveals that peer communication about shopping for clothing during adolescence explained 45.2% of all the six dimensions of CDMS.

Path Modelling and Hypotheses Testing

The results from testing the hypotheses are found in Table 3.

Table 3: Hypotheses testing results

	Path coefficient	T-values	P-values
Peer Communication -> Confused by Over-choice	0,188	2,294	0,022*
Peer Communication -> Novelty/Fashion Conscious	0,211	2,872	0,004**
Peer Communication -> Perfectionists	0,148	2,017	0,044*
Peer Communication -> Price Conscious	0,280	4,194	0,000**
Peer Communication -> Quality Conscious	0,194	2,377	0,018**
Peer Communication -> Time conscious	-0,030	0,351	0,725

* $p < 0.05$; ** $p < 0.01$

Hypotheses 2 posited that peer communication about shopping for clothing during adolescence will positively influence the a) desirable (perfectionistic, price and quality conscious), b) undesirable (confused by over-choice and impulsive), and c) social/hedonistic (novelty/fashion, brand conscious, brand loyal, recreational) CDMS. The results in Table 3 show that with the exception of time consciousness, peer communication positively and significantly influenced perfectionists ($\beta = 0.148$; $p < 0.05$); price conscious ($\beta = 0.280$; $p < 0.001$); quality conscious ($\beta = 0.194$; $p < 0.01$); confused by over-choice ($\beta = 0.188$; $p < 0.05$); novelty/fashion conscious ($\beta = 0.148$; $p < 0.001$) CDMS dimensions.

The results show that peer communication about shopping for clothing during adolescence had a negative influence on time consciousness, even though this relationship was not significant. The study supports other life-course studies, which have shown the strong influence of peer communication during adolescence on consumption

orientations in various cultures. For example, peer influence on materialism has been proven in France and South Africa (Duh et al., 2015), Greece (Grougiou, Moschis, & Kapoutsis, 2015) and Australia (Weaver, Moschis & Davis, 2011). In addition to Kamaruddin and Mokhlis' (2003) findings showing that peers exert influence even on CDMS, the current study contributes by revealing that the impact of peer communication on CDMS is also strong, even when the influence took place during adolescence. The impact of peer communication during adolescence on all the dimensions of CDMS (with the exception of time consciousness) confirms Kamaruddin and Mokhlis's (2003) suggestion that peers can influence all the categories of CDMS (that is, desirable, undesirable and social/hedonistic CDMS. The findings about peer influence also support Moschis' (1987) claim that during adolescence, consumers gather information and emulate buying behaviour of their peers. The attitudes and values they learn may continue to adulthood (Benmoyal-Bouzaglo & Moschis, 2010), depending on how much other forces of socialization (family, media, church members) dominate.

IMPLICATIONS AND RECOMMENDATIONS

This study employed socialization life-course theory to examine the extent to which peer communication about shopping for clothing during adolescence influences young adult South Africans' CDMS. Six CDMS dimensions were identified, which were grouped into desirable (perfectionistic, price, quality, time conscious), undesirable (confused by over-choice) and social/hedonic (novelty/fashion conscious).

The most remarkable finding was that the South African young adults displayed more desirable or utilitarian decision-making styles when shopping for clothing. Contrary to popular views that young adults are impulsive and brand conscious, this study shows, and in support of Martin and Turley (2004) and Nobel et al. (2009), that young adults in South Africa too are more objective, rather than socially motivated to shop. This was further supported by the strong influence that peer communication during adolescence had on price and quality consciousness. For peers to have this influence, it means that they themselves and even during adolescence have a value-for-money orientation. Consumer Interest Authorities would welcome this finding, because this orientation would prevent these African young adults from getting into debt as Gutter and Copur (2011) feared of the US young adults.

The display of utilitarian CDMS in this study would also have implications for retailers and other companies that would have to provide value-for-money clothing to capture and retain this lucrative, but disloyal young adult consumer segment. Kimberly (2010, p. 29) also found that US young adults "research their purchase decisions, and are more interested in saving money," because they have so much access to the Internet and other sources of information on products and various price offerings. They have also experienced economic depression and limited job opportunities during their formative years that should be turning them into value-oriented consumers.

While young adults surf the internet to compare prices to get best deals (Kimberly, 2010; Nobel et al., 2009), Roberts, Yaya and Manolis (2014) report that they spend about 10 hours a day on social media. With this rate of access to social media, it is recommended that businesses in South Africa should participate in social media marketing to less costly target and market their offerings to this large consumer segment. They should position the quality and economic values of their offerings. Marketers should also look for innovative ways of cutting costs and remaining efficient to sustainably provide value-for-money. Theoretically this study contributes by empirically testing the applicability of a life-course paradigm in Africa and demonstrating how other researchers can employ any or all of its multi-theoretical and multi-disciplinary viewpoints to understand various shopping and consumer behaviours in other emerging economies. Another theoretical contribution is testing the CDMS with young adult consumers or Generation Y which Ma and Hahn (2023, p. 22) worry that "little is known about their differing CDMS of contemporary global young adult consumers in various societies". Studying the contemporary young adult consumers is particularly important because they are different compared to previous generations in shopping motivations, preferences, brand loyalty levels, shopping sites driven by technology advancements and cultural shifts (Charm et al., 2020; Ma & Hahn, 2023).

LIMITATIONS AND CONCLUSION

While this study provides valuable insights into the CDMS and its drivers among a large and lucrative market segment like young adults in South Africa, it has a few limitations. The first limitation is the use of only university young adults. Their educational level and income earning capacity and potential is likely to give these young adults a higher

sense of self-worth and better financial literacy. The university young adults' level of financial literacy could be the reason for their value consciousness and conservative nature of decision-making styles. Future study should not only examine this possibility, but should also investigate whether non-university young adults, who may have lower self-esteem and financial literacy would display more undesirable and social/hedonistic CDMS dimensions.

The second limitation is the use of only socialization life-course theory. The life-course theory provides various theoretical perspectives (e.g., human capital, stress, family communication etc.) to understand different aspects of consumer behaviour. For young adults however, the socialization life-course was more applicable. Even though Gentina et al. (2016) contend that socialization is very influential when young adults are concerned, future studies should test other life-course perspectives. Adding other perspectives may explain greater percentage of CDMS variance.

In conclusion, since young adults love shopping and those at university have a greater possibility to gain employment, earn good incomes and become a profitable market for a variety of goods and services after graduation (Nobel et al., 2009; Gutter & Copur, 2011), the insights provided into their decision-making styles would give marketers the basis to segment, target and position their offerings. Since peer communication even during adolescence affects consumer decisions even into young adulthood, advertisers should not ignore the power of adolescents' opinion leaders. Consumer policy makers should start educating consumers about desirable decision-making when they are adolescents.

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CHALLENGES ENCOUNTERED BY BACHELOR OF PUBLIC ADMINISTRATION HONOURS STUDENTS UNDERTAKING RESEARCH FOR THE FIRST TIME: THE CASE OF A PRIVATE ACADEMIC INSTITUTION IN SOUTH AFRICA

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ABSTRACT

Post-graduate students often encounter numerous obstacles while doing their academic programmes which lead them to taking a longer than required time to complete their studies. The purpose of this study was to record the challenges experienced by bachelor of public administration (BPA) honours students in one private academic institution in South Africa, while undertaking research for the first time. Experiences of those conducting research for the first time can benefit first time researchers in effectively dealing with these challenges. The BPA honours students are required to complete a research project as a component of their research module. It is observed that some of the BPA honours students take longer than required to complete the research project. A qualitative approach utilising semi-structured interviews triangulated with data from document analysis were collected from a purposive sample of ten (10) students. Findings of this study revealed that the BPA students conducting research for the first time experienced problems which included inter alia, difficulties in formulating the research topic, identifying the problem statement, writing the research proposal, professional writing etc. Based on the findings of this research, this article provided the following recommendations: introduction of research at undergraduate level; encouraging academics to collaborate with students in presenting conference papers; introduction of writing skills program and capacity building programmes to be introduced for both academics and students.

Keywords: public administration honours, research module, proposal writing, qualitative approach, private academic institution.

INTRODUCTION AND BACKGROUND

In most South African higher education institutions, a research project is a prerequisite for the completion of a Bachelor of Public Administration (BPA) honours degree. According to DoE (2007) in order for South Africa to attain better productivity and competitiveness, its institutions of higher learning are required not only to supply the economy with appropriate scarce and critical skills, but also to contribute to research and development of new technology and with new organisational forms and innovation. Recent national policy shifts also mean that higher education institutions are now required to align and coordinate their strategies with the state's reprioritisation of socio-economic development goals that favour the poor and socially marginalised (Phakiti 2008, 24). Many countries, developed as well as developing, prioritise investing in their citizens. According to Sonn (2016) there is a shift in focus in institutions of higher learning from producing bachelor's degrees en masse, to an increase in the production of graduates with post-graduate qualifications. In recent times, more and more higher education institutions in South Africa focus on recruiting students doing post-graduate degrees and encourage them to complete their research component of their studies in the required time. The private academic institution chosen for this study is one of those institutions that require BPA honours students to complete a research report before they can graduate. The research module comprises: formulation of a topic; development of a research proposal which plans the execution of a research activity investigating the chosen topic; and research report on what was done, and results of the research. While

conducting research, the students express their knowledge, skills, views (Bashir, Saba & Hussain, 2023), attitude, power, initiative, confidence and perseverance along with their own research spirit in the research report. Thus, the research report can be regarded as the first systematic empirical step of research, introduced to the students.

The extant literature reveals that conducting research is quite challenging to the post-graduate students, especially those executing it for the first time (Bashir et al., 2013; Cekiso et al., 2019; Sonn, 2016). Despite the challenges experienced by honours students who are beginners in conducting research, there are limited studies which have been undertaken to investigate the nature and scope of challenges experienced by students conducting research for the first time. Most of the studies done on postgraduate research challenges focus on Masters and PhD graduates. As far as it can be ascertained, no study on the challenges faced by honours students has been conducted in the private academic institution where the current research is being undertaken. Therefore, the present study was triggered by the limited knowledge on the challenges experienced by students conducting research for the first time at the research site. This article is an attempt to close that gap. This research will shed some light on the obstacles that the students deal with in this regard in the selected private academic institution in South Africa. The findings of this study will contribute to literature review in the area of research obstacles that face first time researchers.

The policy of the academic institution being researched here stipulates that honours students must successfully complete their research projects before they can graduate. Various authors concur that the majority of students doing research for the first time take longer than required to complete their research projects (Bashir et al., 2023; Cekiso et al., 2019; Ekpoh 2016). Students register for the module for research report after completion of the module for the research methodology. Once registered, each student is allocated a research supervisor by the institution, that the student will work with until completion of the research project. The main responsibility of the research supervisor is to guide the student throughout the research process starting at the selection of the research topic, development of the research proposal, data collection, data analysis, until the research report writing is successfully completed. The students must first complete a research proposal which must be approved by the academic institution before undertaking the actual research. Both the student and the supervisor sign a contract prepared by the academic institution, which stipulates obligations, roles and responsibilities of each party. Additionally, the contracts signed by both supervisors and students spell out the research-related ethics considerations. According to the academic institution's policy, supervisors are to hold a PhD qualification in the field of study of the students they are going to supervise, to qualify as supervisors. It is compulsory for supervisors to attend seminars on research supervision before they can start research supervision. Supervisors are allowed to supervise as many students as they want. At the time of conducting this research some supervisors were supervising eight (8) students. The institution holds research seminars and workshops to induct both students and supervisors. The next section outlines the research questions of this study.

RESEARCH QUESTIONS

This article explored the following research questions:

- What challenges have the BPA honours students at the private academic institution encountered while conducting research as part of their honours program?
- What are the best strategies that can be recommended to overcome the challenges identified by the study?

The BPA honours students' input on research challenges they experience would contribute to policy formulation and evaluation of current supervisory practices at the research site. The remainder of this paper is organised as follows: the next section reviews the literature related to the topic of this research. Section 3 presents the methodology adopted in carrying out this study. Section 4 discusses and interprets the results of the research. Section 6 provides the conclusion and recommendations that emerged from the research.

LITERATURE REVIEW

Numerous research studies on this topic have been undertaken globally (Bashir et al., 2023; Cekiso et al., 2019; Ekpoh, 2016; Sharp, 2013; Sonn, 2016; Wadisango & Machigambu, 2011). Sharp (2013) notes that there are potentially

various issues that students could comment on when reflecting on their research experience. Sharp further mentions these as diversity of research methods that are available, that put emphasis on various aspects of research (e.g. qualitative and quantitative and whether to utilise virtual environments or not). Sharp in his study on international students' experiences of research, point out that the dialogue between students and supervisors is very crucial for the development of skills and to plan and carry out research effectively. Brown (2007) as cited in Sharp laments the conflict of interest that often occurs between higher education institutions that are after higher income and do not furnish the essential resources to assist supervisors and students during research. Sharp identifies challenges facing postgraduate students as including development of suitable research questions; need to understand and manage research process well; lack of skills particularly at the start of the research process in stating the research problem and choosing a research design.

Ekpoh (2016) concurs with various other researchers (Bashir et al., 2023; Cekiso et al., 2019; Sharp, 2013; Sonn, 2016; Wadisango & Machigambu, 2011) on the view that a large number of postgraduate students do not complete their studies in the required time because of different challenges. In supporting this view, Ekpoh notes that graduates in Nigeria take longer than the minimum period to complete their studies due to the challenges they face when writing their theses. Some of the challenges identified by Ekpoh included students not being conversant with the research process; problems in choosing an appropriate topic and unfamiliarity with research methodology. Ekpoh, further points out that, occasionally, students' challenges are personal, family problems, financial pressure and employment related. These challenges are identified as taking a longer time to finish the research due to strike action; lack of research materials; difficulties with choosing research topic.

Mapolisa & Mafa (2012) categorised challenges that affect how students conduct their research projects into three groups: tutor-related, student-related and institution-related challenges. They identified tutor-related problems as: too little direction; too little practical help; too few interactions with students; showing no passion in students' topics; failure to respond to students' queries promptly; inadequate research experience and insufficient research skills. Mapolisa & Mafa indicated that lack of time, money, library resources, commitment and motivation to do research and family problems were difficulties experienced by students. Institution-related challenges included lack of internet facilities. Research related courses, library resources, computer literacy and workshops (Mapolisa & Mafa). Thondhlana, Mawere and Weda (2011) as quoted in Mapolisa & Mafa (2012) add another dimension of tutor-related challenges by indicating that the practice of imposing research topics on the students contend with students' success in research work.

In Sonn (2016:234) most of the respondents indicated that the suitability of the problem; sources where to find research topics or problems; the struggle to formulate the research problem; and posing the research problem as a statement, were challenges experienced by post-graduate students. He grouped students' challenges under three categories which are: lack of resources, student-supervisor relationship and delays in the external examination process.

According to Bashir et al., (2023) challenges that students encounter include, problems formulating the research topic; stating the problem statement, developing the research proposal and professional writing. Additionally, it was reported that supervisors were not easily available to the students. There was also lack of access to university E-library. On that note Bashir et al., (2023) are in agreement with Mapolisa & Mafa (2012) who pointed out that lack of library resources was one of the problems that students faced while doing research.

According to Cekiso et al., (2019) problems that limit postgraduate students from finishing their research are: inexperienced overburdened supervisors; poor planning and management; methodological problems; personal problems besides research; inadequate financial support for students; poor relationship between student and supervisor and all-inclusive ineffective infrastructural support for postgraduate studies. Cekiso et al., argue that effective supervision of research students is recognised as a vital factor in the post-graduate students' successful completion of their studies.

RESEARCH METHODOLOGY AND DESIGN

This qualitative research was undertaken by adopting the interpretivist paradigm to determine the research challenges encountered by the BPA graduates in a selected private academic institution in South Africa, while doing research for

the first time. The qualitative design was selected because it allows the gathering of data, which is directly related to subjective personal experiences and hence, by nature, it is exploratory in its application. The study was conducted from the beginning of January 2024 to the end of May 2024. Ten (10) graduates were chosen purposively for this research. The focus was mainly on those honours students who successfully completed their research projects. The data was gathered by means of a semi-structured interview guide composed of open-ended questions. Open-ended questions were used so that respondents are not restricted when discussing aspects of their experiences of research. The interview guide was developed after a careful review of literature. In-depth interviews were chosen for this study because of their potential to generate rich and detailed data regarding the individual's experience. The interview guide was administered by the researcher, personally. Interviews were tape-recorded with the consent of the respondents. The data from interviews were triangulated with data from document analysis which entailed reviewing previous honours research projects in the academic institution's library. Data analysis was conducted using thematic analysis.

The Study Sample

The researcher made use of the non-probability purposive sampling method to choose ten (10) postgraduate students to participate in the study. Before data gathering, a pilot study was undertaken using face-to-face semi-structured interviews with two post-graduate students of the institution under the study.

Data Analysis

In this study, the analysis of data from the interviews was conducted using thematic analysis. All interviews conducted were audio recorded, transcribed and data then manually analysed and subsequently key themes analysed. The researcher analysed the data by reading each transcript carefully several times and reflecting on the points raised by participants. The researcher selected to manually analyse the data instead of using qualitative computer software programme, like NVivo, in keeping with Carson et al.'s (2001) contention that manual analysis culminates in a deeper appreciation of many interpretations that may be derived from qualitative data.

Ethical considerations

Appropriate ethical considerations were observed in conducting this research. These include seeking permission from various gatekeepers to undertake the research, protecting and respecting participants' rights by obtaining informed consent, informing participants that participation in the research was not compulsory, avoidance of harm or hurting participants during the study among other ethical acceptance practices. The pseudonyms were used to protect the identities of participants. Sotuku and Duku (2015) state that pseudonyms refer to participants in research but they are not supposed to resemble the nicknames of the participants.

FINDINGS AND DISCUSSION

This section presents the findings, discussion, and interpretation of data collected during this study and includes findings from a thematic analysis of the ten (10) interviews conducted. The qualitative data was gathered telephonically. In this section, the biographical characteristics of the participants are presented first, followed by the findings based on the two research objectives as well as the interview questions in the interview guide.

Demographic Characteristics of the Participants

In-depth telephonic interviews were conducted with ten (10) BPA honours graduates who completed their honours degree with a research component. The findings indicate that the majority of participants were females as represented by 80% (n= 8), and 20% (n= 2) were males. Regarding the age of participants, the age groups 41 years to 50 years, was the majority representing 50% (n=5) of the sample. The 31 to 40 years, age group represented 30% (n=3), while the 21 years to 30 years, age group was the lowest 20% (n=2). All participants were employed at the time of data collection. The majority of the respondents 60% (n=6) were married while 40% (4) were single.

Challenges Encountered by BPA Students

The study sought to find from the participants what challenges did they encounter while undertaking research as part of their academic programme at the selected academic institution in South Africa. From the data gathered in this study it became evident that BPA honours students encountered various challenges while carrying out research, which are elaborated on below.

Research methodology component

All the participants that were interviewed by the researcher indicated that they first completed a research methodology module before registering for the research project module. When asked if they faced challenges with the research methodology module all participants responded to the affirmative.

Respondent 1 commented:

“It took me time to understand the different styles of research. That being quantitative and qualitative, I often mixed the two up and my supervisor would always correct me that I was defining the methods incorrectly”

Respondent 2 stated:

“Quantitative methods are very difficult especially when it comes to the analysis of the data. Sometimes I misunderstood when to use qualitative or quantitative methods”

Respondent 3 pointed out:

“Initially, I encountered significant difficulties in comprehending the lecture notes and I was unable to grasp the concepts presented by our instructor. I found it challenging to comprehend the exact expectations placed upon me. Furthermore, the vocabulary used, particularly the phrase “literature review,” was unfamiliar. Despite seeking information on Google, I still struggled to comprehend the process. Furthermore, I discovered that individuals in my class were also encountering difficulties and it appeared that there was no assistance available.”

With regards to the research methodology component the majority of participants indicated that they had difficulty distinguishing the different research methods (quantitative and qualitative) and were not sure when/how/why to use which one. This finding is in line with the finding by Sonn (2016), where respondents expressed that they found it difficult to follow the research methodology.

Development of a research proposal

When respondents were asked whether they experienced problems when writing the proposal, all of them agreed that they struggled getting the proposal right.

Respondent 5 responded:

“The main challenge I had with the research proposal was that I struggled with summarising what I would plan to do for the research proposal. My supervisor told me that my proposal was too long and it seemed that I had jumped ahead and done the research project instead of proposal writing. I had to now find a balance and differentiate between research proposal and research report writing”.

The majority of respondents stated that they faced problems developing the research proposal. They indicated they would have appreciated receiving workshops on how to go about developing a research proposal. This finding is in agreement with that of Desmennu & Owoaje (2018) where postgraduate students stated that they wished they had received training in research proposal writing.

Research supervision

When the question: “Did you experience challenges with your supervisor?” was asked, contrary to findings in many studies on postgraduate research, in the current study, all respondents revealed that they did not experience challenges with their supervisors.

Respondent 8 said:

“I fortunately had no problems with the supervisor”

Respondent 10 stated:

“I had no issues with my supervisor, she was a call away. Whenever I got stuck she would help me.”

Generally good relations existed between students and their supervisors. Most supervisors understood the problems students were struggling with. This finding is in agreement with the findings in a study by Sonn (2016) and that of Bashir et al., (2023), where the majority of postgraduate students revealed that most supervisors cared for their supervisees. A significant number of previous studies (Cekiso et al., 2019; Ekpoh, 2016; Sharp, 2013; Wadisango & Machigambu, 2011) revealed findings contrary to those of the present study where students perceived supervisors to be taking a long time to provide feedback; some did not honour their appointments and others lacked ethical considerations.

Research report writing

When respondents were asked about their experiences in writing the research report, all agreed that they experienced challenges.

Respondent 7 reported:

“I struggled with long form writing. I find this to be a struggle because I was used to writing 500 to 600 words articles, so jumping from that to writing a minimum of twenty (20) pages came as a shock for me. I often got frustrated as well, that I had to cite and reference everything. I now understand though, that is how proper research is done.”

Respondent 5 indicated:

“Fortunately, when the deadline for the study project arrived, a classmate had discovered an external individual who might assist us in comprehending the material, in exchange for payment. At this juncture, I was compelled to make the payment for this assistance, and I have not regretted my decision since then. Consequently, I had no difficulties with my research project, at least no more than normal.”

Respondent 3 said:

“I was not clear what academic writing incorporates. I did not know whether to use simple language or academic language. I also did not know how/when to substantiate my argument.”

When participants were asked to rate the components of the research, starting with the most challenging, respondents listed: “choosing the research methodology” as the most challenging component of the research project module, followed by “writing the literature review”, then “the statement of the research problem”, “formulating the research question” and selecting the research topic was the least challenging of the five (5) components.

It must be noted that none of the respondents mentioned encountering difficulties related to funding or resources as is the case in numerous previous studies (Bashir et al., 2023; Cekiso et al., 2012; Desmennu & Owoaje, 2018; Ekpoh, 2016; Sharp, 2013; Wadisango & Machigambu, 2011). This could be attributed to the fact that all respondents were currently employed and their studies were funded by their employers. Additionally, they had access to the internet facilities from their employers.

Suggestions to Address the Identified Challenges

When respondents were asked to provide suggestions on how the identified challenges could be addressed, they suggested the following:

- Research should be introduced at undergraduate level. It was mentioned that it does not have to be as extensive as it is at post-graduate level, but it would help to familiarise the students with it so that it won't be overwhelming at honours level.

- It is crucial to have the appropriate individual introduce the research component to first-time research students. The introduction should assess the intricacy of the subject and prioritize the successful transfer of skills.
- The institution should provide workshops on proposal writing prior to the start of the research report component
- The institution must ensure that students are adequately prepared and offer sufficient support should they encounter difficulties.

CONCLUSION AND RECOMMENDATIONS

The current study sought to explore challenges being encountered by BPA honours research students while carrying out research as a component of their academic qualification in a private academic institution in South Africa. Semi-structured interview protocols were distributed to ten (10) BPA former honours students who had recently completed their studies including the research component. Interviews with the selected ten (10) respondents was conducted telephonically. This study revealed that postgraduate research students in the private academic institution faced challenges including, research methodology, selecting relevant research topic, development of research proposal, writing literature review, and research report writing. Respondents mentioned that they did not encounter problems related to research supervision, funding of their studies and E-library resources.

Based on these findings, the article provides the following recommendations:

- Workshops and capacity building and mentoring programmes must be incorporated into the research curriculum of honours students
- Supervisors must be encouraged to collaborate with students and present conference papers and publish articles.
- Research must be introduced from the first year of study to ensure that the students gain experience in research early in their academic programmes at the university.
- The academic institution must introduce a module on writing skills from the first year of university studies.

Areas for Further Research

Finally, some limitations of this study, however, should be acknowledged. This study has been conducted in a single academic institution and can therefore not be generalised. Further research could utilise quantitative approach with a big sample of higher education institutions or mixed-method approach to obtain more meaningful outcome. A bigger sample can be used in order to generalise findings. According to Wang (2019:11) there is a need for a bigger sample in order for findings to be generalised. However, the current study can be viewed as a preliminary investigation and in terms of future research this study may be extended to other institutions of higher learning. Additionally, further research that will focus on the experiences of post-graduate research supervisors is necessary.

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EXPLORING COMPETENCIES HOSPITALITY GRADUATES SHOULD POSSESS TO BE EMPLOYED IN THE HOSPITALITY INDUSTRY: A LITERATURE REVIEW

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ABSTRACT

The hospitality industry is a dynamic and rapidly evolving field that requires a skilled and adaptable workforce to meet the diverse demands of customers. To ensure that hospitality graduates are well-prepared for successful careers in this sector, it is essential to identify the competencies that are highly valued by industry professionals. This study aims to explore the competencies that hospitality graduates should possess to be employed in the hospitality industry. A desktop approach was adopted to conduct this review and a wide range of secondary sources of data were consulted to get an in-depth appreciation of the problem being explored. Sources of data for this research included local and international peer reviewed conference proceedings and articles published between 2003 and 2023. Data bases such as Emerald, Google Scholar, Sabinet, Proquest, and Science Direct were used to search for relevant articles using key words like “hospitality industry”, “hospitality graduates” “competencies”, “hospitality curriculum”, “employability”, “graduate attributes”. This article contributes to a comprehensive review of literature on competencies required in the hospitality context. It is hoped this research will provide valuable insights for hospitality education programs, curriculum developers, and policymakers to align the education and training of future hospitality professionals with the industry's evolving needs. By prioritizing the development of these competencies, hospitality graduates will be better equipped to excel in their roles and contribute positively to the continued growth and success of the hospitality industry.

Keywords: hospitality graduates, hospitality industry, hospitality curriculum, competencies, desktop research.

INTRODUCTION AND BACKGROUND

Extant literature reveals discrepancies between the knowledge, skills and abilities graduates possess at graduation and the knowledge, skills and abilities employers expect for entry-level employment (Ayoubi et al., 2017; Hossain et al., 2020; Moore & Morton, 2017; Osmani et al., 2019). Various employers regard new university graduates as not being ready for the world of work (Abelha et al., 2020; Griffiths et al., 2018; Osmani et al., 2019). The misalignment between the knowledge, skills and abilities graduates acquire at university and the knowledge, skills and abilities required by the labour market has been discovered in studies globally including Australia (Prikshat et al., 2020), Malaysia (Fahimirad et al., 2019; Kenayathula et al., 2019), Germany and Italy (Succi & Canovi, 2020), South Africa (Ngulube, 2020), Ghana (Damoah et al., 2021), Nigeria (Nwajiuba et al., 2020; Okolie et al., 2020), Mauritius (Hardin-Ramanan et al., 2020), China (Su & Zhang, 2015), and Bangladesh (Uddin, 2021), among others as cited in Mainga et al., (2022:29). Accordingly, higher education institutions (HEIs) the world over are under pressure to produce employable graduates. Many HEIs have responded to the call, but it is observed that progress has been uneven and has encountered challenges. For example, a study in South Africa indicates that academic institutions were grappling to integrate employability skills in the curriculum (Mtawa et al., 2021). Moreover, it is evident that possession of only discipline-

specific knowledge for graduates is inadequate to ensure long-term success in today's dynamic and turbulent hospitality labour market.

The purpose of this paper was to review literature regarding competencies that the hospitality industry professionals deem to be necessary for new hospitality management graduates to possess, to be more employable and successful in the hospitality industry. This was accomplished by adopting a desktop research approach where literature searches were undertaken across bibliographic databases such as Google Scholar, Sabinet, Proquest, Emerald and Science Direct. Local and international peer reviewed conference proceedings and articles published between 2003 and 2023 were consulted.

The hospitality industry which includes hotels, foods, restaurants, chefs, as well as food service (Mohamad et al., 2018) is considered the largest and most dynamic labour-intensive industry around the world (Korpi & Mertens, 2004) that has the potential to make a significant economic contribution to national Gross Domestic Product (GDP) (Mohamad et al., 2018; Molefe et al., 2019; Van der Merwe et al., 2019). Over the years, the demand for human resources in this sector is increasing as it carries on expanding and reflecting a positive growth (Mohamad et al., 2018). According to the World Travel and Tourism Council (WTTC), hospitality industry is estimated to have a total of 262.6 million jobs which presented the world's workforce by the year 2017 and being one of the most resilient industries in the world. For this reason, more and more skilled workforce is required to meet the needs and expectations of this industry. According to Jooste (2019) the hospitality industry is highly critical to the South African economy and that this industry should be developed for sustained and inclusive growth. Ezeudju, Chibe and Nyathela (2017) assert that institutions of higher learning are expected to enrol appropriate students to study hospitality management and also to prioritise those students who selected hospitality management as their first choice. Moreover, research indicates that higher education institutions globally are under pressure to ensure students' learning outcomes meet the requirements of the labour market (Ahmed et al., 2017; Bisoux, 2015; Mourshed, Farrell & Barton 2013).

In view of the above, it is crucial that institutions of higher learning, study what the hospitality sector requires in terms of graduates' competencies, in order to meet the needs of this labour market. The present study is undertaken to achieve this purpose. This article is based on literature from various scholars and researchers that have undertaken research studies on the most important competencies new graduates should possess to be successful in the hospitality sector.

AIM OF THE STUDY

The overall aim of the present research was to explore and identify competencies required in hospitality and therefore contribute to the planning, development and improvement of the curriculum of the national diploma in hospitality management in the comprehensive university where the researcher is employed, in South Africa.

RESEARCH QUESTIONS

This review was guided by the following research questions:

- Which competencies are perceived as most important for graduates to be employed in entry-level positions in the hospitality industry?
- What recommendations can be made to address the misalignment between graduates' competencies and industry expectations?

It is hoped that the findings of this research will benefit the hospitality academic department where the researcher is employed as well as those of other institutions of higher learning offering the same academic programme. The remainder of this paper is structured as follows: the next section presents the research methodology that underpinned this study. Next, the findings are presented, discussed and interpreted. The final section concludes the article and provides recommendations and potential for future research.

RESEARCH METHODOLOGY

This paper reviewed competencies that the hospitality industry professionals deem to be necessary for new hospitality management graduates to possess, to be more employable and successful in the hospitality industry. To accomplish this purpose, the researcher utilized a desktop (theoretical) approach to research. This is a methodology which reviews published works related to a research question or an area of interest (Petticrew & Roberts, 2005). The objectives of a literature review are to identify, evaluate and reach conclusions regarding quality research related to problematic issues of interest. Synder (2023) points out that as the speed at which research is undertaken is expediting, literature reviews are more imperative than ever, and, if well undertaken, they provide the basis for future research and enable crucial development in research. This section of the review presents the methods employed to identify and collect data. This comprises of the search strategy (the procedures for data collection), criteria for including/excluding sources and data extraction.

Scope and Search Strategy

The current research consists only of empirical papers related to the competencies required at the workplace by the hospitality industry and the quality studies published in reputed journals from 2003 to 2023 were considered. The review was sourced from five well-recognised journals, including Google Scholar, Sabinet, Proquest, Emerald and Science Direct to ensure the quality of chosen papers for this study. Local and international peer reviewed conference proceedings and articles published between 2003 and 2023 were consulted. Only studies that were conducted in the field of the hospitality industry are incorporated in the current review. In the selection of papers, the following criteria were followed: studies that have been published from 2003 to 2023; only the empirical studies were included; and studies that discuss the skills needed by the hospitality industry. The research papers were identified and selected through a systematic search procedure comprised of searching key words in the title, abstract, and keywords section of the papers. The key words and phrases used to search the literature were: hospitality graduates, hospitality industry, hospitality curriculum, competencies, desktop research.

This search produced 200 research and review articles. All the articles were carefully screened to eliminate those which did not fit the inclusion criteria. For example, articles written in other languages and articles that were not peer-reviewed were identified and excluded from the dataset. Since the study identified the most essential hospitality competencies from the recruiter's point of view, henceforth, the papers related to student's and institution's point of views were also excluded from the list. Consequently, the number of articles drawn from the above dataset was reduced to 20. The research papers were identified and selected through a systematic search procedure comprised of searching key words in the title, abstract, and keywords section of the papers.

Data Analysis

The data collected from the desktop study were then systematically analysed. Following this analysis, the researcher extracted the literature relevant to this article and utilised it in this research.

RESULTS

The purpose of this paper was to review literature regarding competencies that the hospitality industry professionals deem to be necessary for new hospitality management graduates to possess, to be more employable and successful in the hospitality industry. Several studies have investigated the competencies that hospitality graduates require to be successful in the hospitality industry from the perspective of professionals and practitioners in the hospitality industry. There is consensus among researchers and scholars that a strong knowledge-base alone does not guarantee a new graduate employment, and that the personal attributes and capabilities of the graduate are considered to have a greater influence on success in the workplace (Bell, Crebert, Patrick, Bates & Cragolini, 2003). Numerous researchers articulated different competencies and skills that are essential in the hospitality industry and such skills lead toward the employability of an individual.

Baum (2007) notes that a deficiency of technical, practical or job-specific skills, experience of the world of work, and oral communication remain commonly cited issues with regards to hospitality graduates. Human resources are crucial for successful hospitality service delivery, so it is of vital importance to develop students' ability to work in teams with people from different cultures and with different levels of communication skills (Yang, Cheung and Song 2016). Skill gaps may vary according to the region, size of the business, and type of market orientation (Khare 2014).

Kleemann (2011) explored hospitality employers' perceptions on the competencies expected from new graduates in the hospitality industry. The study reported that from highest to lowest, perceived competencies expected from new graduates were communication, teamwork, professional qualities, conceptual/analytic, work culture, organization/planning, leadership, and learning theory and practice. Moreover, the study reported on the importance attached to these skills or competencies by hospitality employers. The findings indicated that all the skills, excluding learning theory and practice, were rated at least somewhat important. Among these revelations, communication was rated or perceived higher than the other skills. Based on these findings, the study emphasised that above listed competencies were those skills valued in the hospitality industry and should be considered in preparing students for entry into the workplace.

In another study by Sisson and Adams (2013) on identifying the essential hospitality management competencies needed by managers in hospitality industry, findings revealed that the hospitality industry preferred graduates with soft competencies, especially in developing positive customer relations and ability to work effectively with other subordinates. However, apart from emphasizing on soft skills, it was suggested graduates should also equip themselves with hard competencies that are gained through education and training. Nevertheless, apart from soft and hard competencies, Littlejohn and Watson (2004) came up with graduate's attitudes as a vital competence in the industry. Accordingly, attitudes of graduates towards working in the industry are seen as one of the important aspects as the knowledge graduates gained throughout their studies. They revealed that graduates need to have good people management skills and be more customer focused in order to be successful in the hospitality industry. Hence, the need for academic institutions to emphasize on developing generic management skills was suggested.

The study conducted by Shariff and Abidin (2014) on human resource manager's perceptions towards tourism and hospitality graduate's competencies in Malaysia indicated that ability to work as a team is regarded as the most essential competency in comparison to the least regarded competencies, ability to use technology. This meant, in order for the graduates to survive within the industry, working in teamwork is important but knowing how to use technology is not a must.

Molefe et al., (2019) explored hospitality employers' perspectives of the skills, attributes or qualities they deem necessary to make a graduate employable. They point out that interactive services in the hospitality and tourism industry have mainly concentrated on the soft skills having been considered more important than the hard technical skills. The soft skills are often focused on the aspects of social and interpersonal skills, meaning that a display of responsiveness and being courteous and understanding with customers are what employers are looking for from employees (Wesley, Jackson & Lee, 2017). The provision of quality service is of utmost importance, especially to employees experience direct and frequent contact with the hospitality customer. Molefe et al., (2019) highlighted that employers deem soft skills as being most important because hard skills can always be acquired by training, but soft skills mostly come naturally. Soft skills are necessary, because the hospitality industry is to a large degree people and service-orientated. To be successful in this field, one needs to have the right qualities and abilities that will result in customer satisfaction and loyalty as this is what makes for a sustainable business.

It is the graduates' lack of experience, lack of passion, negative attitudes, lack of self-management, lack of learning skills and the inability to market them as a brand that makes them less employable than they would like to be (Molefe et al., 2019). Another contributing factor to the lack of graduate employment is the problem of students holding attitudes, beliefs and expectations that they deserve success without earning it. Employers are looking for individuals with the desire to develop themselves and grow within the company. That kind of individual is an asset to any employer. Furthermore, in Molefe et al., (2019) employers were of the perception that attitude is an important quality. Employers were willing to employ someone with a positive attitude over one with skills. Passion, integrity,

hard work, confidence, being self-driven, innovative and open-minded are also important qualities for a successful career in the industry.

Van der Merwe et al. (2019) sought to determine the perception of role players in the hospitality industry regarding their expectations of entry-level employment in the hospitality industry. In-depth interviews indicated that the respondents were of the view that hiring an individual for entry-level employment in the industry did not depend on a formal qualification. According to van der Merwe et al., (2019:9) the top 10 abilities the hospitality industry requires from an individual for an entry-level position are as follows:

- 1) Communication skills are important as the individual must be able to communicate well so that the guests can be understood by the employee in order to deliver a satisfactory service.
- 2) Self-motivated employees who can do and complete the job at hand.
- 3) Time management, as the individual must not be a “time watcher” and is expected to do the job until the work is done.
- 4) Ability to work under pressure - must be able to face a problem “head on” and sort it out to the guest’s satisfaction.
- 5) Passion and eagerness to learn and to grow in the industry.
- 6) Common sense is important for any position in the industry.
- 7) Basic manners and values are important for any position in the industry as guest satisfaction is important.
- 8) Personality of the individual - the person must be an extrovert to succeed in the industry.
- 9) A punctual and energetic person is important as this is “366-day-a-year” employment.
- 10) Adaptability to learn between the different departments to grow as an employee in the industry.

Van der Merwe et al. (2019) further identified the top seven skills the industry requires from an individual as follows:

- 1) A positive attitude.
- 2) Excellent writing and verbal communication skills.
- 3) Proficiency in computer skills.
- 4) Critical thinking skills - problem-solving and decision-making skills to the guest’s satisfaction.
- 5) Basic skills of the industry are important for the position applied for.
- 6) Passion for the industry and the position the individual is employed in on a daily basis.
- 7) Willingness to learn and to grow in the industry, as well as to perform the job.

Van der Merwe et al. (2019) found that passion and eagerness for the position and the industry are the main abilities required from an individual.

Dhaliwal and Misra (2020) note that the hospitality industry encompasses various types of skills which can be divided into technical skills and soft skills. They further explain that the technical skills are referred to as hard skills. These skills were initially considered vital for employment but now are generally considered not sufficient for graduates to get employed, and there is equally a need to possess a number of soft skills to perform efficiently and effectively in today’s work environment. Dhaliwal and Misra further contend that the most preferred soft skills by employers are: ‘integrity, communication, courtesy, responsibility, social skills, positive attitude, professionalism, flexibility, teamwork, and work ethics and further advocated that about 25% of success in the job is dependent upon their technical abilities while 75% are dependent upon the soft skills carried by them at the workplace. These authors argue, although, the knowledge of the subject matter of students is usually satisfactory but still they lack in their interpersonal and other skills. They further indicate the technical, human, and conceptual skills are being required in the hospitality industry.

In a recent study carried out in Ghana by Commey (2021), the purpose of which was to match the competencies of hospitality graduates with the expectations from industry, the findings revealed gaps between the competencies expected by the industry and the perceived competencies of hospitality graduates. These gaps were in part, attributed to current hospitality curricula being offered by Ghanaian higher education institutions. It emerged that the success of hospitality graduates in the industry mostly relied on the acquisition and demonstration of required

competencies to function effectively in diverse roles. Consequently, hospitality professionals generally expect hospitality graduates to be in possession of competencies that assist in solving job-related problems and ascertaining that customers are kept satisfied. Therefore, hospitality industry employers require hospitality graduates to possess practical and technical competencies to meet these needs. This finding is in agreement with existing literature (Okeiyi et al. 1994; Raybould and Wilkins 2005; Kay and Russette 2007; Lolli 2013; Weber et al. 2013; Tesone et al. 2015; Balakrishnan 2016; Yang et al. 2016).

Hyasat (2022) conducted a study to determine the essential skills and knowledge required by the hospitality industry. The study revealed that there were consistent high expectations from the hospitality, travel, and tourism industry related to the personal qualities category. It was significant that the personal qualities set are of great importance to hospitality and tourism employers. It is argued this could be a source of input to colleges curricula for future improvements. It was found that practical skills, customer service skills are a priority in the hospitality industry. Also, 'solving guest and customer problems' was ranked the highest among all the skills expected in all the categories.

Ngoepe and Wakelin-Theron (2023) carried out research to determine the employability attributes of hospitality management students from private higher education institutions (PHEIs) in South Africa. The findings suggest that hotel managers require eight knowledge sub-domains, and seven skill sub-domains, and a wide range of competencies from hospitality graduates from private higher education institutions. The study's findings suggest that hotel managers, namely: front office, food and beverage, banqueting and housekeeping, require eight knowledge sub-domains and seven skill sub-domains, with a wide range of competencies, from hospitality graduates from PHEIs. According to Ngoepe and Wakelin-Theron the eight knowledge attributes that hotel managers appreciate are: basic knowledge, service knowledge, product knowledge, cultural knowledge, practical knowledge, process/systems knowledge, cleaning knowledge and theoretical knowledge.

DISCUSSION

From a global perspective, previous empirical studies have been conducted by researchers to assess the competencies of hospitality graduates and industry expectations across several parts of the world. In this review it has been highlighted that the role of hospitality institutions is to produce quality graduates for the hospitality industry but unfortunately graduates remain unable to meet the expectations of the industry. It has emerged that it is often problematic for higher education institutions to equip graduates with appropriate skills, especially behavioral skills and that universities do not sufficiently emphasize the development of behavioral skills to prepare graduates for professional life (Burchell, Hodges & Rainsbury, 2000; Coll & Zegwaard, 2006). It is important therefore to determine what are the competencies valued most by employers in a discipline context (in this case hospitality), and what competencies the higher education institutions should focus on in their efforts so that both the learning experience for the student in the workplace and the likelihood of employment as a graduate can be maximized. The current review has revealed that hospitality industry practitioners and employers expect hospitality graduates to possess practical, technical, result-oriented and business-like competencies, while placing less emphasis on the theoretical competencies of graduates. Hence, the curriculum must endeavour to focus on equipping graduates with these competencies in order for them to thrive in the hospitality industry.

Managerial Implications

The above findings have implications for curriculum and human development within hospitality education. The purpose of the curriculum used in training hospitality students is to produce graduates who are prepared and equipped with the required skills and competencies to make an impact within the hospitality industry. This contention is supported by Starkey et al. (2004) who emphasise that the primary aim of higher education is to prepare students for the world of work. In this regard, the curriculum links institutions of higher learning and industry to ensure that hospitality graduates are adequately trained. Thus, hospitality education curriculum should prepare students for work in the hospitality industry.

Study Contribution

This paper contributes to the literature on graduate competencies and higher education institutions in the hospitality domain to address and review both the industry and the workplace, in order to make it more attractive and rewarding for young graduates, and also to enhance the educational model that still dominates hospitality management programmes in preparing graduates for careers. A good understanding of the competencies expected of hospitality graduates will contribute to retaining graduates in the hotel sector, advance the industry, and ensure more sustained graduate employment in the future. This research contributes significantly to education and curriculum design to improve graduate competencies among hospitality management graduates.

CONCLUSION

This review revealed that hospitality industry practitioners and employers expect hospitality graduates to possess practical, technical, result-oriented and business-like competencies, while placing less emphasis on the theoretical competencies of graduates. However, based on past studies reviewed here, competencies required for hospitality graduates may slightly differ according to the country the research is conducted. The extant literature indicates the top most rated competencies for hospitality graduates include good interpersonal skills, people skills, leadership skills, problem solving skills and teamwork. It can be concluded that the most essential competencies for hospitality graduates to possess are in the soft category rather than hard competencies. It is argued that hard skills can always be acquired by training. Employers were willing to employ someone with a positive attitude over one with skills. Passion, integrity, hard work, confidence, being self-driven, innovative and open-mindedness were cited as important qualities for a successful career in the industry in the current review.

RECOMMENDATIONS

Based on the findings that graduates do not meet the expected competencies from the perspective of professionals and employers in the hospitality industry, this article provides the following recommendations:

- Employers need to make their expectations from graduates as new work entrants clear from the outset, so they enter the industry with an accurate understanding of the industry.
- There is a need for revising hospitality curriculum at both undergraduate and post graduate levels.
- Academic institutions offering hospitality management programmes must emphasize the development of generic management skills.
- Education institutions offering hospitality management courses must collaborate with industry experts to develop the standard curriculum. This collaboration is to accommodate the industry needs by producing potential workers with competencies required by the industry.
- Internships should be structured so that students are exposed to a range of opportunities that will enhance the development of their general management competencies. For example, cross training enables students to practice transferable skills across differing functional areas. This will help broaden students' learning and develop flexibility and adaptability
- Graduates and students are encouraged to pay close attention to the nature of the hotel industry and its demands. They are further encouraged to invest in lifelong learning and upskill themselves to remain competent and competitive, as employability in the hospitality industry is not a one-sided approach.
- The relationship between HEIs, hotel managers, and human resources managers is important. Ongoing conversations and engagement between these stakeholders will benefit the tourism and hospitality industry as a whole. These partnerships will assist HEIs in refining and improving their curricula by ensuring that they include up-to-date and future-ready knowledge, skills and competencies.

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AN EVALUATION OF SERVICE FAILURE RECOVERY STRATEGIES IN THE LIBYAN AIRLINE INDUSTRY

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ABSTRACT

This research is an intricate exploration of service recovery strategies within the aviation sector, with a specialized focus on Libyan Airline. The study illuminates the complex dimensions of service restoration in the aftermath of service failures, and how they intertwine with customer satisfaction, loyalty, and trust. The lack of comprehensive studies addressing service recovery, particularly within the context of Libyan aviation, elucidates the research gap that this study seeks to fill.

This study presents a comprehensive and nuanced examination of service recovery in the Libyan aviation industry. By melding theoretical concepts with practical aspects of service recovery, the study provides an expanded understanding of the complex dynamics involved in restoring customer relationships post-service failures. The theoretical and practical contributions of the research serve as a valuable resource for academia, industry practitioners, and policymakers alike.

INTRODUCTION AND CONTEXT

This research is an intricate exploration of service recovery strategies within the aviation sector, with a specialized focus on Libyan Airline. The study illuminates the complex dimensions of service restoration in the aftermath of service failures, and how they intertwine with customer satisfaction, loyalty, and trust. The lack of comprehensive studies addressing service recovery, particularly within the context of Libyan aviation, elucidates the research gap that this study seeks to fill.

The research is focused on two primary objectives. Firstly, it sought to assess the efficacy of service recovery strategies implemented by Libyan Airline in retaining customer satisfaction, loyalty, and trust post service failures. Secondly, it aimed to identify the pivotal organizational factors influencing the design and execution of service recovery strategies, such as employee training, communication channels, and customer involvement. Employing a qualitative research methodology, the study utilized semi-structured interviews as the primary data collection tool. This approach allowed for a rich, nuanced understanding of the research phenomenon. A thematic analysis of the interview data provided robust insights into the multi-dimensional aspects of service recovery strategies and their role in restoring customer relationships post-service failures.

Findings from the research underscore the pivotal role of effective service recovery strategies in enhancing customer satisfaction, loyalty, and trust in the aftermath of service failures. Moreover, the study affirms the significant role of specific organizational factors in formulating and implementing successful service recovery strategies. Theoretical contributions of the research are substantial. The study uniquely embeds the Justice Theory and Commitment-Trust Theory within the service recovery process. This innovative theoretical alignment not only expands the extant body of knowledge on service recovery but also paves the way for future studies within the realm. The study's practical implications are also profound. Through its research findings, this doctoral study offers actionable insights that can guide airlines to refine their service recovery strategies and bolster their crisis management capabilities.

This study presents a comprehensive and nuanced examination of service recovery in the Libyan aviation industry. By melding theoretical concepts with practical aspects of service recovery, the study provides an expanded understanding of the complex dynamics involved in restoring customer relationships post-service failures. The theoretical and practical contributions of the research serve as a valuable resource for academia, industry practitioners, and policymakers alike.

The integration of technology in service recovery, as discussed in Chiu and Nguyen (2022), is not extensively explored in the context of the airline industry. The increasing role of technology in customer service presents an opportunity to study how tech-based solutions can enhance or hinder the service recovery process in airlines. Weber and Hsu's (2022) exploration of multi-provider and external service recoveries highlights a gap in understanding these complex dynamics in the airline industry, where multiple service providers often interact. The orchestration of service recovery across different stakeholders remains under-researched. Bagherzadeh et al. (2020) discuss customer participation in service recovery, but there is a scarcity of research on how airlines can effectively involve customers in co-creating recovery solutions, especially considering the diverse customer base and service expectations in the airline industry.

Anwar and Ozuem's (2022) call for an integrated service recovery process indicates a gap in the current literature, where a comprehensive, systematic approach that encompasses various aspects of service failure and recovery in the airline industry is missing. Park, Lee, and Nicolau's (2020) focus on the dynamics of service attributes as satisfiers and dissatisfiers in the airline industry needs further exploration, especially in understanding how these attributes contribute to the overall service recovery experience. Addressing these gaps through focused research can lead to a more comprehensive understanding of service failure and recovery in the airline industry, contributing to improved strategies for customer satisfaction and loyalty. The current research argues that such an approach gives rise to overarching theoretical insight concerning the service failure including the pluralistic and contextual stances of consumers involving the entire process of service failure. Therefore, the aim of the current research is to address the full current study framework would serve not just as a theoretical contribution, but it also aims to offer practical implications for the service providers, particularly in the Libyan airline industry. The aspirational outcome is to guide the development of more empathetic, effective, and adaptable recovery strategies, thereby enhancing customer satisfaction, loyalty, and trust in the wake of service failures. This research aims to transcend the conventional binary discourse of 'failure' and 'recovery', and in doing so, illuminating the potential of the failure-recovery process as a transformative journey – a harmonious orchestration between the customer and the service provider in their shared quest for resolution, satisfaction, and growth. Owing objectives and questions:

1. What are the underlying dimensions and factors that contribute to service failure and subsequent recovery strategies in the context of Libyan Airline?
2. How do customers perceive the effectiveness and outcomes of the service recovery strategies employed by Libyan Airline in addressing their complaints and recovering from service failures?
3. What are the main challenges and complexities faced by Libyan Airline in the implementation of service recovery strategies, and how do organizational factors influence their effectiveness.

The current study framework would serve not just as a theoretical contribution, but it also aims to offer practical implications for the service providers, particularly in the Libyan airline industry. The aspirational outcome is to guide the development of more empathetic, effective, and adaptable recovery strategies, thereby enhancing customer satisfaction, loyalty, and trust in the wake of service failures. This research aims to transcend the conventional binary discourse of 'failure' and 'recovery', and in doing so, illuminating the potential of the failure-recovery process as a transformative journey – a harmonious orchestration between the customer and the service provider in their shared quest for resolution, satisfaction, and growth.

METHODOLOGY

Social constructivism directs towards qualitative techniques of data collection as qualitative techniques align with subjectivism which is also the quality of social constructivism. Bryman & Bell (2011) highlighted the characteristic of qualitative techniques that they enable a researcher to conceptualize the phenomenon based on social actors' perceptions. This means that qualitative techniques enable the researcher to take into account the view of social actors such as through interviews and focus group discussions. This enables the creation of knowledge through the medium of language, hence qualitative techniques align well with social constructivism (Denzin & Lincoln, 2000). In the current situation the researcher takes into account the perspective those impacted by service failure and recovery strategies concerning airline services. This the researcher does by interacting with them i.e. using the medium of language. This medium enables the researcher to explore the phenomenon.

The methodological choices discussed above also align with inductive approach instead of deductive. Inductive approach involves drawing of inferences from observations (Bryman & Bell, 2011). These inferences in the current research are drawn from the response of the respondents who are affected by service failure and recovery strategies to understand their experience and thereby understand the phenomena.

The researcher utilized the purposive sampling technique to select the customers. Purposive sampling is also referred to as judgmental sampling as it involves the researcher exercising his judgment to select the participants suitable for the research according to its aim and objectives (Saunders et al. 2009). The sample selection involves selecting those people who are information-rich and can provide the information relevant to the subject of the research (Ozuem et al. 2015; Becker et al. 1961). In the current situation the prior experience of the researcher was highly useful in selecting the participants of the research. The researcher possesses prior experience of working in airline sector including also the matters pertinent to airline. This experience helped the researcher select the suitable persons for collecting primary data. The contradictions in the results of existing positivist studies indicate that the detachment of researcher from the subjects is not a useful strategy; hence, subjective understanding is pursued in the current research (Rio-Lanza et al. 2009; Wirtz & Mattila, 2004).

FINDINGS AND DISCUSSION

This part presents the analysis and discussion of the primary data collected in the study, focusing on the thematic analysis of in-person interviews with customers. The data analysis follows a thematic approach, aiming to identify recurring themes and keywords in the participants' responses. The results of the analysis are then discussed in relation to the existing literature and relevant theoretical frameworks. This chapter analyzes primary data from customer interviews, utilizing thematic analysis to unearth patterns in their responses. Thematic analysis, a method praised for detecting themes in textual data, guides this exploration (Sinclair-Maragh et al., 2021). Following a meticulous process, themes, and keywords recurrent across interviews were identified, reflecting on issues like public service complaint resolution, service failure, recovery strategies, and enhancements in recovery processes. This identification process, rooted in the methodologies of Sinclair-Maragh et al. (2021) and Naeem & Ozuem (2022), involved preparing transcripts and developing a coding system to categorize recurring themes, forming a theoretical framework for data discussion.

Participant confidentiality was ensured through data encryption and informed consent. The thematic analysis yielded insights into the participants' experiences and perceptions regarding service recovery, aligning these findings with existing literature and theoretical frameworks. This comparison aims to bridge the gap between primary data and broader knowledge on service recovery, highlighting alignment with existing theories and pinpointing areas needing further research. Additionally, participant demographics were considered to contextualize the findings, enhancing the discussion's depth. The analysis aims to contribute to developing a context-specific theoretical construct around service failure and recovery strategies within the public service domain, offering insights to improve service delivery and customer satisfaction.

The chapter drew conclusions from the data using a combination of his own prior knowledge, his theoretical understanding of the topic, and the results. Repeatedly occurring key concepts and themes in the dataset guided the development of the conclusions and their application to the research questions (Naeem & Ozuem, 2022). Step one

involved getting the interview transcripts ready for analysis, and step two involved creating a coding system for thematic review. To improve each step of the SR process, the coding method used was vital for extracting the key textual information. The author detailed the process by which they first noticed the pattern. In addition, the author of this study generated a list of keywords, topics, and subthemes that were incorporated into the larger framework.

Main Theme 1: Public SR Strategies

The main theme of public SR strategies covers the following codes:

Service Failure and Recovery: The term "service failure and recovery" pertains to the process of acknowledging and resolving customer complaints and issues that arise from a breakdown in the service delivery process. This involves identifying the root cause of the problem, implementing corrective measures, and compensating the customer in an equitable and appropriate manner.

Customer Perception: refers to the subjective views and opinions that customers hold about the airlines' SR strategies, including all phases of the recovery process. Perceptions include evaluations of the effectiveness of the recovery process, the fairness of the compensation, and overall satisfaction with the resolution of the issue.

Joint Experience of the Failure-Recovery Process: Effective service recovery involves a joint experience between the service provider and the customer, where both parties engage in active communication, maintain transparency, and share responsibility to identify and resolve service failures. This approach aims to find the most optimal solution to the problem at hand, while prioritizing customer satisfaction.

Organizational Factors: These refer to the internal and external factors that influence the SR strategies of airlines, including organizational culture, leadership, resources, technology, and customer expectations. These factors can have a significant impact on the effectiveness of the SR process and the perception of customers about the airline's ability to address service failures.

Code 1: Service Failure and Recovery

Keywords: customer complaints, customer satisfaction, airline industry, customer loyalty, reputation, operational efficiency, customer feedback, technology, frontline employees, decision-making, lost revenue.

Public service failure and recovery refers to the process of addressing and resolving customer complaints and issues that arise from a breakdown in the service delivery process in the public sector. In the context of the airline industry, public service failure and recovery are essential because they can have a significant impact on customer satisfaction, loyalty, and retention. When airlines fail to deliver the expected level of service, it can result in customer complaints, negative reviews, and even legal action. Therefore, effective SR strategies are crucial to ensure that customers are satisfied, and that the airline's reputation is maintained. Airlines that fail to deliver the expected level of service can face negative consequences such as customer complaints, negative reviews, and legal action, which can impact the airline's reputation. Therefore, having a robust SR process is crucial to ensure customer satisfaction and maintain the airline's reputation. When airlines fail to deliver the expected level of service, this can result in customer complaints, negative reviews, and even legal action (Interviewee, P7). Public airlines need to have a robust SR process in place that addresses these challenges and ensures prompt and efficient resolution of customer complaints and issues." (Interviewee, P22). "I believe that any service failure can lead to customer complaints, negative reviews, and even legal action, which can tarnish the airline's reputation. It is crucial to have a SR process that is prompt, efficient, and customer-oriented to address any issues and ensure customer satisfaction." (Interviewee, P10). These interviews emphasize the importance of having an effective SR process in the public airline sector to address customer complaints and issues promptly and efficiently, and to maintain customer satisfaction whilst protecting the airline's reputation.

Public airlines must balance the need for customer satisfaction with operational efficiency, which can present further challenges in the SR process. "I served several years for airline industry, so I know that complex and interconnected nature of airline operations, limited resources, language and cultural barriers, unpredictable events such as weather conditions and technical issues, and the need to balance customer satisfaction with operational efficiency" (Interviewee, P17). Gathering customer feedback can help airlines identify areas for improvement in their service delivery processes, and proactively address potential service failures. By implementing these initiatives, airlines can

improve their ability to address service failures and provide effective SR to maintain customer satisfaction and loyalty. “Public airlines need to focus on investing in technology to improve service delivery and communication with customers, empowering frontline employees to make decisions and take action to resolve issues promptly and gathering customer feedback to identify areas for improvement” (Interviewee, P17). By putting these initiatives into operation, airlines can better respond to service failures, minimize their impact on customers, and improve overall customer satisfaction.

Code 2: Customer Perception

Keywords: subjective views, opinions, evaluation, effectiveness of recovery process, fairness of compensation, forgiveness, patience, personal preferences, cultural norms, expectations, past experiences, feedback, nature of service failure, varying expectations.

Customer perceptions in this context refer to the subjective views and opinions that customers hold about the airlines’ SR strategies, including all phases of the recovery process. This extends to their evaluation of the effectiveness of the recovery process, the fairness of the compensation, and their overall satisfaction with the resolution of the issue. Customers can have different perceptions about the effectiveness of the recovery process based on their individual experiences. For example, “I have noticed that some customers are more forgiving when it comes to service failures, while others are less patient and demand immediate action. Some customers appreciate when the airline goes above and beyond to compensate for the inconvenience, while others believe that the airline is just trying to make up for their mistakes” (Interviewee, P11). The differing perceptions of customers regarding service failures and recovery can have a significant impact on public SR strategies. This difference in customer perceptions can make it challenging for airlines to effectively address service failures and satisfy all customers. It is essential for airlines to gather customer feedback and continuously evaluate their SR strategies to ensure they meet the varying expectations of their customer base. By doing so, airlines can effectively address service failures and maintain customer satisfaction and loyalty.

Variations in customer perceptions can be attributed to various factors, including past experiences with the airline, personal preferences, cultural norms, and expectations. These factors can influence the level of patience, forgiveness, and satisfaction that customers have with the SR process. For instance, customers who have had positive experiences with the airline in the past may expect more from the SR process, while those who have had negative experiences may be more forgiving. For example, one participant noted, “I know some customer of my network that had positive experiences with the airline in the past tend to have higher expectations when it comes to SR. They expect the airline to maintain the same level of service even when something goes wrong. On the other hand, customers who have had negative experiences in the past may be more forgiving and satisfied with a basic SR effort” (Interviewee, P7).

Code 3: Joint Experience of Failure-Recovery Process

Keywords: Communication, transparency, shared responsibility, customer engagement, frontline employees, customer feedback, trust, reputation, customer satisfaction, loyalty, proactive communication, employee training, customer expectations, service delivery processes.

The above category refers to the collaborative efforts between the service provider and the customer to address and resolve service failures. This involves active communication, transparency, and a shared responsibility to find the best possible solution to the issue at hand. The findings highlight the importance of the joint experience of the failure-recovery process in the airline industry. This emphasizes the need for active communication, transparency, and shared responsibility between the airline and the customer to find the best possible solution to the issue at hand. Such a joint experience can have a significant impact on customer satisfaction and loyalty, making it essential for airlines to invest in employee training and development to ensure effective SR. The joint experience of the failure-recovery process is crucial to ensuring effective SR in the airline industry.

The process involves active communication and collaboration between the service provider and the customer to find the best possible solution to the issue at hand. This collaboration can help build trust and improve customer satisfaction and loyalty. One participant noted, “The key to effective SR is to make it a joint experience between the service provider and the customer. This involves open communication, transparency, and a shared responsibility to find the best possible solution to the issue at hand” (Interviewee, P14). By involving the customer in the recovery process, airlines can better understand their needs and expectations, which can help in providing a more satisfactory

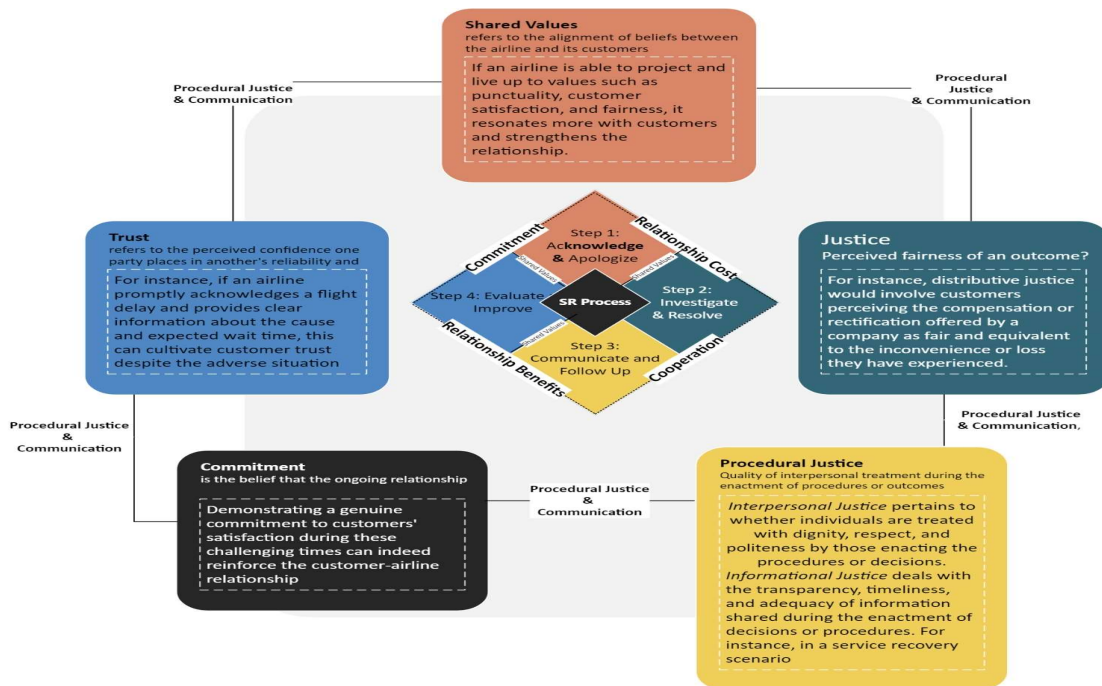
resolution. Another participant noted, “Involving the customer in the recovery process can help to build trust and improve customer satisfaction and loyalty. When customers feel like they are part of the solution, they are more likely to forgive the airline for the service failure” (Interviewee, P14). Effective joint experience of the failure-recovery process requires clear and timely communication. Airlines must be transparent about the issue and keep the customer informed about the progress of the recovery process. “Clear communication is critical to effective SR. Airlines must be transparent about the issue and keep the customer informed about the progress of the recovery process” (Interviewee, P15). This can help to reduce customer anxiety and frustration and build trust between the customer and the airline. Airlines should also be proactive in communicating with customers, even before they complain, to identify potential issues and address them before they become a significant problem.

Code 4: Organizational Factors

keywords: Leadership, resources, customer expectations, SR strategies, customer satisfaction, employee empowerment, communication with customers, budget constraints, cost-effective technology, frontline employee training.

The above refers to the internal and external factors that influence the SR strategies of an airline, including organizational culture, leadership, resources, technology, and customer expectations. These factors can have a significant impact on the effectiveness of the SR process and the perception of customers about the airline's ability to address service failures. Organizational factors play a crucial role in shaping the SR strategies of public airlines. Organizational culture, leadership, resources, technology, and customer expectations are some of the internal and external factors that can influence the effectiveness of SR processes. A positive culture that prioritizes customer service and employee empowerment can lead to more effective SR processes. “A positive culture that prioritizes customer service and employee empowerment can lead to more effective SR processes” (Interviewee, P23). Leadership also plays a critical role in setting the tone for SR strategies. Effective leadership that emphasizes customer service and provides the necessary resources can lead to more successful SR processes. One participant noted, “Leaders who prioritize customer service and provide the necessary resources can lead to more successful SR processes” (Interviewee, P24). I think there is need to invest in technology to facilitate communication with customers and streamline the SR process. To construct a conceptual framework for the service recovery process within the context of the airline industry. Drawing on the comprehensive review of extant literature, selected theoretical perspectives, and key findings from primary data, this chapter seeks to formulate a four-step recovery process designed to manage and mitigate service failures effectively and efficiently.

Figure 1: SR Process



The four-step recovery process outlined - Acknowledge and Apologize, Investigate and Resolve, Communicate and Follow Up, Evaluate and Improve - aligns well with the principles of Justice Theory and Commitment-Trust Theory. These theories highlight how customers perceive and react to service failures, and provide a blueprint for airlines to restore trust, commitment, and overall customer satisfaction following such incidents.

MAJOR CONTRIBUTIONS AND IMPLICATIONS

By aligning elements of Justice Theory and Commitment-Trust Theory with each stage of the service recovery process, the research introduced a novel, context-specific theoretical construct for service failure and recovery. This integrative framework provided a structured, systematic approach to manage service recovery effectively, ensuring all crucial aspects are addressed. Furthermore, it highlighted the interconnections between various factors influencing service recovery, thereby offering more nuanced insights. The major contribution of this research lies in bridging the gap between theoretical principles and practical application. By embedding the theories into a recovery process, the research demonstrated how theoretical principles can guide practical strategies. This novel contribution not only deepened the understanding of service recovery dynamics but also offered a blueprint for airlines to improve their service recovery effectiveness, thereby enhancing customer satisfaction, loyalty, and trust.

This research addresses this gap by providing an integrative framework that acknowledges the multi-dimensionality of service recovery. This novel theoretical construct underscores the role of justice perceptions in shaping customers' responses to service failures, the need for trust and commitment in restoring customer relationships, and the importance of aligning recovery strategies with stages of service failure. Moreover, by embedding the theories within the stages of service recovery, the research highlighted the sequential, evolving nature of service recovery. This theoretical contribution offers a blueprint for academics and practitioners alike to unpack the complexity of service recovery and devise effective strategies.

The practical contribution of this research is the implementation of the developed service recovery framework into the existing Customer Relationship Management (CRM) systems, ultimately paving the way for a more comprehensive and efficient service recovery process in the airline industry.

Limitations and Future Directions

The research was limited by its dependence on self-reported data, which may be subject to bias. Self-reporting often relies on respondents' memory and honesty, which can lead to inaccuracies. Moreover, the potential for social desirability bias, where respondents answer in a manner, they perceive to be socially acceptable rather than truthful, can also distort findings. While this research provides significant insights into the service recovery strategies in the context of the Libyan Airline, these limitations must be kept in mind while interpreting the findings. Future research can address these limitations by broadening the context, using a wider theoretical framework, considering individual customer differences and external factors, focusing on the temporal aspect of service recovery, collecting longitudinal data, and using different data collection methods to validate findings.

In light of the findings and limitations of this research on service recovery strategies in the Libyan Airline industry, several potential avenues for future research emerge, offering promising directions to advance the understanding of service recovery processes. Firstly, considering the context-specific nature of this study, future research could extend the scope to other airlines in different geographical regions. Comparisons between airlines from diverse cultural backgrounds, market structures, regulatory environments, and service philosophies could enrich the understanding of how contextual factors shape service recovery strategies. Furthermore, investigating service recovery in other service industries, such as hospitality, banking, or healthcare, could offer valuable cross-industry insights. Secondly, the theoretical foundation of this study, primarily rooted in Justice Theory and Commitment-Trust Theory, leaves room for additional theoretical perspectives. Lastly, the strategic implications of service recovery for customer relationship management could be a fruitful area for future research. Understanding how effective service recovery efforts can turn dissatisfied customers into loyal advocates, or how poor service recovery can damage customer relationships, could have significant strategic implications for airlines and other service firms. While this research has made significant strides in understanding service recovery strategies in the Libyan Airline, it has also opened exciting possibilities for future research.

By broadening the context, integrating more theoretical perspectives, considering individual customer differences, incorporating external factors, delving into the temporal aspect, employing diverse data collection methods, and exploring strategic implications, future research can continue to advance the understanding of service recovery processes and their critical role in service management.

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CONTRIBUTIONS OF SMALL AND MEDIUM ENTERPRISES (SMEs) ON ECONOMIC GROWTH IN EUROPE

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ABSTRACT

Globalisation and technological changes enable small and medium-sized enterprises (SMEs) to reach new opportunities. The importance of SMEs has also been recognised in the European Union (EU) countries by setting the framework to promote entrepreneurship, simplifying the regulatory and policy environment for SMEs and removing the remaining barriers to their development. SMEs are the most important driver of economic growth and play a significant role in employment creation and, therefore, in fighting unemployment. In recent years, the macroeconomic environment has been more favourable for growth of SMEs, particularly due to real growth in all components of aggregate demand. Most enterprises active within the EU is SMEs. Considering the employment and other performance figures, SMEs are also contributing towards delivering the key objectives of the Europe 2020 strategy to reach smart, sustainable and inclusive growth. SMEs are a vital part of national economies contributing to employment and value added. Qualitative research was used in this study. An extensive literature review regarding the importance of SMEs in the European economy was explored. This study aimed to investigate the contributions of SMEs on economic growth in Europe. This aim was achieved by an extensive literature review which revealed that SMEs positively contribute to economic growth in Europe. The study establishes that SMEs make positive contributions to economic growth in Europe. SMEs are vital to the economic growth of any country. The successful establishment of SMEs leads to employment opportunities and growth in all economies. Based on the study results, it is recommended that the government of Europe should establish a new support agency for SMEs. The European government should improve the public's view of SMEs. Additionally, there is a recommendation for reforms in the European education system to equip SMEs with the skills they need to thrive.

Keywords: SMEs, economic growth, gross domestic product, wealth creation, work opportunities.

INTRODUCTION

Globalisation and technological changes have empowered small- and medium-sized enterprises (SMEs) to access new opportunities. The significance of SMEs in the European Union (EU) countries is evident through the establishment of frameworks that promote entrepreneurship, simplify regulatory and policy environments and remove barriers to their development. SMEs are the most important driver of economic growth and play a significant role in employment creation and combatting unemployment (Rotar, Pamic & Bojnec, 2019). In recent years, the macroeconomic environment has been more favourable for growth of SMEs, particularly due to real growth in all components of aggregate demand. The vast majority of enterprises active within the EU is SMEs. Considering the employment and other performance figures, SMEs also contribute towards delivering the key objectives of the Europe 2020 strategy to reach smart, sustainable and inclusive growth. SMEs are a vital part of national economies, contributing to employment and value added (Rotar, Pamic & Bojnec, 2019). In the EU-28, SMEs account for more than 99 percent of all enterprises in the non-financial business economy, of which 93 percent are micro enterprises, less than 6 percent are small enterprises and less than 1 percent are medium enterprises. Micro enterprises contribute to approximately 30 percent of total employment, whereas SMEs contribute approximately 20 percent and 17 percent of total employment, respectively. Altogether, SMEs contribute to more than 66 percent of total EU employment, the rest contribute to large enterprises' employment. Additionally, from a value-added perspective SMEs contribute around 57 percent of total value added with more equally distributed shares among SMEs (Muller, Julius, Herr, Koch, Peycheva, & McKiernan, 2017). Encouraging the growth of SMEs in the EU contributes to economic growth and

employment, therefore, reaching the key objectives of the Europe 2020 strategy. In contrast to large enterprises, SMEs are able to respond to the needs in the economy faster due to their flexibility and capability of networking (Alpkan, Yilmaz, & Kaya, 2007). On the other hand, small versus large often represent the barrier, considering the general business environment, access to strategic resources and exporting opportunities of SMEs (Krammer, Strange, & Lashitew, 2018; Paul, Parthasarathy, & Gupta, 2017).

BACKGROUND OF THE STUDY

Definitions of Small and Medium Enterprises in Europe

Companies are classified as SMEs by the EU if the number of their employees does not exceed 250 and if they are independent from large companies. In addition, their annual turnover may not be more than 50 million euro, or their annual balance sheet beyond 43 million euro. (Braun & Hadwiger, 2011). The EU definition is: “The category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro and /or an annual balance sheet total cost not exceeding 43 million euro” (Dalberg, 2011). SMEs are further subdivided into micro, small and medium-sized enterprises (50 to 249 employees). Larger enterprises are defined as those with 250 or more employees (D’Imperio, 2012).

The EU’s Director General (DGXXIII), on the other hand, defines businesses as follows: micro (0 to 9 employees), small (10 to 99 employees), medium (100 to 499 employees) and large (500+ employees) (Anderson, 2011). The Department of Trade and Industry in the UK and governments all around the EU usually use the following definitions: micro firm: 0 to 9 employees; small firm: 10 to 49 employees; medium firm: 50 to 249 employees and large firms: over 250 employees (Katua, 2014).

In the SME definition of the EU, enforced on 1 January 2005, there is an “independence” dimension, together with the criteria of annual turnover and the stated number of employees, where an independent SME is described as “the one where 25 percent or more of the enterprise’s capital (or equity) is not undertaken by an enterprise or that its capital is not owned by enterprises that are not defined as SMEs” (Karadag, 2015). SMEs also include people who are self-employed (with or without employees) and family businesses, irrespective of their legal form, if they are engaged in economic activity and can be considered an autonomous/independent entity (Eurofound, 2013).

Contributions of Small and Medium Enterprises in Europe

SMEs are the backbone of Europe’s economy: there are 23 million SMEs in Europe constituting around 99 percent of all undertakings and 57 percent of which are sole proprietorships. They contribute two thirds of the total private-sector employment, represent 80 percent of the total job creation and produce more than half of the European Union added value (Lopriore, 2009). SMEs in Europe account for 99 percent of all enterprises, employ 67 percent of all workers and contribute 58 percent of gross value added (GVA) (D’Imperio, 2012). According to the 27 EU member states, SMEs are responsible for 62 percent of the workforce and contribute 59 percent of gross value added. It is essential to notice that its gross value-added share into gross domestic product (GDP) accounts for almost 51 percent (AlMaimani & Johari, 2015).

In the European Union, SMEs are economically significant, constituting 98 percent of an estimated 19.3 million enterprises, providing around 65 million jobs. The average European business provides employment for four people, including the owner/manager. SMEs account for roughly two-thirds (66 percent) of employment within the EU (Katua, 2014). There are 20.5 million enterprises in the European Economic Area (EEA) and Switzerland, providing employment for 122 million people (Katua, 2014).

Ninety-nine percent of all EU enterprises are SMEs, employing almost 100 million people. This strong SME base, through its taxation on profit and wages, provides support (through monetary contributions) to the social needs of European countries (Smit, 2012). The European Union Commission Report of 2005 notes that SMEs contribute greatly to the economy of Europe; 99 percent of all companies are SMEs, which provide around 75 million jobs and in some industries like textile, construction and furniture, they provide around 80 percent of jobs (Inyang, 2013).

Between 2002 and 2010, the net employment numbers in the EU rose substantially, by an average of 1.1 million jobs (or 0.9 percent) each year. Eighty-five percent of this net employment growth was registered as employment growth in the SME size class. This share is considerably higher than the share of the SME size class in total employment, which was 67 percent in 2010 (De Kok, Vroonhof, Verhoeven, Timmermans, Kwaak, Snijders & Westhof, 2011). SMEs play an even more prominent role in Italy, Portugal and Spain, where they account for 20 percent more employment than the European average; therefore, sustained economic recovery in Europe thus hinges on restoring the health of SMEs across the EU (Tran & Ott, 2013).

Challenges Faced by Small and Medium Enterprises in Europe

Eurozone firms perceive that their clients have the least difficulty dealing with regulators and licensing in their home country, with 33 percent saying that this is not a problem. The same group, however, see their clients as having a major challenge in dealing with regulators and licensing in other countries – 34 percent doing so – more than the countries in the rest of Europe and the rest of the world (D’Imperio, 2012). According to a 2008 study by the European Commission, most difficulties encountered by SMEs are related to the amount of administrative burden, the access to enough finance, the level of taxation and access to public procurement (Lopriore, 2009). Financing of SMEs is limited, particularly when compared to commercial debt for large firms and microfinance. When asked to name the most severe obstacle to growth, SMEs worldwide listed financing constraints as the second most-severe obstacle, while large firms placed it only fourth (Dalberg, 2011).

SMEs in many member states have experienced an increasing reluctance from private banks to lend them money. Between 2007 and 2010, the share of unsuccessful loan applications of SMEs rose in 19 of the 20 member states. In 2010, the highest shares of unsuccessful applications were found in Bulgaria (36 percent), Ireland (27%), Latvia (26%), the Netherlands (23%), Lithuania and the UK (21% each), while the lowest shares were in Finland, Malta, Cyprus, Poland and Italy (up to 5% each) (Eurofound, 2013). SMEs in the euro area experienced a further deterioration in the availability of bank loans and overdrafts between April and September 2012, even if the level was better than in 2009. Some 15 percent of SMEs reported that their loan application was rejected (compared to 13 percent in the same period of 2011), being the highest level since 2009. The highest rejection rates were found in Greece, Ireland, the Netherlands and Portugal, while acceptance was high in Austria, Finland and Germany (Eurofound, 2013).

STATEMENT OF THE PROBLEM

SMEs in Europe have experienced an increasing reluctance from private banks to lend them money. SMEs in the euro area experienced a further deterioration in the availability of bank loans and overdrafts. Some of SMEs in Europe reported that their loan applications were rejected. When asked to name the most severe obstacle to growth, SMEs in Europe listed financing constraints as the second most-severe obstacle.

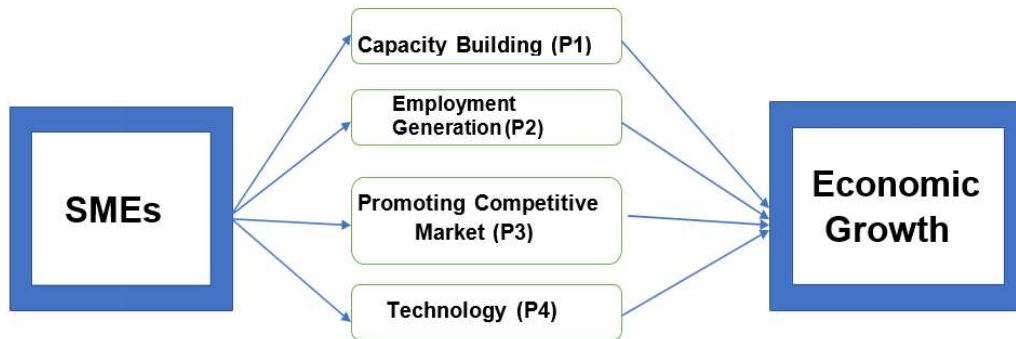
OBJECTIVES OF THE STUDY

The following theoretical objectives were formulated:

1. To carry out a literature study on SMEs in Europe
2. To carry out a literature study on economic growth in Europe.

CONCEPTUAL FRAMEWORK

Figure 1: Conceptual framework for SMEs and economic growth



Source: Muthuraman, Al Haziati, Veerasamy and Al Yahyaei (2020)

SME and Economic Development

Carree and Thurik (1998) studied the effect of small firms on industry output growth and found positive correlations between the measure of entrepreneurship and growth. The outcome of their study was that the share of small firms has an impact on industry output, with that industry and have better performance. Lal and Clement (2006) investigated the role of individual enterprises in relation to economic development. The study indicated that reforms in market motivate the individual enterprises and a way to higher economic growth. The results of the study concluded that by fostering entrepreneurial activities, India can generate additional economic growth. The study by Thurik (2008) provided insights into emerging economies and highlighted the view that entrepreneurship has emerged as an important element in the organisation of economies. Smith (2010) studied entrepreneurship and economic growth in terms of the function of entrepreneurship in economic growth. The study confirmed that the level of entrepreneurship has a positive effect on economic growth. Shrivastava & Shrivastava (2013) emphasised the fact that entrepreneurs help to create new jobs for the people and, hence, assist with economic development. Toma, Grigore & Marinescu (2014) studied the interconnectivity of economic development and entrepreneurship. The paper developed a theoretical model that showed some of the main factors that related to the association of entrepreneurship and economic development.

Capacity Building

Researchers have made significant efforts to deal with the problem of measurement difficulties as well by constructing measures of capacity building. It has been observed that in the light of the definition put forth by Teece, Pisano and Shuen (1997) of dynamic capabilities, the research has placed more emphasis on a firm's ability to integrate, build and reconfigure its internal competencies. However, there is not enough evidence in the literature on the dynamic capabilities employed to integrate, build and reconfigure external competencies. Extant strategic management theory highlights that firms use alliances as a medium for acquiring external competencies, technology innovation and enhancing core business activities (Mitchell & Canel, 2013).

Employment Generation

According to Birch (1979), one of the SMEs potentials is to generate employment and thus reduce unemployment in the economy. Employment contribution of small business has been the focus of policymakers at all levels of the economy. Ayyagari, Demirguc-Kunt and Maksimovic (2011), in a unique cross-country database analysis of 99 countries, found that small firms with less than 100 employees and mature firms (firms older than 10 years) have the largest shares of total employment and job creation ability with the young small firms standing out in job creation. The International Labour Office (2013) publication found empirical evidence confirming small businesses are the engine of job creation in the developing economies. The job creation or destruction dynamics are driven by births and deaths, expansions and contractions and in- and out-migration of firms.

Promoting Competitive Market

According to Kirzner (1983), it is not the entrepreneur who causes disequilibrium. Entrepreneurship, to him, involves identifying market opportunities. The entrepreneur is the one who correctly anticipates where the next imperfection will be. According to Low, Chapman and Sloan (2007), market orientation is described as a customer-led practice. This is because, market orientation requires organisations to monitor rapidly changing customer needs and wants, determine the impact of such changes on customer satisfaction, enhance the innovation success and organisations' competitive advantages. Understanding the present and future needs of customers is crucial for organisations to foster the culture of innovation in the organisation to continuously improve and develop products and services that meet customer wants and needs (Pelham and Wilson, 1995). On the other hand, competitor orientation involves actively monitoring all existing and potential competitors in the marketplace and collecting competitive intelligence to differentiate the competitors' approaches (Narver & Slater, 1990). The key objective of market-oriented organisations is to be attentive towards the competitor's activities and consider this as a source of ideas for new product development. In fact, a greater understanding of competitor orientation may reduce the failure of new products (Mahmoud, Blankson, Owusu-Frimpong, Nwankwo & Trang, 2016).

Technology

SMEs are more flexible and can easily adapt the technology for better progress. SMEs are better placed to develop and implement new ideas. The flexibility of SMEs, their simple organisational structure, their low risk and receptivity are the essential features facilitating them to be innovative (Mahmoud, Blankson, Owusu-Frimpong, Nwankwo & Trang, 2016). Research has shown that the introduction of new technology in SMEs has a major impact on the structure and functioning of those businesses (Mahmoud, Blankson, Owusu-Frimpong, Nwankwo & Trang, 2016). For instance, several SMEs in the United Kingdom, France and Germany have adopted "Internet Business Solution" which has resulted in huge cost savings to the organisations. SMEs can benefit from the new process, techniques, or new ideas of production. SMEs with new technology may be able to overcome diseconomies of scale to compete with large enterprises. To compete in this competitive market, SMEs must monitor technological development actively and they need technology to meet or exceed the expectations of customers (Islam & Nasira, 2017).

CONTRIBUTIONS OF THE STUDY

This study is important in several ways. It contributes to the existing body of knowledge since it is an addition to the available literature on SMEs and economic growth. It is also an important source of information on research methodologies for studies in SME management. Furthermore, the study provides a specific conceptualisation of the relationship between SMEs and economic growth, while offering information regarding the contributions of SMEs on economic growth. It emphasises that economic conditions can be improved by enhancing SMEs conditions that are considered in this study.

RATIONALE OF THE STUDY

SMEs are widely seen as engines of economic growth. In developed countries, they are credited with creating jobs, delivering innovation and raising productivity. But SMEs in developing countries are not currently meeting that promise. While there is no lack of interest in promoting entrepreneurship in poor countries, we do lack evidence about what helps, or even what represent the biggest barriers to growth (Lekhanya, 2015).

RESEARCH METHODOLOGY

A qualitative research method was used in this study, employing a systematic approach to collect and analyse non-numerical data from various sources such as articles, dissertations, the internet, theses, and textbooks. Electronic databases including Emerald, Science Direct, EBSCO-Host, Nexus, Sabinet, and Sage were utilised to gather relevant data. The collected data was reviewed to understand how small and medium enterprises contribute to the economic growth in Europe. A within-study literature analysis was conducted to identify key themes. An in-depth examination of the data and findings was performed to gain a deeper understanding of the research and its implications

RESULTS

This study examined the relationship between SMEs and economic growth in Europe. This aim was achieved by developing four premises. This section discusses the results of each of these premises.

The first premise (P1) suggests a significant positive relationship between capacity building and economic growth. The results of the study show that capacity building has a positive contribution on economic growth. Extant strategic management theory highlights that firms use alliances as a medium for acquiring external competencies, technology innovation and enhancing core business activities (Mitchell & Canel, 2013).

The second premise (P2) suggests a significant positive relationship between employment generation and economic growth. The results of the study show that employment generation has a positive contribution on economic growth. Ayyagari *et al.* (2011), in a unique cross-country database analysis of 99 countries, found that small firms with less than 100 employees and mature firms (firms older than ten years) have the largest shares of total employment and job creation ability with the young small firms standing out in job creation.

The third premise (P3) suggests a significant positive relationship between promoting a competitive market and economic growth. The results of the study show that promoting a competitive market has a positive contribution on economic growth. The key objective of market-oriented organisations is to be attentive to competitors' activities and consider these as a source of ideas for new product development. In fact, a greater understanding of competitor orientation may reduce the failure of new products (Mahmoud *et al.*, 2016).

The fourth premise (P4) suggests a significant positive relationship between technology and economic growth. The results of the study show that technology has a positive contribution on economic growth. For instance, several SMEs in the United Kingdom, France and Germany have adopted "Internet Business Solutions", which has resulted in huge cost savings for the organisations. SMEs can be benefited from new processes, techniques, or new ideas of production. SMEs with new technology may be able to overcome diseconomies of scale so as to compete with large enterprises. To compete in this competitive market, SMEs have to monitor technological development actively. SMEs need technology to meet or exceed the expectations of customers (Islam & Nasira, 2017).

This study aimed to investigate the contributions of SMEs on economic growth in Europe. This aim was achieved by an extensive literature review, which revealed that SMEs have positive contributions on economic growth in Europe. The Obama administration singled out the promotion of high growth and innovative entrepreneurship as the key elements of the USAs Innovation Strategy for achieving sustainable growth and quality jobs (Tustin, 2015).

Despite the availability of previous research studies focusing on small enterprises in Europe, one major research gap still exists, which creates a need for further research in the area. This gap pertains to the scant evidence of studies that focus on the contributions of SMEs on economic growth in Europe. Few empirical studies that are available focus on specific matters regarding SMEs in Europe and completely disregard the dimensions discussed in this study. Thus, this study is intended to address these gaps by investigating how various SME conditions can be harnessed to improve economic growth in Europe.

CONCLUSIONS

In the past decades, there has been a growing interest regarding the concepts of economic development and entrepreneurship. Researchers have concluded that although economic development theory can still be argued to lack a general theory of entrepreneurship, one that could encompass a variety of development outcomes, progress has been made in extending the notion and understanding of entrepreneurship in economic development (Naudé, 2008). Small businesses have earned government recognition in Europe because they have been important in generating employment, complementing the work of large firms and in developing local resources (Al-Markazi, 2001). It is expected that small and medium enterprises, now representing the largest category in the economic sector, will complement the activities of largescale businesses as industrialisation gains pace in Europe. This will come about through their integration into the mainstream of industrial development, since Europe is seeking to diversify its production base and also to develop a viable private sector capable of sustaining and increasing economic growth (Al-Kharusi, 2003). There is a need to emphasise the role of SME entrepreneurs in economic development and to ascertain

the role of SMEs in capacity building, employment generation, and promoting a competitive market and technological development for the economic growth in Europe.

The study concludes that SMEs make positive contributions to economic growth in Europe, emphasising their vital role in the economic development of any country. The successful establishment of SMEs leads to employment opportunities and growth in all economies. Europe represents both significant opportunities and barriers for local SMEs. It is evident from the EY G20 Entrepreneurship Barometer report that Europe embraces the culture of entrepreneurship, a very important element needed to propel it to success. However, there are other equally important elements such as access to funding, support and education and training that need strengthening to truly build a thriving entrepreneurial society.

The importance of SMEs at all levels is essential to a country's economic development, wealth and employment creation. Entrepreneurship was identified as a specialised discipline that can be taught and learned. Entrepreneurial development is the origin of successful entrepreneurial activity. Although, some are born entrepreneurs, it is possible to develop individuals to become entrepreneurs. This is where entrepreneurial education and training play an important role. There is a need to emphasise the role of SME entrepreneurs in economic development and to ascertain the role of SMEs in capacity building, employment generation, promoting a competitive market and technological development for the economic growth of America.

IMPLICATIONS OF THE STUDY

SME owners/managers and all relevant stakeholders, including the European government, must possess clear knowledge and understanding of related theories that may be useful to the survival and growth. New theoretical discoveries about the economic benefits of SMEs should be developed and implemented. The importance of theoretical frameworks and models for economic growth of SMEs in Europe is lacking and needs more attention. This means that European SMEs owner/managers need to recognise and understand the importance of the SME industry in the European economy.

FUTURE STUDY

A future study should provide a direction for the development of new SMEs and the expected role of SME entrepreneurs for the contribution to the economic development in Europe through capacity building, employment generation, promoting a competitive market and technological development. An intensive study will provide recommendations to the European government on the matter of urgency to assist prospective entrepreneurs to have access to finance and necessary information relating to business opportunities, modern technology, raw materials, market, plant and machinery. This would enable them to reduce their operating cost and be more efficient to meet market competition. For the European government to succeed in reinventing the future of SMEs, it must extend the current reforms to the educational system to make it more functional, relevant, need-oriented and driven. The thrust and emphasis should be on modern technology and practical technological and entrepreneurial studies aimed at producing entrepreneurs.

Future studies should include similar research covering both urban and rural areas in Europe. In-depth, qualitative research could help to better understand the nature of challenges facing the survival and growth of SMEs in Europe. In addition, future studies should provide direction for the development of new SMEs and the expected role of SME entrepreneurs in contributing to economic growth in Europe. Finally, future studies could provide recommendations to the European Government on entrepreneurs' access to finance and necessary information relating to business opportunities, modern technology, raw materials, market, plant and machinery. This will greatly assist SMEs to grow and positively contribute to economic growth in Europe.

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EXAMINING THE CONTRIBUTIONS OF SMALL AND MEDIUM ENTERPRISES (SMEs) ON ECONOMIC GROWTH IN AFRICA

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ABSTRACT

Small and medium enterprises (SMEs) are the engines that drive world economies and the stepping stone to industrialisation for both developing and developed economies. The businesses account for 99 percent of all businesses in developing countries, thereby signifying their importance. For instance, SMEs account for 52 percent of the private workforce and contribute 51 percent to the United States of America's (USA) gross domestic product (GDP), while in the United Kingdom (UK) they are associated with 62 percent of total employment and contribute 25 percent to the GDP. As with the USA and UK, SMEs contribute to 79 percent of Italian employment and 63 percent and 60 percent of France and Germany employment respectively. In China, SMEs employ 80 percent of the urban population and contribute 60 percent of GDP. Likewise, at the heart of Africa's encouraging growth are small and medium enterprises, commonly known as SMEs. In the sub-Saharan Africa region, SMEs account for more than 95 percent of all firms. Qualitative research was used in this study and an extensive literature review regarding the importance of SMEs in the African economy was conducted. This study aimed to examine the impact of SMEs on economic growth in Africa. This aim was achieved by the literature review, which revealed that SMEs make positive contributions to the economic growth in Africa. The study concludes that SMEs have positive contributions on economic growth in Africa. SMEs are vital to the economic growth of any country. The successful establishment of SMEs leads to employment opportunities and growth in all economies. In view of the study results, it is thus recommended that the governments of African countries should establish a new support agency for SMEs and African governments should improve the public's view of SMEs. It is further recommended that the education system in African countries should reform in order to provide SMEs with the skills they need to thrive.

Keywords: SMEs, challenges, contributions, economic growth, gross domestic product.

INTRODUCTION

Small and medium enterprises (SMEs) are the engine that drives world economies and the stepping stones to industrialisation for both developing and developed economies. The businesses account for 99 percent of all businesses in developing countries thereby signifying their importance (Fjose, Grunfeld & Green, 2010). For instance, SMEs account for 52 percent of the private workforce and contribute 51 percent to the gross domestic product (GDP) in the United States of America (USA) (Longenecker, Carlos, & Petty 2012), while in the United Kingdom (UK) they are associated with 62 percent of total employment and contribute 25 percent to the GDP (Burns, 2001; Day, 2004). As with the USA and UK, SMEs contribute to 79 percent of Italian employment and 63 percent and 60 percent of France and Germany's employment respectively (Burns, 2001). In China, SMEs employ 80 percent of the urban population and contribute to 60 percent of the GDP (Sham, 2014). Likewise, at the heart of Africa's encouraging growth are small and medium enterprises, commonly known as SMEs. In the sub-Saharan Africa region, SMEs account for more than 95 percent of all firms (Hatega, 2007; Kauffmann, 2005). It is notable that SMEs are even more significant given their role to reduce poverty, boost countries' GDP and provide employment for the majority of the population (Muriithi, 2017). The sector is particularly important due to its simple approach in response to the majority of Africans' needs by offering affordable goods and services at reasonable terms and prices, as well as being a source of income and employment (Kauffmann, 2006). SMEs businesses range from very small micro-firms run by one or two persons and very slow growth or no growth to fast growing medium businesses earning millions of dollars and the majority employing as many as 250 employees (Fjose *et al.*, 2010). The businesses' definitions also vary from those requiring

little money to start to others the demand millions of dollars to start (Adisa, Abdulraheem, & Mordi, 2014). Various sectors in different parts of the world focus on certain indicators to define SMEs, among them the number of employees, total number of assets, annual turnover and capital investments (Gibson & Vaart, 2008).

LITERATURE REVIEW

Definitions of Small and Medium Enterprises in Africa

In Tanzania, SMEs have been categorised into micro (up to four employees and up to 5 million shillings), small (between 4 and 49 employees and up to 200 million shillings) and medium enterprises (from 50 to 99 employees or between 200 and 800 million shillings) (Anderson, 2011). In Kenya's manufacturing sector, SMEs are defined as enterprises with full-time employees not exceeding 100 or annual sales turnover not exceeding Ksh150 million (Kedogo, 2013).

From a Zimbabwean perspective, the Ministry of Small to Medium Enterprises policy and strategy framework has defined SMEs as those that are registered in terms of their legal 'status' and employing anywhere between six (6) to 100 workers (Gwangwava, Manuere, Kudakwashe, Tough, & Rangarirai, 2010). Still, the Ministry of Small to Medium Enterprises defines a small enterprise as one that employs not more than 50 people and acts as a registered entity and medium enterprises are firms employing up to 75 and 100 people. The Small Enterprise Development Corporation defines an SME as a firm that has not more than 100 employees with maximum annual sales of up to USD830 000 (Gwangwava *et al.*, 2010).

According to Morenikeji and Oluchukwu (2012), the National Council of Industries in Nigeria defines SMEs as follows:

Micro-scale industry: this is an industry with total capital employed of not more than N15 million working capital but excluding cost of land and/or a labour size of not more than 10 workers.

Small-scale industry: this is an industry with total capital employed of over N1.5 million but not more than N50 million, including working capital but excluding cost of land and/or labour size of 11 to 100 workers.

Medium-scale industry: this is an industry with a total capital employed of over N50 million but not more than N200 million, including working capital but excluding cost of land and/or labour size of 101 to 300 workers.

Large-scale industry: this is an industry with a total capital employed of over N200 million, including working capital but excluding cost of land and/or labour size of over 300 workers.

In Egypt, micro enterprises have one to four (1 to 4) employees, small enterprises have five (5) to 14 employees and medium enterprises have 15 to 49 employees with \$1m annual turnover. In Ghana, micro enterprises have one to five (1 to 5) employees and \$10K annual turnover, small enterprises have six (6) to 29 employees and \$100K annual turnover and medium enterprises have 30 to 39 employees with \$1M annual turnover (D'Imperio, 2012:). The Ghana Statistical Service (GSS) considers firms with less than 10 employees as small-scale enterprises and their counterparts with more than 10 employees as medium and large-scale enterprises (Ocloo, Akaba & Worwui-Brown, 2014). However, the National Board of Small-Scale Industries (NBSSI) in Ghana applies both the fixed asset and number of employees' criteria. It defines a small-scale enterprise as one with not more than nine (9) workers and has plant and machinery not exceeding 1 000 Ghana Cedis (Ocloo *et al.*, 2014).

Contributions of Small and Medium Enterprises in Africa

SMEs have benefited the macro-economy of several developing countries through creating employment, motivating people in entrepreneurship, generating income and providing encouragement for social and political stability (UK Essays, 2015). SMEs cover about 90 percent of African business operations and contribute to over 50 percent of African employment and the GDP. They are increasingly recognised as a leading vehicle for economic development, a prime source of employment, revenue generation, innovation and technological advancement in both developed and developing nations (Neneh & Van Zyl, 2011).

In Kenya, SMEs contribute to 18 percent of the national GDP, while in Morocco, the SME sector accounts for 93 percent of the industrial firms and provides 46 percent of the employment. Some of the less developed SMEs

can mainly be found in Zimbabwe, Tanzania, Kenya, South Africa and Nigeria (UK Essays, 2015). In the context of the developing world, SMEs in Africa constitute the larger proportion of businesses and employ a significant portion of the population. In Ghana, official statistics indicate that about 70 percent of enterprises are micro and small sized and that about 40 percent of Ghana's gross national income is contributed by the private sector, which is dominated by SMEs (Anane, Cobbinah & Manu, 2013).

The activities of SME enterprises in Africa are of vital importance to the promotion of economic growth, job creation and the mitigation of poverty. It has long been debated that SMEs are pivotal to employment creation and economic growth, particularly in countries with a high unemployment rate, such as South Africa, estimated at up to 40 percent (Smit, 2012). In Kenya, 90 percent of all enterprises are SMEs, providing employment to over 60 percent of the total employed population. In Zimbabwe, 15 percent of the total formal employment is in the SME sector (Katua, 2014). SMEs in Ghana have been crucial in mobilising funds, which otherwise would have been idle. SMEs have been recognised as a seed-bed for indigenous entrepreneurship, are labour intensive, employing more labour per unit of capital than large enterprises and promoting indigenous technological know-how (Ocloo *et al.*, 2014).

Furthermore, due to their regional dispersion and their labour intensity, the argument can be made that small-scale production units can promote a more equitable distribution of income than large firms in Ghana can. They also improve the efficiency of domestic markets and make productive use of scarce resources, thus facilitating long-term economic growth (Ocloo *et al.*, 2014). SMEs in Ghana continue to contribute significantly to economic development, especially in the areas of employment creation, income generation and diffusion of intermediate technology. The 2010 Population and Housing Census in Ghana suggests that about 86 percent are in the private informal sector, which is dominated by SMEs. Ninety-two (92) percent of businesses in Ghana are SMEs, which provide about 85 percent of manufacturing employment, contributing about 70 percent to Ghana's GDP (Anane *et al.*, 2013).

It is estimated that SMEs account for 70 percent of Ghana's GDP and 92 percent of its business. They also make up 98 percent of formalised business in South Africa and 70 percent of the manufacturing sector in Nigeria (Aigbavboa & Thwala, 2014). Studies conducted on SMEs in Nigeria have noted the promotion of entrepreneurship among SMEs by contributing significantly to tackling unemployment. They help drive national development in developed economies. SMEs have gained prominence as seedbeds of innovation, inventions and employment generation (Inyang, 2013). The introduction of enterprise training in educational institutions in the Niger Delta region of Nigeria has enhanced the development of entrepreneurship and entrepreneurial skills and helped change the mindset of the youth to venture into SME operations after graduation rather than hostage-taking or kidnapping to extract ransoms (Inyang, 2013).

The United Nations Industrial Development Organisation (UNIDO) estimates that SMEs represent over 90 percent of private businesses and contribute to more than 50 percent of employment and to the GDP in most African countries. (Mahembe, 2011). They comprise over 90 percent of African business operations and contribute to over 50 percent of African employment and GDP (Ramukumba, 2014). Unemployment is most severe among Africans, especially women and those with educational qualifications below a matriculation. If employed, however, people from these groups are disproportionately likely to be employed in SMEs. Those without matriculation qualifications are statistically far more likely – some 19 percent more likely – to be employed by SMEs than those holding higher qualifications (SBP Alert, 2013).

Challenges Faced by Small and Medium Enterprises in Africa

Despite the potential role of SMEs to accelerate growth and job creation in developing countries, several bottlenecks affect their ability to realise their potential. SME development is hampered by several factors, including finance, lack of managerial skills, equipment and technology, regulatory issues and access to international markets (Abor & Quartey, 2010). Growth opportunities in sub-Saharan Africa are severely hampered by access to finance and a stable supply of electricity. Business owners consider access to electricity and finance as the most important challenges when operating and developing businesses in Africa. Micro and very small businesses in South Africa provided more than 55 percent of total employment and 22 percent to the GDP in 2003 (Fjose, Grunfeld & Green, 2010).

SMEs are weak in Africa because of small local markets, undeveloped regional integration and very difficult business conditions, which include cumbersome official procedures, poor infrastructure, dubious legal systems and

inadequate financial systems and unattractive tax regimes (Kauffmann, 2005). That is, many firms stay small and informal and use simple technology that does not require great use of national infrastructure. This is a fact that hinders them from becoming competitive in the market place (Ocloo *et al.*, 2014).

SMEs in developing countries face challenges that most SMEs in developed countries do not have, such as lack of government support, burdensome regulations and responsibility for job creation, coupled with a lack of skills and infrastructure, the absence of safety nets and representative bodies (Vivier, 2013). Electricity and access to finance are considered by far the most important hindrances by businesses in sub-Saharan Africa. While electricity is considered the most important by close to 25 percent, access to finance is ranked as the second most important hindrance by about 18 percent. Africa is the only region where electricity is considered the most important hindrance (Fjose *et al.*, 2010). Several developments and long-standing issues have combined to endanger the ability of small firms in Africa to survive in today's global economic system. Some of the key challenges include globalisation of markets and production; lack of financial support; poor infrastructure; international expansion issues; and government assistance and support (Ekeledo & Bewayo, 2009).

Entrepreneurial Framework Conditions

Entrepreneurial framework conditions (EFCs) is a framework used by the Global Entrepreneurship Monitor (GEM) to diagnose and promote the entrepreneurial activity around the world, consisting of nine dimensions (financing, government policies, taxes and bureaucracy, government programmes, school-level entrepreneurship education and training, post-school entrepreneurship education and training, Research and Development (R&D) transfer, access to commercial and professional infrastructure, internal market dynamics, domestic market burdens, access to physical and services support, and social and cultural norms) (Rodríguez-Aceves, Mojarro-Durán & Muñíz-Ávila, 2019).

EFCs are one of the most important components of any entrepreneurship ecosystem. The state of these conditions directly influences the existence of entrepreneurial opportunities, entrepreneurial capacity and preferences, which in turn determines business dynamics and growth (Gabor, 2018). EFCs depicts the multifaceted features of entrepreneurship recognising the proactive, innovative and risk-responsive behaviour of individuals always in interaction with the environment. EFCs derive from the basic assumption that national economic growth is the result of personal capabilities of individuals to identify and seize opportunities and that this process is affected by environmental factors that influence individuals' decisions to pursue entrepreneurial initiatives (Herrington & Coduras, 2019). Scientific consensus agrees that entrepreneurial activity is related to economic growth. However, the role of entrepreneurship in economic growth can be strongly influenced by the quality of governance or the business environment in which economic growth occurs (Khyareh & Amini, 2021).

Table 1: Entrepreneurial Framework Conditions

Entrepreneurial framework conditions	Description
Entrepreneurial Finance	Availability of financial resources for new and growing firms (including equity, debt, grants and subsidies, private investors, etc.)
Government Policies: Support and Relevance	The extent of public policies focused on supporting new and growing firms
Government Policies: Taxes and Bureaucracy	The extent to which taxes and regulations do not harm new and growing firms
Government Entrepreneurship Programmes	The presence of programmes focused on enhancing new and growing firms
Entrepreneurial Education at School Stage	Attention given to building creativity, self-confidence, or basic understanding of market of entrepreneurial principles in primary and secondary schools
Entrepreneurial Education at Post School Stage	Availability of programmes that prepare for starting and managing new or growing firms at all types of higher educational institutions including universities, colleges, vocational or professional schools
R&D Transfer	Availability of new knowledge and affordability of new technologies for new and growing firms

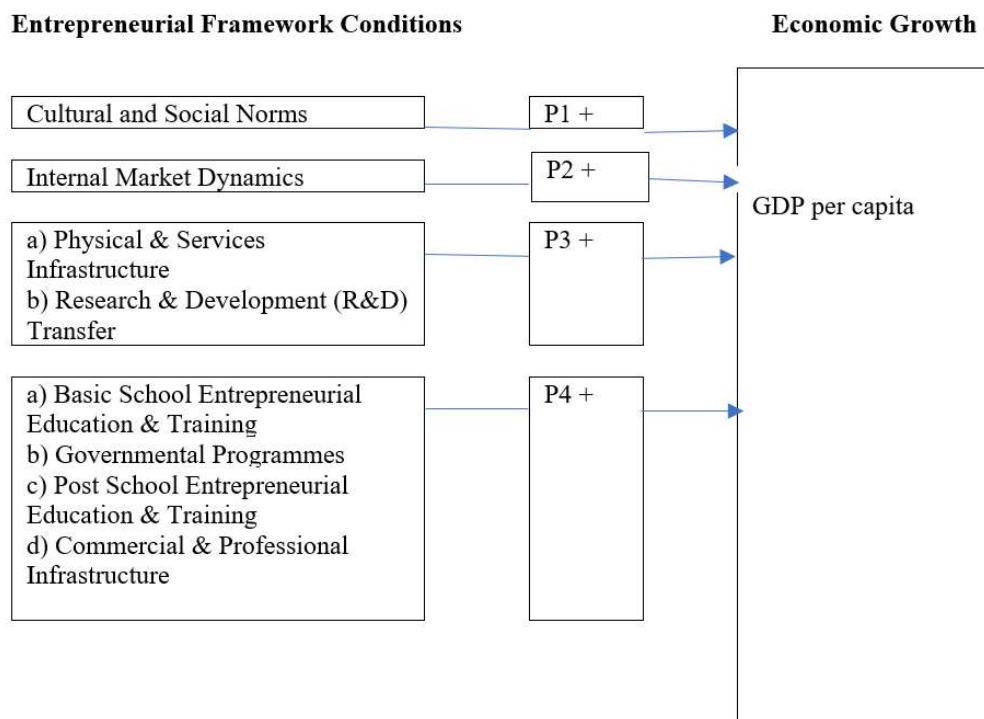
Entrepreneurial framework conditions	Description
Commercial and Professional Infrastructure	Availability and affordability of business suppliers, contractors, consultants, legal, accounting and banking services
Internal Market Dynamics	Perception of dramatic changes in markets
Internal Market Burdens or Entry Regulation	The extent to which new and growing firms are free to enter existing markets
Physical Infrastructures	Ease of access to communication, utilities, transportation, land and space at a price that does not discriminate against new and growing firms
Cultural and Social Norms	The extent to which national culture supports individual success, self-sufficiency, risk taking, innovativeness and individual responsibility

Source: Pfeifer, Singer, Šarlija & Peterka (2021)

CONCEPTUAL FRAMEWORK AND SUMMARY OF PREMISES

The study tested the conceptual framework illustrated in Figure 1 which shows that SMEs have positive contributions on economic growth in Africa.

Figure 2: Conceptual Framework for Entrepreneurial Framework Conditions and Economic Growth



Source: Gomes, Ferreira, Lopez and Farinha (2022)

P1: Cultural and social norms have positive impacts on the economic growth

P2: Internal market dynamics have positive impacts on the economic growth

P3: Physical and services infrastructure and R&D transfer have positive impacts on the economic growth

P4: Basic school entrepreneurial education and training, governmental programmes, post-school entrepreneurial education and training and commercial and professional infrastructure have positive impacts on the economic growth

The purpose of the study was to examine the contributions of SMEs on economic growth in Africa.

PROBLEM INVESTIGATED

The contribution of SMEs on economic growth in Africa was investigated.

RESEARCH OBJECTIVES

The following theoretical objectives were formulated:

1. To carry out a literature study on SMEs
2. To carry out a literature study on economic growth.

RESEARCH METHODOLOGY

In this investigation, we used a qualitative research design and a systematic approach to collect, analyse, and interpret non-numerical data to understand concepts, opinions, and experiences. We gathered data from documentation, electronic databases, and textbooks to understand the contributions of small and medium enterprises to economic growth in Africa. We analysed the collected data using within-study literature analysis. We identified key themes to gain a deeper understanding of the research and its implications. We also conducted an in-depth examination of the components, methodologies, and results of the study.

RESULTS

This study examined the relationship between SMEs and economic growth. This aim was achieved by developing four premises. This section discusses the results of each of these premises.

The first premise (P1) suggests a significant positive relationship between cultural and social norms (which are entrepreneurial conditions) and economic growth. The results of the study show that cultural and social norms have a positive impact on economic growth. Thus, cultural and social norms positively impact the economic growth of countries in innovation-driven and transition-driven economies. According to several studies, cultural and social norms are relevant for entrepreneurship levels and, consequently, for economic growth (Gomes, Ferreira, Lopez & Farinha, 2022).

The second premise (P2) suggests a significant positive relationship between Internal Market Dynamics (which are entrepreneurial conditions) and economic growth. The results of the study indicate that Internal Market Dynamics positively impact economic growth. As the market is more dynamic, there is a greater probability of new businesses emerging. By stimulating entrepreneurship, it is possible to increase economic growth. Internal Market Dynamics are usually facilitators of entrepreneurship in innovation-oriented countries. Internal Market Dynamics have a greater impact on the early stages of entrepreneurship (Gomes, Ferreira, Lopez & Farinha, 2022).

The third premise (P3) suggests a significant positive relationship between Physical and Services Infrastructure, R&D transfer (which are entrepreneurial conditions) and economic growth. The study results indicate that Physical and Services Infrastructure has a positive impact on economic growth. The results show that the higher the degree of development of a country, the greater the impact of Physical and Services Infrastructure on economic growth. R&D Transfer has a positive impact on the economic growth of a country. In innovation-driven economies, Entrepreneurship Education and Training are relevant in the context of governmental programmes for the effectiveness of R&D Transfer. Thus, Entrepreneurship Training and Education positively affect the relationship between governmental programmes and R&D transfer to growing and new firms (Gomes, Ferreira, Lopez and Farinha, 2022).

The fourth premise (P4) suggests a significant positive relationship between Basic School Entrepreneurial Education and Training, governmental programmes, Post-School Entrepreneurial Education and Training, Commercial and Professional Infrastructure (which are entrepreneurial conditions) and economic growth (Gomes, Ferreira, Lopez and Farinha, 2022).

The results reveal that Basic School Entrepreneurial Education and Training has a positive impact on economic growth. Whenever Basic School Entrepreneurial Education and Training presents weaknesses in an economy, the labour market is impacted. This impact is unfavourable for entrepreneurial activities. On the other hand, entrepreneurial activities correlate strongly with the number of job vacancies available. In other words, the more job vacancies there are, the less entrepreneurial activity there will be. As a rule, there will be less economic growth if there is less entrepreneurial activity. For economic growth to occur, policymakers must prioritise entrepreneurship.

The results show that governmental programmes positively impact economic growth. Governmental programmes aim to foster the innovative spirit of entrepreneurs, promoting entrepreneurship to the creation of new companies through new business models emerging in the market. Governmental programmes facilitate the creation of an industry focused on the current needs of cities, that is, on the creation of increasingly intelligent cities. Governmental programmes also assist in the industry's transformation to meet sustainability goals, which in turn impact economic growth positively.

The results indicate that Post-School Entrepreneurial Education and Training has a positive impact on economic growth. Post-School Entrepreneurial Education and Training means more qualified human resources with more knowledge. The variable Post-School Entrepreneurial Education and Training are relevant in the entrepreneurship and economic development of economies and in the growth and management of firms. Post-School Entrepreneurial Education and Training positively affects the production and development of high-tech products. In turn, these new high-tech products are often the basis for creating new firms, thereby increasing entrepreneurial activity and economic growth.

The study results reveal that commercial and professional infrastructure was also found to have a positive impact on economic growth. Commercial and Professional Infrastructure is the driver of entrepreneurial activity. When Commercial and Professional Infrastructure is well implemented in countries, these countries have, for example, a good network of business incubators and/or technology parks. In this way, it is feasible to promote business networks and increase company turnover in developing countries' economies (Gomes, Ferreira, Lopez & Farinha, 2022).

This study aimed to examine the contributions of SMEs on economic growth in Africa. This aim was achieved by an extensive literature review, which revealed that SMEs have a positive contribution on the economic growth in Africa.

CONCLUSIONS

SMEs continue to play a significant role in Africa's economic growth. Africa should have been a refuge for SMEs, rich mineral deposits, ample fertile farmland and other natural resources. Based on the results of this study, SMEs in Africa have been shown to contribute to the development of jobs and the growth of the economies and poverty reduction, all of which contribute to the African countries' economic growth and development. The SME sector would undoubtedly be an important tool for the rapid industrialisation of the African economy if it is managed efficiently and effectively by good leadership. SMEs account for the majority of the economy's industrial base and their activities are critical to the sector's development. SMEs have a positive and significant effect on economic growth, which is why the African governments should promote the sector's growth.

The study concludes that SMEs have a positive contribution on the economic growth in Africa. SMEs are vital to the economic growth of any country. The successful establishment of SMEs leads to employment opportunities and growth in all economies. Africa represents both strong opportunities and barriers for local SMEs. It is evident from the EY G20 Entrepreneurship Barometer report that Africans embrace the culture of entrepreneurship, a very important element needed to propel it to success. However, there are other equally important elements, such as access to funding, support and education and training that need strengthening to truly build a thriving entrepreneurial society.

The importance of SMEs at all levels is essential to a country's economic development, wealth and employment creation. Entrepreneurship was identified as a specialised discipline that can be taught and learned. Entrepreneurial development is the origin of successful entrepreneurial activity and, although, some are born entrepreneurs, it is possible to develop individuals to become entrepreneurs. This is where entrepreneurial education and training play an important role.

RECOMMENDATIONS

SMEs are important in terms of job creation, GDP contribution and poverty alleviation. The African governments, through their various departments and agencies, should work to support and encourage the development of SMEs. African governments should extend reforms to SMEs, especially regarding policy formulation and implementation that can encourage the sector to grow. Understanding the factors that are preventing SMEs in Africa from growing and surviving will assist policymakers and other stakeholders in designing policies that will stimulate innovation, as well as assisting policymakers in supporting, encouraging and promoting SME development in the region. African governments should ensure that suitable infrastructural facilities, such as adequate electricity and efficient transport systems are in place for the proper operations of SMEs. This will lead to the growth and economic development in Africa. SME owners must address the overwhelming challenges faced by small businesses in Africa for the sector to be significant and sustainable and play the critical role it is supposed to play in terms of job growth, GDP contribution and poverty alleviation. This means that SME owners must strive to be creative, ensure successful management of their companies, develop strategic business strategies, perform ongoing market research and seek out business training to improve their level of business acumen. This will enable them to gather knowledge that will enable them to implement and integrate the factors that contribute to small businesses' long-term viability. For the SME sector to have a long-term contribution on Africa's economic growth, it must expand and be sustainable.

In view of the study results, it is thus recommended that the governments of African countries should establish a new support agency for SMEs. African governments should improve the public's view of SMEs. It is further recommended that the African countries' education systems should reform in order to provide SMEs with the skills they need to thrive. Teaching entrepreneurship at the level of basic school and higher education also contributes to stimulating a more active and consistent entrepreneurial culture. For this reason, it is thus recommended that the African countries' education systems should promote and support entrepreneurial education and training.

CONTRIBUTIONS OF THE STUDY

Despite the availability of previous research studies focusing on small enterprises in Africa, one major research gap still exists, which creates a need for further research in the area. This gap pertains to the scant evidence of studies that focus on the impact of SMEs on economic growth in Africa. Few empirical studies that are available focus on specific matters regarding SMEs in Africa and completely disregard the dimensions discussed in this study. Thus, this study is intended to address these gaps by investigating how various SME conditions can be harnessed to improve economic growth in Africa.

This study is important in several ways. It contributes to the existing body of knowledge since it is an addition to the available literature on SMEs and economic growth. It is also an important source of information on research methodologies for studies in SME management. Furthermore, the study provides a specific conceptualisation of the relationship between SMEs and economic growth. The study provides information to society regarding the impact of SMEs on economic growth. It emphasises that economic conditions can be improved by enhancing entrepreneurial framework conditions considered in this study.

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INFLUENCE OF COVID-19 ON THE JORDANIAN DIGITAL PAYMENT SECTOR

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ABSTRACT

This study explored how COVID-19 impacted Jordan's digital payments. It examined both opportunities and challenges, alongside regulations implemented by the Central Bank. The research analyzed data to identify factors influencing the industry's shift towards cashless transactions. It also looked at user behavior using established models. Regulatory measures' impact on digital payment organizations was assessed. Overall, the research found an increase in digital payments but also identified challenges. Recommendations are provided for overcoming these challenges and ensuring a secure and inclusive digital payment system in Jordan.

Keywords: digital payments, Central Bank, Covid-19, cashless, Jordan.

INTRODUCTION

During the pandemic, while many Western countries experienced a decline in cash payments, in Jordan cash remained the dominant. According to JoPACC (2021), 88% of payments during the pandemic were in cash, and even afterwards nearly 80% continued to be cash. The COVID-19 pandemic did prove to be catalyst to accelerate the adoption of digital payment systems in Jordan, as it did in many other countries around the world and spurred a major digital transformation among Jordan's businesses. Adults who have accounts reported that 12.8% of them opened their accounts specifically because of the COVID-19 health crisis. One reason was their employers decided to switch wages payment through digital accounts due to the ease of access to government financial support. Another factor was digital payments become more preferred due to their convenience. More than half of adults in Jordan who reported that they had started to use digital payments declared that their regularity of digital payment usage rose directly due to the pandemic (Hauser, Abbassi, and Mismar, 2023).

Covid-19's Impact on Jordan's Digital Payments: Opportunities and Challenges

This paper explores how COVID-19 impacted Jordan's digital payment industry.

Opportunities:

- **Increased Cashless Transactions:** The pandemic accelerated the shift from cash to digital payments due to social distancing and hygiene concerns. This resulted in a rise in digital transactions for Jordanian digital payment organizations.
- **E-commerce Growth:** The pandemic drove e-commerce adoption, further boosting digital payments.
- **Supportive Regulations:** The Central Bank of Jordan implemented regulations to encourage digital payments during the pandemic, promoting faster adoption.

Challenges:

- **Operational Resilience:** Digital payment organizations need to ensure their systems can handle the surge in transactions, addressing issues like network problems, server downtime, and data security.

- **Building Trust:** Overcoming user concerns about fraud, data security, and connectivity is crucial for wider adoption.

Addressing the Gap:

This paper aims to analyse the opportunities and challenges missed by previous studies on COVID-19's impact on digital payments in Jordan. It will emphasize the importance for digital payment organizations to be prepared to adapt and address these challenges to ensure a sustainable future.

Research Questions:

The research sought to answer the following questions:

1. What is the link between Covid-19 and the accelerated shift from cash to cashless payments?
2. What are the opportunities and challenges that have arisen due to Covid-19 health crisis?
3. How the regulations that had been issued by Central Bank of Jordan in response to the Covid-19 pandemic had impacted digital payments' organizations?

LITERATURE REVIEW

Introduction

COVID-19 disrupted Jordan's economy, forcing the digital payment industry to rapidly adapt. Cashless payments surged, and the business environment shifted dramatically. This review explores:

1. Jordan's digital payment landscape (regulations, trends, players).
2. Health crises and digital payment adoption (safety, convenience, technology).
3. Opportunities and challenges for Jordanian digital payment organizations in a changing environment.

Overview of the Digital Payments Industry in Jordan

Jordan's digital payment industry boomed before and after COVID-19.

- **Pre-Pandemic Growth:** Jordan already had a strong foundation with mobile wallets, online banking, and card payments. The Central Bank actively supported digital adoption through regulations. Mobile wallets like Orange Money gained traction.
- **COVID-19 Impact:** The pandemic accelerated digital payments due to a need for contactless transactions. Government restrictions and Central Bank promotions further boosted digital payments.
- **Challenges and Opportunities:** New players like fintech startups increased competition but also offered innovative solutions. Traditional banks faced pressure to adapt. Understanding these dynamics is crucial for digital payment organizations to succeed in Jordan.

This growth highlights Jordan's potential as a digital payment hub, but staying relevant requires adapting to evolving consumer needs.

Gaps in Previous Studies

This research aims to fill gaps in existing studies on COVID-19's impact on digital payments.

- **PwC Report:** It lacks a deep dive into why people are shifting to cashless payments during the pandemic. This research will explore user motivations and behaviour changes driving the surge.
- **Accenture Report:** It misses potential opportunities and challenges. This research will explore new possibilities like contactless payments and challenges like security concerns.
- **JoPACC Report:** It doesn't evaluate the impact of government policies on digital payments. This research will assess policy effectiveness in supporting the sector during crises.

This research aims to provide valuable insights for stakeholders in the digital payments industry.

Health Crises and the Adoption of Digital Payments

The research confirms that COVID-19 dramatically boosted digital payments in Jordan. Key insights found significant were:

- **Hygiene Concerns:** Fear of catching the virus from cash led people to prefer contactless digital payments (Taylor et al., 2020; Chaveesuk et al., 2022).
- **Safer Alternatives:** Mobile wallets, online banking, and contactless cards provided safer and more hygienic options (Kaur & Kushwaha, 2021; De' et al., 2020).
- **Convenience and Speed:** Existing advantages of digital payments like ease of use and speed became even more attractive (Al-Qudah et al., 2022).

Understanding these factors is crucial for Jordanian digital payment organizations. By analysing user behaviour and preferences, they can:

- **Adapt Strategies:** Tailor offerings to meet evolving customer needs.
- **Promote Benefits:** Educate users about the safety and convenience of cashless transactions.
- **Increase Adoption:** Drive wider use of digital payments for enhanced security.

The pandemic clearly accelerated Jordan's shift towards digital payments and understanding the reasons behind this shift is vital for digital payment organizations to stay relevant.

Opportunities and Challenges Faced by Digital Payments Organizations in Jordan

The Covid-19 pandemic has brought forth both opportunities and challenges for digital payments organizations in Jordan. On one hand, it accelerated the transition towards digital payments. This opened up avenues for these organizations to expand their customer base and boost revenues. Furthermore, this outbreak highlighted the significance of digital infrastructure and connectivity, providing digital payments organizations an opportunity to collaborate with government agencies and other stakeholders in developing and promoting them together.

Al-Qudah, Al-Okaily, and Al-Qudah (2022) have highlighted the advantages of digital payments for individuals, businesses, and economies alike. Digital payments provide convenience, speed, and accessibility in transactions anytime or anywhere; they reduce physical cash reliance thus improving security by decreasing theft or loss risk (Odeh and Yousef 2021). Moreover, they contribute to financial inclusion by giving access to financial services to underserved populations (Al-Smadi, 2018). Digital payments offer several potential advantages that could increase economic growth, boost transparency, and enable tracking transactions for taxation and regulatory purposes (ACI, 2017). Digital payments offer several advantages, yet their widespread adoption remains hindered by various challenges. Digital divide, digital literacy, and technological infrastructure across regions and populations represent barriers for digital payment organizations (USAID, 2018). Hauser, Abbassi, and Mismar (2023) noted that concerns related to security, privacy, and fraud present challenges to the adoption of digital payments systems, with users fearful of data breaches or unapproved access to their financial data, interoperability between different digital payment platforms and systems being an obstacle, this has created fragmentation for users leading to inconvenience for many of them. The pandemic has highlighted the need for digital payments organizations to remain agile in adapting to market shifting conditions and customer preferences.

Regulatory Implications for Digital Payments Organizations in Jordan

In response to the COVID-19 pandemic, Jordan's Central Bank implemented regulations to not only lessen the economic blow but also specifically support digital payment organizations. These regulations significantly impacted how these organizations operate and strategize.

Boosting Financial Inclusion:

- The Central Bank's "Basic Bank Account Instructions" simplified account opening procedures and fees, granting access to essential banking services (including electronic banking) for previously excluded individuals. This increased financial inclusion and provided a larger potential customer base for digital payment organizations (Central Bank of Jordan, 2021).

Creating a Thriving Environment for Digital Payments:

- By lowering fees and supporting online operations, the Central Bank fostered a growth-friendly environment for digital payment processors. This allowed them to offer cost-effective and secure payment solutions to both individuals and businesses (Klapper & Singer, 2017). As adoption grew, these organizations gained new opportunities to expand their customer base and develop innovative payment products.
- The Central Bank's regulations aligned with the global shift towards cashless transactions, further accelerated by the pandemic (De', Pandey & Pal, 2020). This positioned Jordan favourably and allowed digital payment organizations to capitalize on the rising demand for these services.

Raising Awareness and Encouraging Adoption:

- The Central Bank actively promoted digital financial products. This included providing extensive online information on using mobile wallets and conducting digital transactions (Central Bank of Jordan, 2020). Additionally, awareness campaigns (including online sessions) educated the public on consumer protection, microfinance, and digital financial services (CBJ, 2020).
- To combat the pandemic, the Central Bank encouraged using mobile wallets for transactions, even requesting employers to pay wages digitally. They also provided informative materials like booklets and short videos to build trust and address user concerns (Central Bank of Jordan, 2020).

Supporting Mobile Wallets:

- The Central Bank launched the Mobile Wallets Gateway, a central platform offering information on self-registration, contact details, and transaction fees for various mobile wallets. This streamlined registration and increased transparency for users (Central Bank of Jordan, 2020).
- Leveraging Jordan's strong information technology infrastructure, the Central Bank enabled online self-registration for financial services and the use of quick response codes. Additionally, government aid and salaries were distributed via mobile wallets, further emphasizing digital payments (Central Bank of Jordan, 2020).
- Collaboration between the Central Bank, relevant institutions, and mobile payment operators facilitated financial assistance through mobile wallets, benefiting thousands (JoPACC, 2020).

Challenges and Considerations:

While these regulations significantly benefitted digital payment organizations, adapting to them may require investments in infrastructure or technology upgrades to ensure compliance (Klapper & Singer, 2017).

Additional Measures by the Central Bank:

The Central Bank also implemented other initiatives to support digital payments:

- **Reduced Fees:** Making digital transactions more attractive by waiving or reducing certain fees.
- **Simplified Account Opening:** Promoting financial inclusion by simplifying account opening procedures, particularly for those previously excluded.
- **Interoperability:** Encouraging seamless transactions across different digital payment platforms.
- **Enhanced Consumer Protection:** Implementing regulations to ensure security and trust in digital payments.
- **Stakeholder Collaboration:** Working with government and industry to develop standardized policies and best practices.

These actions demonstrate the Central Bank's proactive approach in supporting the growth and resilience of Jordan's digital payment sector during the COVID-19 pandemic.

METHODOLOGY

Based on secondary data, pragmatic design was utilised, aligned to each of the research questions. For the first research question of analyzing the link between Covid-19 and an increased shift from cash payments to cashless ones, market research analysis was undertaken to investigate any changes in payment preferences or behavior since the pandemic outbreak. To address the second research question of identifying opportunities and challenges associated with the Covid-19 health crisis, a range of secondary data sources, including academic journals, industry reports, and government publications were utilised. The third research question; exploring the implications of regulations issued by the Central Bank of Jordan in response to Covid-19 pandemic on digital payments organizations, a variety of secondary data such as like governmental reports, or company websites of digital payment companies operating in Jordan were utilised.

Theoretical Framework

This study uses four ideas to understand Jordan's digital payment shift during COVID-19:

1. **TAM:** How easy and useful people find cashless payments.
2. **TPB:** How social norms and control influence people's choice to use cashless payments.
3. **Regulatory Focus Theory:** How Jordan's Central Bank regulations affect digital payment companies.
4. **PESTLE Analysis:** How political, economic, social, technological, legal, and environmental factors impact the industry after the pandemic.

By combining these, the study offers a comprehensive view of the situation, helping Jordan's digital payment industry identify opportunities, challenges, and future strategies.

RESULTS AND ANALYSIS

Introduction

Based on available secondary data from Central Bank of Jordan, industry publications, and relevant research studies we examine the link between COVID-19 and the accelerated transition from cash to cashless payments, identifying opportunities and challenges arising from the COVID-19 health crisis, and investigating the impact of Central Bank regulations on digital payment organizations.

Characteristics of Digital Payments Organizations

The introduction of new various payment channels stemmed from an awareness that digital payments organizations to provide convenient and safe payment methods to reach more users and to achieve more financial inclusion in Jordan. JoPACC (2021) categorized the digital payment services offered by organizations in Jordan as being mobile banking, online payment gateways, e-wallets, QR Payments, and contactless payment solutions. Consumer awareness and usage likelihood provide interesting results. Awareness: Mobile banking 28%, online banking 23%, QR payments 18%, CliQ 20% and ITM 15%. Likelihood of future usage: Mobile banking 64%, online banking 64%, QR payments 62%, CliQ 59% and ITM 60%. These trends show how Covid-19 changed the payment behavior of people in Jordan and how it accelerated the shift from cash to cashless payment methods. In terms of market share, the same JoPACC (2021) report determined that market share of digital payments organizations in Jordan is only 12% compared to those who pay in cash methods. This showed how far digital payment organization have an opportunity in the Jordanian market. This justifies the pursuit of digital payment organizations introducing new digital solutions to capture the remaining 88% of cash payments to include them in the cashless loop.

Adoption Trends in Digital Payments

Through the examination of transaction data over the past three years, the authors observed a consistent growth pattern in the volume of digital payments in Jordan. The average annual digital payments growth rate was estimated to be around 50% (CBJ, 2023), confirming the increasing acceptance and adoption of digital payment methods among consumers and businesses. The below figure shows a five-year trend of the amounts in (Billions) of digital payments in Jordan. A remarkable year-over-year growth of 65% between 2021 and 2022 explores the accelerated shift from cash to cashless payments due to the Covid-19 pandemic. This high growth is also because of the Central bank of Jordan regulations to facilitate the embracement of digital payments in Jordan.

The same report revealed a remarkable shift from cash-based transactions to digital payments within the Jordanian market (CBJ, 2023). Convenience, speed, hygiene, and the growing acceptance of digital payment methods by merchants were key contributors to this shift. JoPACC (2021) in their study of the change in payment behavior due to Covid 19 mentioned that 45% trusted that digital payment methods are safe and secure as well as 65% have faith on their financial service providers, illustrating the evolving attitude towards digital payments. Moreover, since there are still 88% who use cash in Jordan, this shows the high potential for digital payment organizations to grow.

It is evident that a strong preference for digital payment methods among consumers in Jordan took place post the pandemic. Covid 19 has urged the category of people who were using cash to use digital payments, accordingly,

the experience for this category in terms of payment speed, convenience, hygienic, and the ability to track transactions were cited as key drivers for adopting digital payments. These findings provide valuable insights into consumer behavior and highlight the factors that influence their choice of payment methods. In terms of trend, further evidence the JoPACC report shows the preferred payment method and the last payment method used by people in Jordan, it is evident that there are multiple factors which hinder the digital payments, a top reason given is the unavailability of digital payment method for the users. This study represents the notion and the stem for regulators and digital payment organizations to increase the spread of digital payments in Jordan. Their pursuit to increase the financial inclusion in the country stemmed from low acceptance which is not favorable especially at time of health crisis such as Covid-19. Moreover, this could be looked at as a golden opportunity for digital payment organizations, as more financial inclusion initiatives by regulators mean more business and transaction volume for digital payment organizations. It became clear that the accelerated shift from cash to cashless payments is due to cooperation and strategy alignment among regulators and payment processors. Both can work to overcome the below reasons for not using the preferred payment method.

PESTLE Analysis: Opportunities and Challenges

Political Factors

Jordan's government support, through policies and incentives, significantly boosted digital payments. This created an environment where digital payment companies thrived. They offered new solutions, improved security, and a better user experience. While digital payments benefit businesses and consumers through efficiency, cost reduction, and transparency, they risk excluding those without smartphones, bank accounts, or digital literacy skills. Political stability also plays a role, as instability can discourage adoption of these new methods.

Economic Factors

Inflation in Jordan rose from 11% between 2018-2022 (WorldData.info, 2023) influenced digital payment adoption. Digital payments allow price comparisons and finding better deals, incentivizing use as consumers become more price conscious. This helps stretch limited funds and make informed purchases. Inflation also pushed regulators to promote digital payments. However, increased competition from new Fintech players might lower profits for existing digital payment organizations.

Sociocultural Factors

Covid-19 boosted digital payments in Jordan as people sought contactless transactions. Fear of infection created an opportunity for digital payment companies. However, trust and security concerns remain a challenge, with some in Jordan hesitant to move away from cash due to cultural norms and traditional practices.

Technological Factors

Strong tech infrastructure in Jordan fuels digital payments. Widespread mobile phone ownership and internet access (88%) create a large user base for digital payment providers, especially among younger demographics. However, security concerns like data breaches and limited digital literacy in some parts of the population remain challenges.

A quantitative study by Al-Qadi, 2018 found that people's perception of Security, Usability, and Support strongly influences their decision to adopt E-Payment systems (Al-Qadi, 2018). These factors align with the ideas of the Unified Theory of Acceptance and Use of Technology (UTAUT), where Security, Usability, and Support relate to performance expectancy, effort expectancy, and social influence (Al-Qadi, 2018). Previous research also supports these findings, emphasizing the importance of users feeling that the system is secure, easy to use, and well-supported. Notably, the study highlighted Support as the most critical factor for E-Payment Adoption, confirming previous studies. To encourage adoption, organizations offering e-payment should prioritize security, user-friendliness, and excellent support. These factors have a significant impact on users' attitudes and their likelihood of adopting e-payment systems.

Legal Factors

Jordan's digital payment industry boomed due to supportive government policies, rising inflation pushing consumers to find better deals digitally, and the hygiene concerns during Covid-19. However, trust in digital transactions, cultural preference for cash, and limited digital literacy in some areas pose challenges. Strong mobile phone use and internet access (88%) create a large potential user base, but security concerns like data breaches need to be addressed.

Environmental Factors

Digital payments in Jordan can benefit the environment by reducing paper use from receipts and checks, and lowering CO2 emissions from cash transportation. This aligns with sustainability goals. However, the industry also creates e-waste from devices and consumes energy for data centers, posing challenges for eco-friendly practices.

Technology Acceptance Model (TAM) Analysis

The Technology Acceptance Model (TAM) helps explain why people used cashless payments more during the pandemic. TAM suggests people adopt technology based on its perceived usefulness and ease of use. During the pandemic, people saw cashless payments as useful because they reduced physical contact, offered convenience, and helped track finances. This perception of safety and ease of use drove adoption. Cashless payments were also convenient because of e-commerce growth. People liked being able to pay from home, access digital receipts, and make contactless transactions.

The simplicity of cashless payment apps further boosted adoption. User-friendly interfaces and clear instructions allowed people of all tech skill levels to use them. Additionally, online tutorials and customer support made them seem even easier to use. The research also identified other factors influencing cashless payment adoption, including perceived economic benefits, security of the digital economy, and reduction of economic offenses. Overall, the study highlights that people's perception of the advantages of a cashless economy significantly impacts their decision to adopt digital payment methods.

Behavioral Intentions of Using Cashless Transactions

Theory of Planned Behavior (TPB) Analysis

The Theory of Planned Behavior (TPB) helps us understand how social pressures and a sense of control influence people's use of cashless payments during pandemics.

Social Pressure (Subjective Norms):

- People are swayed by their social circles' behavior. Witnessing positive experiences with cashless payments from family, friends, and authorities creates a sense of social acceptance and desirability.
- Government campaigns promoting cashless payments as a safe and responsible choice during pandemics reinforce this pressure to conform.

Sense of Control (Perceived Behavioral Control):

- Confidence in using digital payment systems, understanding the technology, and overcoming adoption challenges influence people's use.
- User-friendly interfaces, support resources, convenient account setup, and reliable customer support all enhance user confidence and perceived control.

A study by Lu and Kosim (2023) supports the TPB by showing how social norms influenced consumer behaviour during COVID-19. Cashless payments were seen as a practical way to control the virus' spread by enabling contactless transactions. However, their study found that perceived control wasn't a statistically significant factor in adopting these systems.

Regulatory Focus Theory Analysis

Jordan's Central Bank used Regulatory Focus Theory to guide its Covid-19 regulations for digital payments.

Promotion (encourage):

- Incentives like subsidies and campaigns boosted adoption of cashless payments.
- Financial benefits and streamlined processes for service providers fuelled industry growth.
- Support for innovation fostered a competitive landscape.

Prevention (minimize risk):

- Strict security standards, data protection, and fraud prevention mechanisms enhanced trust.
- Regulatory enforcements and dispute resolution protected consumers and organizations.

This two-pronged approach created a favourable environment for both growth and security in Jordan's digital payment industry.

Impact of Central Bank of Jordan Regulations on Digital Payments Organizations

In this section, the authors examined the impact of regulations issued by the Central Bank of Jordan on digital payments organizations. These regulations greatly influence how these organizations operate, comply with guidelines, and shape customer behaviors. By exploring the regulatory landscape, we seek to understand how these rules have impacted the adoption and usage of digital payment channels and services.

Adoption of Digital Payment Channels and Services

To evaluate the Central Bank of Jordan's digital payment initiatives, the authors analyzed regulations and research. Key initiatives include:

- **Open APIs:** Sharing data and promoting competition among payment service providers through open application programming interfaces (APIs).
- **Digital Identity:** Creating a nationwide system for verifying users and businesses via digital IDs, allowing remote access to government services.
- **Reduced Internet Costs:** Lowering internet fees to make accessing digital services more affordable.

These initiatives aim to increase adoption of digital payments in Jordan.

Hypermarket Volume Analysis

Based on data from Network International, actual total processed volume for hypermarkets in 2020 was much higher than the total processed volume in 2019. This is due to the changed behavior of the consumers which have changed in response to the Covid-19. Consumers are more likely to consume basic commodities. Additionally, digital payment processors in Jordan had witnessed an increased number of new joiners to the cashless loop due to the precautionary measures imposed by the government of health and the central bank of Jordan.

Card Issuance Growth

COVID-19 boosted contactless payments globally. Expected growth is 6-8% compared to pre-pandemic forecasts. Issuance of contactless cards is predicted to surge by 14% year-over-year, reaching over 65% of all issued cards in 2020 (World Bank). This trend is especially strong in countries reliant on cash, with governments and health organizations promoting contactless payments for hygiene reasons. In Jordan, the number of active contactless cards grew from 315,000 to 345,000 in 2020 (Network International). Digital payment organizations must comply with regulations like the Personal Data Protection Act, established by Jordan's Ministry of Digital Economy & Entrepreneurship. This act balances user privacy with data-driven innovation. It allows businesses to benefit from big data and the internet of things while requiring responsible data practices. This fosters trust and encourages digital payment adoption.

Implications for Operations and Systems Infrastructure

This section examines how Central Bank regulations affect digital payment organizations' operations and infrastructure. Key areas of impact include:

Technological Requirements:

- **Challenges:** Regulations often mandate specific technologies and standards, forcing organizations to upgrade systems, hire new talent, and integrate new functionalities. This can be expensive, time-consuming, and complex.

Transaction Processing and Settlement:

- **Efficiency and Speed:** The Central Bank sets timelines for transaction processing and settlement. Organizations need efficient and reliable systems to meet these deadlines, which requires investment in processes and staff training.

Operational Strain:

- **Strict timelines put pressure on organizations,** demanding efficient transaction processing, reconciliation, and fund availability. This can lead to higher costs, errors, and service disruptions if not managed effectively.

Liquidity Management:

- **Meeting settlement deadlines requires adequate liquidity.** Smaller organizations or those with fluctuating cash flow may struggle, potentially causing delays, penalties, or strained relationships with banks.

System and Infrastructure Requirements:

- **Fast and reliable systems are necessary** to handle the volume and speed of settlements. Upgrading or implementing new systems can be expensive and require technical expertise, especially for smaller players with outdated technology.

Compliance Burden:

- **Meeting settlement timelines necessitates strict monitoring, reconciliation, and reporting.** This requires additional resources and staff, potentially diverting focus from strategic initiatives or customer service.

Risk Management:

1. **Technical glitches or unexpected volumes can lead to missed deadlines.** This carries the risk of penalties, reputational damage, and strained relationships. Proactive risk management and contingency plans are crucial.

Operational Burden (Costs):

- **Compliance costs:** Implementing robust security, data protection, and audits requires additional staff, consultants, tools, and regular assessments.
- **Regulatory Reporting:** Mandated reporting on operations, financials, and customer data necessitates dedicated teams or reporting systems, adding to financial burdens.
- **Staff Training:** Training staff on compliance, risk management, and data protection can be expensive, involving trainers, materials, and resources.
- **Ongoing Compliance Monitoring:** Continuously monitoring and adapting to regulatory changes requires dedicated personnel, external consultants, or compliance monitoring services, incurring ongoing costs.

In summary, Central Bank initiatives, while promoting security and efficiency, impose significant operational burdens on digital payment organizations through technological upgrades, stricter compliance requirements, and increased operational costs. Managing these challenges is crucial for organizations to remain competitive and compliant in the evolving digital payment landscape.

Integration of Quantitative and Qualitative Findings

In this section, the authors integrate the quantitative and qualitative findings obtained through secondary data analysis to gain a comprehensive understanding of the research topic. By synthesizing and analyzing existing secondary data, key factors influencing the adoption and utilization of digital payments in Jordan are illuminated through emerging common themes and trends. These themes are derived from the analysis of previously published studies, reports, and relevant literature and are as follows:

1. **Trust and Security:** Existing literature highlights the importance of trust and security in driving the adoption of digital payment solutions. Several studies delve into the importance of consumer trust regarding the security measures implemented by digital payment providers. These studies also emphasize the necessity to address concerns related to data privacy and fraud prevention.

It became clear that due to the accelerated migration from cash to digital payments, there is an increased risk of facing fraud, cyberattacks, and money-laundering that attempt to negatively influence the payments migration process and the trust of digital payments (Korte, 2017).

The accelerated transition from cash to cashless payments that had taken place because of Covid-19 pandemic and that is driven by the imposed social distancing measures and the panic from the virus could hinder the use of cash and increase the probability of cybersecurity and fraud concerns for both businesses and clients. Digital payments' risks such as scammers as well as hackers are concerned about stealing critical personal information such as social security numbers as well as bank account details. No doubts that stealing data that is related to transactions is considered difficult due to the current security layers, however, we have noticed that online scammers followed a new way by seizing the pandemic era; they have sent random deceptive online messages that include fraudulent Covid-19 relief payments.

2. **Convenience and User Experience:** The adoption of digital payment solutions is influenced by convenience and user experience. Secondary data analysis highlights the significance of factors such as user-friendly interfaces, seamless transactions, and quick response times in driving the widespread acceptance of digital payments. Research articles and industry reports discuss how these aspects contribute to enhancing user satisfaction and promoting the use of digital payment methods.
3. **Awareness and Education:** The available secondary data revealed the need for greater awareness and education about digital payment options among the population. Research studies and reports highlight the significance of educating consumers about the advantages, functionalities, and usage of digital payment methods. This education is crucial in overcoming obstacles and boosting adoption rates.
4. **Regulatory Environment:** Existing literature discusses the impact of regulatory measures on the digital payment industry. Various studies have delved into how government policies, regulations, and standards influence the digital payment ecosystem. These measures are crucial for safeguarding consumer interests and promoting innovation.
5. **Operational Capacity:** The existing literature examines how operational capacity influences the adoption and utilization of digital payments in Jordan. This analysis provides a comprehensive understanding of the challenges and opportunities faced by digital payment organizations. By addressing operational capacity challenges and enhancing their infrastructure and capabilities, organizations can provide a seamless and reliable digital payment experience, thereby promoting increased adoption and utilization of digital payment methods in Jordan.

DISCUSSION OF FINDINGS

This study offers valuable insights into the digital payment industry in Jordan. It explores the various factors that influence the adoption and utilization of digital payments. Trust, security, convenience, user experience, awareness, education, financial inclusion, availability, and the regulatory environment are identified as critical elements shaping the landscape of digital payments in the country.

Trust, Security, and Safety

Building trust is key to widespread digital payment adoption. Here's how:

- **Implement strong security:** Use encryption, secure logins, and fraud detection to protect user data.
- **Communicate openly:** Clearly explain security measures through user interfaces and policies.
- **Continuously monitor:** Regularly test systems and train staff to identify and fix vulnerabilities.
- **Partner with experts:** Collaborate with security firms and industry associations to stay ahead of threats.

By prioritizing security and fostering trust, digital payment organizations can create a safe and thriving industry.

Convenience and User Experience

For people to adopt and keep using digital payments, convenience is key. This means making the systems easy and user-friendly. Here's how:

- **Simple and Fast:** Streamline registration, reduce transaction steps, and offer quick processing with real-time confirmation.
- **Personalized:** Use customer data to suggest features and offers relevant to their needs.
- **Supportive:** Provide multiple channels (chat, email, phone) for prompt customer service.
- **Always Improving:** Gather user feedback and update the platform with new features based on user needs.

By focusing on convenience and a great user experience, digital payment organizations can encourage wider adoption and more frequent use of their services.

Awareness and Education

Lack of awareness and education hinders digital payment adoption in Jordan. Many people lack knowledge about benefits, usage, and security. To address this:

- Awareness Campaigns: Use media, social media, and community outreach to:
 - Promote convenience and advantages of digital payments.
 - Debunk myths and misconceptions.
 - Showcase real-life success stories.
- Educational Programs: Tailor programs for different literacy levels:
 - Offer workshops, seminars, and online tutorials.
 - Teach best practices like secure passwords, Wi-Fi networks, and trusted platforms.
- Collaboration is Key:
 - Partner with educational institutions for curriculum integration.
 - Work with financial entities and government agencies for wider reach.
 - Advocate for digital payment education in national policies.

By increasing awareness and education, Jordan can create a digitally literate society that embraces the security and convenience of digital transactions

Financial Inclusion and Availability of Digital Payment Channels

Limited access to digital payments in certain areas of Jordan hinders adoption, especially for underprivileged communities. Here's how to address it:

- **Collaboration:** Digital payment organizations, businesses, financial institutions, and government agencies should work together to:
 - Expand network coverage and internet connectivity in rural and underserved areas.
 - Identify and address specific barriers faced by underprivileged communities, such as lack of infrastructure or affordability challenges.
- **Financial Inclusion:**
 - Partner with microfinance institutions and community organizations to integrate digital payments into existing platforms.
 - Offer subsidies or incentives to encourage marginalized groups to adopt digital payments.
- **Innovation:**
 - Develop mobile-based payment solutions and offline transaction options for areas with limited internet access.

By working together and embracing new technologies, stakeholders can create an inclusive digital payment ecosystem that serves all Jordanians, regardless of location or socioeconomic background. (198 words)

Regulatory Environment

This summary focuses on the factors influencing digital payment adoption in Jordan and the crucial role of regulations.

Essential Elements for Growth:

- **Trust and Security:** Building trust through strong security measures is vital. Regulations should prioritize data privacy, transaction security, and fraud prevention.
- **Convenience and User Experience:** Easy-to-use, fast platforms with real-time confirmation enhance adoption.
- **Awareness and Education:** Public awareness campaigns and educational programs are necessary to promote understanding of benefits and safety.
- **Financial Inclusion:** Ensuring secure and accessible digital payment options nationwide, especially in underserved areas, is crucial.

The Role of Regulations:

- **Supportive Framework:** A clear and supportive regulatory framework is needed that balances consumer protection with innovation.
- **Collaboration:** Digital payment organizations must actively collaborate with regulatory authorities to shape effective regulations.
- **Flexibility:** Regulations should be adaptable to technological advancements and emerging risks.
- **Industry Standards:** Collaboration among stakeholders can establish industry-wide best practices for security.

- **Innovation:** Flexible regulations that encourage experimentation with new technologies can drive growth.
- **Regulatory Sandboxes:** Controlled environments for testing innovative payment models can facilitate safe development.
- **Harmonization:** Collaboration across jurisdictions can streamline cross-border transactions.

Addressing Challenges:

- **Limited Infrastructure:** Unavailability of digital payments in some areas hinders adoption, particularly for underprivileged communities. Collaboration is key to improve financial inclusion.

The Way Forward:

By addressing these factors and fostering collaboration between stakeholders, Jordan can create a thriving digital payment ecosystem that is secure, convenient, and inclusive for all citizens.

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Conclusions

Security, convenience, and education are key to driving digital payment adoption in Jordan. Building trust through robust security measures and user-friendly interfaces is essential. Awareness campaigns can educate users about the benefits and safety of digital payments. Supportive regulations that balance innovation with consumer protection are needed for a flourishing digital payment sector.

Implications

This study's findings hold value for all players in the digital payment ecosystem.

Policyholders & Regulators:

- Implement policies that promote digital payments (e.g., innovation, consumer protection).
- Create robust regulations for security, data privacy, and consumer rights.
- Invest in digital literacy initiatives for wider adoption.

Financial Institutions:

- Build trust and seamless user experience with strong security, user-friendly designs, and personalized services.
- Collaborate with technology and industry partners to innovate and grow.

Businesses:

- Embrace digital transformation by offering user-friendly payment options and collaborating with payment providers to enhance capabilities and unlock new opportunities.

Consumers:

- Gain knowledge and confidence through digital literacy programs to actively participate in the ecosystem and make secure transactions.

Recommendations for Stakeholders

The conclusions and implications of this study lead to several recommendations for stakeholders in the digital payment ecosystem. These recommendations aim to enhance their understanding and optimize their activities within this realm.

For Policymakers and Regulatory Authorities:

To enhance collaboration, policymakers should actively promote cooperation between various industry stakeholders. This includes financial institutions, technology providers, and consumer advocacy groups. By fostering partnerships and facilitating open dialogue, policymakers can establish an environment conducive to innovation, regulatory compliance, and the safeguarding of consumer rights. The digital payment landscape requires a proactive approach from policymakers. To keep up with technological advancements and evolving consumer needs, they must continuously monitor and adapt regulations. By regularly assessing and updating the regulatory frameworks, policymakers ensure that they remain relevant, effective, and supportive of industry growth.

For Financial Institutions and Payment Service Providers:

Financial institutions should prioritize innovation and actively seek partnerships with fintech startups, technology providers, and other industry players. By harnessing cutting-edge technologies and collaborating with forward-thinking companies, financial institutions can offer advanced digital payment solutions that meet the evolving needs of customers. **Enhancing Security Measures:** To safeguard customer data and cultivate trust, it is imperative for organizations to consistently invest in robust security measures. In order to ensure secure and reliable digital payment experiences, financial institutions should explore advanced authentication methods, encryption technologies, and fraud prevention systems.

For Businesses:

Seamless Integration: Businesses should strive to smoothly incorporate digital payment options into their operational processes. This entails optimizing checkout procedures, offering multiple payment methods, and utilizing user-friendly interfaces. By ensuring a seamless payment experience, businesses can enhance customer satisfaction and boost conversion rates. Businesses should prioritize customer engagement and actively seek feedback to enhance their digital payment offerings. By attentively listening to customer needs and preferences, businesses can refine their solutions, effectively addressing any pain points or areas for improvement.

For Consumers:

Education and Awareness: Consumers should avail themselves of educational resources and initiatives. By doing so, they can enhance their comprehension of digital payment options, security practices, as well as their rights as users. This knowledge empowers consumers to make informed decisions and safeguard themselves against potential risks. **Embracing Digital Literacy:** Consumers ought to embrace digital literacy and acquire the essential skills to confidently navigate through various digital payment systems. This includes gaining a thorough understanding of using digital wallets, securely storing payment information, as well as detecting and promptly reporting any fraudulent activities that may arise.

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KNOWLEDGE SHARING MOTIVATION TOWARDS INCREASE OF INNOVATION CAPABILITY AND INNOVATION CULTURE: META-ANALYSIS OF DEVELOPING ECONOMIES

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ABSTRACT

It is widely acknowledged that collaborative innovation culture, capability and knowledge sharing are indispensable for long-term business operations, competitive marketing advantages, and sustainable growth. The objective of this study is to perform a meta-analysis of the literature published in order to generate practical ideas and recommendations for managerial strategies for the firms that can be applied to supply chain networks across countries. For the quantitative analysis of inclusive parameters, an assortment of works of literature from the China, Vietnam, and Iran have been assessed and analyze. The results of this study revealed a statistically significant discrepancy between the findings on knowledge sharing behavior and innovation capability presented by different Chinese researchers. However, the meta-analysis also showed that there is no statistically significant difference among the countries on collaborative culture and innovation performance. In the paper, statistical tool two sample t-test (pooled variance) use for the statistical analysis of the secondary data collected form the published research. The study does, however, have certain limitations because it was carried out using a very limited amount of data that was obtainable.

Keywords: collaborative innovation, innovation culture, innovation capability, knowledge sharing.

INTRODUCTION

From ancient times, business and logistics have been integral parts of human civilization and supply chain is part of commercial activities. With time, traditional purchasing, logistics, distribution and other function evolved into broader management and known as Supply Chain Management (SCM). With the advancement of digitalization and globalization has enabled organizations accessing the new domestic and global market and seeks higher in productions, sourcing, service providing and heightened the relevance of supply chain networks and collaboration. Subsequently, with the new market the firms required innovative products, process and services to cater the need of customers. Furthermore, the markets are more dynamic, and customers' expectation became more complex. Thus, with the changing customers' rapidly growing requirements and technological development organizations required more integrated and collaborative efforts for the innovative new products, service and processes.

The term "global supply chain" is one of many that need definitions in the supply chain. "Global Supply Chain involves all the process of manufacturing, delivering of products and services when more than one country involved in the supply chain process," according to researchers and professionals (Meixell and Gergeya, 2005; Branch, 2008; Nagurney et al., 2003). With the increasing globalization of supply chain several issues and challenges immersed in the recent period of time like variability and instability in the currency exchange rates, political instability, economic instability, lack of global standard environmental laws, lack of infrastructure in developing countries, risk of influence of global situation in the supply chain performance, increasing lead time and cost of transportation and quality assurance and so forth (Dornier et al., 1998; Carter and Vickery, 1988).

Supply chain collaboration is cooperative strategies by the firms to leverages their individual abilities into a joint competitive advantage in the market (Soosay and Hyland, 2015; Whiatehead et al. 2018). According to previous research, the relationship within the firms and relationship between the firms and their intermediate partners direct

have impact on the firm's outcomes and its financial performance. However, there is no clear evidence has been published in the public domain regarding the impact of relation between the firms and its extended intermediate as well as network of inter-connected business on the supply chain as whole or chain performance. Though some study indicates that one level has little impact on another, this domain needs more research evidence because there has recently been little in the way of it presented by researchers. Due to the recent development the supply chain became more complex and thus, highlighted the need to studied in reference of different characteristics like Cost, Information flow, time, resilience, critical point and so forth (Madenas et al., 2014; Bottani et al., 2010; Tukamuhabwa et al., 2015). In the previous research studies, it has been indicated that collaboration culture, and knowledge sharing are major factors impacted the collaboration innovation capability, moreover, the organizational culture values like trust, collaborative environment and the openness prepare the organization and their team for sharing the knowledge and technology for the more effective innovation activities according to the market opportunities and requirements (Donate and Guadamillas, 2011). Researchers have shown in an assortment of studies the significance of knowledge sharing contributes to organizational innovation.

LITERATURE REVIEW

Research Questions

In this review paper our main focus is on the following two questions and the previous results obtained by the researchers and professionals of supply chain network in reference of these questions.

1. Are there significant differences in the collaborative innovation capability, activities, knowledge sharing and collaborative innovation performance among the different firms in the country?
2. Are there significant differences in the collaborative innovation capability, activities, knowledge sharing and collaborative innovation performance among the different firms in the different countries?

Knowledge Flow

Knowledge is a very abstract concept and does not have any concrete definition. However, it has been defined by several researchers by using different knowledge metaphor like Metaphorical Thinking, Knowledge as objects, Knowledge Nuggets, The Iceberg Metaphor, and Knowledge Flow (Pinker, 2007; Nonaka et al. 2008; Nonaka and Von Krogh, 2009; Carayannis and Campbell, 2011; Borgo and Pozza, 2012). In this research paper, our main focus is on the Knowledge flow. Moreover, several researchers defined knowledge as Stock and Flows and defined the knowledge stock as "amount of knowledge possessed in any particular organization" and "transfer of the knowledge from one economics player to another economics players are called as the flow" (Bolisani and Oltramari, 2012). In another research Nissen (2007) and Chauvel (2016) defined the knowledge flow as "movement of knowledge across the place, people, association, organization, and time, which illustrate modification, rotation and application. According to their theory, the knowledge flow is multi-dimensional space based on the four axes as activities cycle associated with the flow, flow time, degree of social aggregation and explicitness.

Supply Chain Collaboration

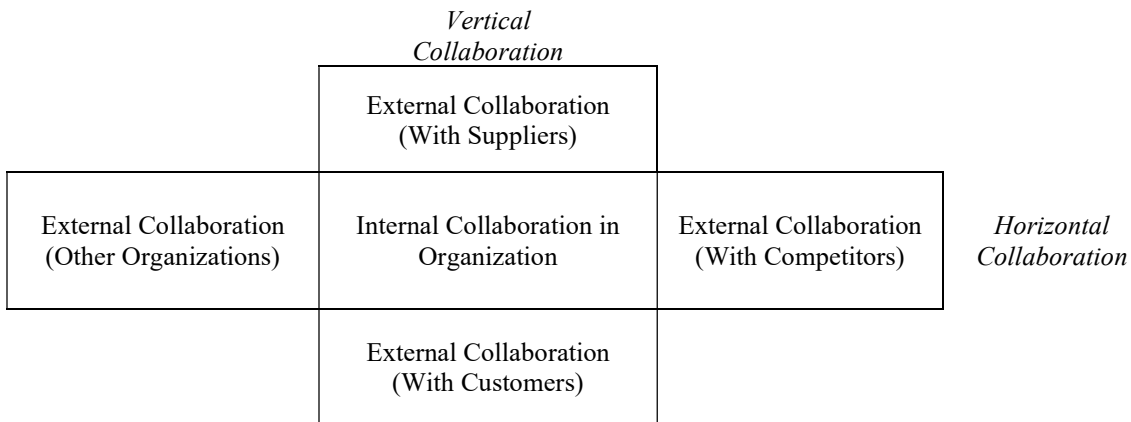
Supply chain collaboration has been defined by several researchers in the context of their application, usability, and implementation process. Liao et al., 2017 In the context of innovation, it can be defined as the process of exchanging and creating knowledge and generating new ideas for the commercialization of new products and services in the supply chain for the mutual benefits of the collaborated organizations (Barbaroux, 2012; Hui et al., 2019), however, according to Cao and Zhang, (2011), in the implementation process supply chain collaboration can be defined as "collaboration is partnership among the individual and independent firms to achieve certain collective goals by working together, plan and execute supply chain operations to improve better performance."

Collaboration as the relationship which initiated and implement a knowledge creation endeavor and shares all the costs and benefits of newly created knowledges, and sharing the ownership through the patents and licenses (Samaddar and Kadiyala, 2006)

Process through which two or more organizations engaged in the constructive management in order to develop solutions based on the provisional agreements that may coexist with disagreement and dissent (Hartley, 2013).

In the literature researchers indicated several elements of collaboration around the supply chain management, however, major supporting elements are collaborative culture, collaborative communication, external & internal trust, decision synchronization, mutuality (mutual benefits) and information / knowledge exchange in the supply chain (Lambert and Cooper, 2000; Ireland and Bruce, 2000; Barratt and green, 2001; Barratt, 2004; Hudnurkar et al., 2014) There is multiple form of supply chain collaboration potential, and the researchers and professionals mainly categories in two form named horizontal collaboration and vertical collaboration. Furthermore, before collaborating, the organization must still consider two important questions: whom and what has to be collaborated?

Figure 1: General Scope of Collaboration in Supply Chain (Barratt, 2004)



Additionally, several researchers presented varying results on the impact of supply chain cooperation on the company's performance. According to Wei et al. (2019) outcomes, supply chain collaboration innovations have a positive impact on a company's performance and aids in acquiring an advantage over competitors in an uncertain market.

Collaborative Innovation Capability

Innovation from the organizational perspective is synthesis of knowledge, products, service or processes, and placing new ideas or method to the market (Iranmanesh et al., 2021; Arshad and Asif, 2023). Further to this, collaborative innovation capability is not the new concept and has been practice from the longer time across the business, it has rich background in the study of organizational strategy and supply chain collaboration literature. Capacity is the developing the system and personnel who able to integrate collaboratives at organizational level or inter-organizational level (Weber et al., 2007). In order to attain superior innovation performance and more competitive in the market with the innovative products and services, companies engage in external integration with supply chain partners that own innovation facilities (Soosay et al., 2008; Mishra and Shah, 2009). Moreover, the other researcher also defined the innovative capability as “the capability which includes products and process capability for the development of new or substantial change in the products and process” (Camison and VillarLopez, 2014; Najafi-Tavani et al., 2018). Companies must strengthen their capacity for innovation and seize opportunities to stay competitive in the unpredictable market climate, evolving technological landscape, and shifting demands of customers. Moreover, Innovation also directly affects organizational performance in long-term operations (Swafford et al., 2008; Isfianadewi, 2023).

Collaborative Innovation Activities

In the supply chain, the collaborative innovation activities considered as the R&D activities among the partners towards introducing the new products, services and process (Cao and Zhang, 2011; Wang and Hu, 2020). Innovation became collaborative activity from in-house after 21st century and become very relevant particularly if the organizations have the common agreed goals, interest and values (Demircioglu & Audertsch, 2020; Van der Voet & Steijn, 2021). In the collaborative innovation activities, the organizations complement their resources who are at the same level of value chain or extract knowledge form the key sources of either upstream or downstream of the supply

chain and test their radical ideas of innovation (Phillips et al., 2006; Soosay et al., 2008). Information and knowledge exchange between partners is essential to innovation activities. Similarly, in interorganizational collaboration, we observe the manner in which technological connectivity indirectly reflects the ability of two proprietary systems to lower technical barriers and incompatibilities for more efficient information exchange (Kim et al. 2008). Additionally, based on the amount of available research, some scholars have come to the conclusion that while collaborative innovative activities require enormous amounts of resources—including money, time, technology, human resources, and so forth—they also retain a substantial risk of project failure (Conelly et al. 2014; Vivona et al. 2023).

Collaborative Innovation Culture

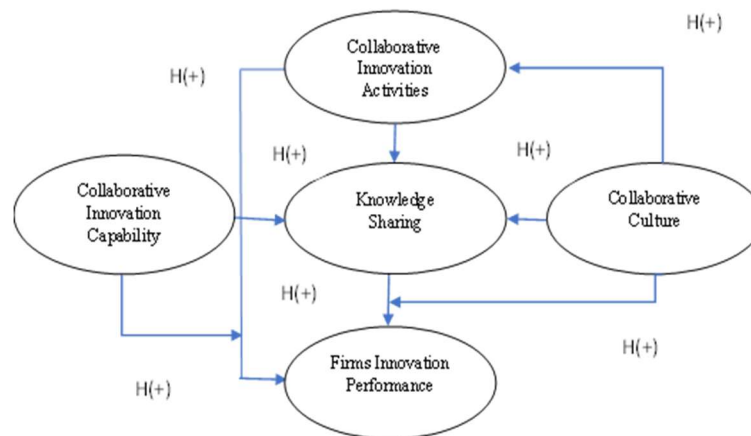
Culture is a value structure of the people in the specific organization and set of values that encompasses their behavior, in other words, it refers to organization’s value, mission, (Akkas, 2022). Firms are collaborating in the supply chain for the creating new ideas for the products, service and process development and innovation. Researchers positively stated critical role of innovation culture on the innovation performance in the firms. In the literature, the innovation culture has been defined under multi-dimensional context, including objective of innovation, resources to support the innovation activities, environment to test and implement the innovation (products, services and process), and operational level behavior or openness to share the knowledge (Wang and Ahmed, 2004; Dobin, 2008). A number of studies have defined the innovation culture, yet there is still disagreement and no consensus on universal acceptance (Fuad et al. 2022), as it changes in context of subject matter Dobin, (2008) defined the innovation culture in supply chain as “*It is engaged behavior that vales creativity, risk association, inter and intra organization teamwork, individualistic freedom, communicative, instill trust & respect, and quick in the decision taking in the innovative activities*”

Hypotheses

This study encompassed a review across numerous literatures, and as part of the meta-analysis, the outcomes of various studies conducted by researchers in many different countries would be compared. The suggested literature follows the most current chronology. These argument and available recent literatures lead to us propose the following hypotheses for the meta-analysis:

- H1a: Different Investigators in China have different estimates of knowledge sharing behavior outcomes
- H1b: Different investigators in China have different estimates of Innovation capability outcomes
- H2a: Different countries (China and Vietnam) have different estimates of Collaborative Culture (CC) outcomes
- H2b: Different countries (China and Vietnam) have different estimates of Innovation Capability outcomes
- H3a: Different countries (China and Iran) have different estimates of Innovation Product Capability outcomes
- H3b: Different countries (China and Iran) have different estimates of Innovation Process Capability outcomes
- H3c: Different countries (China and Iran) have different estimates of Innovation Performance outcomes

Figure 2: Summarized result of few previous literature regarding Knowledge sharing, Innovation Performance, collaboration culture, Capability and Activities



METHODOLOGY

Data Collection

The purpose of the qualitative research in this review research paper is to provide evidence for the experience it is investigating and the comparison of outcomes of the previously conducted qualitative research in the same sector. Data serves as the ground for qualitative research and findings derived from the analysis of evidential data. This research is based on the literature published on the collaborative culture, collaborative innovation, innovation capability, competitive advantages, and knowledge sharing among the firms and organizations. The researchers had collected the data through the questionnaire, interviews and survey method from the Chinese, and Vietnamese manufacturing and services firms.

For calculation of the relation among parameters which affects the innovation performance of the collaborated organizations, different factors are taken into consideration. Listed in Table 1 are factors from the several literatures published used for the calculation of the relation are (Yang et al., 2018; Nguyen et al., 2019; Wang and Hu, 2020; Lam et al., 2021):

Table 1: Constructs and observed variables

Constructs	Observed variables
Organizational Culture	<i>Degree of collaboration among the partners firms well promoted</i>
	<i>Willingness of intra-organizational collaboration among the different units</i>
	<i>Trust or Faith in the partners' ability and vice versa and fully involved in the development of R&D for new products and services</i>
	<i>Formal training program for skills development and technical support to partners</i>
	<i>Promote individual and team experiments and take the considerable risk</i>
	<i>Encourage the discuss on problem and potential solution openly</i>
Innovation capability	<i>Collaborative partners should be well aware the goals and instruction</i>
	<i>Build and manage network relationship to capture and exploit knowledge and technology in supply chain</i>
	<i>Identify partners with the roles and responsibilities in the innovation process and development of products and services</i>
	<i>Acquires new skills or equipment and ideas frequently</i>
	<i>Partners use creative ways in its operating methods</i>
	<i>Introduction of the new products in previous working years should gradually increase</i>
Knowledge Sharing	<i>Modification and improvement of the existing products against the competitors</i>
	<i>New knowledge for application across functional boundaries</i>
	<i>Standard rewards for knowledge sharing among the inter and intra organization units</i>
	<i>Engagement in processes integration of different sources of knowledge</i>
	<i>Sharing innovation work repots and technical documents with the partners on request</i>
	<i>Sharing methodologies and manuals with the partners on request as well as answer related questions</i>
Innovation performance	<i>Sharing the experience and new ideas from the previous work with the partners and member of teams</i>
	<i>Knowledge sharing in the correct format (language) to the correct person form the partners member</i>
	<i>Development of new products and services against the major competitors in the supply chain</i>

Participating with the partners to achieve the higher profit growth (financial and non-financial)

Collaboration with the partner for the higher technological competitiveness against competitors

Reduction in the response time to customer demand with new products and services

Development of more effective and efficient manufacturing and operating procedure or process

Limitation / Peculiarity of the Meta-Analysis

The primary objective of the meta-analysis is to evaluate every discovery that accomplishes the inclusion criteria; nonetheless, it is exceedingly difficult to include every research, investigation, and there is a significant risk of overlooking a paper that accomplishes the requirements. The time lag bias, selective reporting bias, and selective language bias are some other significant flaws of the meta-analysis. Additionally, when published stories include little, inaccurate, or insufficient reporting, there is a selective reporting bias. Research that publishes positive outcomes are more likely to be published; on the other hand, studies that analyze data and produce negative results are less likely to be published. Furthermore, recent research has shown that there may be a systematic distortion of the results if the findings are published in a language other than English or any other primary language. Even while meta-analyses offer aggregate results, it's possible that they won't apply to each the individual's circumstances (Haidich, 2010).

Meta-analysis is statistical techniques which synthesizes and assess multiple studies of the same phenomenon, which having several benefits, firstly, individual studies always have space for the error, however, the meta-analysis pools the outcomes and calculate the average of the outcomes, that minimize the error and provide statistically more accurate and simplified outcomes.

Publication Search and Data Extraction

To identify all the potentially eligible studies, we conducted a comprehensive literature search with the strategy of using keywords and words related to objectives / goals of the research. Eligible studies were selected according to the following keywords inclusion criteria; Innovation, Collaboration culture, Collaborative innovative activities, collaborative innovation capability, Knowledge sharing, information sharing and relation among these parameters. The reference of retrieved articles was also scanned to search potentially related articles and selected four articles for the meta-analysis with the published data (secondary data).

The information and data have been extracted from the eligible studies using a standardized data collection protocol: Author's citation, year of publication, country of data collection, latent variables, observed variables, number of samples collected, descriptive statistics and so forth. The Cronbach's Alpha tool has been utilized to test the quantitative data that was gathered from the literature. Since Cronbach's Alpha measures internal consistency, or more simply put, "how are the items close relative as a group," it is considered reliable data if its value is larger than 0.7 (>0.70). Moreover, the collected data from the literature showed the Cronbach's Alpha value more than 0.80 thus, the data passed the test of reliability and validity.

Statistical Analysis Techniques

Table 2: Meta-Analysis testing

Comparative study of China based literature	R_{C1} and R_{C2} Knowledge Sharing Data Analysis	R_{C1} and R_{C2} Innovation Capability Data Analysis
Comparative Study of China and Vietnam	R_{C1} and R_V Collaborative Culture Data Analysis	$R_{C2} + R_V$ Innovation Capability Data Analysis

Comparative Study of China and Iran	<i>R_C1 and R_I</i>	<i>R_C1 and R_I</i>	<i>R_C2 and R_I</i>
	Innovation Product Capability	Innovation Process Capability	Innovation Performance data
	Capability	Data Analysis	Analysis
	Data Analysis		

Previous researchers used the quantitative approach to examine the relationship between different factors, collaborative innovation culture, collaborative innovation capability, innovation performance, collaborative innovation activities and knowledge sharing among the partners firms. Since the data used in this study is secondary data from the published literatures with purpose of enriching the literature in the field of management and economics. For the analysis of the collected data from the 4-research paper based on the collaboration innovation and knowledge sharing. The meta-analysis has been conducted in the following combination as published below:

Table 3: Research Citations for China, Vietnam, and Iran

Country	Research Citation	Nomenclature
China	Yang et al., 2018	R_C1
	Wang et al., 2020	R_C2
Vietnam	Nguyeg et al. 2019	R_V
Iran	Najafi-Tavani et al., 2018	R_I

The study used the Two sample t-test (pooled Variance) for analysis of the data collected from previously published research literature and to estimate the validity and test the proposed hypotheses. To determine whether there is a statistically significant distinction between the averages of the two populations, the two-sample t-test (pooled variance) is used (Kim, 2015).

RESULTS AND DISCUSSION

We performed the test to check the validity of the hypotheses and stated the results in the below table.

Table 4: Results obtained from the Meta-Analysis

Hypotheses	P-Value	T-value	d-value (Effect Size)	H ₀	Result
H1a	0	11.570	1.47	Rejected	Hypotheses Supported
H1b	0	13.795	1.76	Rejected	Hypotheses Supported
H2a	0.406	-0.830	0.11	Fail to Rejected	Hypotheses Rejected
H2b	0	23.780	1.99	Rejected	Hypotheses Supported
H3a	4.791e-46	-16.734	2.17	Rejected	Hypotheses Supported
H3b	9.205e-41	-15.394	2.00	Rejected	Hypotheses Supported
H3c	0.255	1.137	0.096	Fail to Rejected	Hypotheses Rejected

Hypotheses H1a: Test conducted among different researchers in the China to check the deviation in the means of the collected data on knowledge sharing behavior and observed the p-value equals 0, ($p(x \leq T) = 1$) and t-value 11.570. It means that chance of type I error (rejecting a correct H₀) is small: 0 (0%). The smaller the p-value the more it supports H1a. Moreover, the effect size d-value is 1.47 which indicates magnitude of difference between means are large.

Hypotheses H1b: Test conducted amongst researchers in the China to check deviation in the means of collected data on collaborative innovation capability and p-value equals 0, ($p(x \leq T) = 1$) and t-value 13.795. It means the chance of type I error (rejecting a correct H_0) is small: 0 (0%). The smaller the p-value the more it supports H1b. Moreover, the effect size d-value 1.76, its mean magnitude of difference between the average is large.

Hypotheses H2a: Test has been conducted among China and Vietnam to check the deviation in the means of the collected data on Collaboration innovation culture and observed p-value equals 0.4068, ($p(x \leq T) = 0.2034$) and t-value -0.830. It means that the chance of type I error, rejecting a correct H_0 , is too high: 0.4068 (40.68%). The larger the p-value the more it supports H_0 . It means the difference in the collaboration innovation culture among the countries are not statically significant. Moreover, the effect size d-value is 0.11, it indicates the difference in the mean is small.

Hypotheses H2b: Test conducted among the different countries (China and Vietnam) to check deviation in the means of the collected data on Collaboration Innovation Capability and observed p-value equals 0, ($p(x \leq T) = 1$) and t-value 23.780. It means that the chance of type I error (rejecting a correct H_0) is small: 0 (0%). The smaller the p-value the more it supports H1. Moreover, effect size d-value is 1.99, it indicates the magnitude difference of mean is large.

Hypotheses H3a: Test conducted among China and Iran to check deviation in the means of the collected data on Collaboration Innovation Product Capability and observed p-value equals $4.791e-46$, ($p(x \leq T) = 2.395e-46$) and t-value is -16.734. It means that chance of type I error (rejecting a correct H_0) is small: $4.791e-46$ (4.8e-44%). The smaller the p-value the more it supports H1. Moreover, the effect size is 2.17, it indicates the magnitude of the difference in the average is large.

Hypotheses H3b: test conducted among the different countries (China and Iran) to check the deviation in the means of the collected data on Collaboration Innovation Process Capability and observed p-value equals $9.205e-41$, ($p(x \leq T) = 4.602e-41$) and t-value is -15.394. It means that the chance of type I error (rejecting a correct H_0) is small: $9.205e-41$ (9.2e-39%). The smaller the p-value the more it supports H1. The effect size d-value is 2, it indicates the magnitude of the difference of the average is large.

Hypotheses H3c: Test conducted among China and Iran to check the deviation in the means of the collected data on Innovation Performance and observed p-value equals 0.2557, ($p(x \leq T) = 0.8722$) and t-value is 1.137. It means that chance of type I error, rejecting a correct H_0 , is too high: 0.2557 (25.57%). The larger the p-value the more it supports H_0 . The effect size d-value is 0.096, it indicates the magnitude of difference of the average of the parameter is large.

CONCLUSION

In summary, our meta-analysis reveals that there is a significant difference between the means and average in the outcomes of knowledge sharing behavior as well in the innovation capability in China among the different firms. The results of this study demonstrated the significant variation in average means shown in the earlier studies. Furthermore, no discernible variation can be observed in the collaborative culture across countries; nonetheless, a significant difference has been noted in the mean value of product innovation and process innovation capability across countries, as assessed for the China, Vietnam, and Iran in this conducted meta-analysis. Although there has not been any significant difference among the collaborative innovation performances in different countries.

LIMITATION AND FUTURE SCOPE

Although this research has made significant contribution in the meta-analysis, as there is relatively limited meta-analysis has been conducted in the field, but there are certain limitation and future scope. The collected data from the literature is small and need to conduct the research at the large scale with bigger sample size. Additionally, the researchers' sample size was very limited. In order to build a large knowledge base for more reliable results, we will gather significant samples from multiple nations in our subsequent studies.

The extensive analysis of the collaboration, knowledge sharing and innovation in the supply chain network identified new direction in the field. There is still potential for research despite the fact that numerous studies have been done and have produced an assortment of results that are available to the public. Relatively limited research has been done up to this point on innovation and cooperation in multi-country multinational supply chains. Furthermore, research is recommended to comprehend the effects of collaborative innovation, culture, and knowledge sharing on the import and export of the different countries. However, the different countries have different size of supply chain network like China have more longer supply chain as compare to the Vietnam or Iran. Thus, the dissolution of the Knowledge or information flow is higher in the China as compared to Vietnam; therefore, these factors also need to

be considered in the data for more accurate result. Moreover, another interesting topic of the research is how imports and exports would be affected by the length of the supply chain network.

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IS POOR LEADERSHIP CONTRIBUTING TO THE NON-ACHIEVEMENT OF CLEAN AUDIT OUTCOMES IN SOUTH AFRICAN MUNICIPALITIES?

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ABSTRACT

The government established Operation Clean Audit, aiming for clean audit outcomes for the local government sphere by 2014. Until now, there has been a very small improvement in terms of the local government audit outcomes, and the number of clean audits has decreased in the 2022 financial period. This article aimed to investigate whether poor leadership is contributing to the non-achievement of clean audits in South African municipalities. A qualitative research approach was used, and the study mainly relied on evaluating the academic literature and examining the key official documents. The study found that lack of leadership is the key factor impeding the achievement of clean audit outcomes in South African municipalities.

Keywords: local government, auditor-general, audit outcomes, clean audit, leadership.

INTRODUCTION

It is commonly accepted that credible financial statements and reliable recording of the activities of government institutions are a requirement for better provision of government services (Auditor-General of South Africa, 2020; Wessels, et al., 2021, p. 46). After the performance of the local government received scrutiny in 2009 that resulted in headlines dominated by topics of service delivery failures and civil unrest, mismanagement, financial administration problems, and bad audit outcomes, amongst others (Oberholzer & Diedricks, 2012), the Department of Cooperative Governance and Traditional Affairs decided to conduct its evaluation of the local government. A specific concern was the state of weak financial management, culminating in persistent poor audit outcomes based on audits performed by the Auditor-General. This motivated the government's establishment of Operation Clean Audit, aiming for clean audits for the entirely local government sphere by 2014 (Powell, O'Donovan, Ayele, & Chigwata). Even so, there has been minimal improvement in the local government audit outcomes, and the number of clean audits has decreased (Auditor-General of South Africa, 2022).

The consolidated general report on local government audit outcomes by the Auditor-General of South Africa (AGSA) for 2021/22 reveals that only 38 of 257 municipalities received clean audit outcomes. This is a regression compared to the previous financial year, 2020/21, wherein 41 of 257 municipalities managed to receive clean audit outcomes (Auditor-General of South Africa, 2022, p. 14). Furthermore, the AGSA alludes that when a municipality receives a clean audit opinion, it means that “its financial statements and performance report give a transparent and credible account of both its finances and its performance against service delivery targets. In other words, these accountability reports present a reliable picture of that municipality’s performance – good or bad” (Auditor-General of South Africa, 2022, p. 15).

RESEARCH METHODS

The research approach followed in this study was both qualitative as well as literature review. This was the best approach to use as the data used in this study is non-numeric or has not been quantified (Saunders & Thornhill, 2016, p. 724). This study was primarily dependent on evaluating the academic literature and examining the Auditor-General’s reports on audit outcomes to achieve the research objective. The researcher reviewed the literature with the intent of laying a foundation for the theoretical framework that could be employed to explain the sluggishness and/or

non-implementation of the AG’s audit recommendations, which had the potential to lead to the improvement of the audit outcomes (Matlala & Uwizeyimana, 2020). Thematic analysis technique was used to analyze the underlying causes for the non-achievement of the clean audit outcomes by the South African municipalities by “searching the themes or patterns, occurring across a data set” for the period under review (Saunders & Thornhill, 2016, p. 929). The Auditor-General South Africa (AGSA) must perform mandatory audits of all municipalities, provincial departments, national departments, and government entities. Each financial year, the Auditor-General issues audit outcomes on national and provincial departments and municipalities, including public entities (Auditor-General South Africa, 2014). The Auditor General's key documents were reviewed after the literature review, and the key repeating findings were hypothesised.

FINDINGS AND DISCUSSION

The researcher reviewed the consolidated general reports on local government audit outcomes by the Auditor-General of South Africa for the periods 2019/20, 2020/21, and 2021/22 and analyzed them to identify themes or patterns occurring across the data for this period (Saunders & Thornhill, 2016, p. 729).

The table below displays the Auditor-General’s findings for the three financial years referred to above and their related themes or factors impeding the clean audit outcomes or root causes related to the findings.

Table 1: Auditor-General's Audit Findings for the three financial years under review and the author has identified the following as related root cause

Financial Period	Auditor-General’s findings	Factors impeding clean audit outcomes
2019/2020	<ol style="list-style-type: none"> 1. Lack of supervision, monitoring, and oversight. 2. Lack of financial management and reporting skills resulting in reliance on consultants. 3. Challenges resulting in poor service delivery. 4. Lack of oversight and poor controls 5. Information systems and automated controls do not support accountability. 6. Lack of consequences for accountability failures. 	<ol style="list-style-type: none"> 1. Ineffective and/or lack of leadership. 2. Lack of financial management skills. 3. Lack of planning on service delivery issues. 4. Ineffective and/or lack of leadership. 5. Lack of planning before procurement of the ICT systems. 6. Ineffective and/or lack of leadership
2020/2021	<ol style="list-style-type: none"> 1. High vacancy rate of the finance unit at municipalities. 2. Ineffective use of consultants to do financial reporting. 3. Reliance on external audit process to produce quality financial reports. 4. Ineffective Information Technology governance systems. 	<ol style="list-style-type: none"> 1. Ineffective and/or lack of leadership. 2. Inappropriate skills and/or lack of skills. 3. Lack of skills within finance units in municipalities. 4. Lack of planning before procurement of the ICT systems
2021/2022	<ol style="list-style-type: none"> 1. Over-reliance on the audit process to identify and correct misstatements. 2. Ineffective use of consultants for financial reporting. 3. High municipal official’s vacancy rate. 4. Ineffective information technology governance process. 	<ol style="list-style-type: none"> 1. Inappropriate financial skills. 2. Lack of monitoring 3. Failure to appoint appropriate personnel in finance units. 4. Lack of planning before procurement of the ICT systems.

Source: Author’s own design.

When one scrutinizes the findings of the financial period under review in Table 1 above, one gets a sense that although many root causes reveal themselves as related to the audit findings, the main issue lacking in municipalities is proper leadership. Oberholzer (2012) and Diedricks (2012) have this to say about municipalities and/or local government: “Any discussion about ways to improve local government finances, and therefore service delivery, would be incomplete without a focus on the role of leadership: style and substance, as well as actions and utterances” (Oberholzer & Diedricks, 2012). Most successful organizations have been proven to succeed because of suitable leadership styles. The municipalities are also failing to get clean audits because of leadership within the municipalities. Despite many factors that prevent municipalities from achieving cleaning audits, ranging from sound financial management, continually improving skills depth, good governance, and oversight, including regulatory compliance. Oberholzer (2012) argues that “Leadership is the glue that holds it all together, it is the crucial pillar around which all else revolves” (Oberholzer, 2012).

Leadership within the context of the local government refers to the political leadership (the executive members under the leadership of the Executive Mayor/Mayor and the legislative members or the council under the leadership of the Municipal Speaker) and the administrative leadership under the leadership of the Municipal Manager. According to Koutsoulianos (2023), political leadership represents the political program with principles and interests. They then design the policy based on their principles and interests and the backbone of the accomplishment of the political program of the mayoral term. Administrative leaders are the executive managers who implement policies, programs, and actions. After their interactions, essential leadership expertise is vital to ensure the set municipal programs are realised. Political and administrative leaders' decisions and how they act and conduct themselves could have far-reaching organizational effects (Koutsoulianos, 2023).

Leadership has been defined as “a process by which an individual influences a group of individuals to achieve common goals through mobilising and motivating the workforce .” Good leadership presumes consistency, personal development, and upper levels of satisfaction; it gives direction and vision, an alignment with the environment, an enabling system for innovation and creativeness, and a source of the renewal of the organisational culture. Consequently, municipal leadership must seek to increase their subordinates' performance and job satisfaction to achieve the organisational goals (Koutsoulianos, 2023). To achieve what is postulated by Koutsoulianos above, the leadership of the municipalities has to apply four management functions – planning, organising, directing, and controlling.

Planning Function

According to Robbins, “*planning* encompasses defining an organisation's goals, establishing an overall strategy for achieving those goals, and developing a comprehensive hierarchy of plans to integrate and coordinate activities” (Robbins, 1998, p. 3). This definition applies to all organisations, whether in the private sector or public sector and therefore also applies to the local government environment.

Planning Function in the Local Government

A municipality must undertake developmentally orientated planning to ensure that it strives to achieve the objectives of local government as set out in the Constitution and to contribute to the progressive realization of the fundamental rights to a healthy environment, property, access to housing, healthcare, food and water, and education. The municipality's planning must be aligned with and complement the development plans and strategies of other affected municipalities and organs of state to ensure coordinated planning and to give effect to the principles of cooperative governance (SALGA, 2014, p. 21-22).

A municipality must adopt a single, inclusive strategic plan for its development—the Integrated Development Plan (IDP). The IDP forms the policy framework and the general basis for the annual budget. The IDP is the municipality's principal strategic planning instrument, which guides all planning and development in the municipality. It also binds the municipality in the exercise of its executive authority and binds all persons to the extent that the parts of the IDP that impose duties on or affect the rights of people have been passed as a by-law. Notably, the IDP ensures close coordination and integration between projects, programs, and activities, internally (directorates) and externally (with other spheres of government). The successful implementation of the IDP depends on cooperative governance between the three spheres of government and sound partnerships with strategic stakeholders (SALGA), 2014, p. 22).

When the municipality has determined its priorities through community participation in the IDP process, it must effect them in its budget. The budget must be aligned with and informed by the:

- constitutional mandate, i.e., delivery of essential services
- a credible IDP
- Service Delivery and Budget Implementation Plan (SDBIP) (SALGA, 2014, p. 22)

Every municipality is expected to develop an SDBIP, which should outline how it will implement its budget to meet service delivery needs. The SDBIP should clearly outline the municipality's ability to effect or implement its budget, thus giving effect to the municipal budget and IDP. This, therefore, means that the SDBIP is a tool that seeks to ensure the budget is effective (SALGA, 2014, p. 23).

The Systems Act places the responsibility on the council to adopt a Performance Management System (PMS). The system developed must be commensurate with its resources as determined in the budget. It must align with the priorities, objectives, indicators, and targets in the municipality's IDP. It must promote a performance management culture amongst the political structure, office bearers, councilors, and the administration. As part of the Performance Management System, the municipality must set performance indicators for measuring its performance, aligned with the priorities and objectives set out in the IDP. The PMS must set measurable targets for each priority identified to monitor the municipality's performance (SALGA, 2014, p. 23).

Most municipalities need to improve in planning their activities (Auditor-General South Africa, 2021, p. 30). The Auditor-General reported that most municipalities had unsuitable systems to gather and account for their performance information, and officials did not know or could not implement the performance management and reporting requirements. It was further reported that performance management reports had substantial errors and rendered them not reliable for the council or the public to utilise them in holding municipalities accountable for service delivery promises they make in their strategic planning documents (Auditor-General of South Africa, 2020, p. 33). The achievements reported were found not reliable, performance indicators and targets were not useful, and in 4% of the cases there were no underlying records or planning documents (Auditor-General of South Africa, 2020, p. 34).

During the 2020/21 general report on local government audit outcomes, it was reported that some municipalities did not prepare performance reports, which meant that they were not transparent about or accountable for their performance. It was further noted that 74% of the 244 municipalities submitted poor-quality performance reports for auditing. The poor-quality reports submitted raised doubts about the credibility of the reported information (Auditor-General South Africa, 2021:30). In 40% of municipalities, the indicators and targets used to plan and report on achievements could have been more useful. This means that what was reflected in these municipalities in the reports is relevant to the municipalities' original promises in their strategic documents (Auditor-General South Africa, 2021, p. 31).

Organising Function

According to Robbins (1998), “organising includes determination of what tasks are to be done, who is to do them, how the tasks are to be grouped, who reports to whom, and where decisions are to be made” (p. 3).

Organizing is conducted by managers to achieve organisational goals. The organising function needs managers who can identify actions that must be taken to achieve their goals, appropriately delegate subordinates according to their roles, and coordinate responsibilities. They are also required to communicate appropriately between various levels of the management hierarchy and deal properly with any situations that may arise. Organising is advantageous because it establishes a clear chain of command (organisational structure) and creates a conducive environment for the ideal use of resources to achieve a goal most effectively (<https://study.com/academy/lesson/organizing-as-a-function>, 2023).

Organising is an important management function because it can significantly assist an organisation in achieving its objectives if properly utilised and can significantly deter the organisation's pursuit of its goals if utilised incorrectly. Employees must be allocated to roles in which they have a grasp of their responsibilities and employ strong skill sets to compete effectively. If an improper organisation is used, the outcome could devastate the business (<https://study.com/academy/lesson/organizing-as-a-function>, 2023).

In the South African local government sector, the organising function is legislated in the Local Government: Municipal Systems Act. Chapter 7 of the Municipal Systems Act stipulates how some organising aspects should be conducted. According to Section 51 of the Act, a municipality must, within its administrative and financial capacity, establish and organise its administration in a manner that would enable the municipality to be responsive to the needs of the local community, facilitate a culture of public service and accountability amongst its staff; be performance orientated and focussed on the objects of local government set out in Section 52 of the Constitution and its developmental duties as required by Section 153 of the Constitution; ensure that its political structures, political office bearers and managers and other staff members align their roles and responsibilities with the priorities and objectives set out in the municipality's integrated development plan (Republic of South Africa, 2000).

It is then implied from the above provisions of the act that the municipality is expected to employ individuals to ensure the municipality achieves its objectives. The main objective of the municipality is to deliver services to the communities guided by its IDP (Republic of South Africa, 2000). It has been proven through the Auditor-General's reports that most municipalities fail to deliver services to the communities because of a failure to fill critical posts. In its 2019/20 report, the Auditor-Generals reported that vacancies and instability in key positions have caused poor audit outcomes for the municipalities. It was reported that at 63 municipalities, instability and vacancies in critical positions like municipal manager and chief financial officer prevented them from getting better audit outcomes. Thus, these municipalities sustained their bad audit outcomes. In contrast, stability in critical positions such as municipal manager and chief financial officer has enabled municipalities to obtain better audit outcomes (Auditor-General of South Africa, 2020, p. 60).

It was reported that the average vacancy rate at municipalities was 21% overall, while that of senior management and finance units was 18%. The resourcing of finance units in 92 municipalities was either concerning or requiring intervention. In addition, there was instability at the council level at 13 municipalities (Auditor-General of South Africa, 2020, p. 60).

The other aspect of organising that results in municipalities failing to deliver services is the appointment of incompetent managers. The appointment of incompetent managers emanates from cadre deployment, and several have been successfully challenged in court. In *Mlokoti vs Amathole District Municipality*, the Eastern Cape Division of the High Court found that in contestation for the position of municipal manager, even though there was an expressed political preference for another candidate, the municipality was obliged to appoint the best candidate. Judge Pickering delivered a damning judgment wherein the judge was critical of the municipality's decision to appoint a candidate on the instruction of the regional executive committee of the ANC (Kwaza, 2022). In October 2021, the Mahikeng High Court set aside the appointment of Mike Mokgwamme. Judge Samkelo Gura ruled that the local municipality acted unlawfully and irrationally when it appointed him as the municipal manager in June 2020, ahead of two better-qualified candidates competing for the post. It was alleged that Mokgwamme was the least qualified of the shortlisted candidates (Koko, 2021).

Directing or Leading Function

Directing refers to a process or technique of instructing, guiding, inspiring, counseling, overseeing, and leading people towards the accomplishment of organisational goals. It is a continuous managerial process throughout the organisation's life (<http://www.toppr.com/guides/business-studies>, 2023). Other writers refer to directing as a leading function, and they define leading as follows, "*leading is stimulating high performance by members of the organization*" (Bateman & Snell, 2013).

In its 2020/21 consolidated audit outcomes report, the Auditor-General reminds the municipalities how they should direct functions regarding financial reporting. This is what the Auditor-General said: "Financial reporting does not only happen at the end of the year but also takes place during the year in the form of quarterly reports to councils and treasuries. These reports are used for decision making and to monitor spending, revenue generation, and the use of conditional grants" (Auditor-General South Africa, 2021, p. 16). This means that those who are leading the financial reporting should be directed quarterly by guiding their subordinates accordingly.

The municipalities made the appointment of consultants for financial reporting a permanent feature (Auditor-General South Africa, 2021, p. 16). As a result, the cost of consultants for 2020/21 amounted to R1,26 billion. The

report reflects that this amount doubles the previous year's cost of consultants. The Auditor-General also calculated the combined cost of financial reporting - the money spent on finance unit staff, including consultants employed to perform financial reporting functions- and amounted to R11,67 billion for the 2020/21 financial year. Notwithstanding all of these resources and support, the critical management controls of municipalities were inadequate to avoid material misstatements in the financial statements (Auditor-General South Africa, 2012, p. 16).

The inability of the municipalities to compile credible financial reports forces them to appoint consultants year after year, and this is done without ensuring that skills are transferred to municipal staff; therefore, what was intended to be a short-term solution continues perpetually. The AG report reflects that 79% of the municipalities reappointed consultants that were appointed in the previous year (Auditor-General South Africa, 2021).

An overwhelming majority of municipalities, to be precise, 220 municipalities, hired financial reporting consultants in the 2021/22 financial year. The Auditor-General further contends that 53% of these municipalities hired consultants to supply skills that their finance units still needed to have. It is also reported that 40% of the hired consultants used bridges for specific skills and/or a vacancy gap, while 7% was purely used to offset vacancies. Therefore, for the 2021/22 financial period, 81% of municipalities re-employed the consultants used in the previous year, slightly more than the previous year (Auditor-General of South Africa, 2022, p. 31).

Controlling or Monitoring Function

Controlling can be defined as that function of management “*which helps to seek planned results from the subordinates, managers, and at all levels of an organisation. The controlling function helps measure the progress towards the organisational goals, brings any deviations, and indicates corrective action*” (<http://www.toppr.com/guides/business-studies>, 2023).

It is reported year after year that audit outcomes in the local government sector are becoming worse than improving (Auditor-General of South Africa, 2022:5). Therefore, most municipalities fail to perform controlling as a management function. Robbins defines controlling as “*monitoring activities to ensure they are accomplished as planned and correcting any significant deviations*.” After the goals are set, plans are formulated, structural arrangements are delineated, and people are hired, trained, and motivated, things may need to go right. Management must monitor the organisational performance to ensure things are going as they should. The actual performance should be compared with the prior set goals. When there are substantial abnormalities, the management must ensure the performance is back on track. Monitoring, comparing, and potential rectification is what controlling function means (Robbins, 1998, p. 3).

In the municipal environment, a municipality must set key performance indicators, including input indicators, output indicators, and outcome indicators, concerning each of the development priorities and objectives referred to in Section 26(c) of the Local Government: Municipal Systems Act. The municipal key performance indicator must be measurable, relevant, objective, and precise. In setting key performance indicators, a municipality must ensure that communities are involved, and the key performance informs the indicators set for all its administrative units and employees and every municipal entity and service provider with whom the municipality has entered into a service delivery agreement (SALGA, 2014, p. 129 - 130).

Regarding monitoring, measurement, and review of performance, a municipality must, after consultation with the local community, develop and implement mechanisms, systems, and processes for the monitoring, measurement, and review of performance concerning key performance indicators and performance targets set by it. The mechanisms, systems, and methods for monitoring must provide for reporting to the municipal council at least twice a year, be designed in a manner that enables the municipality to detect early indications of under-performance and provide for corrective measures where under-performance has been identified. Performance measurements must include the measurement of cost, resources, and time used to produce outputs by input indicators, the extent to which the municipality’s activities or processes produced outputs in accordance with the output indicators, and the total improvement brought by outputs in accordance with outcome indicators (SALGA, 2014, p. 132).

Instead of performing this function, most municipalities use the audit process as their mechanism to control (Auditor-General South Africa, 2021:17; Auditor-General of South Africa, 2022:31). There has been an increase in

irregular expenditure in South African municipalities, which should not be the case if the municipal leaders were doing controlling or monitoring as a management function. *“Irregular expenditure is an expenditure that was not incurred in the manner prescribed by legislation”* (Auditor-General of South Africa, 2020, p. 40).

When the municipalities incur irregular expenditures, it does not automatically mean that money has been squandered or that money embezzlement has occurred. It indicates that money has been spent without following the legislative prescripts. Therefore, the management of municipalities should investigate whether this was done intentionally, negligently, or by error. Through this investigation, the responsible individual and the impact of non-compliance should be revealed. Guided by the investigation, the next action to take should be determined. The next action could be condoning the irregular expenditure if the non-compliance had no impact and negligence was not proven. On the other hand, if negligence has been proven, disciplinary action against the individual involved must be taken, and any losses incurred should be recovered from the implicated individual. If necessary, the procurement contract should be cancelled, and the matter be reported to the police or the investigating authority. This is the council's responsibility, which the Municipal Public Accounts Committee (MPAC) must support.

During the financial year 2019/20, irregular expenditure was as high as R26 billion. Municipalities, nonetheless, have not dealt with it as quickly as they should (Auditor-General of South Africa, 2020, p. 40). During the same financial period, 73 towns were qualified on completeness of their disclosure and/or did not know the total amount and were still investigating to determine this (Auditor-General of South Africa, 2020, p. 41). During the financial year 2021/22, 24% of municipalities did not report all the irregular expenditure they should have in their financial statements. In some cases, the amount of the irregular expenditure reported was incorrect. This clearly shows that the municipalities were not having mechanisms to monitor irregular expenditure. The Auditor-General would not have highlighted the above irregularities if the municipalities had monitoring mechanisms.

Capital expenditure is the second issue, proving that municipalities are not performing the controlling or monitoring function. Most of the capital expenditure (the money the government spends on buying, maintaining, or improving fixed assets) is financed through conditional grants. Although there is a great need for these grants to finance infrastructure projects, they are often underspent, mostly because of poor project management. Sometimes, the money is also not used for its intended purposes. The underspending on these grants means that valuable infrastructure assets meant for service delivery are not maintained, resulting in a deterioration in the quality of services to citizens, who continue to be frustrated with inadequate service delivery (Auditor-General of South Africa, 2020, p. 23; Auditor-General South Africa, 2021, p. 34).

Information technology is the third issue, proving that municipalities need to perform the controlling or monitoring function. Year-on-year, the Auditor-General has pinpointed serious control weaknesses in local government's information systems associated with information technology governance, system-related controls, information security, disaster recovery, information technology projects, and information technology contracts and licenses (Auditor-General South Africa, 2021, p. 25).

During the financial period 2020/21, it was revealed that information technology governance improved at ten municipalities and regressed at four over the previous administration's term. In seventy-five percent of the 79 municipalities where the Auditor-General tested the effectiveness of information technology governance, it was found that the governance process was ineffective. Ineffective information technology governance processes resulted in control settings that are susceptible to misuse or manipulation, runaway information technology projects that completely surpassed budget and time targets, and expenditures that were not justified, resulting in value not being added to the investments made in technology (Auditor-General South Africa, 2021, p. 25).

The Auditor-General's report reveals that system controls could have been more successful or capable of ensuring that the information processed by the systems is valid. In the local government sector, particularly metros and big municipalities, large sums of money are continually spent on new and advanced systems to streamline their processes. However, because of material weaknesses in these systems, the Auditor-General had to do extra procedures around the transactions and data processed by such systems. Further, these systems were found to be susceptible to exploitation, abuse, and fraud (Auditor-General South Africa, 2021, p. 26).

The Auditor-General's report reveals that out of 79 municipalities, 68 (86%) had ineffective security controls. It found that because of weaknesses in security controls, hackers could exploit the flaws in some of the municipalities

where the AG found that information technology security was weak. This has resulted in critical local municipal services not being made available for an extended period and, in some cases, hackers demanding a ransom (Auditor-General South Africa, 2021, p. 27).

CONCLUSIONS AND RECOMMENDATIONS

The review of literature and data identified factors that hinder the achievement of clean audit outcomes in South African municipalities. The author argues that although many issues have been identified in the study as factors that hinder the achievement of clean audits and root causes related to them, these are manifestations of poor leadership. At a political level, the political leaders make appointments through patronage and favouritism in critical positions, which is done in the name of cadre deployment. These individuals have been proven incompetent; their appointment contributes to the non-achievement of poor audit outcomes. At an administrative level, the administrative leaders fail to execute the basic principles of management functions i.e. planning, organising, directing, and controlling, as they have no skills to perform these functions. Cadre deployment was necessary during the transitional period from the apartheid administration to the democratic administration, as the new government could not entrust the administrators of the apartheid era with implementing its policies. However, the cadre deployment policy has since been misused for political and personal gains. All South Africans who qualify to hold critical positions should be allowed to occupy these positions.

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“PET HUMANIZATION” BUSINESS ENTRY STRATEGY THROUGH AI-BASED NAMING ALGORITHM

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ABSTRACT

Recently, as the number of households with pets has increased, the related market is expanding, and one business area called Pet Economy is expanding. Therefore, it is necessary to lay the foundation for the expansion of the pet industry and the creation of business value. Existing pet business applications require content provision and recommendation technology based on various user information because they are remarkable in nature, and development of stand-alone pet economy applications that can continuously secure and supply them is necessary. Therefore, this study intends to develop a 'filtering algorithm based on input information', which is of great significance in that it can conduct a business that can create new value for the pet business. This algorithm performs filtering based on three types of user input information, such as user information, pet image, and preference name type selection, and the recommended name and its basis are provided within the application. It can be seen as a process of first tagging the name DB to be used in the naming algorithm, then extracting deep learning-based features from the input image, and finally extracting the appropriate name by tagging the labeled name DB and the extracted features. This study has promising development potential in utilizing business strategies by considering success factors applied when establishing AI-based business strategies at the start, transformation, and expansion stages, respectively.

Keywords: petconomy, pet humanization, business strategy, AI-based naming algorithm, Techno-Leveraging Business.

INTRODUCTION

With the recent increase in the number of households with pets, the related market is expanding (Ji-Hye Park, 2017). According to the American Pet Products Association (APPA), the proportion of households with pets in the United States in 2017 was 68%. In addition, the expenditure for companion animals is about 69 billion dollars, which is a trend that continues to increase. In the case of Korea, the number of households with pets is continuously increasing due to the recent increase in single-person households, low birth rate, and aging population. The term "pet economy" has emerged and is defined as one business area called pet economy. Pet economy is a combination of "pet" and "economy," which means economy, and refers to production and consumption activities related to pets. In addition to pet-related contents, pet economy uses a lot of applications that consider user convenience. In addition, "Pet Humanization," a concept that replaces humans rather than just a pet concept, is spreading, recognizing pets as family members and related businesses are spreading, and providing services similar to children in need of care such as "PetPlay" and "Pet Living" through applications (Lee, G. et al., 2021). In particular, the pet-tech industry using IT technology is emerging, similar to how people use technology to increase convenience in life.

At this point, when various new services related to companion animals continue to emerge and the companion animal market continues to expand, it is necessary to lay the foundation for expansion of the domestic companion animal industry and creation of business value. Content provision and recommendation technology based on various user information is needed, and the development of a stand-alone petconomy application that can continuously secure and supply this is necessary. This is due to the limitations of the existing pet business-related market. Existing petconomy applications do not operate their own business, but rather have a community nature that connects and recommends products and services. It is a form of business that has a significant impact on the quality of products/services of other business entities. In most cases, users must pay for products/services for the business entity running the application to make a profit (Feng, Y., 2022). In the case of product/service recommendations, there are many competitor applications, and content can be accessed through other channels such as recommendations from

acquaintances and offline communities. In the case of content that can be accessed through other channels, a large user pool and richness of content are essential, but the barrier to new entry is very high due to the active prior business/application, so it is not possible to run an independent business with the application alone. Therefore, there is an emerging need to select content that can be self-produced/supplied/distributed to complement the limitations of the existing companion animal market as the main content of the application. Therefore, this study aims to provide contents during the 'infant age-adoption' period among the life cycles of companion animals. Existing contents related to 'infant age-adoption' include pet adoption and abandoned animal adoption applications, but this focuses on community functions. The first name to do when encountering a companion animal is 'naming', and it is necessary to provide content focused on this.

Therefore, this study aims to develop contents and technologies that can create new added value in the ever-expanding pet business market. In the case of the existing pet economy application, it does not run its own business, but has the characteristics of a community that links and recommends products and services. For example, in the case of a pet product recommendation application, there is a DB linkage and self-review function between product manufacturers and distribution shopping malls. In addition, the pet hospital/treatment recommendation application provides the user with a connection with the pet hospital registered in the DB around the user based on GPS. In the case of an application that provides pet care/training information, it is provided in the form of producing its own content or linking third-party information such as famous YouTube content. It can be viewed as a form of business that has a significant impact on the quality of products/services of other business entities. Most applications take the form of product/service recommendations, distribution margins generated during the purchase process, and profit generation through advertising (Strobell, H. W., 2021). In other words, the business entity that operates the application can make a profit only if the user pays for the product/service. This form cannot create value within the business on its own and does not have its own unique advantages as an application. Therefore, it is necessary to be able to emphasize the pet humanization phenomenon and at the same time develop technologically independent applications. Accordingly, this study seeks to provide 'naming' content for stand-alone application operation. Since this is unique content that is difficult to access through other channels, business differentiation can be created by developing naming technology based on an image recognition algorithm.

LITERATURE REVIEW

The Pet Business Industry

The pet business industry has undergone major changes over the past decade, developing into a diverse market (Kuzma, E., & Sehnem, S., 2023). The industry encompasses traditional products such as food and toys as well as embodies a broader lifestyle and hobby culture among pet owners. Consumers' hobbies and preferences are at the center of the growth of the pet market, driving innovation and influencing industry trends. In addition, the expansion of the pet market can be attributed to changes in the relationship between pet owners and pets. Pets are increasingly recognized as family members, and they are playing an important role in shaping consumer spending habits. Consumers' willingness to invest for the overall well-being and happiness of pets beyond simply spending on necessities for pets is becoming clear (Carrión, P. A., 2023).

In addition, consumer hobbies play a pivotal role in these dynamics (Kuzma, E., & Sehnem, S., 2023). For many people, keeping a pet is not just a responsibility, but a passion that encompasses a variety of activities and interests. The pet business market has diversified to meet the interests of this niche, offering everything from travel accessories and sports-only equipment to organic products and customized clothing. Pet owners' preferences have the same impact. As individuals learn more about their pets' health and nutrition, they look for products that fit their values and lifestyle choices. This has led to the emergence of organic, non-GMO, and special diet pet foods that reflect human health trends, and in addition, as ethical considerations such as animal welfare and environmental impact have increasingly made purchasing decisions, companies have adopted sustainable practices and transparency in their sourcing and manufacturing processes.

In addition, the rise of social media is also playing an important role within the pet industry in amplifying consumers' hobbies and preferences (Kuzma, E., & Sehnem, S., 2023). Platforms such as Instagram and TikTok have provided pet owners with the space to share their experiences and connect with like-minded communities. This visibility has not only normalized spending on pets but has also created influential figures that shape trends and spur

demand for specific products. Brands are aware of this dynamic and often work with pet influencers to reach out to more customers. Customization trends are another aspect of consumer preferences that affects the industry. As owners try to express their pets' unique personalities, there is a high demand for customized products. Services such as DNA testing for pets have also gained popularity, providing insight into the characteristics and health tendencies of each breed and providing more personalized care. Furthermore, Bloomberg Intelligence's Pet Economy Report stated that the global pet industry is valued at \$320 billion in 2023 and is expected to grow to approximately \$500 billion by 2030. This growth trajectory indicates how consumer preferences for premium and specialty products are reshaping the pet industry.

The impact of these consumer trends is evident from the increasing number of specialized retailers and services. Beauty services such as niche boutiques, luxury snack shops, and spas for discerning pet owners that value quality and experience have become commonplace (Kuzma, E., & Sehnem, S., 2023). In particular, the pet service sector showed remarkable growth as services such as dog care, behavioral training, and pet photography have become standard services. Consumers' hobbies and preferences play an important role in the pet industry. They are not just following trends but are actively forming them. It creates demand for innovative products and services that improve the quality of life of pets. This symbiotic relationship between consumer interest and industry products has created a dynamic market that adapts and responds to changes in pet ownership trends.

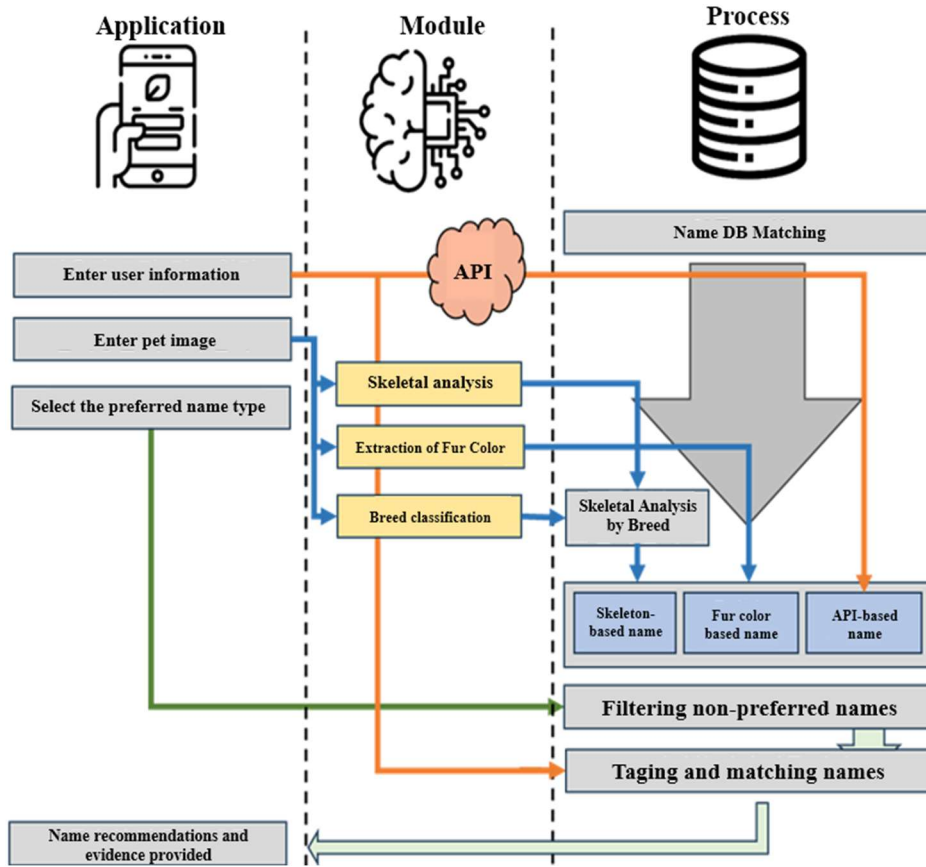
The future of the pet market is closely related to consumer preferences and hobbies. As these changes continue, the industry will also adapt to meet the needs of diverse and passionate pet-owned communities. It is clear that understanding and responding to consumer needs, such as innovative health products, environmentally friendly plans, and personalized experiences, is not only beneficial but also important to succeed in the ever-growing pet industry. Therefore, in this study, it is necessary to provide a more sophisticated and complex business industry form based on the phenomenon of 'pet humanization', beyond seeing the pet business as a simple consumer industry. This suggests that technology-based applications that can reflect consumers' hobbies and preferences are needed.

RESEARCH FRAMEWORK

Research Concept for a 'Pet Humanization'

To carry out the business, an image-based pet name algorithm is developed. The corresponding algorithm is a 'filtering algorithm based on input information' and may filter and provide a name that matches the information input by the user from a previously secured name DB. Filtering is performed based on three types of user input information such as user information, pet image, and preference name type selection, and the recommended name and the basis are provided together in the application. The process follows the following order. 1) The user inputs the image of the companion animal and related information, and then the type of the preferred name. 2) Features and information are extracted from the input image through analysis modules such as skeleton analysis, fur color extraction, and breed classification. It utilizes feature extraction, an unsupervised deep learning methodology. 3) The non-preferred name is filtered by matching the information to the name DB labeled with rule-based, and the most suitable name is recommended. In other words, it may be seen as a process of first performing the tagging operation in the name DB to be used in the naming algorithm, then extracting deep learning-based features from the input image, and finally extracting a suitable name by tagging the labeled name DB and the extracted features. A summary of the process is shown in Figure 1 below.

Figure 1: An algorithmic schematic diagram



Detailed Process

The corresponding algorithm is an 'input information-based filtering algorithm' that filters and provides names that match the information entered by the user from the name database secured in advance. The DB automatic update process through the automatic collection web crawler is built in advance, and data labeling for the naming process is performed. For this work, labeling is performed to name based on the external characteristics of the companion animal extracted through image recognition. The case of naming a pet based on external features such as the length of its fur, the size and size of its color is performed through image recognition, and the labelling work is performed in advance to recommend related names by extracting two features through image recognition. Labeling is performed in advance to recommend related names by extracting two characteristics, such as fur and size, through image recognition. After that, when a predefined feature is extracted when a specific image is input, the related name can be recommended. In addition, name types are categorized into various categories and labeled with nature, food, and preferred brands to recommend names according to users' preferences/non-preferences. The labeling was performed in a qualitative way, and the basis for labeling was first classified as to what characteristics each name had and then classified according to the category. Examples of name type classification labeling are as follows (Table1).

Table 1: Examples of Pet Name Labeling

name	type	Fur color	size
Peanut	food	brown	small
Kkami		black	
Donsuk			big
sarang	feeling		

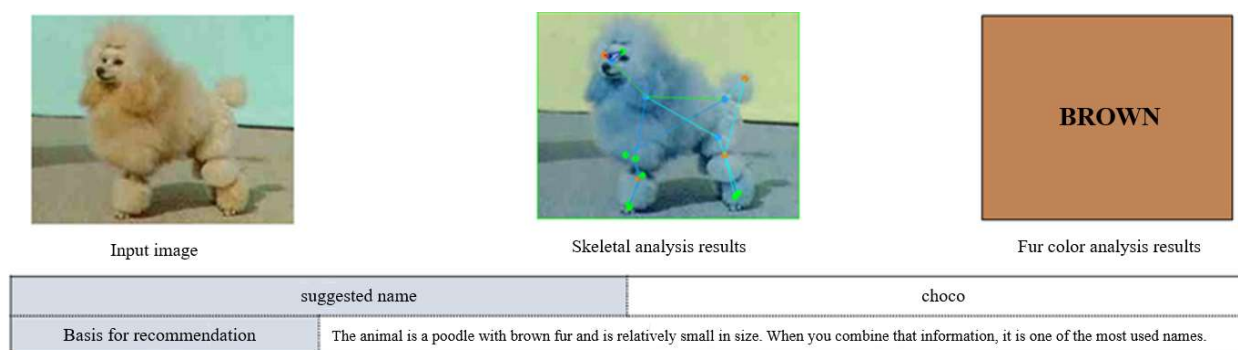
happy	feeling		
ccomede	brand		
rui	brand	brown	
bittong	brand	brown	

Through the input image, skeleton analysis, fur color extraction, and variety can be classified to extract various characteristics. The skeleton analysis can analyze the skeleton in a dot-line when entering an image using the open pose AI algorithm and proposes a variety classification model using the CNN model together. The Open Pose is a model developed to detect and analyze a pose in real time in the field of computer vision and visualizes key points such as a person's body, hands, and face (Karashchuk, P. et al., 2021). In this study, we analyze the characteristics of the exoskeleton of companion animals using the open pose, and because of analyzing the naming cases of companion animals, we identified a total of four types: long or short limbs, and large or small limbs. In this study, the average front leg/arm length of each breed and the total length of the image of a dog were measured through images secured in advance. Since the front leg/arm leg length can be measured differently depending on the size of the companion animal in the input image, the relative length in the input image was used, and the size of the size was composed of a box shape using the Max-min value of the key point extracted as the open point, and the relative area was quantified as the size of a dog. After that, when selecting a skeleton-based name, the characteristics of the exoskeleton are derived by linking the skeleton analysis result and the classification of varieties. It compares the size of the average limb length/size for each breed with the limb length and size of the input image. As a result of the comparison, if the mean value and ± 3 standard deviation, the name related to the characteristics of the skeleton is recommended in the DB. After that, when selecting a name based on fur color, it is recommended to find five representative colors of fur extracted through HSV. Currently, if more than one color comes out from one image, it is recommended to interpret it as a spotted pattern and recommend a related name.

APPLICATION OF SYSTEM

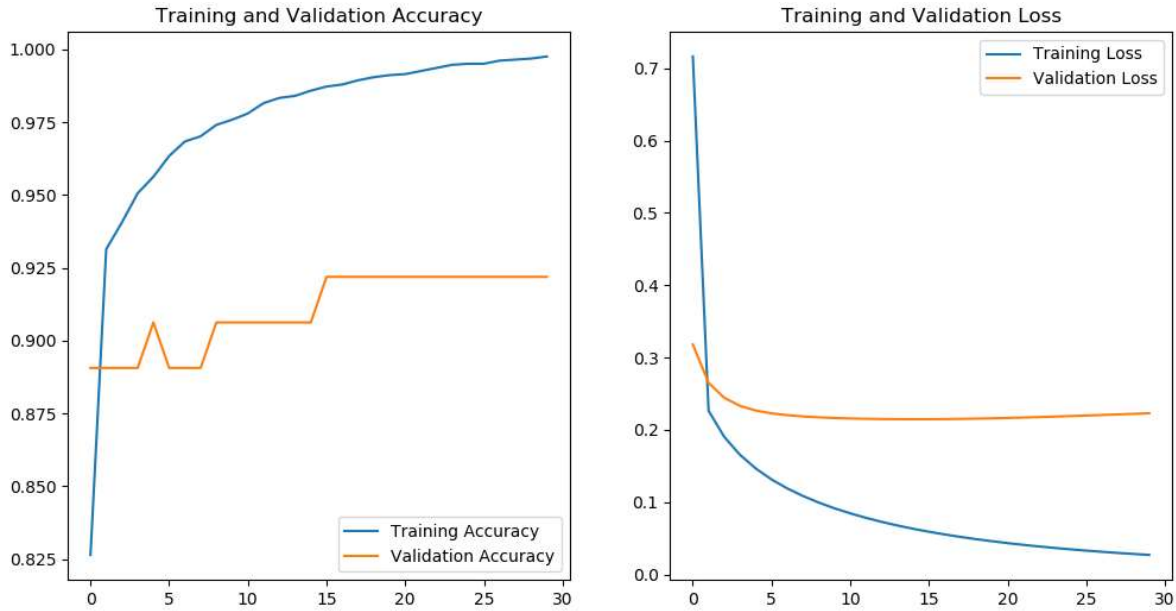
This chapter also shows the accuracy of the actual algorithm model, its examples, and the results of the survey for applicability. Figure 2 below is an example of the naming result that may come out when the algorithm is actually applied. Information such as companion animal breed, relative size comparison through skeleton analysis, and fur color is extracted from the image input as input. After that, the most suitable name is recommended and the basis for this is provided together.

Figure 2: Naming result example



The external characteristics that influence the naming of companion animals differ for each breed. CNN is a representative Artificial Intelligence Machine Learning Model for image analysis, and a high-accuracy model has been proposed using Labeled Data of various animals. In this study, a classification model for the top 10 breeds among registered images was developed by using the linkage with the naming algorithm, and a classification model with an accuracy of 92.5% was developed based on Google's mobilenet_v2. The results of developing the classification model are as follows (Figure 3).

Figure 3: Pet breed classification model Training / Validation Result



In addition, a survey was conducted to improve businessization and algorithms, and the contents of the survey include whether to use the application when naming companion animals, the amount of willingness to pay unlimitedly per month, the amount of willingness to pay per name, algorithm suitability, and whether to recommend acquaintances. The survey was conducted on 130 people, and because of the survey, it was confirmed that about 80% of the respondents responded positively to the use of algorithms and applications. This can be seen as a high response from questionnaires expressing positive opinions on willingness to pay. Accordingly, it was confirmed that the application is very suitable for commercialization. The results of the survey are summarized as follows (Table 2).

Table 2: Key questionnaire survey results

age range of respondents			algorithm suitability		
response	Number (name)	Ratio	response	Number (name)	ratio
Teenage	6	5%	very reasonable	4	3%
20s	59	45%	reasonable	33	25%
30s	50	38%	moderation	80	62%
40s	9	7%	Not reasonable	13	10%
50s	6	5%	Not very reasonable	0	0%
Whether to use the application			Recommendation of acquaintances		
response	Number (name)	ratio	response	Number (name)	ratio
Yes	106	82%	Yes	103	79%
No	24	18%	No	27	21%
Amount of willingness to pay for unlimited naming per month			Amount of willingness to pay per name		
response	Number (name)	ratio	response	Number (name)	ratio
3,000 won/month	47	36%	1,000 won/number	44	34%
5,000 won/month	17	13%	3,000 won/number	18	14%
10,000 won/month	4	3%	5,000 won/number	6	5%
20,000 won/month	2	2%	10,000 won/number	2	2%
No answer	60	46%	No answer	60	46%

DISCUSSION & CONCLUSION

It is of great significance that by developing a technology-oriented application algorithm using image recognition technology, it is possible to conduct a business that can create new value for pet business with stand-alone content. The business proposed in this study can lay the foundation for commercialization by developing an algorithm with a differentiated 'naming' as content for distribution and community-oriented pet economy-oriented business. By developing an algorithm that can apply technology-oriented applications that can sustain business only with data labeling without large-scale AI and sensors, business improvement is possible by securing additional R&D and computing power for algorithm improvement without large-scale investment. In the case of community-oriented business, cooperation is essential. However, the business strategy proposed in this study can operate and support independent businesses that are not dependent on other businesses through algorithms that can be sustainable only with data supply and algorithm improvement, regardless of other business entities.

The first factor in the success of AI-based businesses is the search for companies in the market based on independent technology at the beginning stage and the value and business concept to be provided through the business must be defined (Lim et al., 2023). The application proposed in this study can satisfy these factors. Second, the transformation stage is when a company lays the necessary foundation before expanding its business in earnest, and it is the stage to specify and develop the goods and services it wants to provide, secure the resources and capabilities it needs to provide, and secure trust and legitimacy. Through these stages, the company matures into a systematic company that operates sophisticated businesses, and the many challenges it faces in the process must be considered. The business proposed in this study should compensate for technical shortcomings at this time and overcome directional establishment and financial capacity development to move on to the next stage. Finally, in the expansion stage, we strive to secure a competitive scale and position in the market by growing based on the concept and business model of the business verified through the previous stage. Currently, it is necessary to recognize the market widely and consider expanding the application.

Since the business proposed in this study is a stand-alone technology-based application that is focused on specific targets and stages, a strategy should be established that considers the characteristics of the business. The 'starting stage' can be considered the most important for a business based on the naming algorithm proposed in this study. Naming algorithms can provide innovative and reasonable customer value by providing services through proprietary technologies and applications. The application proposed in this study generates revenue through consumers' naming applications, and since it is a business that can attract a lot of consumers at the start stage, it is expected to generate a lot of profit at that stage. To create additional value from the application, it will be necessary to consider providing new services after naming. In establishing direction and strengthening competitiveness, it is necessary to ensure that consumer usage rates do not fall and to reduce the proportion of one-time consumption. If a strategic business model is built with this in mind in the future, the potential for development is promising by providing significant differentiation in the peteconomy business centered on distribution and community. By utilizing the above strategy from the perspective of the pet business, decision makers will be able to make decisions that are differentiated from the existing pet economy business. By developing an algorithm that is differentiated from the existing pet business, a strategy that can be applied to the business was devised in this study. However, since there was no actual case of applying the algorithm to the business, it was not possible to confirm how the business strategy could change according to each stage. In future research, more specific business strategies can be established if the research direction is set in consideration of these points, the algorithm is modified and improved from the perspective of technology development and used according to each business entry strategy stage.

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ESG AGENDA IN THE INTERNATIONAL MARKET

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ABSTRACT

The aim of this research is to present the concepts of ESG - Environmental, Social and Governance and its alignment with organizational leadership, as well as to demonstrate its legal aspects. Corporate governance is the system by which companies and other organizations are managed, monitored and encouraged, involving relationships between shareholders, the board of directors, management, supervisory and control bodies and other interested parties. Compliance means to comply with, obey, execute and promote a culture that encourages ethics and everything related to the law. Aspects of Corporate Governance and Compliance were analyzed, showing that, in each country, the best Corporate Governance practices are established according to their social, economic, corporate and regulatory environment. The ESG Agenda in international relations was discussed, emphasizing the situation of ports worldwide. The methodology employed was descriptive research, using documentary and bibliographic research, manual and electronic research in books, articles and scientific journals. A qualitative analysis completed the study. It was concluded that in order to achieve success in the ESG Agenda, there is a need for the presence of leadership at the national and international level, with public and private partnership as a requirement to settle negotiations, increase production costs and facilitate logistics for organizations.

Keywords: ESG (Environmental, Social and Governance), ESG agenda, compliance, international ports.

INTRODUCTION

The modern world has undergone several transformations, affecting the economic, political, regulatory, cultural and social areas. Consequently, public and private organizations have experienced the results of these changes. This scenario has required professionals to keep up to date with the dynamics of new management processes, technological agility and, above all, innovative leadership. The entrepreneurial vision has strengthened the modern concept of leadership and sought to offer conditions for integrating people and departments into their teams with various methodologies. As a consequence, the degree of motivation and commitment of employees has made the organization more agile and efficient. As a result, companies have had to keep up with new management trends, in which competency models have been implemented to integrate people into organizations. Accompanying the whole process of change, ESG - Environmental (E), Social (S) and Governance (G) - has gained prominence. This terminology emerged in 2004 through a report generated by the Global Compact, a United Nations (UN) initiative aimed at aligning companies' strategies in the areas of human rights, labor, the environment and anti-corruption, in partnership with the World Bank. The acronym ESG has taken over and replaced the term “Sustainability” and is considered the 6th wave of innovation.

In the international arena, the impact on negotiations has attracted investment, given that the domestic market respects and implements good environmental, social and governance practices. This is the case, for example, with Toyota, which established the “Toyota Environmental Challenge 2050”, creating six challenges: new vehicles with zero Co2 emissions; a life cycle with zero Co2 emissions; zero Co2 emissions in factories; minimizing and optimizing the use of water; establishing a society and systems based on recycling; and organizing a society in harmony with nature (<https://www.toyota.com.br/mundo-toyota/posicionamento-esg>). Faced with the complexity of organizations, it is important that flexible leaders are present and active in order to keep up with the continuous changes in the market. The methodology of the study was based on descriptive research, using documentary and bibliographic review with manual and electronic research in books, articles and scientific journals. A qualitative analysis completed the study.

ESG CONCEPT (ENVIRONMENTAL, SOCIAL AND GOVERNANCE) AND LEADERSHIP

ESG can be defined as policies that involve environmental, social and corporate governance sustainability in companies:

- Environmental (E of ESG) demonstrates what is done to conserve the environment.
- Social (S of ESG) presents the company's relationship with employees and *stakeholders*.
- Governance (G of ESG) prioritizes the focus on administrative and management processes.

It also encompasses diversity and inclusion of gender, race, age, sexual orientation, etc.

Figure 1 provides an overview of the scope of ESG.

Figure 1: ESG



Source: <https://www.cause.net.br/esg-como-fazer/2022>

The ESG Agenda is a set of practices created with the objective of guiding companies towards more sustainable actions aimed at transforming the economy, society and the market.

Figure 2: ESG Agenda



Source: <https://www.resenhadevalor.com.br/resenha/2021/10/esg/>

ESG is considered the sixth wave of innovation. The wave sequence was as follows, according to PUCRS (2023):

First wave of innovation (1785-1845): The First Industrial Revolution, based on water power, steam engines, textile production and the steel industry.

Second wave of innovation (1845-1900): The Second Industrial Revolution, based on coal, oil, electricity, the telegraph, the telephone and the automobile.

Third wave of innovation (1900-1950): The Third Industrial Revolution, based on steel, chemistry, assembly lines in aviation, radio and cinema.

Fourth wave of innovation (1950-1990): The Fourth Industrial Revolution, based on oil, plastics, electronics, information technology and biotechnology.

Fifth wave of innovation (1990-2020): The Fifth Industrial Revolution relies on the internet, telecommunications, social networks and Artificial Intelligence.

Sixth wave of innovation (2020-present): The current wave of innovation is based on sustainability, renewable energy, the circular economy and the green economy (<https://posdigital.pucpr.br/blog/sexta-onda-de-inovacao>). The pandemic in 2020 resulted in a debate on a global agenda, and the World Economic Forum launched a guide to metrics based on ESG values at its 2020 Annual Meeting in Davos.

In the case of ports, “the port and maritime market is an extremely important sector for the global economy, responsible for handling about 90% of the world's goods, according to the United Nations Conference on Trade and Development (UNCTAD)” (<https://landseagroup.com.br/energia-renovavel-no-porto-de-rotterdam/>). The Port of Rotterdam in the Netherlands, which handles 400 million tons of cargo a year, has invested in renewable energy generation. Other ports have also invested in ESG: the Port of Los Angeles (USA), with a solar power plant, and the Port of Yokohama in Japan, with the installation of solar panels.

In Brazil, environmental practices involve the principles of reducing environmental impacts, reducing pollutant emissions (air quality), best practices in the use of packaging and the management of solid, liquid and health waste. The Port of Itaqui, in Maranhão, for example, received two Port ESG awards.

Companies use ESG best practices as a competitive advantage and in order to create differentiators. These are: environmental policies, program, processes, plans, projects and partnerships. The implementation of best practices offers the lowest risk of lawsuits, reduces costs, builds customer loyalty, improves the organization's image and the issuing of green bonds. It is important that environmental aspects are considered from the production process of goods and services to their destination, whether on the national or international market. There is a need for a diagnosis prepared by the company, with leadership committed to the process, an implementation strategy and the creation of indicators to establish controls for adjustments, should the need arise. When a company invests in an ESG strategy, it is committing itself not only to a more sustainable world, but also to reducing costs, risks and innovation projects that reflect on the entire business and social environment. This is the case, for example, of a chicken slaughterhouse in Argentina that has implemented an effluent treatment system, “with oil storage tanks, cooking tanks, a flotator and tridecanter, equipment that brings quality and sustainability to the end customer” (<https://gratt.com.br/case/25/case-internacional-argentina>). The tridecanter equipment has the purpose of separating solids, oils and liquids.

An excellent ESG implementation result depends on ethical and competent leadership, as it adds great value to projects, knowing how to choose your team and exploiting opportunities in the decision-making process. The executive function of this leadership is called Chief ESG Officer or Chief Sustainability Officer and its performance will depend on the competencies deployed, such as:

- Awareness of risk management.
- Development of strategies and performance in the face of risks.
- Risk assessment and search for strategic treatments.
- Ability to develop solutions in the face of adversity.

- Social influence on the company and society.
- Integrity, ethics and values focused on the organization, national and international customers.
- Sense of innovation, seeking solutions to risk situations.
- Facilitation of the moments of building the organization.
- Development of the capacity for integration, collaboration and partnership.

It is also important that this leadership is flexible to change, since its function is to research, identify risks and seek solutions.

Legal Aspects of ESG

In 2020, ESG had a major breakthrough, with more than 60 major global corporations agreeing on 21 metrics discussed at the World Economic Forum ” (<https://www.oab.org.br/noticia/60413/esg-no-mundo-juridico-uma-agenda-em-evolucao>). The 1988 Constitution recommends in Chapter VI – Environment, article 225 heading:

Art. 225. Everyone has the right to an ecologically balanced environment, an asset of common use to the people and essential to a healthy quality of life, imposing on the public authorities and the community the duty to defend and preserve it for present and future generations.

It is important to note that the Federal Constitution warns of the civil, criminal and administrative liability of legal entities for acts of aggression against the environment. In addition to the Constitution, the Environmental Crimes Law, the National Policy on Climate Change and the National Policy on Payment for Environmental Services: The Renovabio Law (Law No. 13.576/2017), which created the Decarbonization Credits (CBIO), to be issued by the producer or importer of biofuels. When considering the legal issues facing organizations, the example of the multinational oil company Shell for damaging the environment has become an international *case*. By court order, the company was banned from continuing oil exploration off the east coast of South Africa, as the tests were invading whale breeding grounds and also dolphin and seal rookeries.

With regard to social aspects, the Universal Declaration of Human Rights (UDHR), social relations, diversity, privacy and data protection are highlighted. In this respect, the Consumer Defense Code - Law 807890, aligned with the National Consumer Relations Policy, must also be taken into account. Legal issues also take into account the obligations and practices of the CLT - Consolidation of Labor Laws - as well as the relevant legislation for public sector employees. The Brazilian Association of Technical Standards (ABNT) launched ABNT PR 2030 in 2022, aligning environmental, social and governance principles and presenting concepts, guidelines and an evaluation and guidance model for organizations. The standard consists of a seven-step plan for implementing ESG strategies, which are as follows:

- Know
- Have strategic intent
- Diagnose
- Plan
- Implement
- Measure and monitor
- Report and communicate

It is important to remember that the standard is a recommendation, not a law, and is linked to the ISO - International Organization for Standardization, which administers and defines these standards worldwide. Another aspect to consider is Brazil's presence in the UN Global Compact, which was created in 2003 and contains projects focused on water and sanitation, food and agriculture, energy and climate, human rights and labor, anti-corruption, engagement and communication. The Global Compact is a platform that brings together various areas of the business community with a view to new businesses and possible partnerships.

Figure 3: ESG - Global Compact



Source: www.pactoglobal.org.br 2022

The Global Compact is not a regulatory instrument, a mandatory code of conduct or a forum for policing management policies and practices. It is a voluntary initiative that provides guidelines for promoting sustainable growth and citizenship through committed and innovative corporate leadership. The Global Compact is headquartered in New York (www.unglobalcompact.org). In Brazil, the social aspect is observed in the Statute of the Disabled Person, the Statute of the Elderly Person, the Statute of Racial Equality and various legal powers. The third dimension – Governance – needs to be aligned with best governance practices, risk management, auditing and *compliance*. *Compliance* means fulfilling, obeying, executing and promoting a culture that encourages ethics and everything that concerns the law, according to Assi (2018). In private organizations, we find stakeholder capitalism, which “is a form of capitalism in which companies seek to create long-term value by taking into account the needs of all stakeholders and society in general,” (<https://blogdocontabilidade.com.br/esg-e-o-capitalismo-de-stakeholders/>) according to Klaus Schwab, President of the World Economic Forum. The legal aspect involving the ESG, both nationally and internationally, is based on the rights, duties, guidelines and liability regime set out in its civil and criminal codes.

Aspects of Corporate Governance and *Compliance*

Corporate governance is the system by which companies and other organizations are managed, monitored and encouraged, involving relationships between shareholders, the board of directors, management, supervisory and control bodies and other interested parties (IBGC). From a financial perspective, governance is “the way in which the providers of financial resources ensure that they get a return on their investments” (ALVARES; GIACOMETTI, GUSSO, 2008, p. 13).

Best corporate governance practices convert principles into objective recommendations, aligning interests with the aim of preserving and optimizing the value of the organization, facilitating its access to capital and contributing to its longevity (IBGC). It originated in the early 1990s in the United States and soon spread around the world. The competitive market of the 21st century envisages the creation of a uniform corporate governance structure that would be implemented in companies all over the world (HITT, IRELAND, HOSKISSON, 2008). In Brazil, it emerged in 1990 with the creation of best practices by the Brazilian Institute of Corporate Governance (IBGC). It was accelerated by the processes of globalization, privatization and deregulation of the economy. The concern of Corporate Governance is to create an efficient set of mechanisms, both incentives and monitoring, in order to ensure that the behavior of managers is always aligned with the best interests of the company. This contributes to professionalize the management, making it more transparent.

In each country, the best Corporate Governance practices are established according to its social, economic, corporate and regulatory environment. Given the business peculiarities of each country, it is impossible to describe in detail all the governance models in force around the world, so the main ones will be presented below:

- Anglo-Saxon Governance System (United States and United Kingdom) which, according to IBGC, are:
 - Shareholders are dispersed and typically outside the day-to-day control of operations in the Company.
 - Dispersed ownership structure in large companies.
 - The important role of the stock market in the growth and financing of companies.
 - Activism and large size of institutional investors.
 - Market with real possibility of acquisitions.
 - Focus on maximizing shareholder return (shareholder oriented).

- Governance System of Continental Europe and Japan:
 - Large shareholders are typically in charge of day-to-day operations, either directly or via people they appoint.
 - More concentrated ownership structure.
 - The important role of the debt and securities market in the growth and financing of companies.
 - Frequent family control of large companies, as well as the presence of the state as a significant shareholder.

- Presence of large business groups/conglomerates, many times highly diversified.
 - Low activism and smaller size of institutional investors.
 - More explicit and systematic recognition of other non-financial stakeholders, especially employees (stakeholder-oriented).

The Brazilian model of Corporate Governance is closer to the second model, with a predominance of concentrated ownership, an important role for the debt market, a strong presence of family-owned and state-controlled companies, and more stakeholder-oriented (including by legal provisions). In the United States, the Sarbanes-Oxley Act (SOX) was created by congressmen Paul Sarbanes and Michel Oxley in 2001, with the aim of “improving corporate governance and accountability (information on income, expenses, balance sheet and total assets and liabilities)” (<https://www.treasury.com.br/blog/sox-lei-sarbanes-oxley/>).

ESG AGENDA IN INTERNATIONAL RELATIONS

In international relations, the growth of ESG has been significant, as movements on the environment, human rights, diversity and inclusion have increased with the participation of governments, consumers and investors. It is also a way for companies to take care of their reputation in the market and improve their performance on the subject. In the United States, the Senate is discussing a law that includes metrics aimed at standardizing the disclosure of environmental, social and governance measures in the public and private spheres. In Latin America, there was growth in 2022, according to the sustainability study in the Leadership Agenda, which surveyed 400 market executives from Argentina, Brazil, Colombia and Mexico (<https://exame.com/esg/esg-cresce-na-america-latina-e-ja-faz-parte-69-das-empresas-red-01/>). In addition to environmental sustainability with a focus on reducing the carbon footprint, preparing the workforce and the circular economy, the metrics of equality, diversity and inclusion were scored. It is important to clarify that the “carbon footprint” is the total volume of greenhouse gases (GHG) generated by economic activities. The hotel industry is investing in ESG implementation in view of the increase in international tourism. As an example, the BWH Hotels chain presents its strategies and commitments to the environment, diversity, equity and inclusion and commitment to the community. The implementation of ESG in the international market is of great importance for survival, healthy competitiveness and, above all, professional ethics.

Situation of Ports Internationally

The most significant ports, which are considered to be the most important in terms of cargo handling, have an advantage in international logistics.

Table 1 – Ports in the world

	Port Name	Country
1	Shanghai	China
2	Singapore	Singapore
3	Ningbo-Zhoushan	China
4	Shenzhen	China
5	Guangzhou	China
6	Busan	South Korea
7	Qingdao	China
8	Hong Kong	China
9	Tianjin	China
10	Rotterdam	The Netherlands

Source: <https://www.fazcomex.com.br/comex/portos-do-mundo/2023>

Despite the score, there is still a need to adapt to the best practices of the ESG Agenda. The port of Shanghai, located in the city of the same name, is considered the largest port in the world. There is a recycling plant for wet waste. The port of Busan is the largest in South Korea and ranks sixth in container handling. All ports will need to comply with ESG policy, as environmental impact determines the life cycle and sustainability of products. To this end, the control of pollution and gas emissions is part of the customs package. With regard to the social aspect, companies will need to offer decent working conditions, equal opportunities, safety and health. Corporate governance focuses on the conduct of managers, the business ethics of port managers, shareholder rights, board structure and remuneration. It is important to mention that the World Trade Organization's (WTO) Committee on Trade and Environment (CTE) is responsible for complying with the rules imposed in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), in order to comply with current international trade legislation. For there to be alignment in all ports, it is necessary for the global market economy to comply with the ESG precepts in order to achieve the goal of growth and responsibility towards the market.

CONCLUSIONS

The implementation of ESG at national and international level will be a requirement for negotiations, increase production costs and facilitate logistics for organizations. The partnership between the companies will provide an opportunity to raise public awareness about sustainability, society and governance. Discussions about the environment are universal since, according to the UN, everyone has the right to a clean and healthy world. In relation to society, we have awareness of diversity, inclusion and rights relating to labor safety, health and the working environment. The implementation of *compliance* is important for international relations, as it punishes those who violate tax laws. It is a part that complements ESG, as it integrates and enforces the legislation. Finally, corporate governance demonstrates the need for all countries to implement rules, systems, processes and practices. For results to be optimized, it's important for the leadership to be at the forefront of the entire process, to prioritize the needs of the team and to seek changes when necessary. Lastly, it is essential that the public and private spheres commit to environmental initiatives and research, with the aim of optimizing results.

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GEN Z'S BUZZ: HOW ELECTRONIC WORD-OF-MOUTH SHAPES BRAND RECOGNITION AND TRUST IN CHATGPT

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ABSTRACT

ChatGPT stands as a symbol of AI innovation, transforming emerging markets with its unmatched efficiency, driven by electronic word-of-mouth (eWOM). This research examines the influence of eWOM on Generation Z's brand recognition and trust in ChatGPT, focusing on brand awareness, familiarity, and their intention to use ChatGPT. Using structural equation modelling on data from 150 individuals aged 18 to 24, the analysis confirmed positive and significant relationships within the model. Trust emerged as the most influential factor in adoption, underscoring its importance for Generation Z, who value authenticity and transparency. The findings provide insights into effective digital marketing strategies for engaging this demographic.

Keywords: brand awareness, brand familiarity, ChatGPT, eWOM, intention to use ChatGPT, trust.

INTRODUCTION

ChatGPT, a 'conversational generative pre-trained transformer', is an artificial intelligence (AI) language model by OpenAI, renowned for its ability to comprehend natural language and to stimulate human-like conversations through machine learning algorithms (Li et al., 2022; Roumeliotis & Tselikas, 2023). Its wide-ranging uses, from coding to creative writing, have swiftly catapulted it to fame, as highlighted by its achievement of attracting one million users in a mere five days after its launch, a feat not matched by giants such as Spotify or Facebook (Hussain, Khan & Malik, 2024; Statista, 2023a). Nonetheless, ChatGPT has come under scrutiny for generating eerily accurate yet potentially misleading responses (Munn et al., 2023; Ushery, 2023;), with concerns about impersonation adding to its contentious nature (The Guardian, 2022), particularly in emerging markets, where the intricate layers of language and culture present further complications (Komminoth, 2023; Rahman et al., 2017). Given its novel impact and the wide-ranging implications for consumer studies and marketing, research into ChatGPT is essential (Paul et al., 2023). Despite facing issues related to bias, privacy, and ethical dilemmas (Bahrini et al., 2023), ChatGPT promises considerable advantages, including enhanced user engagement, customisation opportunities, and deeper consumer insights (Kumar & Upadhyay 2023; Paul et al., 2023).

As the tool evolves, with ongoing refinements by its developers (Kalla & Smith, 2023), the accuracy of ChatGPT's responses improves through user interaction and feedback, enhancing its contextual and nuanced understanding (Chowdhary, 2020). However, the predominance of input from developed economies may bias its content, amplifying the need for diverse inputs, particularly from emerging markets, to ensure relevance and accuracy in these contexts (Browne, 2023; Duncan & McCulloch, 2023). Generative AI, such as ChatGPT, could enhance living standards and expedite sustainable development in emerging markets by lowering entry barriers, cutting costs, and boosting government transparency (Mannuru et al., 2023). This is particularly pertinent for South Africa's Generation Z individuals, a technologically adept cohort who represent a significant portion of the population and who are poised to influence and be influenced by technologies such as ChatGPT (Chayomchai, 2020; Lerm, 2022; Statista, 2023b). Especially in the context of innovative AI technologies such as ChatGPT, word-of-mouth (WOM) is a powerful influencer in shaping perceptions and decisions about products and services that result in adoption and use (Huete-Alcocer, 2017; Li et al., 2022), thus playing an important role in influencing emerging market individuals to engage with AI technologies such as ChatGPT.

Recent research has delved into the diverse factors driving the adoption and use of ChatGPT in various fields. Studies have investigated ChatGPT's role in health self-diagnosis (Ma & Huo, 2023; Shahsavar & Choudhury, 2023), product research, information retrieval, and education (Foroughi et al., 2023; Gude, 2023; Teerawongsathorn, 2023). Other research has focused on ongoing use intentions, applying analytical models such as the technology acceptance model (TAM) and the unified theory of acceptance and use of technology (UTAUT) (Menon & Shilpa, 2023; Shah et al., 2023; Tiwari et al., 2023). With a generational lens, Chan and Lee (2023) explored ChatGPT's educational adoption, while a multinational study by Abdaljaleel et al. (2024) highlighted global interest in ChatGPT's integration into daily life. Authors have investigated the advent of digital communication and social networks that have dramatically widened the scope of word-of-mouth (WOM), enabling the swift dissemination of personal experiences and opinions to vast audiences. In the case of technologies such as ChatGPT, positive electronic word-of-mouth (eWOM) could significantly bolster adoption rates (Jo, 2023; Li et al., 2022).

Furthermore, trust has been identified as a crucial factor in the willingness to use and recommend ChatGPT (Jo, 2023; Paul et al., 2023). In addition, the significance of brand marketing in the context of ChatGPT has led to a call for more research in this area (Kumar et al., 2024). This includes the study of brand familiarity, brand awareness, and brand recognition, which are pivotal components of brand marketing. Brand recognition, in particular, refers to the ability of consumers to identify a brand under various conditions, directly impacting their trust and intention to use the brand. The rapid dissemination of user experiences and opinions through eWOM can significantly enhance brand recognition and trust, making these concepts vital for understanding the factors influencing the adoption of ChatGPT among Generation Z. Hence, this study includes brand familiarity, brand awareness, and brand recognition to provide a comprehensive view of the influences on ChatGPT's adoption.

This study investigates how ChatGPT could enhance interactions with Generation Z, a group who are adept at digital navigation and selective in their content choices (Szymkowiak et al., 2021), by producing content that is contextually relevant to foster personalised engagement, thereby building brand familiarity and trust (Jo, 2023; Kumar & Upadhyay, 2023; Paul et al., 2023). It particularly investigates the role of electronic word-of-mouth (eWOM) in shaping brand recognition, comprising brand familiarity and awareness as well as trust, which are crucial for engaging Generation Z with platforms such as ChatGPT. This research emphasises brand awareness and brand familiarity (Acharya, 2021; Arani & Shafizadeh, 2019; Barijan et al., 2021; Esch et al., 2006; Jallad, 2019; Milman & Pizam, 1995; Sousa et al., 2018), highlighting the importance of these elements in influencing consumer decisions (Newell & Shanks, 2004; Zhang, 2020). The paper proposes integrating eWOM and AI such as ChatGPT into strategic marketing for Generation Z, advocating for a comprehensive understanding of these factors to improve ChatGPT's brand recognition and resonance in this key demographic, leveraging theories beyond the traditional TAM to offer, through quantitative research, new insights into technology adoption. Given the crowded landscape of new AI tools and the unique challenges and opportunities they present, this study adopts the social exchange theory and the schema theory to provide a fresh perspective on technology adoption or the intention to adopt, moving beyond the commonly used TAM.

In summary, the paper argues for the strategic integration of eWOM and AI tools such as ChatGPT in brand marketing strategies that are targeted at Generation Z, emphasising the need for a nuanced understanding of brand awareness, familiarity, and trust in shaping consumer engagement in the digital age.

THEORETICAL FRAMEWORK

Theories Grounding the Study

Investigating the impact of electronic word-of-mouth (eWOM) on brand recognition and trust in ChatGPT among Generation Z involves examining information interpretation and social exchange processes. Social exchange theory (SET) and schema theory together explain the reciprocal dynamics and content assessment in eWOM, shaping trust and brand perceptions (Zhou et al., 2022; Gharib et al., 2020; Izogo et al., 2023; Kim et al., 2022).

The Social Exchange Theory

First proposed in the 1920s by the pioneering scholars Malinowski and Mauss, the social exchange theory (SET) has profoundly influenced various fields such as social psychology, sociology, and anthropology (Firth, 2004). It was Homans (1958) who initially conceptualised social behaviour as a form of exchange, further refining this idea by 1961 (Homans, 1958; Treviño, 2015). Thibault and Kelley (1959) investigated the dynamics of groups, and Blau (1964) expanded on the concept by introducing ‘exchange and power’, emphasising the theory’s economic foundations in contrast to the psychological focus of Homans (Sabatelli & Shehan, 1993). Blau argued that social exchanges are driven by the anticipation of rewards, thus motivating voluntary actions (Hom et al., 2009).

The SET is central to understanding why individuals share knowledge (Liang et al., 2008), and plays a crucial role in the adoption of technology, facilitating quicker adoption rates, breaking down barriers, nurturing a supportive community, spurring enhancements, and ensuring the successful impact of technology (Andrade et al., 2022; Lin et al., 2009). In the digital era, the concept has gained further relevance, especially with the transition from traditional word-of-mouth (WOM) to electronic word-of-mouth (eWOM), in which users frequently share feedback on and insights into social media regarding technological advancements and innovations (Dwivedi et al., 2021). The theory is invaluable for analysing diverse social dynamics such as status, influence, networks, fairness, and trust, which are essential for understanding how customer opinions, online reviews, and interactions shape brand recognition (Chu & Choi, 2011; Surma, 2016).

In contexts of collaborative consumption, the significance of social exchanges is amplified in scenarios in which individuals have limited access to others’ information, particularly during interactions with strangers (Scaraboto, 2015). The theory sheds light on the psychological and social behaviours that emerge from these exchanges, as individuals assess the costs or risks against the potential rewards (Cook et al., 2013).

The Schema Theory

First introduced by Bartlett in 1932 and expanded by Rumelhart in 2013, the schema theory suggests that individuals use existing knowledge to form schemas for understanding new information (Arbib, 2008; Rumelhart, 1980). This theory, vital in navigating today’s information overload, has expanded from analysing news to broader applications such as stereotype research and agenda setting (Scheufele & Scheufele, 2010; Van Veen et al., 2020).

As consumers accumulate experiences, their awareness of similar products increases, fostering a deeper familiarity, especially with repeated exposure to the same information (Hoch & Deighton, 1989). While schemas can hinder the recognition of new brand information among consumers who are familiar with a different brand, they can also enhance the awareness and acceptance of new brands by integrating new information into existing knowledge (Kim et al., 2022; Varga et al., 2022). Yanit et al. (2023) observed that consumers’ schemas differentiate between human interactions and AI, noting a contrast in their respective emotional intelligence and warmth (or lack of it). Brand schemas, built through frequent exposure, encapsulate a brand’s attributes and qualities, supporting a quicker recognition and processing of brand-related information (Dwivedi et al., 2021). This not only improves brand recognition and recall, but also influences consumer preferences and choices by reinforcing brand awareness (Macdonald & Sharp, 2000).

THEORETICAL MODEL DEVELOPMENT

Electronic Word-Of-Mouth and Brand Familiarity

Electronic word-of-mouth (eWOM), as defined by Qahri-Saremi and Montazemi (2023), evolves from traditional word-of-mouth practices, with a focus on leveraging online platforms such as social media for sharing customer experiences before purchasing. In the context of generative AI such as ChatGPT, the interplay between eWOM and Brand familiarity (BF) remains underexplored. BF signifies a deeper level of consumer engagement than that of brand awareness (BA) (Acharya, 2021), in which the consumer not only recognises the brand, but also has a comprehensive understanding of its products and services, which influences their likelihood of becoming customers (Esch et al., 2006). BF plays a pivotal role in shaping consumer preferences and potential brand loyalty (Arani & Shafii-zadeh,

2019; Sousa et al., 2018). Nonetheless, given eWOM's rapid dissemination and its influence on 82% of potential buyers' decisions (Choi & Leon, 2020), its impact on BF in this domain is promising. Puriwat and Tripopsakul (2021) note eWOM's effectiveness in swiftly bolstering customer confidence, suggesting that it could similarly enhance ChatGPT's BF. This leads to the hypothesis:

H1: Electronic word-of-mouth positively influences brand familiarity

Electronic Word-Of-Mouth and Brand Awareness

In the digital realm, eWOM is crucial for boosting Brand awareness (BA), as noted by Ruiz-Equihua et al. (2020). The extent of online reviews and ratings that are driven by eWOM serves as a barometer for a product's or service's popularity, guiding potential customers in their decision-making (Chen et al., 2024). BA represents the extent to which consumers recognise a brand by its name, incorporating positive attributes that differentiate the brand in the marketplace (Zhang, 2020). Previous studies have confirmed eWOM's direct and positive effect on BA (Aljumah et al., 2023; Mahar et al., 2022; Raharja & Dewakanya, 2020), leading to the hypothesis:

H2: Electronic word-of-mouth significantly influences brand awareness

Electronic Word-Of-Mouth and Trust

Trust (T), defined as the user's confidence in the reliability, integrity, and security of systems such as ChatGPT (Dwyer et al., 2007; Metzger, 2004), is crucial when personal data is involved, significantly shaping user behaviour (Brill et al., 2022). Studies show that T has a significant impact on behavioural intentions, predicting future interactions with systems (Balakrishnan & Dwivedi, 2021; Pillai & Sivathanu, 2020), and fostering continued use of chatbots (Nguyen et al., 2021). Furthermore, through online reviews and personal recommendations, eWOM is a trusted source that markedly influences buying decisions (Qahri-Saremi & Montazemi, 2023), builds T by reducing perceived risks (Ismagilova et al., 2020), and is essential for T in online shopping (Khwaja et al., 2020). The positive correlation between eWOM and T (Zhao et al., 2020) supports the hypothesis that T positively affects behavioural intention, and underscores eWOM's role in trust-building, highlighting its significance in informed purchasing and continuous system use. Thus:

H3: Electronic word-of-mouth influences trust positively

Brand Familiarity and Intention to use ChatGPT

Brand familiarity (BF), as defined by Hsiao et al. (2022), refers to a customer's previous experiences with a brand, which in this study pertains to prior interactions with ChatGPT. Van Berlo et al. (2021) suggest that brand-related memories often influence purchase decisions. Research, including studies by Aljarah et al. (2022) and Kurniawan and Alversia (2021), confirms a strong link between BF and the intention to adopt new technologies. Similarly, Copeland and Bhaduri (2020) found that BF significantly affects purchase intentions in the fashion industry. This leads to the hypothesis:

H4: Brand familiarity significantly and positively affects the intention to use ChatGPT

Brand Awareness and Intention to use ChatGPT

BA, the recognition and recall of a brand by customers, is a key factor in shaping their intention to use a product or service (Matikiti-Manyeverere et al. 2020). It is a significant driver of user adoption, as noted by Nguyen and Chi (2021). For instance, Tam et al. (2022) showed that BA significantly influences the decision to purchase flight tickets online, while studies in the context of QR-code e-wallet adoption confirm its positive effect on usage intention. Thus, in this study, BA is expected to have a positive impact on the intention to use ChatGPT, leading to the hypothesis:

H5: Brand awareness positively influences the intention to use ChatGPT

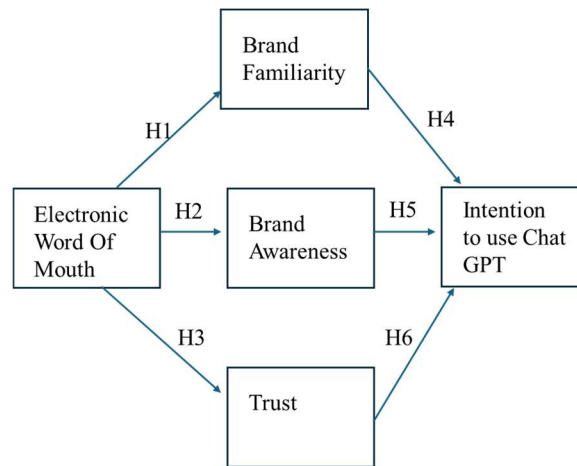
Trust and Intention to use ChatGPT

In the technology sphere, T is the belief that using a specific technology would not lead to exploitation (Moser & Deichmann, 2021); T therefore serves as the bedrock of all relationships, especially online. Numerous studies (Arfi et al., 2021; Choung et al., 2023; Singh & Sinha, 2020) have shown that T significantly boosts the willingness to adopt new technologies, with Jadir et al. (2022) highlighting its critical role in embracing emerging technologies. This forms the basis for the hypothesis:

H6: Trust positively influences the intention to use ChatGPT

Concluding the theoretical discussion, the following conceptual model is proposed for this study:

Figure 1: Conceptual model for the study



Source: Authors' own

RESEARCH METHODOLOGY

Sampling and Data Collection

The study received ethical approval from the University of Johannesburg, South Africa, under the reference 2023SCiS015. Pilot testing, which improved the study's quality and validity (Doody & Doody, 2015), involved an initial trial with 30 participants meeting our criteria. Following successful analysis with SPSS version 29, the study extended to the main demographic: technologically adept South African Generation Z individuals aged 18 to 24 (Statista, 2023c). Generation Z, the most 'tech-savvy' cohort (Szymkowiak et al., 2021), comprises nearly a third of South Africa's population, with 27.5 million individuals born between 1997 and 2012 (Statista, 2023c). With 41.9 million internet users in the country (Statista, 2023b), this group is well-positioned to interact with platforms like ChatGPT. Their quick adoption of new technologies (Chayomchai, 2020; Lerm, 2022) and preference for familiar technology brands (Zhang et al., 2022) underscore the importance of examining brand awareness within this demographic. Given their constant online presence (Mc Keever et al., 2021), Generation Z's engagement with innovations such as ChatGPT is of particular interest.

A non-probability sampling technique was used, complementing probability surveys with digital methods (Lehdonvirta et al., 2021). Primary data was collected using an online Google Forms questionnaire, shared via social media channels like Facebook, WhatsApp, X (formerly Twitter), and Instagram. The research instrument adapted scales verified in other studies, as shown in Table 1. Consistent with the pilot, SPSS version 29 analysis confirmed demographic accuracy and data reliability, providing comprehensive insights through variable comparisons and analysis. The researchers aimed to obtain 200 responses but received 176 completed online questionnaires. Of these, 26 were excluded for not meeting the inclusion criteria of age and prior use of ChatGPT, leaving 150 responses for analysis, resulting in an 85% realisation rate. Determining the right sample size is crucial in structural equation

modelling (SEM). While small sample sizes can suffice for simple SEM models (Hoyle, 1999), the consensus suggests a minimum of 100 to 150 participants for SEM analysis (Ding et al., 1995; Fidell & Tabachnick, 2003).

Demographic Profile

Among the 150 consenting Generation Z participants, 52% identified as female and 44.7% as male. English emerged as the most common language, spoken by 52%, with Xhosa (12.7%) and Afrikaans (9.3%) following. The bulk of the respondents were single (62.7%), and 34% were in relationships. Favourite pastimes included music (106 mentions), socialising (101 mentions), and social media (88 mentions), with WhatsApp (134 mentions), Instagram (132 mentions), and YouTube (100 mentions) being the most popular platforms. Educationally, 48% held a matric certificate and 38% had a university degree. Analysis showed that 49% of Generation Z were ‘super-users’ of generative AI, using tools such as ChatGPT for tasks such as tackling creative blocks, underscoring their high level of ‘tech-savvyness’ and online brand expectations, suggesting that brands need to embrace AI innovation to stay relevant to this crucial group. Among the 150 respondents, 96% reported having Wi-Fi access, 100% used ChatGPT, and were in the 18-to-24 age group.

Data Analysis Strategy

SPSS version 29 was used to assess the psychometric properties of the measurement model; the study also used SEM simultaneously to analyse multiple regression equations, thereby facilitating an in-depth examination of the linear relationships between variables, following Hair et al. (2014). The method was specifically applied to test the theoretical model that posited the influence of eWOM on BF, BA, and T on Generation Z respondents’ likelihood of using ChatGPT. Through SEM, the study effectively investigated the interconnected constructs and predicted multiple outcomes concurrently. Model fit was assessed using criteria such as the Satorra-Bentler scaled chi-square to degrees of freedom ratio (χ^2/df) below 3 (<3) for acceptability (Savalei, 2018), the root mean square error of approximation (RMSEA) under 0.05 for a close fit, the comparative fit indices (CFI) above 0.90 for excellence (Sahoo, 2019), and the standardised root mean square residual (SRMR) under 0.08 as acceptable (Shi et al. 2018).

RESULTS

Assessment of normality

The assumption of normality should be maintained regardless of sample size; and when $p > 0.05$, the null hypothesis is accepted, indicating that the data are considered normally distributed (Mishra et al., 2019). The normality tests on the dataset, showing significant results ($p < 0.05$), indicated univariate non-normality. However, the large sample size justified the assumption of a normal distribution under the central limit theorem. The central limit theorem posits that, for a population with a specific mean and standard deviation, the distribution of sample means from sufficiently large random samples ($n \geq 30$) will approximate a normal distribution, irrespective of the population’s original distribution shape (Ali et al., 2018; Kwak & Kim, 2017). Data normality was meticulously assessed using skewness and kurtosis tests, including Kolmogorov-Smirnov and Shapiro-Wilk, for different scale items in the study (Table 1).

Table 1: Measurement of constructs

Key constructs	Items count	Source	Kolmogorov-Smirnov	Shapiro-Wilk
Trust	4	Chen and Barnes (2007)	0,002	0,008
Brand familiarity	3	Ping et al. (2010)	0,000	0,000
Brand awareness	5	Catalán et al. (2019)	0,007	0,085
		Samala et al. (2019)		
Intention to use ChatGPT	3	Abou-Shouk and Soliman (2021)	0,000	0,000
		Im et al. (2008)		
Electronic word-of-mouth	4	Bialkova and Te Paske (2021); Rao et al. (2021)	0,000	0,000

Assessment of the Measurement Model

In examining the measurement model, the fit indices indicated a satisfactory match with the data, ensuring model adequacy. Specifically, a normed chi-square (χ^2/df) ratio of 1.647 signalled a good fit, with the normed fit index (NFI) at 0.911, the Tucker-Lewis index (TLI) at 0.950, and the comparative fit index (CFI) at 0.962, illustrating the model's robustness. The RMSEA was 0.066, indicating a reasonable approximation error. With the model's fit validated (Table 4), the study then explored the structural paths to understand the hypothesised relationships' directional influences.

Table 2 shows that the factor loadings and average variance extracted (AVE) for the study's constructs exceeded the 0.50 threshold, confirming convergent validity. Furthermore, the composite reliability and Cronbach's alpha values exceeded the 0.70 standard, affirming scale reliability and consistency (Wiid and Diggines, 2021).

Table 2: Convergent validity and reliability scores

Construct and items		Factor loadings	Cronbach's alpha value	CR	AVE
Brand awareness	BA2	0,889	0,903	0,904	0,759
	BA3	0,896			
	BA4	0,827			
Electronic word-of-mouth	eWOM1	0,832	0,914	0,915	0,730
	eWOM 2	0,877			
	eWOM 3	0,871			
	eWOM 4	0,836			
Brand familiarity	GPTBF1	0,935	0,778	0,799	0,670
	GPTBF3	0,683			
Intention to use ChatGPT	IT1	0,846	0,898	0,904	0,758
	IT2	0,826			
	IT3	0,936			
Trust	T1	0,867	0,765	0,778	0,544
	T2	0,601			
	T3	0,721			

Table 3 demonstrates discriminant validity, showing that the square roots of the AVEs mostly surpassed inter-construct correlations, meeting Fornell and Larcker's (1981) criterion. This confirmed the measurement model's strong reliability and validity, providing a solid basis for the structural model's subsequent assessment.

Table 3: Discriminant (divergent) validity scores (SQRT values in bold)

	eWOM	BF	T	IT	BA
eWOM	0,854				
BF	0,250	0,819			
T	0,225	0,271	0,738		
IT	0,271	0,555	0,582	0,871	
BA	0,314	0,385	0,338	0,503	0,871

Notes: eWOM = Electronic word-of-mouth; BF = Brand familiarity; BA = Brand awareness; T = Trust; IT = Intention to use ChatGPT.

Assessment of the Structural Model

Similar to the measurement model analysis, the structural model's fit was assessed through fit indices, showing an adequate fit, with a normed chi-square (χ^2/df) ratio of 1.868. Indices such as the NFI at 0.894, the TLI at 0.933, the CFI at 0.947, and the RMSEA at 0.071 further confirmed the model's adequacy. With the model's fit established, the study proceeded to explore the structural paths to elucidate the proposed relationships, as outlined in Table 4.

Table 4: Goodness-of-fit for both the measurement model and the structural model

Categories of goodness-of-fit	Selected indices	Acceptable fit	Model fit outcomes for the measurement model	Model fit outcomes for the structural model
Absolute fit index	Chi-square (χ^2)/CMIN Df	A value of $\chi^2 < 3,0$ indicates good fit (Hair et al., 2019, p. 636)	1,647	1,868
	p-value		80	84
	RMSEA	RMSEA < 0,06 good (Cangur and Ercan, 2015, p. 157)	0,000	0,000
	CFI	Value of >0,90 indicates good fit (Hair et al., 2019, p. 640)	0,066	0,076
Incremental fit index	NFI	Value of >0,80 (Forza and Filippini, 1998, p. 14) or 0,90 indicates good fit (Hair et al., 2019, p. 640; >Hooper et al., 2008, p. 55)	0,962	0,947
	NNFI (TLI)	Value of 0,90 indicates good fit (Cangur and Ercan, 2015, p. 158)	0,911	0,894
			0,950	0,933

Table 5 reveals that eWOM positively influenced BF, BA, and T, highlighting eWOM's key role in boosting BF and T. In addition, BF, BA, and T significantly enhanced the intention to use ChatGPT, indicating that strategies to increase eWOM, BF, BA, and T could significantly increase ChatGPT adoption rates.

Table 5: Structural model estimates for the proposed model

	Hypothesis	Path coefficients (β)	T-statistics (t)	p-value	Rejected/Supported
eWOM \rightarrow BF	H1	0,259	2,920	0,004	Supported
eWOM \rightarrow BA	H2	0,327	3,701	0,000	Supported
eWOM \rightarrow T	H3	0,239	2,566	0,010	Supported
BF \rightarrow IT	H4	0,394	4,090	0,000	Supported
BA \rightarrow IT	H5	0,276	3,745	0,000	Supported
T \rightarrow IT	H6	0,441	5,160	0,000	Supported

Notes: eWOM = Electronic word-of-mouth; BF = Brand familiarity; BA = Brand awareness; T = Trust; IT = Intention to use ChatGPT.

RESULTS

eWOM has been researched extensively in the marketing literature and is perceived as an important antecedent in strengthening T (Bulut & Karabulut, 2018). Although eWOM and its relationships in the context of BM and BA have been researched (Aljumah et al., 2023; Rahman & Mannan, 2018), Paul et al. (2023) encouraged research into

ChatGPT, owing to its innovative nature and the broad spectrum of its implications in consumer studies and marketing. However, this paper explored the role of eWOM in influencing BF, BA, and T, where brand recognition (familiarity and awareness) and T influenced IT. The study contextualised the intention of South Africa's Generation Z to use ChatGPT, where the strengthening of eWOM, BF, BA, and T in ChatGPT could enhance IT.

In respect of the selected antecedents to IT, eWOM, BA, BF, and T, it was established that all of these antecedents significantly and positively influenced Generation Z's IT in the emerging market context (see Table 5). The findings concur with other research that indicated that eWOM, BF, BA, and T influenced the intention to use new technology innovations (Aljumah et al., 2023; Puriwat & Tripopsakul, 2021; Zhao et al., 2020). Furthermore, in contrast to the finding of Lee et al. (2014) where eWOM did NOT influence decision-making, this study has indicated that eWOM has a positive and significant relationship with brand familiarity ($\beta= 0,259$; $p=0,004$), BA ($\beta=0,327$; $p=0,000$) and trust ($\beta=0,239$; $p=0,010$). Furthermore, as proven by other studies, BF (Aljarah et al., 2022; Kurniawan & Alversia (2021) ($\beta= 0,394$; $p=0,00$), BA (Tam et al., 2022) ($\beta= 0,276$; $p=0,000$), and T (Jadil et al., 2022) ($\beta= 0,441$; $p=0,000$) had a positive and significant relationship with IT (see Table 5).

Theoretical and Managerial Implications of the Study

The contribution made by the study is twofold. It makes theoretical contributions that are based on the study's findings, and practical contributions. These are discussed in the sections that follow.

Theoretical implications

Gaining a deeper understanding of the factors that influence the intention to use ChatGPT is essential for refining the platform and customising marketing strategies. Using ChatGPT for its natural responses, product details, recommendations, and marketing efforts could help organisations broaden their market presence and enhance their customer service (Mutoffar et al., 2023). Furthermore, understanding the factors could enhance its use in education, boost adoption rates, and address the concerns of users (Javaid et al., 2023). This study has confirmed the interconnectedness between eWOM, T, and brand recognition (encompassing BF and BA) (Arani & Shafii-zadeh, 2019; Puriwat & Tripopsakul, 2021; Zhao et al., 2020). Recognising the significance of these relationships is vital, not only for their theoretical implications in marketing, but also for their practical application in the complex landscape of today's market, which is marked by rapid technological advancements, a wide array of applications, ethical dilemmas, and the demand for customised, culturally attuned interactions (Vallor, 2016; Witt & Baird, 2018). Understanding the dynamics between eWOM, T, and brand recognition is key to introducing and rooting ChatGPT successfully in emerging markets, particularly with Generation Z – a demographic noted for their adeptness with technology and their dependence on digital channels when making informed choices (Pânișoară et al., 2023). In the fast-evolving technology landscape, especially in emerging markets, Generation Z plays diverse roles (Raza et al., 2022; Tabassum et al. 2020). Far from being mere consumers, they are also engaged participants, influencers, and innovators, propelling the adoption of new technologies, shaping market trends, and driving innovation (Hazan et al., 2022). While marketing research has delved into various factors influencing the intention to use ChatGPT, this study sheds light on specific variables that significantly bolster trust among Generation Z, thereby influencing their intent to engage with ChatGPT.

Managerial implications

The interplay between electronic word of mouth (eWOM), brand familiarity (BF), brand awareness (BA), and trust (T) is pivotal in shaping Generation Z's perception and adoption of new technologies in emerging markets (Allioui & Mourdi, 2023). This demographic's inclination towards digital platforms and personalised content positions eWOM as an essential tool for promoting advanced AI tools like ChatGPT. Specifically, the use of eWOM on platforms frequented by Generation Z can effectively showcase ChatGPT's customisability and practical utility, potentially leading to widespread adoption.

Generation Z, known for their technological savviness and as trendsetters in digital consumption, place high value on transparency and peer recommendations. Thus, managing eWOM proactively by engaging positively with feedback and demonstrating ChatGPT's authenticity is crucial to building trust (Verma et al., 2021). By highlighting the AI's ability to provide personalised learning experiences and instant feedback, educators can enhance academic

engagement and integrity (Jo, 2023; Kumar & Upadhyay, 2023). For businesses, utilising ChatGPT to improve customer interactions through tailored and responsive communication enhances customer service and operational efficiency, fostering a competitive edge in fast-evolving markets.

From a managerial perspective, it is advisable to leverage influencer collaborations and social proof, such as sharing success stories and positive testimonials, to boost brand awareness and facilitate the acceptance of ChatGPT (Huete-Alcocer, 2017; Li et al., 2022). This strategy not only increases visibility but also reinforces trust and credibility, essential for encouraging adoption among Generation Z in emerging markets. Furthermore, creating a community around ChatGPT users can deepen brand connection, providing a platform for shared experiences and feedback, thereby solidifying ChatGPT's standing within this key demographic. Overall, the strategic application of eWOM is integral to establishing and expanding the footprint of AI technologies like ChatGPT, enriching both educational practices and business operations in emerging markets.

LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

This study, while providing valuable insights into Generation Z's engagement with ChatGPT through eWOM, BA, BF and T, acknowledges certain limitations that pave the way for further exploration. The focus on Generation Z individuals, although offering targeted insights, may not fully represent the broader spectrum of potential users, such as other generational cohorts, thus suggesting the need for a more inclusive approach in future studies. The reliance on self-reported data, which is prone to social desirability bias, points to the potential benefit of employing diverse data collection methods to ensure greater accuracy and reliability. In addition, the exclusive examination of ChatGPT raises questions about the applicability of these findings to other AI systems, indicating the scope for comparative analyses across different platforms. The omission of cultural influences on AI adoption highlights an opportunity for cross-cultural studies to gauge how varied cultural backgrounds might affect users' interaction with AI tools. Finally, the study's ignoring of different ChatGPT versions suggests that future research should consider version-specific user experiences, possibly revealing nuanced insights into users' engagement and preferences. These areas, which are ripe for investigation, underscore the dynamic and evolving nature of AI research and its relevance across various demographics and cultural contexts.

CONCLUSION

This study investigated how Generation Z interacts with ChatGPT, highlighting the critical roles of brand awareness, brand familiarity, and especially trust, influenced by electronic word-of-mouth (eWOM). While awareness and familiarity draw Gen Z's attention, trust deeply influences their willingness to use ChatGPT, which is significantly shaped by eWOM through digital community interactions. These insights offer valuable strategies for marketers to engage effectively with Gen Z by emphasising authenticity and building trust via positive eWOM. This research sets the stage for further exploration of the factors that drive AI adoption among younger generations, underscoring trust's pivotal role in their technological engagement. By introducing new viewpoints into the academic discourse, this research should encourage a deeper examination of the complex interplay between constructs in AI engagement and user behaviour.

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REGENERATIVE AND CONSERVATION AGRICULTURE: REFLECTIONS ON THE AGRONOMICS OF SUSTAINABLE FOOD PRODUCTION IN SOUTH AFRICA

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ABSTRACT

Regenerative and conservation agriculture has garnered significant attention in recent years due to its potential to address sustainability challenges in food production. The reference to 'conservation' is technically unnecessary since 'regenerative' by implication concerns conservation by default. Yet, for the purpose of focus and awareness, many scholars retain this form. This approach focuses on restoring ecosystem health, improving soil quality, and promoting biodiversity, ultimately leading to more resilient and productive agricultural systems. Utilising a qualitative desktop case study methodology, this study aims to evaluate the implementation and outcomes of regenerative agricultural practices. The problem under scrutiny is that a changing world requires innovative agricultural practices and strategies to mitigate an environmentally compromised agri-industry, which inadvertently translate into global business and technology challenges. Consequently, sustainable livelihoods, poverty reduction and realising the millennium development goals remain evasive quests. This research consulted peer-reviewed articles, government and NGO reports, and first-hand accounts from practicing farmers in newspaper articles. The research will compare regenerative strategies with conventional farming methods, assessing impacts on environmental quality, economic viability, and community well-being. Excluded from the study are secondary aggregate data sources that do not provide direct observations or empirical research related to regenerative practices. The objective is to gather evidence on the effectiveness of regenerative agriculture in creating sustainable food systems and to identify ways to replicate and extend these benefits towards promoting socio-economic beneficiation. The findings are expected to identify critical elements and obstacles affecting the adoption of regenerative techniques, which may be directional in terms of subsequent empirical and field research. For this paper, the synthesis of empirical data and local knowledge is drawn from a carefully curated selection of sources from Google Scholar, JSTOR, and the University of Limpopo repositories with filtration of sources not more than 20 years old. The Kaisers model will be used as the grounding model for the study in answering the research question, "How does the adoption of regenerative agriculture practices impact soil health, biodiversity, and ecosystem services, and what are the subsequent effects on farm productivity, profitability, and community resilience?" These sources will be instrumental in guiding stakeholders and policymakers toward fostering the broader application of regenerative principles, thus enhancing the sustainability of food systems globally, and South Africa in particular.

Keywords: regenerative and conservation agriculture, sustainability, food production.

INTRODUCTION

Regenerative and conservation agriculture has garnered significant attention in recent years due to its potential to address sustainability challenges in food production. This approach focuses on restoring ecosystem health, improving soil quality, and promoting biodiversity. The study gains a deeper understanding of how regenerative practices are being implemented in various in terms of social, economic, and environmental impacts. This study also offers an

opportunity to identify the barriers and enablers for the successful adoption of regenerative agriculture, generating insights that can inform future policy and practice.

The *infra* discussion will be on the understanding of regenerative agriculture as it renders a perspective on the conservation motive associated with regeneration and the environmental benefits. The challenges and barriers, the economic impacts, case studies experiences and the South African situation; conservation as a term-in-vogue is often retained during debates relating to this topic, albeit merely for the purposes of ensuring that the narrative emphasises that “that what is”, should by all costs be retained and that “what is regenerated” (mitigated and regained), should equally be conserved, going forward.

REGENERATIVE AND CONSERVATION AGRICULTURE IN PERSPECTIVE

Regenerative and Conservation Agriculture (RCA) does not have a universal definition (Ikerd, 2021), for this study it is described as an approach to farming and land management that goes beyond sustainability, aiming to conserve, restore and rejuvenate the natural resources and ecosystems involved in agricultural production through sustainable and holistic farming techniques eliminating dependence on external inputs like chemicals (McLennon, Dari, Jha). Secondly, regenerative agriculture can be understood as an approach to farming that aims to restore and enhance the health of the ecosystem, improve soil fertility, promote biodiversity, and increase resilience to environmental challenges (Ikerd 2021; McLennon, Dari, Jha, Sihi & Kankarla 2021). RCA focuses on sustainable practices that regenerate the land and contribute to long-term ecological health and productivity (Ikerd 2021; McLennon, Dari, Jha, Sihi, & Kankarla. 2021).

Moving from the premise that contemporary agriculture has largely been moulded by a mindset rooted in colonial, industrial, and production-oriented values (Klein & Rodney 1974; Gordon, Davila & Riedy 2023), the RCA approach has met the nutritional and daily sustenance demands of a growing global population, it has often come at the expense of the surrounding socio-ecological environments. In response, regenerative agriculture emerges as a counter-narrative aiming to overhaul food production methods and rejuvenate damaged ecosystems (Gordon, Davila & Riedy 2023).

The push for expansion within modern agriculture is frequently driven by neoliberal economic narratives that place a high priority on continual economic growth, yet simultaneously resulting in overexploitation and excessive consumption (Sadiq 2013). Such pursuits have heightened the susceptibility of food systems and further exacerbated the deterioration of global ecosystems (Ramankutty *et al.* 2018). Consequently, a pressing need for transformation is recognised to avert the collapse of these systems. Proponents of traditional agricultural methods have often critiqued alternative models like RA, questioning their efficiency in terms of yield, economic feasibility, and climate change mitigation (Habtemariam, Kassa & Gandorfer 2017). Despite such scepticism, RA has seen a pronounced surge in adoption, gaining traction among farmers, celebrated personalities, and even within corporate strategies (Habtemariam, Kassa, & Gandorfer 2017). RA is notable for its inclusive fusion of diverse farming techniques aimed at revitalising and unlocking the latent possibilities within degraded landscapes (Ramankutty *et al.* 2018; Sadiq 2013). One practice within the broad umbrella of RA is carbon farming, a method that values the enhancement of soil carbon levels as a primary objective (de Otálora, Epelde, Arranz, Garbisu, Ruiz & Mandaluniz 2021). Thus, carbon farming, as a component of RCA, prioritises the elevation of soil carbon levels as a central objective through the adoption of practices like cover cropping, no-till farming, agroforestry, and rotational grazing (Teague *et al.* 2011). Regenerative agricultural farming endeavours to capture carbon from the atmosphere and store it in the soil, which contributes to climate change mitigation and enhancing soil health (Schreefel *et al.* 2020). This strategy is in harmony with the overarching principles of regenerative agriculture, which aim to boost ecosystem services, foster sustainability, and enhance agricultural productivity (de Otálora *et al.* 2021). It should be noted that throughout, the natural environmental conservation, regeneration and economic/business imperative brought by such strategies remain paramount, thus retaining the ‘sustainability’ objective.

A practical example is adopting practices such as composting and no-till farming so that there is an increase in soil carbon content (Teague *et al.* 2011). This method is considered one of the hallmarks of regenerative farming, echoing the sentiment that building up soil carbon is synonymous with being regenerative (LaCanne & Lundgren

2018). However, this stance is not universally held, and other agricultural discourses may not align with such sentiment as a definition (Schreefel *et al.* 2020).

Yet, importantly, defining what constitutes regenerative agriculture is fundamental to its integrity. According to some practitioners, it goes beyond the principles of organic farming, it is the necessitating techniques such as cover cropping and animal grazing to truly regenerate soil health. However, as the term becomes increasingly co-opted by major corporations for marketing purposes, its significance risks becoming diluted (Blythe *et al.* 2018). To mitigate this, institutions like the Rodale Institute endeavour to preserve the concept's essence by promoting a more codified approach to regenerative organic practices (Miatton & Karner. 2020).

Regenerative agriculture focuses on revitalising communities and promoting democratic involvement in the food chain. An ideal food system would entail active and participatory involvement of individuals in a democratic manner. Engaging in democratic participation, such as through Community Supported Agriculture, helps to prevent the corporatisation of agroecology (Maye & Duncan 2017). Regenerative agriculture is a farming approach that aims to restore and improve the entire farm ecosystem by focusing on soil health, water management, and fertiliser use techniques (Harrop 2021). Agroecology critiques Regenerative Agriculture for its lack of political engagement (Tittonell *et al.* 2022). Jonas (2021) points out that RA lacks a theory of change for economic or social transformation and is fostering a new cohort of 'experts' and gurus who profit by instructing the 'how' rather than the 'what' or 'why' RA is vulnerable to "corporate capture".

THE PRINCIPLES AND BENEFITS OF REGENERATIVE AND CONSERVATION FARMING

Regenerative farming principles typically encompass practices that improve and restore soil health, increase biodiversity, and enhance ecosystem services. Amongst the principles is *firstly* Soil Health which is the foundation of regenerative farming. It involves maintaining and improving soil structure, fertility, and microbial life (Beacham, Jackson, Jaworski, Krzywoszynska & Dicks. 2023). Techniques such as cover cropping, crop rotations, reduced tillage, and the application of compost enhance soil health by increasing organic matter, improving nutrient availability, and reducing erosion (Gastó *et al.* 2009).

The *second* principle is Biodiversity which within the context of regenerative farming refers to the variety of life across all levels within an ecosystem, including genetic, species, and ecosystem diversity and environmental diversity (Naylor, Hamilton-Webb, Little & Maye 2018). Regenerative agriculture improves ecosystem health and resilience by implementing strategies including cultivating different crops, maintaining living roots in the soil, and reintroducing grazing animals to the land (Beacham, *et al.* 2023). Increasing plant species diversity through polycultures, incorporating beneficial insects with integrated pest management, and fostering habitat for wildlife in enhancing biodiversity on farms (National Agricultural Policy 2010).

Amongst others, the principles encompass ecosystem services which are the benefits that humans derive from the natural environment for supporting agriculture, such as pollination, water purification, climate regulation, and nutrient cycling. Regenerative agriculture aims to protect and enhance these services by managing land in a way that supports natural processes and resilience (Weiss 1992). Furthermore, there is a need for sustainable practices in regenerative farming because they are those that meet current agricultural needs without compromising the ability of future generations to meet their own (Wilson, Myers, Hendrickson & Heaton 2022). This includes water conservation, careful nutrient management, and energy efficiency, ensuring that farm operations are environmentally, economically, and socially sustainable (Weiss 1992). For ultimate success, there is a need for holistic management that involves planning and decision-making processes that consider the social, economic, and environmental impacts of agricultural activities. This includes setting holistic goals, testing decisions against those goals, and monitoring outcomes to adaptively manage agricultural systems for long-term viability and ensure sustained security of food production (Gastó *et al.* 2009). Regenerative agriculture offers a multitude of environmental benefits, which can be broadly grouped into several categories:

- **Climate change mitigation:** By sequestering atmospheric carbon in soil organic matter through practices like cover cropping, no-till farming, and agroforestry, regenerative agriculture can help mitigate climate change. Healthy soils have a better structure and capability to store carbon, contributing to the reduction of greenhouse gases in the atmosphere (Arriaga, Guzman & Lowery. 2017).

- **Soil health improvement:** Regenerative practices enhance soil fertility and structure, leading to improved physical properties like water retention and resistance to erosion. Nutrient management, including the application of compost and manures, can boost soil biota, providing long-term fertility and productivity benefits to the farm ecosystem (Final Draft IPCC Fourth Assessment Report, Working Group III [nd]).
- **Water cycle and ecosystem services enhancement:** Through the improvement of soil structure and health, regenerative agriculture positively affects water cycles, reducing runoff and improving water infiltration and retention. This supports vital ecosystem services, such as pollination, pest control by beneficial insects, and water purification (Final Draft IPCC Fourth Assessment Report, Working Group III [nd]).
- **Resilience and adaptability:** As global climate patterns shift and market demands evolve, regenerative practices make agricultural systems more resilient. Farmers who adopt these methods are better positioned to withstand extreme weather events, such as droughts, and adapt to changes in market demands for food production.
- **Economic and community health:** Beyond environmental benefits, regenerative practices can improve farm profitability due to increased productivity and reduced input costs over time. Moreover, by fostering a healthier environment, regenerative agriculture contributes to the well-being of farming communities, promoting a more sustainable and equitable food system (Dynamics of soil microbial biomass C, soluble organic C and CO₂ evolution after three years of manure application 2011).

In a nutshell, analysing the benefits of RA, there is a transformative approach, promising both enhanced ecosystem health and economic advantages for those in the farming industry. Both in yield and soil restoration.

- **Techniques used in Regenerative Agriculture:** In regenerative agriculture, there are numerous and varied techniques adopted that focus on improving soil health, promoting biodiversity, and enhancing the farm ecosystem. Some of these techniques include cover cropping which requires the planting of cover crops to protect and enrich soil during off-season or between plantings of cash crops (Schreefel *et al.* 2020). Rotating crops is also required as a sequence used to break pest and disease cycles, and to enhance soil fertility (Beacham *et al.* 2023). The RA's stressed techniques is conservation tillage which requires minimal ploughing of the land to reduce soil disturbance. These, helps maintain soil structure, reduces erosion, and promotes soil health. Furthermore, the model requires that compost application should be done utilising organic compost to improve soil organic matter, nutrient content, and microbial activity with no chemical fertilisers (Toensmeier, 2016; Montgomery, 2017; Brown 2018).

The model further requires that agroforestry be applied as it integrates trees and shrubs into agricultural landscapes to provide shelter, increase biodiversity, and enhance land use efficiency. On the other side it helps with managing grazing (Teague & Barnes 2017; Waters, *et al.* 2017). This implies that, the livestock is rotated on the grazing areas to prevent overgrazing, encourage plant growth, and naturally fertilise the soil with manure (Teague & Barnes 2017). The system on its own helps with an integrated and enviro-friendly pest management process through the combination of biological, cultural, physical, and chemical means to manage pests with minimal environmental impact (Gosnell, Gill & Voyer 2019). Lastly, the model gears up biological nutrient management practices as it uses crop residues and other biological inputs to manage soil fertility and reduce reliance on synthetic fertilisers (Gosnell, Gill & Voyer 2019). The model proves to support the overarching goals of regenerative agriculture, restoring and enhancing the health of the agroecosystem for further production of food security, boosting economic output, and sustaining human capital as land is worked by the people not machines that reduces the strength of the soil with no carbon underneath (Montgomery 2017). By way of example, the Kaisers' regenerative farming model is an innovative approach to sustainable agriculture that emphasises continual food production, little soil disturbance, and the use of compost for fertiliser. This agro-entity uses a concept that incorporates multiple regenerative principles to establish a profitable and resilient farming system (White 2020).

Following is an exploration of the fundamental elements of the Kaisers' approach:

- **Continuous food production:** The model functions based on a continuous food production mechanism. Vegetable seeds are first planted in a greenhouse and cared for until they are ready to be transplanted (White. 2020). After harvesting, crops are removed from the field and young plants are promptly replanted in the space (Gosnell, *et al.* 2019). This guarantees continuous food production on throughout the growing season (White 2020; Gosnell *et al.* 2019).
- **Minimal disruption to the soil:** As previously indicated in the models of RA, the Kaisers' agricultural plan prioritises little soil disturbance over traditional practices that rely on significant soil tillage. This aids in conserving soil composition, mitigating erosion, and sustaining soil vitality. The Kaisers' method involves

transplanting seedlings directly into the ground without ploughing or tilling the soil to avoid unnecessary disruption of the soil structure (White 2020; Gosnell *et al.* 2019).

- **Weed control and fertility management:** The Kaisers' concept is notable for its unique methods for weed control and fertility management. Compost is used for fertility and weed suppression instead of cover crops, commercial fertilisers, or herbicides (White 2020). A substantial quantity of on-farm compost is created, which is distributed on the soil surface instead of incorporating it into the soil (White 2020). This approach enhances soil fertility, stimulates microbial activity, and inhibits weed proliferation (Brown 2018). Furthermore, the Artisanal Method is applied, which implies the entire farming process occurs manually, from seed sowing to compost application (Brown 2018; White 2020). This practical method enables careful focus on details and guarantees the successful implementation of regenerative practices.
- **Ecological advantages:** Ultimately, this model involves regenerative agricultural practices, provides environmental benefits such as higher soil health, increased biodiversity, and decreased dependence on external inputs like synthetic fertilisers and herbicides (White 2020). According to this model not disturbing the soil and using compost help maintain soil structure and organic matter, reducing erosion and enhancing water retention in the soil (Teague & Barnes 2017; Briske, *et al.* 2011; Waters, *et al.* 2017). Furthermore, this model serves to involve and create employment and subsequent poverty reduction through regenerative a community-centred farming model; this proves to be a sustainable method to socio-economic development, which focuses on continual food production, little soil disturbance, and the use of compost for fertiliser and weed control (Schreefel *et al.* 2020; Giller *et al.* 2021).

SOCIO-ECONOMIC IMPACT OF REGENERATIVE AND CONSERVATION AGRICULTURE

Sustainability, however, is not just about environmental outcomes; it encompasses the economic and social viability of farming communities (Ikerd 2021; McLennon *et al.* 2021). The long-term health of the land is inextricably linked to the well-being of those who work it. Regenerative and conservation agriculture can improve farmer livelihoods by reducing input costs associated with chemical fertilisers and pesticides, and potentially command higher prices for products marketed as sustainably produced (Ikerd 2021). The essence is that job creation and poverty reduction goals are furthered. As governments and organisations begin to recognise these benefits, local economic development policies and business opportunities can become front-stage projects from a governance point of view. The analysis done thus far, points out that a holistic approach towards farming creates a pathway for sustainable agriculture that nourishes both the planet and its population, and those potential socio-economic yields are within reach.

Economic Impacts of Regenerative and Conservation Agriculture

The economic impacts of regenerative agriculture are multifaceted, with potential for both increased profitability and challenges in its execution. Among these the following are noteworthy:

- **Profitability through improved ecosystem services:** Regenerative agri-practices can lead to healthier ecosystems which provide services like pest control and pollination, which reduces the need for external inputs. Findings have shown that regenerative fields had 29% lower grain production but 78% higher profits over traditional corn production systems, suggesting that profitability may not solely depend on yield but also on the cost savings and ecosystem benefits (LaCanne & Lundgren 2018).
- **Increased input efficiency and reduced costs:** By enhancing natural processes like nutrient cycling and water retention, regenerative techniques can reduce reliance on costly synthetic inputs. Better soil health can lead to decreased irrigation needs and fertilisation costs while maintaining or improving yields (Ikerd 2021).
- **Market opportunities and premium pricing:** A growing consumer demand for sustainably produced food, which can allow farmers to command premium prices for regeneratively grown products is detected as consumers transcend towards, environmentally accountable buying preferences (buying behaviour); creating attractive markets for regenerative products can help offset the risks associated with changing practices (Show Me the Money: Making a Downstream Market for Diverse Regenerative Crops, 2020)
- **The need for initial investment and transition risks:** The transition from conventional to regenerative farming can be financially challenging. It requires awareness creation and re-education. Investments in new practices take time and often results in a temporary decrease in yields due to a slow 'take-up' among the producer community as well as the consumer community on the other hand. It was found that often, farmers need to be assured of

maintaining profitability during and after the transition to fully embrace regenerative methods (Show Me the Money: Making a Downstream Market for Diverse Regenerative Crops, 2020).

The reviewed literature indicates that on overall, the economic impacts of regenerative agriculture depend on a variety of factors, including crop types, local market conditions, and the scale of adoption. While it presents economic opportunities, it also requires careful planning and support systems to realise its full potential. Accordingly, the Public Sector, together with the Business Sector and NGO partners can make a pivotal contribution to stimulate community interest and beneficiation in this regard.

Challenges and Barriers to Implementing Regenerative Agriculture – Applicability to South Africa

With the discussion in mind, caution should be sounded; Implementing regenerative agriculture practices can encounter various challenges and barriers, which can be complex and multifaceted:

- **Economic constraints:** Transitioning to regenerative practices often requires upfront investments which may be a barrier for many (aspiring) farmers (especially those from disenfranchised communities), especially given that the financial returns can be delayed rather than immediate. Farmers are operating on thin margins, and the prospect of positive financial returns is crucial to incentivise change (Show Me the Money: Making a Downstream Market for Diverse Regenerative Crops, 2020).
- **Knowledge and training:** Lack of knowledge and skill sets for implementing regenerative techniques can be a significant barrier. Access to education and training to understand and apply such practices effectively is necessary for widespread adoption (Giller *et al.* 2021). It is at this junction where governments and the NGO sector should collaborate and, together with the farming communities seek practical ways to assist. Without supportive policies, subsidies, and institutional backing, the adoption of regenerative agriculture can be slow. Farmers need access to resources, such as capital and land, and assurance on land tenure to make long-term investments in regenerative practices (Jennifer [nd]).
- **Social and cultural resistance:** Change can be met with resistance due to prevailing cultural norms or because of scepticism regarding new practices. This resistance can be particularly challenging when trying to implement practices that significantly deviate from traditional methods (Giller *et al.* 2021).

In short, the reviewed literature stipulates that addressing the challenges brought by conventional farming and RA often requires a multi-dimensional approach that includes financial incentives, educational programs, supportive community networks, and policy frameworks that encourage sustainable agricultural practices. It is therefore of primary importance that policy makers should understand the importance of RA as a means of improving or bringing reform to the Agricultural Sector.

Regenerative and conservation agronomics has been increasingly popular in South African agriculture since 2015. One major issue with industrial agriculture is the heavy reliance of farmers on tillage, chemical fertilisers, pesticides, and herbicides. The inputs have negative effects on the environment, soil, and human health (Aryal *et al.* 2018; FAO, 2013). Dorrough, *et al.* 2004; Steinfeld, *et al.* 2006; Greenwood & McKenzie, 2001 in Dudley-Bestow, and Peel (2021) stated that over time, farmers become trapped in a harmful cycle where they must use increasing amounts of inputs to maintain production levels as their soils deteriorate. As production costs rise, farming profitability diminishes because farmers operate as price-takers. They must continually obtain additional land to sustain themselves financially in ensuring food security and the substantial financial burdens (Dorrough *et al.* 2004).

Regenerative agriculture reduces farmers' dependence on tillage and chemical inputs through various approaches; possibly an awareness of improved practices and the associated technology awareness associated with the improved practices may be at the root of the problem? Success in farming cannot be achieved through quick fixes or standardised solutions, as each agricultural system is unique and constantly changing. For instance, most farmers who are converting to regenerative mode were confronted with the encounter of reinstating their farm produce as farms are “worn out” by industrial farming and no longer receptive to industrial farming practices, and the farmers are obliged to convert their economic system (Ikerd 2021).

The system is more resilient than industrial production systems because of enhanced soil structures and healthier plants, which can better withstand environmental stressors. Examples of this are pests, insects, heatwaves, floods, and droughts (Terra Genesis International [n.d.]; Rodale Institute [n.d.]; Tesfaye, *et al.* 2017; Gram *et al.* 2020). In a nutshell, the reviewed literature shows that the developed themes such as (food sustainability, economic viability and market demand, environmental benefits as well as global agriculture and sustainability) shows that South Africa faces problems and potential in adopting comparable approaches. Both countries can contribute to the global push for sustainable agriculture and resilient food systems by exchanging information and experiences.

RCA has the economic benefits enjoyed by regenerative farms, where regenerative fields had 29% lower grain production, but 78% higher profits compared to traditional corn production systems due to lower input costs and improved soil conditions (LaCanne & Lundgren 2018; Mutenje *et al.* 2019; Issahaku & Abdulai 2020; Akinyi *et al.* 2022). From the analysis of literature, case studies show enhanced resilience against climate extremes, where regenerative farms maintain or even improve yields despite challenging weather conditions, due to practices that build soil organic matter and contribute to a more stable agroecosystem (Tesfaye *et al.* 2017; Gram *et al.* 2020).

Ultimately, analysis shows that for farmers to make accurate and timely decisions, they need to have a keen awareness of environment and the activities taking place on their fields. Regenerative agriculture forbids tillage due to its harmful impact on soil structure and organisms, a practice allowed by some organic certification bodies. This farming method is holistic, resembling biodynamic production but with less emphasis on branding, certification, and farmer behaviours.

Prospects for Regenerative Agriculture in Sustainable Food Systems

The prospects for regenerative agriculture within sustainable food systems appear promising and are gaining increasing attention among farmers, scientists, and policymakers who are not dependent on donors who sometimes do not consult with the locals for project planning (Mkhize *et al.* 2010; Islam 2011; Poulton & Chinsinga 2018; Bjornlund *et al.* 2020). As the global population continues to rise and the need for sustainable food production becomes more pressing, regenerative agriculture presents a viable pathway to enhance the resilience of food systems while conserving ecosystem health and biodiversity (Myeni *et al.* 2019).

Furthermore, the integration of regenerative practices is expected to play a critical role in the movement toward more sustainable food systems that are not only productive but also resilient to climate change and other environmental challenges (Maino & Emrullahu 2022; Shackleton *et al.* 2015; Rippke *et al.* 2016). The connection between regenerative methods and the objectives of the 2030 Agenda for Sustainable Development suggests that these practices can contribute to broader social, economic, and environmental goals, including combating climate change, preserving biodiversity, and improving nutrition and food security (Water and Sanitation-Related Diseases and the Changing Environment, 2018). As market dynamics continue to evolve, the economic viability of regenerative agriculture will likely improve, potentially leading to increased adoption (Myeni, *et al.* 2019; Ojoko *et al.* 2017). Overall, while challenges and barriers exist, the potential for regenerative agriculture to improve the profitability, sustainability, and equity of food systems offers an optimistic outlook for its role in the context of global agriculture (Rippke *et al.* 2016). Continued research, supportive governmental policies, and education will be vital in realising the full potential of regenerative and- conservation agriculture for future food systems, and that will lead to sustainably cumulative agricultural productivity and proceeds, dropping greenhouse gas emissions and building resilience as well as generating adaptive capacity to climate change (Rippke *et al.* 2016).

CONCLUSION

Promoting regenerative agriculture successfully often necessitates a concerted effort that involves not only policy initiatives but also educational outreach to support and inform farmers, stakeholders, and the public (RAASA, [nd]). Policy mechanisms play a critical role in fostering an environment that encourages the adoption of regenerative farming practices (Mkhize *et al.* 2010). Governments can offer incentives such as subsidies, grants, or tax relief for farmers who adopt sustainable practices, and can invest in research to refine and adapt these methods to local conditions. Establishing clear and secure land tenure rights can also provide farmers with the assurance needed to invest in long-term soil health improvements (Abegunde *et al.*, 2019). Furthermore, integrating regenerative goals

into agricultural and environmental policies can create a more supportive framework for sustainable farming (Giller *et al.* 2021).

Education and outreach are equally important, as they empower farmers with the knowledge and skills necessary to implement regenerative practices successfully (Tanny *et al.* 2015). Extension services and agricultural programs can provide hands-on training, while research institutions can engage in developing and disseminating best practices based on the latest science (Tanny *et al.* 2015; Ikerd 2021). Public awareness campaigns can help consumers understand the benefits of regenerative agriculture, which in turn can drive market demand for sustainably produced goods, providing economic incentives for farmers to transition towards regenerative practices (Cusworth *et al.* 2022). Collaboration among governments, non-governmental organisations, educational institutions, and farmers community is essential to develop a cohesive strategy that supports the principles and practices of regenerative agriculture. By integrating policy and education, the promotion of regenerative and conservation agriculture has the potential to address both the effects of climate change and the need for sustainable food production systems.

In South Africa, the Regenerative Agriculture Association (RegenAG SA), is an organisation that educates farmers and consumers about the advantages of regenerative and conservation agriculture. This organisation facilitates collaboration, research, and knowledge exchange to provide support and whilst keeping stakeholders informed about the latest developments (technologies) in this production method. RegenAG SA further advocates for this farming strategy with the Government due to its capacity to alleviate poverty, enhance food security, and empower rural communities.

RegenAG SA facilitates the growth of regenerative agricultural markets by connecting consumers with farmers. Lastly, RegenAG SA is now seeking to secure money to assist farmers in transitioning to regenerative agricultural practices because farmers rely less on artificial fertilisers to enhance yield. Conversion typically leads to a decrease in agricultural yield over the initial three to five years, followed by a stabilisation of yields. Regenerative farming systems are typically more resilient than industrial systems, particularly in terms of pest, disease, and climate-related hazards.

Regenerative and Conservation Agriculture allows nature to do the work. It is an approach that leads to better, more resilient crops grown using sustainable methods that, at the same time, mitigates the climate crisis that presents a threat to all from a socio-economic and human survival point of view; it represents a paradigm shift in farming practices, with the potential to transform food production into a regenerative rather than depletive process. Although transitioning to regenerative methods poses certain economic risks and requires an upfront investment in knowledge and infrastructure, the long-term benefits - environmentally, socially, and economically - are substantial. While no individual practice is a panacea, the integration of regenerative techniques such as no-till farming, cover cropping, crop diversification, and integrated livestock management can result in systems that are greater than the sum of their parts. The postulate stands that when these practices are thoughtfully applied and adjusted to the local conditions of an area or region much utility is evident.

Meanwhile, to truly promote the widespread adoption of regenerative and conservation agriculture, a supportive framework is required. This framework spans government policies, educational programs, and market incentives that together encourage the adoption of sustainable practices. It is for this reason that the framework is typified as a Multi-sector Triumvirate. More research is warranted; as the global community becomes increasingly aware of the importance of sustainable food systems, regenerative and conservation agriculture practice will likely play a pivotal role in improving socio-economic conditions and, frankly, improve the prospects of human survival.

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DESIGN THINKING AND PROBLEM-SOLVING IN THE FUEL RETAIL SECTOR: A FRAMEWORK FOR ENTERPRISING PEOPLE

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ABSTRACT

This study applies a design thinking and problem-solving approach to enterprise fuel retailers in South Africa. South African fuel retailers operate in a complex and fast-changing market, and by nurturing enterprising individuals, businesses could empower their employees to engage in a problem-solving and agile mindset – all to function better in these fluctuating environments. Using a qualitative research lens and adopting the interpretivist philosophy, the researchers conducted in-depth interviews with two key sub-groups: owners/managers and employees. An abductive thematic analysis was used to analyse the research data across the two sub-groups. Our study revealed that fuel retail employers motivate staff through incentives, improved communication, and positive company culture. In contrast, retail brands provide support through marketing, mystery shoppers, and check-ins. Retail employers/ managers believe they communicate well with staff but exhibit varying confidence levels about their understanding of customer needs. Fuel retail employees value customer focus and clear job purpose but voice frustrations arising from their treatment by customers and the demanding work environment. Recommendations included customer reward programmes, improved training, and addressing work schedule problems. While employee-to-employee communication was good, communication with superiors varied. Our findings underscore the significance of exhibiting innovativeness and the ability to respond to problems creatively through effective communication, cultivating relationships, and fostering a customer-centric approach. We propose a framework built on design-thinking principles, empowering retailers to react proactively to difficulties and envision and shape their future.

Keywords: design thinking, problem solving, fuel retail, enterprising people.

INTRODUCTION AND BACKGROUND TO STUDY

The South African refined petroleum products market is currently valued at USD 8 billion (about ZAR 150 billion). According to a projection by Mordorintelligence.com (2024), this figure is expected to reach USD 8.83 billion (about ZAR 165 billion) by the end of 2029. This growth can be attributed to a range of factors, such as infrastructure expansion, a growing population, and an increase in the consumption of petroleum products in the country. The retail, refining manufacturing, and wholesale sub-sectors also contribute significantly to the broader petroleum products market, accounting for over 78% of employment creation (Crompton, Sing, Filter, & Msimango, 2020). Many of these jobs are concentrated in the fuel retail market, including forecourt attendants, convenience stores, and wholesalers involved in fuel distribution from refineries to the market (Statistics South Africa, 2023).

Despite these notable contributions, South Africa's fuel retailing sector is intricate and fraught with complexities (Fuel Retailers Association, 2021). At a global level, there are many challenges that fuel retailers have faced since COVID-19. These include changes in long-term consumer buying behaviour, product mix re-evaluation and network rationalisation, demand fluctuations, supply chain disruptions, consumer and workforce health and safety, workforce problems, increasing operating costs, a liquidity crunch, and falling oil prices and demand (KPMG, 2020). South African fuel retailers face challenges from rapidly changing market conditions, such as government regulation,

fuel price volatility, competition, and unpredictable consumer behaviour. These difficulties often hinder profitability (Fuel Retailers Association, 2021), impacting fuel retailers' communication, product offerings, and overall strategies. As a result, they need to be agile, innovative, and adaptive (Rubeis, Groves, Bonaccorsi, Portera, Masci, & Chalouhi, 2022). Given the sector's critical importance to the country's economy, it is difficult to ignore or predict the strategic implications of these complexities and the dynamic operating environment.

South Africa's transport system relies heavily on petroleum fuels for energy needs (Department of Mineral Resources & Energy, 2022). The country's fuel industry has experienced significant growth in recent years (Crompton et al., 2020). More than 78% of jobs in this industry are concentrated in three main segments: retail, refining, manufacturing, and wholesale. Many of these jobs are found primarily in the fuel retail market, such as forecourt attendants, convenience stores, and wholesalers involved in fuel distribution from refineries to markets (SAPIA, 2021).

Despite extensive studies on problem-solving and design thinking (Ananda, Rahmawati, Khairi, & Irwanto, 2024; Bernardez & Oracion, 2024; Dorst, 2011; Karla, Pandey, Rastogi, & Kumar, 2022; Kaweesi & Miuro, 2016) and the adoption of an enterprising mindset (Talat & Chang, 2017), only limited scholarly work explores specifically how fuel retailers in emerging markets such as South Africa could leverage these approaches to address their challenges.

PROBLEM STATEMENT

Design thinking is widely practised in various industries (Quaiser & Pandey, 2023). However, the South African fuel retail sector faces challenges balancing standardised service with responsiveness to employee needs (Stiehler-Mulder & Tselepis, 2022). The current predominantly centralised, top-down approach heavily relies on directives from parent companies, resulting in standardised service models that may not cater to diverse customer preferences across different regions. This lack of autonomy at the service station level hampers innovation and the sector's ability to adapt to unique market demands. Moreover, limited channels for employee feedback create a disconnect between management and frontline staff, hindering valuable employee contributions to service improvement and neglecting the emotional well-being of employees who frequently interact with customers. Current training programs primarily focus on operational and safety aspects, failing to equip employees with the necessary emotional intelligence skills to manage customer interactions effectively. This emotional labour can lead to employee burnout and ultimately impact customer satisfaction and loyalty if not adequately supported. To address these issues and enhance employee and customer experiences, the South African fuel retail sector requires a more decentralized and employee-centric approach. Empowering local teams, fostering innovation, and prioritizing employee well-being are crucial steps towards creating an industry's sustainable and prosperous future. Although there are existing studies that have applied design thinking in the retail sector (Al-Faridzqi, Darwiyanto, & Husen, 2022; Kurniawan & Sunitiyoso, 2024), very few have specifically focused on the fuel retail sector. Design thinking, emphasising empathy, ideation, prototyping, and iterative testing, can help fuel retailers to understand better and meet the needs of employees and customers. Therefore, developing a design thinking and problem-solving framework tailored for the enterprising people in the fuel retail sector is necessary. This framework will inform practitioners and researchers about the challenges faced at the fuel retail level, making it essential for fuel retailers to implement its recommendations.

AIM OF THE STUDY

Considering the background of the SA fuel retail industry and the problem statement above, this study aims to apply a design thinking and problem-solving approach to nurturing enterprising people in the South African fuel retail sector. Our study enriches the design-thinking and problem-solving literature in the fuel retailing sector. It adds to both the managerial and the academic literature on design thinking in the retail sector. By applying design thinking to the context of the South African fuel retail sector, this study provides a fresh perspective on how this approach could address the problems faced by fuel retailers, thereby broadening the relevance of problem-solving and design thinking.

AREAS OF EXPLORATION

To achieve the study aim, the following three areas of exploration (AoEs) were formulated:

- To investigate the challenges faced by fuel retailers in designing their working environment;
- To examine the ability of retailers to communicate with employees and establish relationships in their businesses;
- To assess the capacity of retailers to design and deliver product and service offerings that enhance the experience for staff and customers.

LITERATURE REVIEW

The South African Fuel Retail Sector

The South African fuel retail sector is a sub-sector of the petroleum and liquid fuels industry (Department of Mineral Resources and Energy, 2022). This sub-sector retails diesel, petrol, and associated offerings through service stations and convenience stores. Businesses in this sub-sector account for about 8% of the country's GDP, equating to about R300 billion in production output. The SAPIA (2022) has estimated that South Africa has about 4,600 service stations. Regarding employment figures, the fuel retail market sustains over 100,000 direct and indirect jobs. Key industry players are Engen, PetroSA, Sasol, Total, Shell, BP, and Caltex (Mordorintelligence.com, 2024). South Africa consumes about 30 billion litres of fuel annually, with Gauteng, KwaZulu-Natal, and Western Cape consuming 67% (20 billion litres) of this figure (SAPIA, 2022). Over the medium term, increasing infrastructure development activities and the growing population are anticipated to drive the market during the forecast period.

Problem-Solving

Rahman (2019:1) defines problem-solving as “a process which involves systematic observation and critical thinking to find an appropriate solution or way to reach the desired goal”. For Buchanan (2019), this process is about “designing solutions”. These views are consistent with those of Karla et al. (2022), who view the process as systematic in that it involves identifying a problem, determining its underlying causes, categorising it, prioritising and selecting viable options for a solution, and implementing those solutions (Karla et al., 2022). Most modern-day jobs demand problem-solving skills, and individuals are expected to solve problems effectively and continuously in a group setting. Employees are expected to analyse problems and collaborate effectively with colleagues, clients, partners, and suppliers. The retail industry is no exception to this.

Design Thinking

Müller-Roterberg (2018) defines ‘design thinking’ as a customer-centred innovation approach that develops innovative ideas for businesses or entire business models. For McKinsey and Company (2023:1), design thinking is “a systemic, intuitive, customer-focused approach to problem-solving that helps organisations adapt to rapidly changing environments and maximize their potential”. Mount, Round and Pitsis (2020) add that design thinking is a process for complex problem-solving that draws on human-centred principles to bring designers closer to users’ needs and issues and to stimulate the generation of adequate solutions. It is a non-linear problem-solving methodology employed to solve complex problems. It is seen as an exciting new paradigm for dealing with problems in sectors such as IT, business, education, and medicine (Dorst, 2011).

Design thinking helps teams to understand users, challenge assumptions, redefine problems, and create innovative solutions to problems. Design thinking has enhanced individuals’ problem-solving capabilities in diverse fields (Luka, 2014). This could be attributed to individuals being exposed to various perspectives when collaborating in multidisciplinary and multicultural teams. Consequently, they are compelled to explore numerous viewpoints and directions through an iterative trial-and-error process, which equips them with a more robust knowledge foundation for decision-making. This process encompasses methodologies such as gathering insights from user experiences, engaging in ethnography with participants, fostering co-creation and teamwork across organisations or groups,

acquiring new knowledge, visually representing concepts, and swiftly developing initial models of ideas in collaboration with users. These techniques are employed to address intricate challenges across several stages, such as *data gathering*, *idea generation*, and *idea testing* (Mount et al., 2020).

Design thinking has made considerable strides in organisations today. It has been widely popularised as one of the most effective approaches to complex problem-solving (Mount et al., 2020). According to Buchanan (2019), design thinking turns away from the complexity of situations and surroundings and towards the obstacles and problems that humans face in concrete situations, creating environments that may support and improve the quality of human experience. Design thinking is the transformation of surroundings into environments for human experience. Cousins (2018) concurs, arguing that design thinking has produced innovative solutions to problems. One way to view an innovative solution is by using creativity to solve a problem (Nilsson & Jahnke, 2018). Such creativity entails applying the available resources in the best possible way to solve the problem optimally.

Enterprising Spirit

Muñiz, Pedrosa, Garcia and Suarez (2017) define ‘an enterprising spirit’ as a multidimensional process that promotes personal development and enables the initiation, resolution, and continuation of new economic, personal, or social projects. This mindset or disposition is influenced by a combination of individual factors, such as skills, outlook, and character, as well as external factors, such as societal norms, culture, and economic conditions. Personality traits are reliable indicators for starting and successfully managing a business.

RESEARCH METHODOLOGY

This section provides an overview of the research methodology employed in the study. It begins with a discussion of the research philosophy, the approach, and the design before delving into the sampling, data collection, and analysis procedures.

Research Philosophy, Approach, and Design

‘Research philosophy’ refers to the research orientation that is followed and that explains the researchers’ cognitive belief system, worldview, or viewpoint through which the research is conducted (Möller & Halinen, 2022). This study was positioned in the interpretivist philosophy, which is concerned with understanding the subjective reality of human experiences (Kelly, Dowling, & Millar, 2018). It prioritises achieving an in-depth understanding of a phenomenon rather than attempting to generalise it (Creswell & Poth, 2016). This philosophy further assumes a relativist ontology (the research is collected from individual participants’ experiences and biases), a subjectivist epistemology (based on real-world phenomena), and a naturalist methodology (the researcher is a participant observer, and data is collected from natural settings and analysed through cognitive engagement with participants) (Gannon, Taheri & Azer, 2022; Myers, 2019).

The research approach concerns whether a study adopts a quantitative, qualitative, or mixed-methods approach (Gaus, 2017). The exploratory nature of the formulated areas of exploration developed for this study meant that a qualitative approach was best suited. Azungah (2018) asserts that the qualitative approach emphasises the importance of ‘contextual understanding’. Researchers using this approach aim to understand behaviour, values, beliefs, and other factors in the specific research context. It is also essential to establish whether the research approach will use an inductive or a deductive approach. ‘Inductive’ refers to deriving specific insights or concepts from a data source (‘something actually is’), while ‘deductive’ means developing insights or concepts guided by the existing literature or a theory (‘something must be’) (Arrighi & Ferrario, 2008; Hammersley, 2019). Another approach that could be applied is abductive reasoning, which allows the researcher to develop hypotheses, explanations, or theories (Mirza, Akhtar-Danesh, Noesgaard, Martin, & Staples; 2014), and suggests that ‘something is’ (Arrighi & Ferrario, 2008). This study adopted an abductive approach to the data analysis, with the specific approach of moving between existing theory and possible new insights. Therefore, the approach was careful, allowing the researchers to read between the lines in order to obtain findings and draw conclusions.

In the process of *deduction*, we know the ‘what’ (the ‘players’ in a situation whom we need to attend), and we know ‘how’ they will operate together. This allows us to predict results more accurately. For instance, if we know that there are stars in the sky and are aware of the natural laws that govern their movement, we can predict where a star will be at a certain time. In *induction*, we know the ‘what’ in the situation (the stars) and can observe results (their position changes across the sky). But we do not know the ‘how’ or the laws that govern these movements. The proposing of ‘working principles’ that could explain the observed behaviour (also known as hypotheses) is a creative act. The basic reasoning pattern in productive thinking is *abduction*. Abduction comes in two forms; what they have in common is that the outcome of the process is conceived in respect of value. Abduction is often associated with conventional problem-solving (Dorst, 2011). This study adopted an abductive approach in which we knew the contribution we wanted to make and the ‘how’, a working principle that would help us to achieve the value we aimed for. What was missing was a ‘what’ (an object, a service, a system) that defined both the problem and the potential solution space within which an answer could be sought.

The research design is intended to provide an appropriate framework for a study. By definition, a research design refers to the overall approach used to conduct research and that outlines a concise and logical approach to collecting, interpreting, analysing, and discussing data generated by the research question(s) (Thwaites, 2020). Several qualitative research designs exist today. Researchers employ these approaches to study people (such as narrative and phenomenology), examine processes, activities, and events (such as a case study and grounded theory), or explore broad cultural-sharing behaviour (such as ethnography) (Creswell & Creswell, 2018). In this study, an exploratory-descriptive design was employed. A literature review was conducted to identify knowledge gaps, which justified the need to investigate holistically the daily challenges that fuel retailers and their staff face (Hunter, McCallum, & Howes, 2019). Thus, the meaning was constructed from data gathered in natural settings, with the researcher acting as a participant observer (O’Donoghue, 2018) (the naturalist methodology), and the data was analysed through cognitive processes that were informed by interactive processes with the participants (Kivunja & Kyini, 2017).

Sampling

Consistent with the qualitative nature of the study, a non-probability convenience sampling approach was employed to select the study participants. Although the result was not entirely representative, this approach provided an initial pool. Participation in the study was voluntary. The researchers aimed for a balanced sample of at least ten managers/owners and ten frontline staff/attendants. This was designed to achieve a diversity of perspectives and data saturation.

Table 1: Participants’ profile

Role	Number interviewed
Fuel retailer owner	5
Fuel retail manager	5
Frontline employee	5
Fuel attendant	5
Total number of participants	20

Source: Authors’ compilation

A trained moderator collected the data from the appointed research company, The Culture Foundry. The moderator conducted semi-structured, in-depth interviews with the participants during April 2022, both in person and via telephone. These interviews were recorded, transcribed, and supplied to the researchers. The questions posed to the participants were informed by the literature and by the developed AoEs. Both samples were prompted to answer 15 questions, and each interview typically lasted 40 minutes to one hour.

Data Analysis

An abductive thematic analysis was employed to analyse the research data. Derived from the philosophical domain of pragmatism (Peirce, 1974), abductive research is characterised by its simultaneous and equitable exploration of empirical data and existing theoretical knowledge rather than being solely driven by data or hypotheses (Rinehart,

2021). This enabled the researchers to identify data that was inconsistent with the reviewed literature. With an abductive approach, the researchers actively identified discrepancies and fresh insights that were often divergent from the existing literature. The data was coded following a two-step process: first cycle coding ('in vivo') and second cycle coding ('axial') (Jugessur, 2022; Saldaña, 2021). With in vivo coding, direct quotes from participants that reflect their experiences or opinions are captured, serving as the raw descriptive data (Jugessur, 2022; Manning, 2017). Axial coding is the second step in the coding process (Teppo, 2015). Axial coding was employed to categorise the verbatim quotes into broader, more abstract themes that represented collective insights across the interviews (Akbarpour, Haranaki, Mehrani, Gharibnavaz, & Ahmadi Sharif, 2020; Saldaña, 2021). Axial coding enhances theoretical sensitivity by using open coding techniques. Axial coding "consists of intense analysis done around [the 'axis' of] one category at a time, in terms of the paradigm items (conditions, consequences, and so forth)" (Teppo, 2015). A collaborative coding method (co-coding) was implemented to add another layer of rigour, with the two researchers undertaking the coding process independently for later comparison. Co-coding ensured iterative refinement and the uniform application of codes across the dataset, thereby bolstering the rigour and consistency of the research findings (Busetto, Wick, & Gumbinger, 2020). This process helped to identify patterns and relationships in the data, which facilitated a deeper understanding of the subject matter (Jugessur, 2022; Saldaña, 2009).

In summary, Table 2 below provides a synopsis of the research methodology adopted for the study.

Table 2: Summary of research methodology

Research philosophy	Interpretivist philosophy
Research approach	Qualitative
Research reasoning approach	Abductive reasoning
Research design	Exploratory-descriptive
Sampling approach	Purposive
Data collection method	In-depth interviews
Data analysis	Abductive thematic analysis

Source: Authors' own

FINDINGS AND MANAGERIAL RECOMMENDATIONS

This study's findings are organised into three AoEs (1-3). Under each AoE, findings are categorised into the key sub-groups of owners/managers and employees. Each sub-group analysis begins by outlining the relevant AoE, followed by the area explored, after which verbatim quotes are provided. Each AoE analysis for both sub-groups concludes with a summary of key themes, findings, and their connection with the relevant literature.

AoE1: To investigate the challenges that fuel retailers face in designing their working environment.

The first AoE sought to investigate the challenges that fuel retailers face in designing their working environment. The findings related to this AoE are presented next, starting with the employers/owners.

Employers/owners

Under this AoE, employers cited several challenges, such as security and theft, customer satisfaction and service, regulatory and compliance issues, and economic and operational difficulties. Each challenge highlights the intricate terrain that employers must navigate to maximise their operational environment.

P2: "Some of the day-to-day challenge that we face is maybe people drive-offs, and I'm just giving you the small things that are the other challenge."

P6: "Most of the time customers doesn't really respect us, and that is the challenge that we have got."

P13: "Look, I think for me the biggest challenge is rules and regulations for us as retailers is that there are too many role players and too many rules, you know?"

Employees

For employee data, the study established that fuel retail employees contend with several workplace difficulties. These include dealing with difficult customers, maintaining professionalism regardless of personal feelings, the need for better management practices, and communication issues between staff and supervisors. The study also found safety concerns and the job's physical demands to be among the challenges.

P1: "So the challenge is that sometimes customers are very, very, rude, like some of the customers because they come here they think maybe if you're working here sometimes like, if you're an attendant or you're a cashier or whoever, you are not a human being, like you don't have any future."

P23: "Okay, the training that I had here is on how to approach people, how to help them, and how to treat them when they are angry, you know, to, like, I must stay calm and things like that, you see? Because this job yeoooh is not easy, you know, people have got attitude problems sometimes."

As is evident from the above findings, South African fuel retailers face several significant challenges that affect their operations. These include customer service, disruptions in the supply chain, workforce management issues, fluctuating fuel prices, intense competition, and the need for continuous technology adoption. These findings are consistent with previous research, which emphasised the complicated nature of the petroleum retail sector (Crompton et al., 2020; Matsho, 2010; Mordorintelligence.com, 2024; SAPIA, 2022). For example, KPMG (2020) reports that, at a global scale, the problems that confront fuel retailers include changes in long-term consumer buying behaviour, product mix re-evaluation and network rationalisation, demand fluctuations, supply chain disruptions, consumer and workforce health and safety, workforce challenges, increasing operating costs, a liquidity crunch, and falling oil prices and demand. Crompton et al. (2020) argue that outdated regulations and social policies entangled in price control hinder South Africa's petroleum markets. However, Crompton et al. concede that technological advancements in renewable energy offer the potential for reduced costs and hold great promise for the energy markets. At a continent-wide level, Graham and Ovadia (2019) add that weak legal frameworks and a lack of institutional capacity pose major difficulties for African states in managing their petroleum resources. Regarding regulation, South Africa's legislative framework controlling the petroleum sector has changed significantly since the White Paper on Energy Policy was produced in 1998. According to the DMRE (2022), several Acts and regulations have been implemented to improve and transform the industry. For example, the Petroleum Products Amendment Act, which was promulgated in 1977 and revised in 2003 and 2008, aims to oversee licence allocation, to prohibit manufacturers and wholesalers from holding retail licences (with exceptions for training purposes), and to promote the transformation of the petroleum and liquid fuels sector. The Petroleum Pipelines Act of 2003 aims to foster competition in the petroleum sector. In addition, the Mandatory Provision of Energy Data regulations of 2012 empower the department efficiently to collect and publish energy data, defining the required information types and formats from data providers. These legislative initiatives strive to modernise and revamp South Africa's petroleum industry, ensuring its advancement, sustainability, and inclusivity.

Managerial Recommendations Regarding AoE 1

Given the findings related to AoE1, the study makes three key recommendations.

Strengthening employee training and support systems: To address the issues that fuel retailers confront, this study suggests that employers establish comprehensive training programmes that are focused on customer service, emotional intelligence, and dispute resolution. It also suggests that fuel retailers set up efficient communication channels and employee support mechanisms, such as regular feedback sessions and employee help programmes. These could help to foster a more positive and productive work environment.

Enhancing security measures and loss prevention strategies: This recommendation ties in with that of De Villiers, Van der Colff, Stiehler-Mulder and Mafuratidze (2023), who identified security concerns, including theft in retail, as significant retail-related challenges. This study recommends that retailers invest in advanced security systems, such as surveillance cameras, licence plate recognition technology, and integrated point-of-sale systems. Robust loss prevention strategies, such as staff training, transparent policies, and collaboration with law enforcement agencies, could also help to prevent criminal activities and minimise financial losses.

Embracing technology and operational efficiency: The study found that fuel retailers face challenges related to regulatory compliance, economic pressures, and the need for continuous technology adoption. To overcome these challenges, retailers could look into digital solutions that streamline operations, increase efficiency, and improve compliance. This could involve implementing automated fuel management systems and data analytics to improve inventory management. Furthermore, collaborating with industry associations and staying up to date with current regulatory developments could help retailers to manage the complicated regulatory landscape more successfully.

AoE2: To examine the ability of retailers to communicate with and establish relationships in their businesses.

The second AoE sought to examine the ability of retailers to communicate with and establish relationships in their businesses.

Employers

Under this AoE, employers emphasised the importance of effective communication with both staff and customers to enhance service quality and business operations, the need for strong relationships as crucial for creating a positive work environment, and fostering customer loyalty. The study also found that employers viewed the ability to connect and communicate effectively as vital for the success and growth of their retail operations. Under this AoE, several questions were posed to the employers.

Table 3: Summary of findings under AoE1

AoE1: To explore and describe the retailer’s ability to communicate with and relate to people in the business.	
Area Explored	Findings
Employer ratings of the levels of motivation and sense of team among staff	Fair / medium
Motivation strategies	Incentives Loans / longer hours (more money) Communication / culture
Support from retail brands	Varied Marketing and fuel supply Mystery shopper Check-ins
Staff and customer communication	Communicate with staff with respect Authoritative (when required)
Feelings about customer needs	Good customer service Recognition Convenience
Feelings about whether staff understanding and prioritisation of customer needs	Varied Yes (because of reminders) No (link between customer and revenue not clear)

Employees

Under this AoE, the employees also were asked several questions. The findings under each sub-question are presented next.

- Q1: What advice would you give anyone starting in this space?

Under this sub-question, employees offered valuable advice for new and potential employees. They emphasised the importance of treating customers with respect. In addition, the employees highlighted soft skills such as active listening and humility as vital to the success of others starting in the same position. Most employees also recommended saving money, suggesting financial responsibility and a view towards future goals.

[P4] “And just serve the customers, customers expect to be treated well, they don’t wanna be treated badly. And as everyone knows, the customer is always right, you understand? Okay.”

[P15] “They have got to be a good listener and they must be humble as well. They must not be saying that the manager is younger than them and then they disrespect her/him.”

[P8] “I would advise them to, they must work hard, and they must focus. Okay. And to save money, I think we can save money so that, maybe, if I want to go back to school, then I have some money to pay, or if I want to improve my house; but I think young people must think more about saving money these days. Okay.”

- Q2: In your role today, what are some of the biggest annoyances in your everyday work?

Under the sub-question, retail employees highlighted problematic customer behaviours as a major source of frustration in their everyday work. A recurring theme was the need for patience and emotional regulation when dealing with rude, impolite, or disrespectful customers. Participants described situations in which customers treated them as lacking dignity or ambition simply because of their fuel job. This suggested to them that retail workers were less worthy of respect, with no prospects beyond their current job positions.

[P1] “So the challenge is that sometimes customers are very, very, rude; like, some of the customers, because they come here, they think maybe, if you’re working here sometimes – like, if you’re an attendant or you’re a cashier or whoever – you are not a human being, like you don’t have any future. So, your future is around here, so you’re going to end up here, and then you don’t have any vision.”

[P3] “No, you know, here you need to have a great deal of patience, have time as well, because days are different. Look, we work with customers here, and there are times when a customer will come in here, and they’re in a bad mood because of something that happened at home; you should keep calm and address them politely, give them good service, and then thank them when they are driving off.”

- Q3: What ideas, if any, have you always had that you wanted to share with management/owners/ franchisers?

Under this sub-question, employees offered suggestions for improvement that would improve customer satisfaction and well-being. Some proposed implementing customer loyalty programmes, such as complimentary beverages or snacks with full tank purchases, to encourage repeat business and to enhance the customer experience. Participants also raised concerns about employee fatigue, with suggestions for improved scheduling practices for proper rest periods between shifts. They also recommended implementing additional incentive programmes beyond the existing ones to help to boost employee morale and motivation.

[P10] “Or we can just, even when the customer is filling up a full tank, we can just, just to make that customer to come again, give them some coffee or a coffee and a muffin or something. Wow! Then they will come back.”

[P20] “Oh! Like, when people get here, you find that they work extremely long hours, and they cover for other people as well, so they become dog tired. Okay, so you’d suggest that they have a better scheduling system, a better roster system, so that the people that work on the forecourt are able to rest in between. Yes. Oh, okay, cool, absolutely. And better incentives. Yes, there are existing incentives in the company; however, they could add more incentives.”

- Q4: Do you feel part of a team? Please elaborate on your answer.

Under this sub-question, the study found a very strong sense of team spirit among the majority of the participants. They highlighted aspects such as helping one another out by covering shifts, sharing personal experiences, and keeping open communication. This revealed a collaborative and supportive workplace setting in which retail employees were ready to assist their colleagues. The findings also indicated the interconnectedness of their work and their viewing work as a team effort rather than as individual responsibilities. Such collaboration appeared to be prominent in the majority of the responses.

[P8] “Um, yeah, we help each other with shifts. Let’s say, for example, if I come to work a bit late. So, when you get here late? Yes, then I can ask my colleague Shirley to cover for me, and then I can cover for her sometimes. So we try to help each other. Okay.”

[P10] “Yeah, 100%. Yeah, because everything is I’m doing I’m doing with my team and not alone. Yes. So we are doing it as a team.”

[P20] “Yeah, definitely, definitely. I really feel like part of the team, and some of the guys that I work with have actually become my friends.”

- Q5: What does the brand [insert retailer name] mean to you? What three words would you use to describe it?

Under this sub-question, ‘employment and empowerment’ and ‘customer-centric / people-orientated’ emerged as the most prominent themes. Employees expressed gratitude for the jobs provided, especially amid economic difficulties. They viewed the brand and their jobs as empowering financial stability. Throughout a majority of the interviews there was also a strong emphasis on the company’s customer-service focus and people-oriented approach. The employees seemed to take pride in the brand’s reputation.

[P4] “Yeah, my sister, according to me it’s a good brand, it’s actually a great brand. I never imagined that, today, I mean, when a lot of people lost their jobs, they started flocking in here, submitting their CVs. Hmm. So, as someone who has been working for [brand name removed] myself, I would say it means a lot not only to me but to other employees as well. Everyone is working hard, no one is slacking or leaving their job or whatever, everyone just wants to work, and they’re proud of [brand name removed], you understand?”

[P10] “[brand name removed] is a good industry. Here you can, they have opportunities, they can give you an opportunity, and it is a great company to work for.”

- Q6: How much do you feel you understand your customers and what their needs really are?

Under sub-question 6, the study established that the prevailing sentiment among the majority of the employees in the fuel retail industry was a deep understanding of their customers. They also acknowledged their customers’ preference for prompt and efficient service, accompanied by friendly interactions and expressions of appreciation. Many participants expressed satisfaction in establishing a positive rapport with customers and ensuring that they felt valued. Notably, the importance of actively listening, maintaining composure, and promptly addressing any additional service requirements was highlighted. Moreover, the participants took pride in cultivating long-lasting relationships with frequent customers and being recognised as individuals rather than mere service providers.

[P6] “So that’s how we normally engage, and then we become friends at the end of the day. Sometimes they ask others, ‘Where is Jerry today?’ Then they can tell you, ‘No, Jerry is not in today’. And they ask, ‘Is he okay?’ And maybe I am doing night shift, or maybe I was doing day shift. Okay. Or maybe I am on leave. So that is what it is, it gives you great motivation to know that the customers don’t just see you as a petrol attendant, they see you as a person.”

[P20] “I feel like, you get – I understand our customers because, when you arrive at a petrol station to come and fill your car, you’re actually looking for simple things. Firstly, to make sure that there is petrol in your car, but you want a quick service. So you don’t want someone who is going to drag his feet, but at the same time you want a petrol attendant that offers you the other services that they normally offer.”

- Q7: How would you rate communication across the business? Tell us the reason behind your answer.

Communication between team members was described as positive, with frequent interaction that fostered understanding. However, some employees described the communication between themselves and their superiors as lacking, irregular, or poor. Other participants appreciated the team spirit and the ability to discuss issues openly with colleagues. There were also indications that supervisors could improve the communication flow to inform better and connect with their employees.

[P6] “So, especially when – if somebody is down, for example, they might make mistakes. Like, they do make mistakes, like maybe putting a mixture of wrong fuel at the time, but we make sure that it doesn’t; even if he comes to the office, we make sure that the communication on ourselves, we make sure that that person must be with us and try to lift him up. To be honest, the communication is brilliant.”

[P20] “So I’d give it around five. Five? Yes, and the reason I say this is because I feel like our supervisors here are slow to communicate.”

Table 4: Summary of AoE2 findings

Sub-AoE 1: To explore and describe the retailer’s ability to <i>communicate</i> with and relate to people in the business.	
Question	Findings
Advice to anyone starting	<ul style="list-style-type: none"> • Be customer-orientated • Focused (job vision/purpose)
Biggest annoyances in everyday work	<ul style="list-style-type: none"> • Treatment of customers • People-intensive environment
Ideas to share with management/owners/franchisers	<ul style="list-style-type: none"> • Customer rewards ideas • Training ideas • Hours and shift challenges
Feelings about the team Meaning of ‘brand’	<ul style="list-style-type: none"> • Strong team sentiment • Employment and empowerment • Customer orientation
Feelings about understanding customers and their needs.	<ul style="list-style-type: none"> • Well (fast, efficient, engagement, acknowledgement) • Uplifting (making customers happy / feel better)
Communication rating across the business	<ul style="list-style-type: none"> • Good (between employees) • Variable (between employees and superiors)

The findings under AoE2 reveal contrasting levels of communication effectiveness in fuel retail businesses. Inter-employee communication was generally described as positive, open, and conducive to fostering a strong team dynamic. However, communication between employees and superiors/management was found to be inconsistent and often lacking. This contrast aligns with Buchanan’s (1992; 2019) problem-solving domains: lateral communication among colleagues in the ‘coordination’ domain appeared to be healthy, while communication in the ‘legitimacy’ domain, involving top-down communication of organisational rationales, needed to be improved.

Many forecourt attendants provided valuable ideas for improving customer satisfaction and employee welfare. However, there seemed to be a breakdown in conveying these insights effectively to the higher levels of management. In addition, there was a noticeable disconnect between managers’ perceptions of what employees believe that customers need and employees’ own understanding of customers’ needs and priorities. This suggests a lack of ‘adaptive communication’ (Almaney, 1974), which involves sharing frontline knowledge about evolving consumer behaviour between operational levels.

The findings also indicated that communication in these businesses was often treated as a ‘maintenance’ system (Almaney, 1974), primarily used to sustain motivation, reinforce service standards, and coordinate tasks. However, there is less evidence of exploratory dialogue that could drive innovation by incorporating employee perspectives. As highlighted by Littlejohn and Foss (2005), effective communication is a complex process whose importance is often underestimated. While the fundamentals of lateral team communication are sound, the findings

suggest opportunities for strengthening vertical communication flows. Enhancing adaptive communication could also unlock new value by connecting employee insights to strategic decision-making and bridging gaps in understanding the customer experience.

Managerial Recommendations Regarding AoE 2

With respect to AoE 2, the study recommends the following:

Implementing formal mechanisms for bottom-up communication and employee voice. The findings indicate a need to enhance ‘adaptive communication’ by establishing channels through which frontline employees could provide insights about evolving customer needs, experiences, and operational realities. This may involve conducting regular feedback sessions, implementing suggestion boxes, forming cross-functional teams, or using digital platforms that systematically capture and elevate employee ideas and observations to decision-makers. Facilitating this bottom-up dissemination of grassroots knowledge could help to bridge the gap between management perceptions and customer/employee realities.

Investing in developing supervisors’ and managers’ communication capabilities. While peer communication among employees appears to be robust, vertical communication up and down the hierarchy needs to be strengthened. Supervisors should benefit from tailored training programmes that educate them on listening actively, providing constructive comments, facilitating dialogue, and openly sharing the organisational context. Instead of depending entirely on top-down directions, encouraging an ‘open door’ policy and offering spaces for interactive debates could increase involvement and gather support for strategic goals.

AoE3: Assess the capacity of retailers to design and deliver product and service offerings that enhance the experience for both staff and customers.

The third AoE of the study was designed to assess the capacity of retailers to design and deliver product and service offerings that enhance the experience for both staff and customers. As with the first two AoEs, the findings are divided into those relating to the owners/managers and to the employees. We begin with the findings related to the owners/managers.

Owners/managers

This section had one question, which is addressed below.

- Q1: How do you design and implement new service/s? What does that journey typically look like?

Under this sub-question, the owners/managers revealed that the design and implementation of new services is a highly centralised process that is directed by the parent fuel companies/oil brands. As P21 stated, retail sites receive top-down ‘directives’ and ‘mandates’ from their corporate umbrella, executing them locally with little autonomy. This top-down approach is reinforced by P17’s reference to simply receiving monthly materials from the oil company that detail the latest promotions and services to roll out. The responses suggested a standardised, one-size-fits-all approach to innovation across the retail network, with limited mechanisms for incorporating localised insights into the process.

[P21] “Well, we get a lot of directives from the fuel company, remember? A lot of our mandate comes from them, we are under [their] umbrella, so they would they would give us the strategy from the top and we just filter it down. There’s not really much of anything unique that we bring on board in terms of that.”

[P17] Like if maybe there are shop promotions? Yes, let’s say maybe that, yes. Or forecourt promotions. No, we’ve got pamphlets, we’ve got pamphlets every month. A pamphlet every month? Yes, from [oil company] to show, even a POS pamphlet?

Table 5: Summary of AoE findings

Sub-AoE 2: To explore and describe the retailer’s ability to construct or produce product and/or service offerings and to create an experience (for the staff and/or the customer)	
Question	Findings
Design and implementation of new services	<ul style="list-style-type: none"> Oil company mandate initiated and implemented

Employees

This section consists of four questions, which are addressed next.

- Q1: Have you had any training from [insert retailer name]? Tell us about the training you have had. If you have not had any training, tell us whether you would be interested in getting some and in what areas you would like it to focus.

Under this sub-question, the employees highlighted the provision of training by the retailer, which was primarily focused on the operational aspects of working at fuel stations. Most employees indicated that they undergo training to gain basic knowledge about the fuel industry, product differences (e.g., 93 vs 95 octane), proper equipment usage, and an understanding of the company’s brand identity. There was also mention of training related to fuel products, promotional activities, safety protocols for emergencies such as fires, and basic first-aid procedures. This training appeared to be geared to equip the employees with the essential skills and knowledge they needed to embark effectively on their day-to-day responsibilities at the forecourts while prioritising customer service and site safety.

[P1] “So, when I came here I didn’t know anything about [the] industry, we had to go through training. I have a certificate that I got, and then from there we went to [retailer name removed], and they teach us how to use oil, how to use the nozzles and so forth, and what is 93 and what is 95? The difference between the diesel, and even, even further? Like, what does it mean, like what [retailer name removed] stands for, and all those things? So we were told, we were taught.”

[P4] “The training that I have been to, okay, the first training was around oil, you understand? And then there was one regarding promotions, and there was also training around safety and what to do in [the] case of [an] emergency, so yeah. Around safety as well, we were being taught what to do in case the garage catches fire. Like, there is a panic button that we need to press, and there is also a first aid box that we keep here so that, if someone faints or collapses on the forecourt, we’re able to give them first aid help.”

- Q2: What do you think good service or a good experience is?

Under this sub-question, most employees depicted positive service interactions as primarily concerned with regulating emotions, from both the customer’s and the service provider’s perspectives. This emphasis indicated that the employees’ competence in defusing tense situations, maintaining their composure when dealing with demanding customers, and generating favourable emotional outcomes plays a substantial role in cultivating satisfactory customer experiences.

[P6] “In the form of my knowledge, good service is when you come across a very maybe rude customer, and you’re able to calm him down and make sure that, when he leaves, he leaves with a smile. So that’s what I think of as good service.”

[P20] “In fact, they often tell us here: ‘Guys, you have got to approach our customers with a smile’, and that is exactly what we do. Sometimes customers come in, and they’re not having the greatest of days, and they are not in a good mood; but once they are attended by you with care and with respect and dignity, then they can leave with a smile on their face, and you feel like that’s a good experience.”

- Q3: What is a bad service experience?

The overarching theme was not acknowledging or responding to the customer’s needs and/or engaging in conflict with the customer.

[P4] “Bad service, my sister, is not pouring in the right petrol that the customer has asked for. And also when they approach the customer, they don’t greet her, they just stand there and stare at the customer, waiting for the customer to say what she wants.”

[P15] “Fighting with the customer. Fighting with the customer? Yes, if the customer’s fighting you, you fight back. Also, you shouldn’t give a customer a reason to complain that you did this and this and that, but you left out this particular thing here. You must give them a complete service they are expecting.”

- Q4: How do you rate your personal levels of service delivery? Is it important to you? Is it rewarding to deliver a great service experience?

Under this sub-question, participants identified several crucial aspects of negative interactions. These encompassed the absence of attentiveness to customer requests, such as the failure to provide the appropriate fuel type. Moreover, unprofessional conduct, such as the failure to greet customers or engaging in arguments with them, was perceived as detrimental to the quality of service. The emphasis on comprehensive service delivery implies that customers anticipate transparent communication, the fulfilment of their requests, and an overall professional demeanour from service providers.

[P1] “Also, while you’re doing what you’re doing, you must also love what you’re doing because, if there is no love there, you can’t expect to do a great job in something that you don’t love. So you must always teach yourself and teach your soul and tell yourself that I am here and I’m working here. So don’t, don’t say I was supposed to be a doctor, but I am just an attendant, no. So you are just an attendant right now. So while you are working on your goals, where you are, love what you do and love the people that [you] are working with, and make sure that you are working as teams.”

[P8] “Yes, because in my training, they said it was important that we always put the customer first, okay, and that we must always listen, listen to the customer when they speak. And if they [say] there is a problem, we can go and talk to our manager. But it’s, it’s, it’s very important for us to listen to the customer and to understand what, what they want when they come to us. Sometimes they need petrol, sometimes they need a, like, maybe they have had a tyre puncture, and sometimes you need to check their oil and things like that. So we just need to listen to the customer.”

Table 6: Summary of AoE findings

Sub-AoE 2: To explore and describe the retailer’s ability to construct or produce product and/or service offerings and to create an experience (for the staff and/or the customer)	
Question	Findings
Training	<ul style="list-style-type: none"> • Yes, varied (fuel, safety, customer service) • Some want more training
Perception about good or bad service	<ul style="list-style-type: none"> • Emotion-driven (uplifting mood, happiness)
Perception of bad service experience	<ul style="list-style-type: none"> • Emotion (fighting, not acknowledging)
Personal levels of service delivery ratings	<ul style="list-style-type: none"> • Good (personal perception; offering good service is a rewarding personal experience)

The above findings highlight the significant role of employees’ emotional stability in shaping service experiences and delivering satisfactory customer service in the fuel retail sector. Cho et al. (2013) argue that frontline personnel must be able to communicate the desired emotions as part of the service delivery process. Favourable attitudes and emotions are essential in shaping favourable perceptions of customer service, ensuring client pleasure, and cultivating customer loyalty. However, the practice of emotional labour, particularly in settings involving a high level of customer connection, can cause emotional weariness and burnout among employees. This is an issue that should be addressed to ensure employee well-being. Interestingly, Rothenberger (2017) proposes a potential solution to mitigate burnout and to enhance motivation by aligning emotional labour with employees’ personal goals and values. When employees perceive a match between the organisation’s values and their own, they are more likely to feel energised and motivated to carry out their tasks, including the emotional labour involved in creating customer experiences. This aligns with the idea that values drive actions, and employees’ tasks are guided by their personal values. Consequently, the fuel retail industry could establish a connection between its organisational strategy and

creating customer experiences by fostering an environment that considers employees’ personal values and aligns them with the company’s goals and practices.

Managerial Recommendations Regarding AoE 3

In relation to AoE3, the following key recommendations are made:

An organisational culture that reflects employees’ aspirations and values: Fuel retailers should strive to inculcate an organisational culture that aligns with the aspirations and values of their employees. This could be achieved with open lines of communication, employee engagement programmes, and encouraging employee input into decision-making processes. Aligning employees’ personal beliefs with those of the organisation reduces burnout and increases motivation (Rothenberger, 2017). Fuel retail employees feel more inspired and driven to deliver excellent customer experiences if personal and organisational values are aligned.

Incorporating emotional intelligence training programmes: Fuel retailers should invest in extensive training programmes that are aimed at strengthening emotional intelligence in areas such as empathy, mood control, active listening, and conflict resolution, which should be the main emphasis of these programmes. In so doing, retail employees would be more capable of controlling their emotions and, in the process, handling client emotions better. This would help to foster smooth customer–employee relationships.

Implementing employee well-being and support initiatives: Fuel merchants should prioritise employee well-being because emotional labour can lead to emotional tiredness and burnout. Putting support networks in place such as counselling services, stress management courses, and employee assistance programmes may be necessary to achieve this. Employee happiness and well-being could also be increased by encouraging a good work–life balance, offering professional growth opportunities, and praising exceptional service efforts.

Table 7 below summarises the managerial recommendations pertaining to AoEs 1-3.

Table 7: Summary of AoEs and managerial recommendations

AoE	Managerial Recommendations
AoE1: To investigate the challenges that fuel retailers face in designing their working environment.	<ul style="list-style-type: none"> • Strengthening employee training and support systems • Enhancing security measures and loss prevention strategies: • Embracing technology and operational efficiency
AoE2: To examine the ability of retailers to communicate with and establish relationships in their businesses	<ul style="list-style-type: none"> • Implementing formal mechanisms for bottom-up communication and employee voice. • Investing in developing supervisors’ and managers’ communication capabilities
AoE3: Assess the capacity of retailers to design and deliver product and service offerings that enhance the experience for both staff and customers.	<ul style="list-style-type: none"> • An organisational culture that reflects employees’ aspirations and values • Incorporating emotional intelligence training programmes • Implementing employee well-being and support initiatives

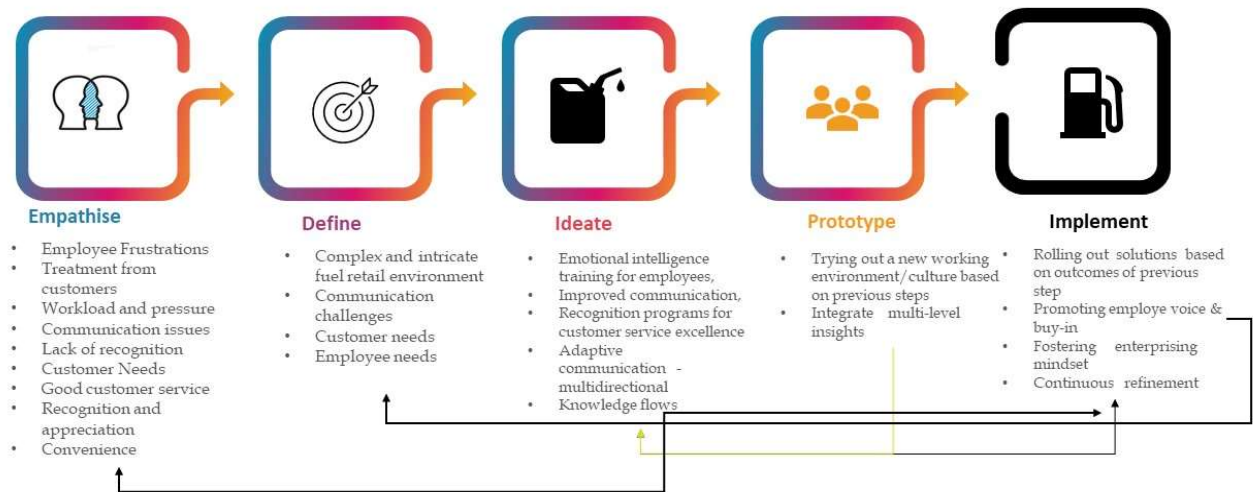
Source: Authors’ compilation

A DESIGN THINKING AND PROBLEM-SOLVING FRAMEWORK

Figure 1 below shows that our design thinking and problem-solving framework for enterprising fuel retailers consists of five key steps: empathise, define, ideate, prototype, and implement. Figure 1 shows that the root of our design

thinking and problem-solving framework lies in understanding retailers’ unique context and challenges in South Africa (the ‘empathise’ stage).

Figure 1: A design thinking and problem-solving framework for enterprising people in the SA fuel retail sector



Source: Adapted from Plattner (2009)

Step 1: Empathise: Using the design thinking and problem-solving framework for enterprising people in the SA fuel retail sector shown in **Figure 1**, employers could use the first stage (empathise) to assess the fuel retailer’s challenges. Empathy focuses on discovering peoples’ explicit and implicit needs. Establishing cross-functional teams creates an inclusive platform to unpack diverse viewpoints and surface rich insights. The central element is to put oneself in the position of the customer/employee and to observe them in detail. Empathy could create distance from the fuel retailer’s perspective on the one hand and closeness to the customer or employee on the other (Müller-Roterberg, 2018). In other words, this approach fosters customer orientation and employee understanding. Developments could thus be better aligned with the customers and, if necessary, prioritised on the basis of the extent to which they could meet the needs and desires of these customers. Empathy would result in fuel retailers understanding the challenges arising from employees’ frustrations, their treatment by customers, their workload and pressure, communication issues, lack of recognition, customer needs, and the need for good customer service.

Step 2: Define: Conducting an audit of the current situation is crucial in establishing a foundation based on empathy. This process aids in defining the multifaceted and intricate fuel retail environment, addressing communication problems and identifying the needs of both customers and employees. As established before, the fuel retail environment in South Africa is complex and intricate (Department of Mineral Resources and Energy, 2022; SAPIA, 2021). In the light of these observations, it is essential to condense the findings into a single representative user whose problem or need is succinctly summarised in a clearly defined question.

Step 3: Ideate: In the third stage, the fuel retailer moves on to ideate. This involves integrating the input across different organisational levels and stakeholder groups. Through co-creation, novel ideas could be generated by synthesising bottom-up employee experiences with top-down strategic guidance. This step exclusively involves the actual brainstorming process, through which the creativity techniques could be applied. Subsequently, the ideas are subjected to customer-oriented or employee-oriented analysis to pinpoint any potential weaknesses, and a decision on idea selection is made, based on an evaluation process. Ideation covers employees’ emotional intelligence training, improved communication, recognition programmes for customer service excellence, adaptive multidirectional communication, and knowledge flows.

Step 4: Prototype: In step 4, the retailer visualises the solution by trying out a new working environment/culture based on the previous steps. At this stage, rapid iterations are conducted with user testing and continuous refinement on the basis of the feedback. Such an agile and iterative methodology would ensure that solutions remain closely aligned with evolving needs. This would also involve integrating multi-level insights that are drawn from the recommendations of this study. Prototyping training, for example, may involve sending a smaller group of employees for training instead of all staff, in order to gain lessons from such a programme. Before a costly store renovation, the fuel retailers may also implement a ‘prototype layout’ using movable displays or floor plans. This would allow customer traffic, product placement, and overall functionality flow to be tested before committing to a permanent design. Shifts could also be redesigned to suit employees’ suggestions and to minimise frustrations. However, before full-scale implementation, the retailer should prototype.

Step 5: Implementation. As viable solutions emerge, the framework emphasises effective implementation and scaling through tactics that nurture an enterprising organisation-wide mindset. Promoting employee voice and buy-in creates a participatory culture of initiative-taking and problem-ownership. This enterprising spirit is essential to sustainable solutions, as it empowers staff to identify emerging opportunities and to drive improvements continuously. Fuel retailers should adopt a phased implementation, which would allow for adjustments that are based on feedback. For example, a recognition programme could be piloted at one location before being implemented across the entire fuel retail chain. This would help to boost innovation, enhance customer and employee satisfaction, improve staff engagement, and gain a competitive edge over rivals. Examples of activities under implementation, as shown in the framework, are rolling out full-scale training solutions based on the outcomes of the previous steps, promoting employee voice and buy-in, fostering an enterprising mindset, and continuous refinement. It must be noted that implementation is an iterative process that loops back to defining and ideation.

LIMITATIONS

This study makes valuable contributions to the existing body of knowledge. However, it has limitations that arise from a small sample size, limited generalisability, and the need to broaden the scope and depth of the enquiry. Because the study employed a qualitative approach, a relatively small sample size across the two sub-groups (employers and employees) hindered the ability to generalise its findings to other regions of the country where dynamics may differ. Consequently, the study’s findings may not fully represent the entire fuel retail sector in the country.

Furthermore, the scope and depth of our inquiry are another limitation. Our study examined communication dynamics, service offerings, employee training, and organisational culture in fuel retail businesses. While these areas of exploration offered valuable insights into the operational challenges and opportunities in the sector, it must be acknowledged that other factors that were not fully explored in the present study may also influence customer experiences and employee satisfaction.

RECOMMENDATIONS FOR FUTURE STUDIES

Considering the limitations noted above, several recommendations for future studies may be advanced. First, future studies could employ a longitudinal lens to track changes in communication patterns, service offerings, and employee perceptions over time. By analysing trends and trajectories, future studies could identify emerging issues and evaluate the long-term effectiveness of interventions that are designed to enhance customer experiences and employee well-being.

The second recommendation is that future studies use comparative analyses to compare different fuel retail businesses or to investigate cross-industry practices that provide valuable insights into best practices and areas for improvement. By benchmarking against industry peers or exploring variations in organisational approaches, researchers could identify innovative strategies and potential areas for optimisation.

Future research could also broaden the scope by considering a more comprehensive range of variables and by adopting quantitative or mixed methods approaches in order to understand the fuel retail sector better.

CONCLUSION

This study concurs with the literature that South African fuel retail players contend with a complex operating environment for business owners and employees. South African fuel retailers face challenges from dynamic market conditions, including government regulations, volatile fuel prices, intense competition, and unpredictable consumer behaviour, that often reduce profitability. This study applied design thinking and problem-solving techniques to yield significant insights into these challenges. By employing design thinking principles and cultivating an innovative culture, fuel retailers could effectively tackle these challenges and cultivate a more favourable and efficient work environment for their employees. This approach would enhance customer satisfaction and foster business expansion.

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THE IMPACT OF PERFORMANCE APPRAISAL SYSTEM ON THE PERFORMANCE AND MOTIVATION OF ADMINISTRATIVE EMPLOYEES AT A SOUTH AFRICAN UNIVERSITY

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ABSTRACT

Academic institutions are currently experiencing various challenges, among these challenges is the lack of motivation and proper performance appraisal systems that are conducive to the working environment and remuneration packages which are more competitive towards administrative employees. Research studies have confirmed the relationship between human resource (HR) practices, employee motivation and performance appraisal, though more research still needs to be conducted in terms of investigating how performance appraisal systems are applied to and perceived by administrative employees in academic institutions. The study therefore sets out to explore the impact of performance appraisal, a fundamental aspect of HR practices, on the motivation and performance of administrative employees at a selected academic institution in South Africa. The study sample was 123 administrative employees, however only 112 responses were obtained for this study. The study data were collected through the use of an online questionnaire that was distributed through Google Forms and regression analysis was used for analysing the data. Findings from the study indicate that the administrative employees perceived their performance appraisal not to be fair and accurately representative as it does not adequately reflect all job components that encompass their performance during their review period. The appraisal system was also determined to possess a strong influence on the motivation and performance of the administrative employees.

Keywords: performance appraisal systems, performance, motivation, administrative employees, academic institution.

INTRODUCTION

The management and measuring of performance is a fundamental aspect of administrative reforms that are motivated by the New Public Management (NPM) ideology (Spalkova, Spacek & Nemeč, 2015). An organisation's long-term success is dependent on its ability to measure how effectively its employees perform under a predetermined period, including how effectively the organisation makes use of that information to ensure that employee performance standards are aligned with the outlined organisation standards, as well as the creation of future improvements (Ojokuku, 2013). DeNisi & Murphy, (2017), refer to this process as performance management (PM), as it depicts a wide variety of activities, procedures, interventions and policies that are developed to assist employees in improving their performance. These policies and procedures start with performance appraisals (PA), though they also include goal setting, training, reward systems and feedback. Thus, performance management starts with performance appraisal as a jumping-off point which focuses on the improvement of individual motivation and performance in a manner that is consistent with strategic objectives and ultimately improving the organisation's performance (Soltani & Wilkinson, 2018). In summary, performance management assists in directing and motivating employees in enhancing their efforts on behalf of the organisation and it is a significant tool for an organisation to achieve its strategic objectives (Aguinis, 2019).

Problem Statement

There exists little empirical evidence on how academic institution administrative employees perceive performance appraisal systems. South African academic institutions are facing various challenges that include decreasing of subsidies; increased sector competition; the growing need to address the concerns of various stakeholders (namely employees, students, government, unions, community groupings, and private sector organisations) as well as the increased demand for quality services and results, including efficient management (Molefe, 2012). To establish a possible academic market share, academic institutions introduced performance management systems that incorporate individual performance with strategies which outline organisational needs, determine high performance needs, and require accountability (Seyama & Smith, 2015). Suggested by literature is that the implementation of performance appraisal systems results in performance. Although, this connection is complex as it includes various variables. The appropriate quantification with regards to the specific mediating and moderating variable which drives administrative employee performance is not satisfactorily explored within the context of South Africa academic institutions.

Study Objectives

The main study's main objective was to determine the impact of appraisal system on administrative employee motivation and their overall performance at a South African academic institution. The secondary objective was to determine the administrative employees' perception on the fairness and accuracy of their performance appraisal system.

LITERATURE REVIEW

Job Performance Conceptualisation

Job performance is not singularly determined by individually specific characteristics such as a person's cognitive abilities, but by other characteristics from which performance occurs (Armstrong, 2012). Research on job performance antecedents focuses on workplace factors which may increase or obstruct performance, it also includes factors such as leadership and reward systems which need to be considered such as behaviour (input) and results (output) when evaluating and rewarding performance (Barling & Cooper, 2008). Pandey (2019) further states that an employee's job performance is a behavioural result based on activities which are observed and measured, it also refers to contributions an employee makes towards the attainment of organisational objectives.

Performance Appraisal Conceptualisation and Purpose

Performance appraisal is a pivotal human resource management activity which is essential to any organisation for the development of the organisation's employees. It is described as an element of the performance management process in which employees' contributions are assessed during a specific period within the organisation (Cappelli & Conyon, 2018), it is also used by various organisations for rewarding their employees in the form of bonuses, promotions, and salary increase (Malik & Aslam, 2013). The feedback from this process allows employees to understand their performance in comparison to the organisation's set standards. A well planned and functional performance appraisal can be used for assessing employees' performance, highlight the employees' potential for career development and improving employees' performance (Mullins, 2002).

Performance appraisal has various purposes for the employees, management, and the organisation. A well-established performance appraisal allows for management to obtain feedback information on how effective an organisation's processes are, coupled with the employee's performance (Orhero & Okolie, 2020). The most important goal of measuring and appraising employee performance is to determine an employee's relative worth or ability in performing allocated activities or responsibilities. Performance appraisal is also used to determine the strengths and weaknesses of employees, enhance employee performance, establish a foundation for rewarding or penalising employees in relation to lack of sufficient contributions towards organisational goals, motivation towards higher performance, identify development and training requirements and establish management understanding of employees (Onyije, 2015).

There exist various reasons for the adoption of appraisals within an organisation. The reasons can be categorised into administrative or developmental. Below is a table that illustrates the most prevalent reasons for performance appraisal.

Table 1: Reasons for performance appraisal

	Administrative	Developmental
1	Effective motivation of employees	Provides feedback on performance
2	Identifies poor employee performance auditing	Identifies individual strengths or weakness and identifies an individual's current job performance levels
3	Decision for retention or termination and provides a forum for leaders to assist	Identifies potential performance and decision making on rewards and compensation
4	Decision on layoffs	Assists in identification of goals
5	Documents human resource decisions and determines promotion, discipline and dismissal of employees	Evaluates achievement of goals and provides information on human resource planning
6		Identifies development and training needs
7	Determines transfers and assignments	Reinforces the structure of authority
8	Validates the selection criteria	Allows for discussion of employee concerns
9	Meet legal requirements	Provides information for succession planning
10	Evaluates training programmes and processes, and checking the effectiveness of human resource management practices	Improves communication and identifies areas of growth

Source: adapted from Bohlander & Scott, 2007

In likelihood, employee appraisal is performed to bring attention to their current performance to (i) fairly reward employees and (ii) to identify potential employees for transfer or promotion.

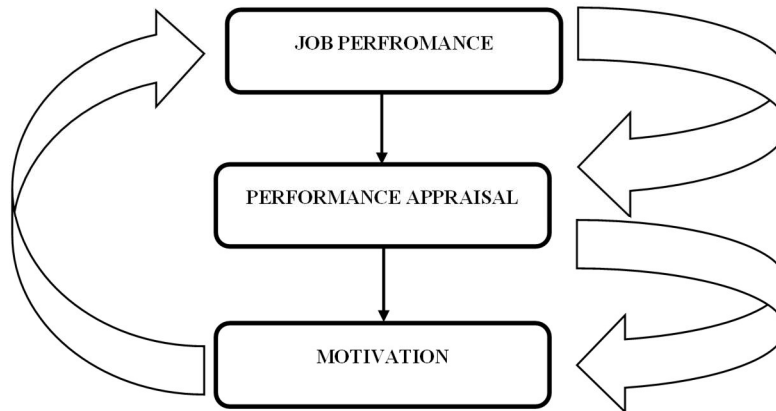
Motivation Conceptualisation and Purpose

The concept of motivation is described as a cognitive and behavioural process which causes an employee to achieve their individual and organisational goals (Havold & Havold, 2019). Motivation is considered to be a principal element of workplace behaviours and it regraded as an instrument for incentivising employees to achieve organisational goals (Ololube, Nwokolo, Onyekwere & Kpolovie, 2013). Ahmed, Islam & Al Asheq (2023), describe motivation as a psychological element which illustrates reasons of an individual's attitude towards rewards, while Armstrong (2012) describe it as an energising force which directs and sustains an individual's behaviour. According to Andriani, Kesumawaiti & Kristiawan (2018), work motivation is a process that energises employees towards achieving work goals by following specific instructions and work motivation is conceived on its perceived impact on an employee's work performance. Work motivation is defined as a fusion of the extrinsic and intrinsic factors which encourages work behaviours and lead its direction and time span (Rusu & Avasilcai, 2014). In support of the above statement, Werner, Schuler & Jackson (2012) state that capable employees are likely to not perform as expected unless they are motivated.

Job Performance, Performance Appraisal and Motivation

The connection between job performance, performance appraisal and motivation has been correlated in various research studies. In a study by Aslam (2011), ambiguity was established as a factor which led to poor motivation in the appraisal system and it hindered the delivery of performance that was expected by the university. Mumtaz, Rohani, Muhammad, Jun-Hwa, Hiram & Muhammad (2020), further state that a well-executed performance appraisal encourages strongly performing employees to maintain their performance levels while motivating poor performing employees to improve in order to ensure organisational success and competitiveness.

Figure 1: Connection between job performance, performance appraisal and motivation



Source: author's adaptation

METHODOLOGY

A quantitative research approach in the form of a survey questionnaire was adopted in order to maximise objectivity, generalisation of findings, replicability and possible predictions. The questionnaire was designed and distributed online using Google-Forms. Non-probability convenience sampling was employed for the study. A sample size of one hundred and twenty three (123) was drawn from a total population of one hundred and eighty (180) administrative employees, though the total population for the study respondents was 112. The study data was collected from administrative employees occupying different positions as well as different job rankings within the university. The data for the study was generated with the assistance of a survey questionnaire using a 4-Point Likert scale, while percentages were adopted for analysing data.

FINDINGS AND DISCUSSION

The respondents were composed of 73.2% of female and 26.8% of male administrative employees. At the university, 17.9% of the respondents were aged 22-29 years, 38.4% belonged to the 30-39 years age group, while 24.1% were aged 40-49 years, and lastly, 19.6% of the respondents were of the age group 50 years and older. Amongst the administrative employees, 69.6% were employed on a permanent basis and the other 30.4% are employed on contract. Only 12.5% of the administrative employees have been in the employment of the university for less than 1 year, 30.4% for 1-5 years, 24.1% for 6-10 years, while 16.1% have been working at the university 11-15 years. The least percentage responses for years of service at the university are for 16-20 years with 8% followed by 8.9% for 21 years or more of service.

Table 2: Analysis of respondents' demographics

Demographic Variable		Frequency	%
Gender	Female	82	73.2
	Male	30	26.8
	Total	112	100
Age	22-29 years	20	17.9
	30-39 years	43	38.4
	40-49 years	27	24.1
	50 years and older	22	19.6

	Total	112	100
Employment status	Permanent	78	69.6
	Contract	34	30.4
	Total	112	100
Length of service	Less than 1 years	14	12.5
	1-5 years	34	30.4
	6-10 years	27	24.1
	11-15 years	18	16.1
	16-20 years	9	8
	21 years or more	10	8.9
	Total	112	100

The above Table 2 presents the demographic analysis of the study's respondents. The table indicates that 82 of the respondents were female and 30 were male. The majority of the respondents were of the age 30-39 years making up 38.4% of the overall respondents. Most of the respondents were employed on a permanent basis and most of the respondents have been in the employment for the university for 1-5 years with 30.4%.

Table 3: The annual review process is important to me as it has an influence on my salary increment and promotion

	Frequency	%	Valid %
Strongly Disagree	18	16.1	16.1
Disagree	31	27.7	27.7
Agree	44	39.3	39.3
Strongly Agree	19	17	17
Total	112	100	100

Table 4: I am motivated when I receive my promotion and salary increment as at when due

	Frequency	%	Valid %
Strongly Disagree	8	7.1	7.1
Disagree	12	10.7	10.7
Agree	39	34.8	34.8
Strongly Agree	53	47.3	47.3
Total	112	100	100

The analysis of the response in Table 3 shows that 56.3% of the respondents consider performance appraisal as important because it has an influence on the administrative employees' salary increment and promotion. With a response of 82.1% in Table 4, the administrative employees affirmed that they are motivated by receiving their salary as at when due. The results imply that employees are susceptible to human resource department activities which are to ensure satisfaction, increased performance and motivation of labour as these activities may result in salary increment and promotion. These results are further supported by the studies of Asaari, Desa & Subramaniam (2019) and Dangol (2021) that found a positive correlation between salaries, appraisal system and motivation. When employees are motivated and inspired by the organisation's performance appraisal, they become fully involved in the organisation's activities and work to maximise their efforts, and this assists the organisation in achieving results rapidly, efficiently and effectively.

Table 5: I perform better and exert more effort when I am motivated

	Frequency	%	Valid %
Strongly Disagree	4	3.6	3.6
Disagree	4	3.6	3.6
Agree	56	50	50
Strongly Agree	48	42	42
Total	112	100	100

Table 6: I am knowledgeable and aware of all the requirements of my job as an administrative employee

	Frequency	%	Valid %
Strongly Disagree	2	1.8	1.8
Disagree	9	8	8
Agree	63	56.3	56.3
Strongly Agree	38	33.9	33.9
Total	112	100	100

Table 7: My performance on other job components including marketing and community engagement are not given sufficient consideration during the annual review

	Frequency	%	Valid %
Strongly Disagree	14	12.5	12.5
Disagree	38	33.9	33.9
Agree	50	44.6	44.6
Strongly Agree	10	8.9	8.9
Total	112	100	100

Analysis of Table 5 indicates that 92% total of respondents agreed and strongly agreed that they perform better and exert more effort in their work when they are motivated. Presented in Table 4.5, 56.3% and 33.9% of the respondents agreed and strongly agreed that they are knowledgeable and aware of the all the requirements of their jobs as administrative employees. The results in Table 7 show that a little over half (with 53.5%) of the respondents agree and strongly agree that performance on other job components is not given sufficient consideration during the annual review. According to Manzoor, Wei & Asif (2021), employee performance should be adequate to the reward that the employee receives in order to keep the employee motivated, therefore affirming the connection between performance and motivation. If performance is not adequately measured and rewarded, it is liked to result in decreased performance and motivation. It is thus the human resource department's responsibility to develop a cordial work environment that increases employee performance and motivates employees while enhancing professionalism in management's operations (Chakraborty & Biswas, 2021).

Table 8: For accuracy and fairness, the university's performance appraisal system needs to be reviewed for administrative employees

	Frequency	%	Valid %
Strongly Disagree	0	0	0
Disagree	14	12.5	12.5
Agree	38	33.9	33.9
Strongly Agree	60	53.6	53.6
Total	112	100	100

Table 9: Does the overall results of the university's annual review reflect all aspects of my performance as an administrative employee

	Frequency	%	Valid %
Strongly Disagree	61	54.5	54.5
Disagree	37	33	33
Agree	14	12.5	12.5
Strongly Agree	0	0	0
Total	112	100	100

The respondents do not deem the university's performance appraisal system to be fair and accurate as attested by a response of 33.9% and 53.6% (Table 8) who agreed and strongly agreed to the question "for accuracy and fairness, the university's performance appraisal system needs to be reviewed for administrative employees". Furthermore, the results suggests that the respondents are of the assumption that the university's appraisal system does not reflect all

the aspects of their performance as administrative employees with 87.5% disagreeing and strongly disagreeing with the question posed in Table 9. Aboramadan, Albashiti, Alharazin & Dahleez (2020) state that when management devotes time to providing feedback and discussing organisational problems, employees are likely to be involved in the setting of organisational objectives and the development of effective performance appraisal processes. According to Soltani & Wilkinson (2020), appraisals can be used for predicting employee commitment, performance and job satisfaction, while Aboramadan, Albashiti, Alharazin & Dahleez (2020) opine that a well-designed and effective performance appraisal system creates commitment and offers a blueprint to recognise and reward high performing employees.

Table 10: Analysis of variance on perception of the accuracy and fairness of performance appraisal system

Model	Sum of square	Degree of freedom	Mean square	F	Sig.
Between	11,785.274	24	1.6845	33	0.04
Within	5,687.248	88	0,088		
Total	17,472.522				

Table 11: Analysis of variance on influence of the performance appraisal system on employee motivation and performance

Model	Sum of square	Degree of freedom	Mean square	F	Sig.
Between	11,785.427	25	1.2654	33	0.04
Within	5,678.248	87	0,088		
Total	17,463.675				

The results of Table 10 indicate that the respondents have a negative perception on the accuracy and fairness of the university's performance appraisal system with a mean score of 1.6845. The results of Table 10 further indicate weak relationship on the university's performance appraisal system and employee motivation and performance, thus performance appraisal does not contribute towards the administrators motivation and performance. Taking into consideration the results presented in Table 10 and Table 11, the university needs to review its current performance appraisal system to be more suitable for assessing administrative employees' performance. By adjusting the performance appraisal system to also suit administrative employees, performance and motivation of the administrative employees can be expected to increase.

MANAGERIAL IMPLICATIONS AND LIMITATIONS

The study is poised to inform performance appraisal system for administrative employees. The relationship between performance appraisal system and employee performance and motivation requires serious attention from management. Management needs to ensure that the performance appraisal system approaches and policies are aligned in such a manner that there is fairness, and that the performance appraisal system encourages a conducive employee relationship which promotes high levels of employee satisfaction and motivation. The managerial implication of the study is that a new performance appraisal system needs to be developed and implemented by top management and the appraisal system must be monitored at all levels of the organisation in order to lead to positive outcomes and better employee performance.

Limitations

Despite the significant findings of the study, the study contains some shortcomings. The findings of the study are limited to a single academic institution in South Africa. Therefore, the results of the study may not be generalised to all academic institutions within the country as values, organisational objectives and organisational culture are not the same for all academic institutions.

Not all administrative employees participated on the study as some were reluctant to answer an online questionnaire. A hardcopy questionnaire may have assisted and been used to supplement the online questionnaire in order to improve on the response rate.

FUTURE RESEARCH

Based on the limitations discussed above, several future research considerations are suggested:

- **Expanding the target population:** Conducting a more comprehensive and comparative study using multiple academic institutions in order to understand the relationship between performance appraisal systems and their impact on administrative employees' performance.
- **Investigating other factors:** In addition to the impact of performance appraisal system on administrative employee motivation, other factors such as organisational culture, employment relations and work engagement could also be considered as factors that impact on administrative employee motivation.

CONCLUSION AND RECOMMENDATIONS

Administrative employees are essential for any organisation including tertiary education sectors thus is important that administrative employees form part of the performance appraisal process. In order to enhance the performance of a university, the human resources department needs to assist in acquiring well performing and competitive employees. Performance appraisal forms part of the important activities of human resources as performance appraisal systems can be used to measure and reward employee performance. From the findings of this study, it can be concluded that the administrative employees of the university do not possess a favourable perception of the performance appraisal system that is currently in use. This is because the performance appraisal system does not adequately measure and reward all aspects that make up an administrative employee's role. It is recommended that the performance appraisal system be adjusted to also suit administrative employees, performance and motivation of the administrative employees can be expected to increase as a well designed and implemented appraisal system can assist in effectively rewarding and motivating employees' performance.

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CONSUMER-INDUCED GUILT IN FREE-GIFT-WITH-PURCHASE PROMOTIONAL SETTINGS: MODERATING EFFECTS OF PRODUCT PRICE AND SELLER'S RESOURCES

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ABSTRACT

Money market exchange relationships represent important social and psychological processes. In addition to legal framework, exchanges are guided by unwritten principles of equity theory. Generous gifts received by consumers during free-gift-with-purchase exchanges are likely to induce consumer guilt as consumers are getting more than they usually receive in equitable exchange situations. As a result, company may improve their relationships with customers and boost sales of their products. Focusing on free-gift-with-purchase promotions, we develop a set of propositions related to the effect of consumer-induced guilt on patronage and repurchase intentions.

Keywords: consumer-induced guilt, marketing exchange, free-gift-with-purchase promotion, product price, sellers' resources.

INTRODUCTION

According to Bagozzi (1975) exchange is not a mere transfer of products for money; it is an important social and psychological process for all involved parties. Equity theory (Adams, 1965; Walster, Walster and Berscheid, 1978) suggests that consumers perceive relationships as inequitable/unfair when their outcome/input ratio is smaller than the retailer's ratio (negative inequity situation). Alternatively, when consumers output/input ratio is bigger than the retailer's ratio, consumers benefit more than the retailers (positive inequity situation). In the latter situations consumers may experience guilt and this feeling may positively affect consumers' patronage and repurchase intentions.

Guilt is defined as an individual's "unpleasant emotional state associated with possible objections to his or her action, inaction, circumstances, or intentions" (Baumeister, Stillwell and Heatherton, 1994, p. 245). Guilt is experienced because of violation of consumers' own accepted social norms, ethical or moral principles during purchasing and consumption episodes (Burnett and Lunsford, 1994; Tracy, Robins and Tangney, 2007).

Guilt has received a lot of attention in psychological and advertising literature, but the concept of guilt remains an under researched topic in marketing literature. Focusing on free-gift-with-purchase promotions, we develop a set of propositions related to the effect of consumer-induced guilt on patronage and repurchase intentions.

LITERATURE REVIEW

The literature review has shown that guilt is a powerful human emotion and can influence consumer behavior in purchasing situations (Bagozzi et al, 1999). Because of experiencing guilt, an individual feels the need to "repair" the situation or at least the need to make a promise to do this (Ghingold, 1981; Izard, 1977). As such, guilt can also be a motivational factor (Izard, 1979).

In this conceptual paper, we are focusing on interpersonal guilt related to exchange between two parties, but not to consumption situations. In general, guilt can be directed to ourselves (intrapersonal guilt) or to others (interpersonal guilt). Intrapersonal guilt can be defined as "the dysphoric feeling associated with the recognition that

one has violated a personally relevant moral or social standard” in the consumption of a product or service (Kugler and Jones, 1992, p.319). For example, intrapersonal guilt may emerge because of consumers’ inability to control their purchasing behavior. People may feel guilty when they buy luxury and “pleasure” products, unhealthy indulgent food, non-environmentally friendly products or when they buy on impulse or overspend. Intrapersonal guilt has a negative effect on consumer satisfaction in post-purchase period (Lunardo and Saintives, 2017; Westbrook, 1987; Saintives and Lunardo, 2016). It may discourage self-indulgent, nonessential consumption and may result in product returns.

Contrary to intrapersonal guilt (focused on ourselves), interpersonal guilt (focused on others) may emerge only when consumers feel that they are benefiting more than the seller in the process of exchange. Majority of research in marketing has been focused on intrapersonal guilt and only few studies investigated interpersonal guilt. For example, Steenhaut and Van Kenhove (2005) showed the role of commitment to a service provider in diminishing consumers’ opportunistic behavior. They found that highly committed consumers are more likely to experience guilt-related feeling and report receiving too much change when they are receiving a large, rather than a small excess of change. Pounders, Moulard and Babin (2018) also emphasize an important role of consumers’ commitment in inducing interpersonal guilt when consumers are trying to find alternative service provider. If they cannot find an alternative service provider, their patronage and repurchase intentions become stronger (Pounders, Moulard and Babin, 2018). Consumer-induced guilt may also occur during direct interaction with sales personnel. Dahl, Honea and Manchanda (2005) report that after even brief interaction with a salesperson that did not result in a purchase, consumers had a strong motivation to engage in reparative actions by making future purchases or at least promising to do so. Rintamaki, Spence, Saarjarvi, Joensuu and Yrjola (2019) focused on planned vs. unplanned returns. The authors showed that when consumers initiate unplanned returns, they might experience the feeling of guilt.

We found only one study investigating the effect of free gifts (hedonic vs. utilitarian) on intrapersonal or self-directed guilt but not on interpersonal guilt. The authors found that self-directed guilt may be diminished when 1) gift is of practical nature and intended for use by the purchaser and when 2) gift is guilt-inducing but will be given to someone else (Lee-Wingate and Corfman (2010).

PROPOSITIONS DEVELOPMENT

We propose that consumer-induced guilt is likely to emerge in exchange situations when consumers are offered much more value than they usually receive in equitable exchange situations. More specifically we propose that consumer’s guilt, evoked by free gifts, will have direct positive effect on patronage and repurchase intentions. We also propose that this effect will be moderated by perceived value of free gift, price of promoted product and seller’s financial resources (national vs. local companies).

Proposition One (main effect): The higher the perceived value of a free gift, the more likely consumers will experience guilt, which will result in higher consumers’ patronage and repurchase intentions.

High price of a promoted product may override this effect. Usually, companies do not reveal their cost structures. When consumers are exposed to high final price, they may arbitrarily allocate cost and margin within final price and may feel that the cost of free gift is included in the price of the promoted product. Therefore, high price of promoted product may not induce consumer guilt and lower consumers’ patronage and repurchase intentions.

Proposition Two (main effect): The higher the price of a promoted product, the less likely consumer will experience guilt when exposed to high-value free gifts, which will result in lower consumers’ patronage and repurchase intentions.

Extensive research has shown that consumers’ perceptions of fairness may vary depending on the perception of another party involved in the exchange (Jung et al., 2014). For example, people try to be fairer when they transact with friends than with strangers (Kahneman, Knetsch and Thaler, 1986).

According to Jang and Chu (2012) when companies offer pay-what-you-want pricing (PWYW), consumers along with their own interests, exhibit caring motives about companies - “not want to make the seller lose money” (p. 358). This is especially true when companies do not have big financial resources like non-profits or small local businesses. For example, Jin, Choi and Che (2022) report that profits of the National Art Museum in Lisbon increased by 40% when it switched to PWYW pricing strategy. There are numerous other examples when consumers paid

significantly more for products that were offered for any price than when they were offered for some fixed price (see Ji, Choi and Che, 2022).

Unlike small companies, big national companies do not use PWYW pricing strategy. One potential reason is that consumers may take disproportional advantage and hurt companies' profits. Indeed, some people may justify their "zero dollars" or low-price offers by thinking about big companies' huge profits as well as about cases of big companies' immoral and deceptive business practices that are widely covered by mass media.

A company's financial resources may be reflected in the status of a company (local vs. national) and may moderate the effect of consumer-induced guilt. When purchasing from a national seller, consumers may feel that the seller has enough financial resources to offer more value in exchange situations than a local seller.

Proposition Three (main effect): The higher the seller's financial resources, the less likely consumer will experience guilt when exposed to high-value free gifts, which will result in lower consumers' patronage and repurchase intentions.

Based on the main effects of the three constructs of interest, we propose a two-way interaction effect. In situations when the price of a promoted product is high and when promotion is offered by a national company, consumers are less likely to experience guilt and form patronage and repurchase intentions.

Hypothesis Four (interaction effect): The effect of high-value gift on consumers' patronage and repurchase intentions will depend on price of promoted product and seller's financial resources (national vs. local).

When the price of a promoted product is high (vs. low), consumers purchasing from both national and local companies are less likely to experience guilt, which will result in lower consumers' patronage and repurchase intentions. Therefore, consumers will have lower patronage and repurchase intentions when the price of promoted product is high than when it is low.

Alternatively, when price of promoted product is low, consumers purchasing from local (vs. national) companies are more likely to experience guilt, which will result in higher consumers' patronage and repurchase intentions. As a result, consumers will have higher patronage and repurchase intentions when they buy from local than from national sellers.

When consumers purchase from local (vs. national) companies, they are less likely to experience guilt purchasing from national than local companies. Therefore, consumers will have higher patronage and repurchase intentions when they purchase from local than from national companies.

DISCUSSION

The focus of our conceptual paper is on the effect of consumer-induced guilt on patronage and repurchase intentions in "legal" exchange situations, where consumers do not try to take advantage of the other party (e.g. keeping too much change, abusing lenient return policies, etc.). Offering high-value gifts during free-gift-with-purchase promotions is likely to increase consumers' patronage and repurchase intentions. Despite the fact that guilt is an unpleasant negative emotion, it is adaptive emotion that motivates "repairing" the situation. Even if "violation" of exchange norms in favor of consumers was initiated by a seller – providing higher than expected value, consumers may feel guilt and "repay" a company by patronizing it and making purchases or just deciding to make purchases in future.

Obviously, companies cannot conduct such generous exchanges all the time. They are limited in their resources and cannot sell for loss. However, offering high-value gifts infrequently may create a big advantage for a company in the long run. Consumers are likely to increase their patronage and repurchase intentions.

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FORENSIC EXPERT: AN EXPLORATION OF CHALLENGES ENCOUNTERED BY THE FORENSIC INVESTIGATORS IN THE INVESTIGATION OF MOBILE FRAUD IN THE SOUTH AFRICAN BANKING INDUSTRY

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ABSTRACT

Research addresses the challenges encountered by the forensic investigators in the investigation of mobile fraud and to identify best practices to combat mobile fraud at the South African Banking Industry are discussed, In 2019, the number of incidences increased to 26,567 which reportedly cost the South African banking industry about R308m in gross losses while in 2020, 35,308 incidences were reported which reportedly cost the banking industry about R309m in gross losses while the methods and equipment used to commit the crime are explained. This study aims to address the challenges encountered by the forensic investigators in the investigation of mobile fraud and to identify best practices to combat mobile fraud at the South African Banking Industry. Design/methodology/approach This study discusses from secondary sources of data, mainly drawn from journal articles, internet sources and scholarly books relevant to address the challenges encountered by the forensic investigators in the investigation of mobile fraud and to identify best practices to combat mobile fraud at the South African Banking Industry. The population of the study was the banking mobile fraud investigators who work in banking mobile fraud unit dealing with mobile fraudulent activities in the banking industry in the country. The study's key findings include: -legal constraints and the sentences awarded by courts to mobile fraud convicts are insufficient; the study establishes that there is law in the Kenyan constitution to protect witnesses in mobile fraud cases; a lack of IT experts; a delay in obtaining expert reports from banks; and time constraints in conducting forensic investigations. Customer confidentiality also impedes successful investigations of banking mobile frauds. The report suggests bank employee training, customer awareness programs, the establishment of a consolidated mobile fraud database, and improvements in the judicial and legal management of bank mobile fraud.

Keywords: challenges, app kidnapping, crime, forensic investigators, investigation, mobile fraud.

BACKGROUND AND INTRODUCTION

Mobile fraud is a critical problem of global concern. It involves the use of occupation for personal benefit via a deliberate misuse or misappropriation of an organisation's resources (Association of Certified Mobile fraud Examiners (ACFE), 2020:np). The South Africa banking industry is managed and controlled by the South Africa Reserve Bank (SARB) as the regulatory authority over the banking industry and financial institutions, aiming to achieve a robust and efficient banking system in the interest of the app kidnapping.

The main causes of mobile fraud in the SABI include poverty, entitlement mind-set, greed, opportunity, rationalisation, motivation and peer pressure. These are dangers of mobile fraud in the SABI that undermine the fight against poverty. Mobile fraud increases the cost of public services and deters domestic and foreign investments, thus stifling growth and future business opportunities for all stakeholders. It contributes to the loss in government departments; it undermines the rule of law, loss of income and leads to blacklisting.

To illustrate this, between 2017 and 2022, mobile fraud related crime increased from 73 277 cases to 83 823 cases in the SABI (Statistics SABRIC, 2022:6). Entirely, the growth of the mobile fraud phenomenon in South African

Banking Industry allows the justice system to reconsider its legal application of the elements of mobile fraud (Van Minnen, 2021:np).

To respond to this problem, the judiciary keeps up with frequent changes and new developments in SABI, while the mobile fraud subject matter experts is tasked with the demonstration of the adaptation to these developments (Swart, 2022:np). The current SABI keeps on demanding forensic investigators should be provided with all required resources to perform their duties to minimise crime such as mobile fraud.

PROBLEM STATEMENT

A research problem is an area of concern or a gap in the existing knowledge that points to the need for further understanding and investigation (Stemler, 2015:np). In this context, the current issue for investigation circles around the challenges encountered by the forensic investigators in the investigation of mobile fraud in the South African Banking Industry. Smit (2019:34) argued that it is stated that law enforcement agencies are obliged constitutionally in investigating mobile fraud in the SABI and strengthen the justice system as stipulated. In assisting law enforcement agencies, a variety of forms, as well as confidentiality procedures, have been established to enable responsible citizens to report crime and mobile fraud related issues.

In South Africa, there are efforts carried out by the government in mitigating cybercrime such as the establishment of the South African Banking Risk Information Centre (SABRIC). The SABRIC is saddled with the responsibility of providing the banking institutions with the necessary information related to crime and risk management and to promote inter-bank synergy aimed at reducing the risk of bank and organised related crimes (Smith, 2017:65).

RESEARCH METHODOLOGY

Given the foregoing contextual background, a qualitative research design was used for the non-empirical examination. This will assist the researcher in learning about mobile fraud, which is grounded in actual issues. Because it uses secondary data in the form of a literature review and tackles a real-world issue, the paper is non-empirical (Leedy & Ormrod, 2016:67). The majority of the data needed for this study will be qualitative in nature. Document review is typically the first step in the qualitative research process in order to gather data. Information about the investigation of mobile fraud will be gathered from a variety of sources, including pertinent national and international literature (Maxfield & Babbie, 2013: 102).

Documentary sources will be to develop an understanding around the theory of ‘investigation of mobile fraud during lockdown in South Africa’. Closed mobile fraud case files will be conducted and analyses. Obtain the opinion and perceptions of the relevant stakeholders such as SABRIC, Auditor General (AG), Special Investigation Units (SIU), and Hawks.

RESULT ANALYSIS AND DISCUSSION

The South African Banking Risk Information Centre (SABRIC, 2019:np) reported that, in 2017, a total of 13 438 mobile fraud cases involving mobile and banking apps as well as online reportedly banking costed the banking industry a gross sum of more than R250,000,000. Furthermore, the rate of cybercrime and economic crime is reportedly increasing in the South African financial institutions (Bakkalbasioglu, 2020:23).

The Procedures that Could be Followed in the Combatting of Mobile Fraud in the SABI

It is stated that no organisation or administrative process is free of risk (OECD, 2014:np). It is the management’s responsibility to identify and control the risks that the organisation faces (Rejda & McNamara, 2014:17). Risk may be defined as the chance of an unwelcome outcome and may cover a wide range depending upon the nature of the organisation’s business (OECD, 2014:7). In the context of managing mobile fraud, the risk is the

vulnerability or exposure an organisation has towards mobile fraud and irregularity (Rejda & McNamara, 2014:18).

It combines the possibility of mobile fraud occurring and the related monetary impact, therefore it is preferable to minimize risk by minimizing both the probability of mobile fraud occurring and the extent of any consequential losses (Rejda & McNamara, 2014:19). Preventive controls and the development of the appropriate company culture will lower the possibility of mobile fraud occurring, while detective controls and effective contingency planning will reduce the magnitude of any losses (OECD, 2014:30). Procedures for detecting mobile fraud include strategic evaluation, mobile fraud detection techniques, mobile fraud detection and prevention practices, and mobile fraud reporting policy and process.

Strategic Consideration

Every corporation or organization ensures that it follows strategic planning. However, the main strategic elements to consider while developing such a future strategy include products, services, consumers, markets, finances, people, technology, policy development, and production capabilities (Patidar & Sharma, 2011:2230). In the context of this study, conducting risk assessments is a critical priority measure for mobile fraud prevention policy. Risk assessments, whether formal and informal, are key aspects of any mobile fraud prevention policy, in addition to being required under the Public Financial Management Act (PFMA) (Association of Certified Mobile fraud Examiners, 2018:46). The assessment of risks in all operations and situations must become a habit and second nature for all employees and management, and it should be included in management and appropriate employee performance contracts (Association of Certified Mobile fraud Examiners, 2018:49). While a written mobile fraud prevention strategy is required, mobile fraud prevention must also be incorporated into all operational plans (Rahman & Anwar, 2014:101). Mobile fraudulent employees and others must be pursued to the fullest extent of the law (Rahman & Anwar, 2014:101). Employees, authority members and others who have relations with the organisation reserve the right to have their criminal histories examined before they are officially affiliated with it, and ethics management is pushed as a concept and practice (Dobel, 2018:39).

Further, Dobel (2018:46) also stated that authority members, management and employees must all believe the following in order to build such an ethical culture:

- That an organisation or company is honest and ethical in its business dealings, including dealings with stakeholders, customers, suppliers and employees.
- That the organisation or company should be ensured that it treats employees with respect, rewards them fairly, imposes discipline fairly, and where, regrettably, redundancy becomes necessary, exits them fairly.
- Mobile fraud prevention should be a common objective throughout the organisation at all levels, and they have been trained to play their part in the fight and their efforts are acknowledged.
- In an event that mobile fraud is suspected, the perpetrator can expect the most rigorous investigation and if found guilty, a severe sentence should be instituted.
- Where professional and other bodies require ethical behaviour from their members, staff who are eligible for membership in such bodies are encouraged to become members.

Mobile Fraud Detection Techniques

Mobile fraud detection techniques are divided into two broad spectrums. Each one has its sub-techniques.

Statistical data analysis techniques

By conducting extensive investigations, statistical data analysis for mobile fraud detection accomplishes numerous statistical operations such as mobile fraud data gathering, mobile fraud detection and mobile fraud validation. The following sorts of techniques are subdivided from these:

- **Statistical parameter calculation:** Statistical parameter calculation is the process of calculating various statistical parameters for mobile fraud-related data collected during the data collection process, such as averages, quantiles, performance indicators, and probability distributions (Salkind, 2014: 43).
- **Regression analysis:** Regression analysis examines the relationship between two or more variables (Salkind, 2014: 45). The relationship between independent and dependent variables is also estimated. This aids in the study and detection of relationships between various mobile fraud features, as well as the forecasting of future mobile fraudulent behaviors. These projections are based on mobile fraud variable usage trends in a potential mobile fraud use case (Salkind, 2014:51).
- **Probability distributions and models:** According to Salkind (2014:65), this technique maps models and probability distributions of different mobile fraudulent business processes either in terms of discrete parameters or probability distributions.
- **Data matching:** In order to compare two sets of obtained data on mobile fraud, data matching is utilized. Algorithms or programmed loops can be used to carry out the procedure. Additionally, for marketing, security, and other purposes, data matching is used to eliminate duplicate entries and identify connections between two datasets (Salkind, 2014:62).

Artificial Intelligence

By using artificial intelligence to avoid mobile fraud, businesses have enhanced internal security and optimized corporate procedures (IvyPanda, 2019:10). Because of its greater efficiency, artificial intelligence (AI) has become a vital tool for financial institutions to avoid mobile fraud (IvyPanda, 2019:11). The following are some AI-based mobile fraud detection techniques:

- **Data mining:** Data mining automatically classifies, groups, and segments data for the purpose of preventing and detecting mobile fraud. It also looks for relationships and rules in the data that may point to interesting patterns, such as trends in mobile fraud (Salkind, 2014:78).
- **Neural networks:** In the context of mobile fraud detection, neural networks classify, cluster, generalize, and forecast data linked to mobile fraud so that it may be compared to findings from official financial documents or internal audits (Patidar & Sharma, 2011:2231).
- **Machine learning:** Machine Mobile fraud detection with machine learning is possible because these algorithms can learn from past mobile fraud trends and identify them in subsequent transactions (McKinsey Global Institute, 2015:10). Machine learning makes use of both supervised and unsupervised learning techniques. In supervised learning, an arbitrary subset of all data is manually categorized as "mobile fraudulent" or "non-mobile fraudulent" (McKinsey Global Institute, 2015:16). Conversely, unsupervised learning makes predictions without additional labeling by looking for correlations and common patterns in the raw data (such as mobile fraud).
- **Pattern recognition:** Algorithms for pattern identification identify rough classes, groups, or questionable behavior patterns in both supervised and unsupervised settings (Makary & Michael, 2011:19). Mobile fraud detection also makes use of additional methods such sequence matching, Bayesian networks, link analysis, and decision theory (Makary & Michael, 2011:21).

Practices for Mobile fraud Detection and Prevention

Technological developments in mobile fraud detection serve as a precise and effective defense against cybercrimes and mobile fraudsters (Rahman & Anwar, 2014:98). Best practices for preventing and detecting mobile fraud are shown in the accompanying figure.

Figure 1: Mobile fraud Detection Best Practices



Source: (Rahman & Anwar, 2014:99)

The figure above presents mobile fraud detection best practices and underneath are discussions based on the figure.

Create a potential mobile fraud risk profile

This is about using a top-down approach to risk assessment to identify the parts of your business that are most vulnerable to mobile fraud and the types of fraud that could happen there (Rahman & Anwar, 2014:99). Subsequently, the risks must be categorized based on the organization's total risk exposure. Mobile fraud risk profiles must be created as part of the overall risk assessment, involving all relevant parties and decision-makers in the process.

Address the possible indicators of mobile fraud

While sampling might be helpful for identifying issues that are generally consistent across datasets, this isn't always the case when mobile fraud is involved (Rahman & Anwar, 2014:100). Instead, organizations should evaluate all of their data. Mobile fraud transactions are by their very nature premeditated (Rahman & Anwar, 2014:101). It is said that transactions may not be reported even when they fit under the parameters of some regular tests.

Implement continuous auditing and monitoring

Continuous auditing and monitoring can be used to assess and validate the efficacy of an organization's controls over transaction authorizations. Continuous analysis could involve writing scripts to identify anomalies as they appear over time (Price Waterhouse Coopers, 2014:20). The entire effectiveness, consistency, and caliber of an organization's mobile fraud detection method can be significantly enhanced by this procedure.

Increase organisational awareness of the monitoring activity

The programme's communication across the organisation is an important aspect of mobile fraud prevention and is very useful for preventing mobile fraud within the company (Price Waterhouse Coopers, 2014:23). Employees will not engage in mobile fraudulent activities if they are aware of the preventative procedures that have been put in place and can be a very effective preventative measure (Price Waterhouse Coopers, 2014:25).

Deploy artificial intelligence

Machine learning is a powerful force for improving both the accuracy and efficiency of mobile fraud detection (Price Waterhouse Coopers, 2014:28). According to Rahman and Anwar (2014:110), through machine learning, systems can automatically perform the following tasks:

- Create and update rules for detection and alert handling: Machine learning can examine masses of data to help establish rules and keep them up to date. Even something as simple as a decision tree can add some benefits to more accurate rules.
- Select the most accurate detection models: A combination of machine learning techniques such as gradient boosting and support vector machines and neural networks can deliver the most accurate mobile fraud detection rates.
- Automate investigation processes: On average, 60 to 70% of an investigator's time is spent collecting data about a subject. Machine learning can guide systems to automatically search and retrieve data, run database queries and collect information from third-party data providers without any human intervention.

Encourage anti-money laundering and mobile fraud suspicious activity reporting

The purpose of suspicious activity reporting (SAR) and the investigation that follows is to find customers who are involved in money laundering, mobile fraud or terrorism financing (Omar & Bakar, 2012:15). SAR can involve a wide range of activities that are considered unusual (Omar & Bakar, 2012:16). If a behaviour raises suspicions that the account holder is attempting to conceal something or perform an unlawful transaction, it may be included in SAR (Omar & Bakar, 2012:20). Hence, organisations need to implement measures to report money laundering and related mobile frauds (Omar & Bakar, 2012:24).

Deploy intelligent case management

According to the Coenen (2009:32); KPMG Malaysia report (2013:3), an advanced, analytics-driven, intelligent case management solution can automatically assist in the following ways:

- Prioritise cases, recommend investigative steps and fast-track straightforward cases.
- Enrich alerts with details about the associated customers, accounts or beneficiaries.
- Intelligently find and pull data from an internal database or even from a third-party data provider.
- Present data in easy-to-understand visualisations.
- Auto-populate and prepare SAR for electronic filing (if applicable).

As such, organisations can streamline their mobile fraud investigations by deploying an intelligent case management solution to aid their fight against cybercrimes (KPMG Malaysia, 2013:19).

Learn, adapt and repeat

This is about reviewing, re-evaluating, and restructuring one's mobile fraud profile, taking into account the most common mobile fraud schemes and also those relating specifically to the risks that are unique to one's organization, thereby moving your investigative lens accordingly (Omar & Bakar, 2012:1). This can be achieved by using data analytics to find out where controls are not working or are ineffective and keep a watch on controls that application control settings cannot govern (Omar & Bakar, 2012:4). Lastly, patterns and mobile fraud indicators shown by mobile fraud detection tests and continuous monitoring and auditing processes need to be investigated.

Mobile fraud reporting policy and procedure

Managers must be aware of what to do in the event of a scam or any alarming sign of mobile fraud so that they can act quickly (Patidar & Sharma, 2011:22; Discovery, 2014:np). According to the National Treasury (2013:34) on anti-corruption, the goal of the mobile fraud reporting policy and procedure is to ensure that action may be performed quickly and effectively:

- To prevent losses of funds or other assets and to maximise recovery of losses where mobile fraud has occurred;

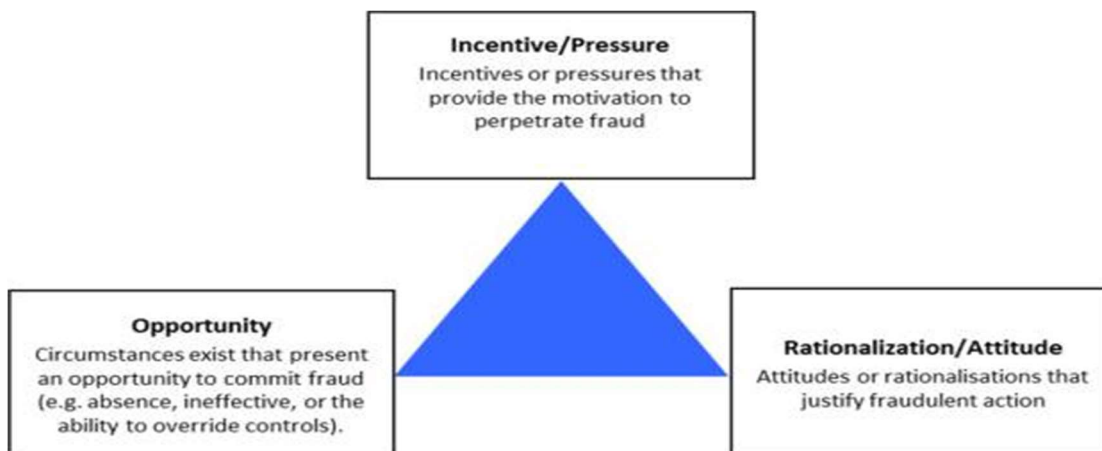
- To minimise the occurrence of mobile fraud by taking rapid action at the first signs of a problem;
- To identify the mobile fraudsters and maximise the success of any disciplinary or legal action taken;
- To minimise any adverse publicity for the organisation suffered as a result of mobile fraud;
- To identify any lessons learnt and use these to prevent mobile fraud in the future; and
- To reduce adverse impacts on the business of the organisation.

The existence of a mobile fraud reporting policy and procedure may, in itself, help to act as a deterrent, as it shows that an organisation or a company is prepared to defend itself against the risk of mobile fraud.

The Fraud Triangle

In terms of pressure, Schuchter and Levi (2015:np) referred to that as a habitual criminal who steals for the sake of stealing; a person desperate for money, as a result, ends up engaging in gambling or drugs. Furthermore, this person has undue family, community and university expectations. Indeed, according to (Price Waterhouse Coopers, 2020:np). a person is morally superior except for accountability.

Figure 2: The Fraud Triangle



Source: (Schuchter and Levi, 2015:np).

In detail, pressure is what causes people to commit fraud in an organisation. This pressure comes in different forms namely, financial needs, work related pressure, and pressure as a way for material possession (Schuchter & Levi, 2015:176). It can also be a result of one's inability to pay bills, medicals and addiction to drugs, as well as a desire for luxurious stuff (Schuchter & Levi, 2015:np).

Opportunity

In terms of opportunity, Schuchter and Levi (2015:np) describes a situation that presents weak internal controls with circumvention of internal controls. Schuchter and Levi (2015:np) states that the greater the position, the greater the trust and exposure to unprotected assets. Indeed, the most trusted employees are the ones that commit fraud. Therefore, what accounts for the rise of this incidence is opportunity.

When opportunities are eliminated, then the incidence of fraud can be greatly reduced. An opportunity to commit fraud, conceal it and avoid being punished is the critical factor that pushes individuals in committing fraud against most financial institutions. An opportunity to prevail for individuals to commit fraud stems from weaker internal control systems. The more internal controls an institution mounts and implements, the less opportunity for perpetrators or employees to commit fraud.

Rationalisation

IvyPanda (2019:np). states that at this stage, most people rationalise that they needed to be assisted more than others and demand to be lent with a promise that they will pay it back. People at the stage of rationalisation make unnecessary excuses that everybody commits fraud, and no one could be hurt because of the fraud incident. People feel that they deserve to commit it, and it is important to them Cressey (1953); Cressey (1953). In many organisations, people who do this usually state that they are not paid enough, which is why they act in this manner; they feel that it is legal to commit fraud (IvyPanda, 2019:np). Indeed, rationalisation is the last factor Cressey (1953); Cressey (1953) discussed in his development of the fraud triangle. A normal component of keeping money extortion and all clerical wrongdoing occurs due to the absence of emotions or impassion communicated by guilty parties coming from a progression of reasons or defences. The loss caused by fraud in corporations is often connected to impoverished families because of largescale scandals that leave companies bankrupt and therefore impact individuals (IvyPanda, 2019:np). Regardless of the category of the victim (institutional or individual), the inability of the police to investigate this type of crime has real consequences to all victims and society in general Cressey (1953). This inability may be related to the fact that white-collar crime and fraud comprise a degree of criminal expertise and specialisation, which is potentially challenging for investigators.

All of these points come down to the effect of fraud on society, which poses a systemic danger to both companies and ordinary individuals. Also, it places a burden on the police to do more in terms of fraud investigation. The prejudices facing victims of fraud should also be taken into account, in particular, emotional harm and physical costs. The quality of the victim's life is affected, and the fear of crime may hamper the victim's personal and financial development (IvyPanda, 2019:np). Victims of fraud may be under the impression that fraud is undetectable. In many cases, the loss suffered through fraud cannot be recovered from the perpetrators (Cressey, 1953). This creates the impression that the police do not effectively investigate fraud because reparations cannot be made thus questioning the investigative capacity of the police and eroding the credibility of general detectives in handling fraud. This may alter the victim's behaviour in terms of avoiding habitual victimisation and may leave the victim fearful of using the internet and depressed due to the experience. Based on the statistics that women are prone to online fraud (Statistics South Africa, 2017:5), women may be influenced adversely in terms of utilising online financial services. IvyPanda (2019:np) emphasise the adverse consequence of fraud in that it affects how much individuals pay for goods and services, including the detection and investigation of the loss. Furthermore, it is reported that more people are injured and killed every year because of corporate negligence and recklessness than by violent street crimes like assault and homicide (IvyPanda, 2019:np). This suggests that numerous South Africans are vulnerable to a multitude of fraud phenomena in their everyday lives. Cressey (1953); Price Waterhouse Coopers (2020:np) investigated global financial integrity in terms of illicit financial flows from developing countries between 2004 and 2013 and indicate that SA, which is regarded as Africa's largest economy, is rated seventh, followed by Nigeria in the tenth position, in the top ten developing countries based on illicit financial outflows on the continent.

The fraud related cases in SA, in terms of scale and frequency, are high. Therefore, there is growing demand from the government to employ more general detectives to investigate crime and fraud cases (South African Legal Information Institute, 2013:np). White-collar crime is increasing, and law enforcement is unable to discover this type of crime and fraud (Price Waterhouse Coopers, 2020:10).

Therefore, there is a high demand for professionals in forensic accounting and auditing. These professionals could play a major role in detecting and curbing financial misrepresentation. In the corporate world, there is a demand and increase for forensic accounting, and this increase is associated with the need for general detectives to support themselves with revised investigative skills.

Fraud and corruption in SA cost the economy billions, and the real impact of these crimes is felt beyond the national fiscus (Tamukamoyo, 2014:59). It is stated that in the business sphere, organisations that experience loss through fraud can recover from insurance claims, which then increases premiums. The loss in company turnover (revenue) hampers the business projections, growth and employment in the affected business sector. This implies that big corporations and small enterprises spend some of their resources putting tougher security and safety measures in place.

Furthermore, goods prices can increase to cover the loss through fraud (Tamukamoyo, 2014:60). Individual victims of fraud can withdraw from using internet banking services (untrustworthiness of the technologies and systemic issues with negative effects). Pertaining to individuals, only 22% of cases of internet fraud in SA were ruled in favour of the customer, while the remaining 940 cases of internet banking-related complaints went in favour of the banks (IvyPanda, 2019:np). With such unfavourable statistics, police services and detectives play a vital role in assuring the public that fraud is not only worth investigating but worth prosecuting as well. This is done, in part, by addressing the economic impact of fraud.

Many companies in South Africa experienced more fraud and bribery than their global counterparts (IvyPanda, 2019:np). Gauteng, the Western Cape, and KwaZulu-Natal top the list of those experiencing loss increases due to banking fraud in 2014. However, it is also taken into consideration that South Africa is one of the developing countries in the Southern African Development Community (SADC) (IvyPanda, 2019:np). As the country develops and grows, it is assumed that it is likely that it is also moving into spaces of how the developed countries operate, particularly in technology to interact and accelerate its services. It is important to state that fraud is not only committed in banking institutions (Coenen, 2009:np). Although most fraud is worth a large amount of money committed against corporations, perpetrators of this phenomenon target any type of victim who can be deceived easily, and, as such, there is a greater commercial and societal vulnerability (Price Waterhouse Coopers, 2020:10).

Fraud is unique to other crimes and exceptionally threatening and complex to examine (Coenen, 2009:np). Fraud examination includes understanding its particular components in expansion to prepare detectives' insights to take after the proof that is regularly concealed in layers of distortions. Coenen (2009:np) states that SA at first set out upon the course of investigative specialisation although this has, as of late, been switched with the decentralisation of specialised services down to the police stations through the restructuring process. In any case, skills development in those restructuring processes was not provided and has not been supported sufficiently. According to Coenen (2009:np), fraud is one of the forms of corruption which is a worldwide phenomenon, and it has been with every kind of society throughout history. Therefore, in detail, the researcher argued that although corruption manifests more in some countries than in others, it spans over colour, creed and culture.

Moreover, corruption does not discriminate against rich (developed), poor (underdeveloped) or developing countries, as its objective of destruction remains the same everywhere (Coenen, 2009:np). Through the process of unpacking the concept of corruption, one discovered that it is an enormously rich term. The concept of corruption has been described and defined by many theorists and scholars in a vast array of light. Because of its extensive use, corruption has diverse connotations for various individuals in different situations. It is critical to have a thorough understanding of corruption in order to advance knowledge regarding fraud (Coenen, 2009:np).

METHODS OF DATA ANALYSIS

De Vos et al. (2011:252); Leedy and Ormrod (2016:32) point out that after having collected the data, it must be prepared for data entry. According to De Vos et al. (2011:252), data preparation includes checking and editing collected data and eventually coding it. Dantzker and Hunter (2012:146) state that after the data has been entered, analysis must begin, and Atlas-ti software was used for that purpose. It is a computer program used in qualitative research data analysis (National Treasury,2013:np; Lamont & Boduszyński, 2020:101). The researcher attended a one-day training session on qualitative study analysis at the University of South Africa. The challenge experienced was that the one-day workshop was not enough. However, the researcher used the You-Tube in order to gain extensive knowledge on how to use the software. Five themes were identified, with some having sub-themes.

PRELIMINARY LITERATURE REVIEW

The preceding paper provided the abstract premises in terms of which the pre-data collection processes and stages of the study were theoretically explained. On the other hand, the current paper presents the actual non-empirical (practical or secondary) data or statements derived from the documentary analysis or case files to the questions posed by the researcher during data collection sessions. In that regard, the criticality of the present paper is underpinned by the

extent to which it serves as the most pivotal reference point for the much-needed practical evidence of the study in relation to both the research problem and aim of the study. By implication, the evidence of the study provides extensive details concerning the sampled documentary analysis or case files profound perspectives, knowledge, perceptions, experiences, and thoughts regarding the investigated phenomenon i.e., governance and public leadership: corruption, social security and ethics/ubuntu (Vithal & Jansen, 2019:65; Anderson, 2019: 141; Creswell & Poth, 2018:47).

This paper presents the interpretation of the research findings. The information obtained from the documentary analysis or case files were explore and presented by means of the emerging themes in the previous paper. In order to present a detailed discussion of the biometric-based solution in combatting mobile fraud in the South Africa Banking Industry. Findings were results discovered during the research. The aim of non-empirical data collection with representatives of the biometric systems providers and experts was to learn more about the current state of biometrics systems in the South African Banking Industry and to explore opinions about attitudes and factors influencing adoption/deployment of biometrics systems in the banking sector. In this research, to express their experiences, opinions and domain knowledge about the implementation of biometrics-based solution in the South African Banking Industry.

Research findings were the writer's suggestions to the reader as to the actions that should be taken to solve the problem that was studied. The conclusion was a statement of reasoning made by a researcher after a thorough investigation. This paper summarised the findings of the study and mapped out the findings in light of the literature review that emerged in the process of resolving the identified problem to comply with the passage above. To conclude this study, paper three lures from several findings emanating from the analyses of the preceding papers and the revelations that various researchers made on the topic. This research aims to the biometric-based solution in combatting mobile fraud in the South Africa Banking Industry was answered.

Following the documentary analysis, the paper then proceeds with a concerted presentation of discussions emanating from the 25-documentary analysis or case files viewpoints, knowledge, thoughts, and understanding regarding the investigated phenomenon of the biometric-based solution in combatting mobile fraud in the South African Banking Industry jurisdiction. It was from these perspectives that the evidence of the study was thematically established in the context of both the research objectives and research questions. It is important to also note that these themes serving as the cardinal foundation of the study evidence emerged from the analysed and interpreted content of each documentary analysis or case files as proof or practical evidence of the study's various claims in relation to the core aspects of the research topic (Creswell, 2020:11; Kumar, 2020:66).

RESEARCH FINDINGS

The preceding paper provided the abstract premises in terms of which the pre-data collection processes and stages of the study were theoretically explained. On the other hand, the current paper presents the actual non-empirical (practical or secondary) data or statements derived from the documentary analysis or case files to the questions posed by the researcher during data collection sessions. In that regard, the criticality of the present paper is underpinned by the extent to which it serves as the most pivotal reference point for the much-needed practical evidence of the study in relation to both the research problem and aim of the study. By implication, the evidence of the study provides extensive details concerning the sampled documentary analysis or case files profound perspectives, knowledge, perceptions, experiences, and thoughts regarding the investigated phenomenon i.e., biometric-based solution in combatting mobile fraud in the South African Banking Industry between 2017 and 2022 (Vithal & Jansen, 2019:65; Anderson, 2019: 141; Creswell & Poth, 2018:47).

This paper presents the interpretation of the research findings. The information obtained from the documentary analysis or case files were explore and presented by means of the emerging themes in the previous paper. In order to present a detailed discussion of the biometric-based solution in combatting mobile fraud in the South Africa Banking Industry. Findings were results discovered during the research. The aim of non-empirical data collection with representatives of the biometric systems providers and experts was to learn more about the current state of biometrics systems in the South African Banking Industry and to explore opinions about attitudes and factors influencing adoption/deployment of biometrics systems in the banking sector. In this research, to express their experiences, opinions and domain knowledge about the implementation of biometrics-based solution in the South African Banking Industry.

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RECOMMENDATIONS

This study set out to an exploration of biometric-based solution in combatting mobile fraud in the South Africa Banking Industry. The study also aimed to explore biometric-based solutions to combatting mobile fraud. A qualitative approach was used in the collection and exploration of non-empirical data. The results from the non-empirical data and the review of the literature revealed that the success or failure of mobile fraud depended largely on how digital evidence is collected and handled. This paper will discuss the summary of the study, recommendation, and conclusion. In essence, the recommendations of the study are a reflection of the researcher's own propositions for evidence-based ideas intended to contribute to improvements in the field of research (Henning, 2018:27). Accordingly, the following recommendations emanate from the findings, and are proposed to address various aspects pertaining to both the research problem and aim of the study (Leavy, 2022:18). Therefore, it is strongly recommended that biometric-based solution in combatting mobile fraud in the South Africa Banking Industry and police management should undertake the following measures for both organizational development and improved performance by their employees (i.e., South African Banking Industry):

Provide the forensic investigators and banking subject matter specialists with proper equipment, such as:

- the use of technology, such as geographical information systems, ATMs installed with cameras, in-ATMs electronic ticketing, body-worn cameras, wireless ear pods communication devices, hand-held scanners, virtual training, intelligent, fingerprint biometric sensors, and digital intelligence. This technology implementation may assist the police department in increasing police officers' safety, public safety, improved crime prevention, and increased accountability (Bakkalbasioglu, 2020:88).

Provide the forensic investigators and banking subject matter specialists with regular opportunities for in-service training more often to acquire knowledge and skills. Such training should entail:

- Control and handling of firearms, alternatives to deadly force, and safe responses to crises;
- De-escalation strategies involving use of minimum force and taking precautionary measures when responding to active crime scams;
- Inculcation of self-control and self-discipline for dignified behaviour that does not bring discredit to themselves and their organization on, and off duty, and also being discreet in their social behaviour and public appearances;
- Initiate processes for amending the constitution to include implementation of harsher sentences, such as life imprisonment for mobile fraud to deter reoccurrence;
- Review internal policies and procedures to ensure the implementation of proper safety measures and procedures that will increase the safety of the forensic investigators and banking subject matter specialists;
- Engage members of the community for restoration of trust and confidence among all the relevant stakeholders by: - Hosting public awareness campaigns and educational road shows through social media, radio and television to eliminate hostility postures between communities, the forensic investigators and banking subject matter specialists.

CONCLUSION

The purpose of this study is to explore the challenges encountered by the forensic investigators in the investigation of mobile fraud in the South African Banking Industry with the aim to provide recommendations to effectively mitigate the impact of mobile fraud. This was achieved using a qualitative approach involving the use of documentary analysis or case files. A total of 25 documentary analysis or case files were obtained across selected (SABRIC annual report 2017-2022). The results obtained indicated that the challenges encountered by the forensic investigators in the investigation of mobile fraud in the South African Banking Industry is significant and that the occurrence of mobile fraud affects the reputation of the South African banking industry in terms of reputation loss, revenue loss, productivity loss and shareholder loss. According to the results obtained, the prevalent forms of mobile fraud perpetrated in the South African banking industry include phishing, spying, malware, data theft, spam e-mail, online theft, hacking and skimming.

Hence, a holistic review of the internal control system of the banking structure is hereby recommended. Mobile fraud had been reported to have a negative impact on an organisation's profitability, customers' satisfaction, public trust, organisation's good will and risk management globally. This calls for the need to review the diverse ways of curbing mobile fraud to lessen its challenges or associated mobile fraud risks on the banking operation. This study provides non-empirical findings that could assist the South African banking industry in the areas decision making or policy formulation geared towards of mobile fraud mitigation. This research notifies the South African banking industry about the nature of mobile fraud perpetrated. The understanding of the nature of mobile fraud perpetrated can assist the South African banking industry to formulate measures to mitigate them. The findings reported in this study is based on the views of the bank experts consulted as well as those of the organisations. Future works can consider the analysis of the level of effectiveness of the mobile fraud control measures in the South African banking industry vis-a-vis the forms of mobile fraud identified.

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GOVERNANCE AND PUBLIC LEADERSHIP: CORRUPTION, SOCIAL SECURITY AND ETHICS/UBUNTU IN THE SOUTH AFRICAN AND AFRICAN COMMUNITIES

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ABSTRACT

Research shows purpose leadership and governance are all about “people” and the “common welfare”. Africans have an Ubuntu philosophy which culturally calls on individuals to promote the welfare of collective society. Governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African communities relating to youth unemployment. It is therefore paradoxical to note how African leaders and governance regimes perform poorly when it comes to the usage of public resources to create conditions for collective human welfare. Why do leaders instead of championing societal advancement rather advance their selfish, egoistic and sectional interests? This study aims to unpack a prevalent paradox and discuss a new approach of linking the rich Ubuntu philosophy to Africa’s governance and leadership discourse. Design/methodology/approach This study discusses from secondary sources of data, mainly drawn from journal articles, internet sources and scholarly books relevant to leadership and public administration in developing African countries and how Ubuntu African philosophy can be deployed to ensure leadership ethos. In an attempt to obtain a more comprehensive and systematic literature review, the search covered all terms and terminologies relevant to the objective of the study. The search process mainly comprised four categories of keywords. The first category involved the concept as approximately related to leadership: “leadership and civic culture”, “Ubuntu culture” and “African collectivist culture”. For the final category, words such as “crisis”, “failure” and “experiences” were used. Findings This study contends that the preponderance of corruption and poor leadership in Africa is anti-cultural, anti-human, anti-ethical and anti-African; hence, those individuals who indulge or encourage leadership paralysis are not “true Africans” by deeds but merely profess to be. Linking the African Ubuntu philosophy to public leadership, the study maintains that the hallmark of public leadership and governance is to develop the skills of all and caring for the society. Practical implications This study draws attention to the need for leaders to espouse virtues so that leadership becomes a tool to promote societal welfare. The hallmark of public leadership and governance is to develop the skills of all and caring for the society. It involves weighing and balancing professional and legal imperatives within a democratic and ethical context with an ultimate responsibility to the people and public interest. It is not a responsibility to a particular set of citizens, but a commitment to be just and equitable to all. The preponderance of corruption and bad leadership is anti-cultural, anti-human, anti-ethical and anti-African; hence, individuals who indulge or encourage leadership paralysis are not true Africans by deeds but merely profess to be. Originality/value This study draws a clear link between indigenous African cultural value system and ethical public leadership. It draws congruence between Africa’s Ubuntu philosophy of civic virtue and Africa’s leadership/governance. This will bring about a renewal of thoughts and practice of public leadership on the continent, as it has been demonstrated that a true African seeks collective social welfare and not selfish interest.

Keywords: governance, public leadership, corruption, social security, ethics, ubuntu.

BACKGROUND AND INTRODUCTION

Most African leaders lack Ubuntu; they have none of it. Is it Ubuntu when they embezzle funds even at such critical times? Especially funds set aside for relief measures for those living in extreme poverty and in need of basic infrastructure. Their talk about Ubuntu should be erased because it smells of mass hypocrisy'. As much as values are important, there needs to be practical considerations. As a society or communities often complain about philosophy being too broad and not applicable in daily life. It is up to us to bring an Ubuntu philosophy to reality, and that is through the saying 'practice what you preach'. Values are important for ethics or morality but more helpful when they become structural and institutionalized (Yukl, 2013:33). Institutions are not abstract bodies but are filled with people who shape them, not the other way round. If communities are to complain about the lack of Ubuntu in African governance, surely something needs to change. Radically. Servant leadership is a philosophy that emphasizes serving and prioritizing the needs of citizens, rather than the leader's own interests (Kenton, 2023:21).

The challenges facing emerging democratic leaders in Africa are many. The route to ascending into power and implementing servant leadership style that addresses the delivery of basic needs to their followers, such as access to education, healthcare, and economic opportunities, is barricaded by all manner of political repression by most governing parties in the continent. Therefore, it becomes quite unreasonable for servant leadership style to thrive in Africa. Kenton (2023:25) and Stauffer and Maxwell (2020:32) asserted that the goal of servant leadership is to achieve authority over power through interactions with people, whether in an administrative or collaboration capacity. The aspirants of servant leadership style are advocates of decentralized administrative structure. This type of leadership involves leaders who interact with citizens in political or administrative decisions making. Due to their personal relationship with citizens, these leaders are better able to decide how to keep people supporting good governance and acknowledge efforts for efficient public service delivery.

Do African leaders lack Ubuntu for the sake of it? Are they not people among us, do they not get major support from us 'the people'? Communities need to look at the issue of moral responsibility in the sense that if Communities are to say that leaders lack Ubuntu, Communities' need to ask who is to blame. Although this is an open debate, it allows us to remember that these leaders are from our own societies – worse, communities elected most of them. communities even defend them in the name of 'the revolution' and 'radical economic transformation'. Social media, mainly Twitter, is always a playing field for fighting citizens – against and for political parties. Hashtags are consistently trending, and one cannot keep count of the number of times faceless accounts defend politicians. They are run by people, not from another planet, but from ours, our own society. Considering this, it is important to wonder and reflect whether Communities only invoke Ubuntu and 'Africanis' (whatever that means) only when it benefits us.

PROBLEM STATEMENT

The Coronavirus (Covid-19) pandemic has raised a lot of ethical questions on all fronts. In our African context, the ethical issues communities' face is related to the continual threat to the survival of the African person. As a continent communities' known for instability (politically, economically, socially, and culturally) our problems are from the double-edged sword of (neo)colonialism and State corruption. It is just another story of corruption. Communities' make noise, it happens again, make noise, nothing else. Now that public officials are infected with Covid-19, there has been a lot of compassion for them. The same thing applies when they are critically ill or have died. Communities' often see a change of atmosphere and compassion even for the most corrupt. Of course, not only does their corrupt colleagues release heart-warming messages of support, yet the public does. When citizens, who are exhausted of corruption and lack of service delivery, start to say good riddance, it raises serious debates. There was a debate on Twitter and talk radio denouncing such utterances, in the name of Ubuntu.

The first category involved the concept as approximately related to leadership: "leadership and civic culture", "Ubuntu culture" and "African collectivist culture". For the final category, words such as "crisis", "failure" and "experiences" are used. Findings This study contends that the preponderance of corruption and poor leadership in Africa is anti-cultural, anti-human, anti-ethical and anti-African; hence, those individuals who indulge or encourage leadership paralysis are not "true Africans" by deeds but merely profess to be. Linking the African Ubuntu philosophy to public leadership, the study maintains that the hallmark of public leadership and governance is to develop the skills of all and caring for the society. Practical implications This study draws attention to the need for leaders to espouse

virtues so that leadership becomes a tool to promote societal Communities. The hallmark of public leadership and governance is to develop the skills of all and caring for the society. It involves Communities and balancing professional and legal imperatives within a democratic and ethical context with an ultimate responsibility to the people and public interest. It is not a responsibility to a particular set of citizens, but a commitment to be just and equitable to all. The preponderance of corruption and bad leadership is anti-cultural, anti-human, anti-ethical and anti-African; hence, individuals who indulge or encourage leadership paralysis are not true Africans by deeds but merely profess to be.

Originality/value This study draws a clear link Communities' indigenous African cultural value system and ethical public leadership. It draws congruence communities' Africa's Ubuntu philosophy of civic virtue and Africa's leadership/governance. This will bring about a renewal of thoughts and practice of public leadership on the continent, as it has been demonstrated that a true African seeks collective social and not selfish interest. In countries where servant leadership philosophy is governing political and socio-economic events, significant impacts are observed in various ways, particularly in the realms of ethical decision-making, business, education, and social change (Meuser & Smallfield, 2023:37). Servant leaders typically emphasize ethical behaviour and values. Aspirants of servant leadership style are committed to lead by considering ethical decision-making, which can have a ripple effect throughout the continent, and promote a culture of integrity. It is imaginable that a focus on the growth and development on all spheres of life, including political and socio-economic domains, can achieve better administrative performance, when a leadership style governing people is able to meet the basic needs. It can be predicted that the usage of servant leadership style in the continent can lead to good governance and improve public service efficiency and innovation (Meuser & Smallfield, 2023:36).

Different attributes associated with leadership styles practiced in the continent and linked to political and socio-economic consequences are examined in this paper. It also examines the African leadership perspective, the effects of culture on African leadership and an approach to promoting servant leadership style as a key factor to public administration and public policy best practice in the continent. Stimulating and enforcing servant leadership style in the continent could allow emerging democratic leaders to implement efficient administrative change and administer a better public service delivery for African citizens.

RESEARCH METHODOLOGY

According to Mouton (2012:55), a research design is a plan or blueprint for how one intends to conduct research. A researched design is dependent on the research topic of the study (Leedy & Ormrod, 2016:26). The researcher will choose a non-empirical design. This will assist the researcher in learning about tender fraud, which was based on a real-life problem relevant to the topic (Maxfield & Babbie, 2011:06). The study was non-empirical because it addressed a real-world problem and will employ secondary data in the form of a literature review. The goal of this study was to analyse the situation and propose or recommend solutions to the identified problem (Bolton, 2016:104). The study question was addressed using qualitative research approaches. The data needed for this investigation were qualitative in nature. Qualitative research typically begins with a document examination to gather information. According to Gordhan (2014:26), a qualitative approach is subjective, value laden, biased and inductive rather than deductive. Qualitative research allows researchers to obtain fresh insights into a phenomenon while also evaluating the effectiveness of current techniques (Kathryn, 2017:19). A qualitative research approach was most suited to the study's aim and purpose, which required the collection of detailed material in order to explore and comprehend the governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African Communities.

Data on perpetrators' methods of tender fraud were gathered from a variety of sources, including relevant national and international literature. Documentary sources were analyses, and a theory based on "an analysis of the governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African Communities " was established.

CONCEPTUAL AND THEORETICAL FRAMEWORK

The servant leadership style is currently a concept that is becoming more and more popular in leadership studies. It is viewed as a holistic approach to work, a sense of communities, and power sharing in leadership decision-making (Gomez, 2022:32). Theoretically, servant leadership is considered in the framework of New Public Management

(NPM) and New Public Service (NPS) paradigm, according to Awasthi and Walumbwa (2023:17). They emphasised that servant leadership is closer to the future of public service, implying that servant leadership in government upholds democratic citizenship norms and acknowledges the significance of communities and civic participation. Therefore, the New Public Service concept is supported by the servant leadership model.

RESULT ANALYSIS AND DISCUSSION

In many developed countries, servant leadership principles and values have been applied to support various social change and communities development initiatives. It has made significant inroads in various socio-economic sectors, including the field of health and education on how medical practitioners, educators and administrators interact with people, creating more positive and conducive environments (Ellahi *et al.*, 2022:12). In Africa there is a wide variety of leadership philosophies that are shaped by a complex web of socio-political, cultural, and historical influences. Africa is a large and diverse continent with 54 nations, each with distinct leadership traditions and practices. However, significant common patterns and historical influences can be found in African leadership styles today. Therefore, it's critical to recognize that Africa is not a homogenous region and that different nations' leadership philosophies might differ substantially from one another. Leadership philosophies vary greatly across the continent due to elements including historical occurrences, cultural variety, and the level of economic development, which play crucial roles in shaping leadership styles across the continent. Leadership philosophies may also change throughout time in reaction to shifting political, social, and economic forces. Unfortunately, despite the wave of servant or democratic leadership style in Africa, until today many countries are still experiencing a lifetime history of authoritarian leadership style, where leaders are exerting a strong control and authority over their citizens (Sackey, 2021:18).

To Identify the Nature and Extent of Governance and Public Leadership

Governance, in its essence, serves as the compass that guides organizations toward proper conduct and sustainable success. While it is sometimes seen as a framework for control and rule adherence, it goes beyond that, encompassing principles that promote effective resource utilization and equitable treatment of stakeholders. In this article, into the nature of governance, focusing on the principles outlined by the Organization for Economic Co-operation and Development (OECD) and exploring its role in steering organizations towards their strategic objectives.

Governance and leadership are closely related but also different. Different definitions and concepts of governance and leadership exist. Here, governance may be broadly defined as “the traditions and institutions by which authority in a country is exercised”, leadership itself is the act of exercising that authority. South African and African communities shall argue later that both governance and leadership are so intricately related that one circumscribes the other.

The Core Principles of Corporate Governance

The OECD has laid out a set of fundamental principles that constitute the backbone of corporate governance. These principles are designed to ensure that businesses operate in a manner that fosters transparency, accountability, and equitable treatment. Let's delve into these principles to understand the nature of governance more deeply:

- **Equitable Treatment of Shareholders:** At the heart of corporate governance is the fair treatment of shareholders. This principle emphasizes that shareholders, regardless of their size or influence, should have their rights respected and protected. It is the bedrock upon which trust in an organization is built.
- **Disclosure and Transparency:** Transparency is a cornerstone of good governance. Organizations must provide accurate and timely information about their financial performance, ownership, and governance structures. This transparency not only builds trust but also empowers stakeholders to make informed decisions.
- **Responsibilities of the Board:** The board of directors plays a pivotal role in governance. They are entrusted with the task of overseeing the organization's strategic direction and ensuring its ethical and legal compliance. The board's fiduciary duty lies not just with the company but also extends to its shareholders.
- **Strategic Guidance:** Governance is not just about maintaining the status quo; it's about providing strategic direction. Effective governance involves the board reviewing and guiding the corporate strategy, aligning it with the organization's long-term goals and values.

- **Monitoring Management:** The board serves as a watchdog, ensuring that management’s actions are in line with the organization’s objectives. Through regular evaluations and monitoring, governance helps mitigate risks and ensures that the company is on the right track.
- **Board Accountability:** Accountability is a central tenet of governance. The board is accountable to both the company and its shareholders. This means that they must answer for their decisions and actions, fostering a culture of responsibility.
- **The Traditional View of Governance**
To gain a deeper understanding of governance, Communities’ can turn to the OECD’s definition: “the system by which business corporations are directed and controlled.” This definition highlights that governance is not just about isolated decisions but is a systemic approach to managing an organization. It delineates the distribution of rights and responsibilities among various participants within the corporation.

Furthermore, the OECD definition emphasizes that governance goes beyond setting objectives; it also encompasses the means to attain those objectives and the mechanisms for monitoring performance. In essence, governance provides the structure and framework that helps organizations navigate their path to success while adhering to ethical, legal, and responsible practices.

Six Aggregate Indicators of Good Governance

Based on a long-standing research program of the World Bank, the Worldwide Governance Indicators capture six key dimensions of governance (Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption) between 1996 and present. They measure the quality of governance in over 200 countries, based on close to 40 data sources produced by over 30 organizations worldwide and are updated annually since 2002.

The governance indicators contribute to the growing non-empirical research of governance which have provided activists and reformers worldwide with advocacy tools for policy reform and monitoring. The indicators, and the underlying data behind them, are part of the current research and opinions that have reinforced the experiences and observations of reform-minded individuals in government, civil society, and the private sector, that good governance is key for development (Adu & Okeke, 2022:43). Their growing recognition of the link between good governance and successful development, as empirical evidence suggests, has stimulated demand for monitoring the quality of governance across countries and within individual countries over time. Virtually all of the individual data sources underlying the aggregate indicators are, along with the aggregate indicators themselves, publicly available.

Figure 1: Six Aggregate Indicators of Good Governance

SIX AGGREGATE INDICATORS OF GOOD GOVERNANCE

(i) Voice and Accountability:

This includes a number of indicators measuring various aspects of the political process, civil liberties and political rights. They measure the extent to which citizens of a country are able to participate in the selection of governments, and also measure the independence of the media.

(ii) Political Stability and Absence of Violence

This combines many indicators measuring perceptions of the likelihood that the government in poCommunities’ r will be destabilized or overthrown by possibly unconstitutional and/or violent means--- including domestic violence and terrorism. The higher the uncertainties faced by the political process the more likely the quality of governance is compromised.

(iii) Government Effectiveness

This measures the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government’s commitment to policies. Emphasis here is on ‘inputs’ required for the government to be able to produce and implement good policies and deliver public goods.

(iv) Regulatory Quality or Soundness of Policies

This focuses on the soundness of policies pursued by government. It measures the extent of market unfriendly policies such as price controls, inadequate bank supervision, regulatory burdens imposed on foreign trade (customs and ports regimes) and business development (cost of doing business), soundness of the macroeconomic policies (fiscal and monetary policies); etc.

(v) Rule of Law

Measures the extent to which agents have confidence in and abide by the rules of society. The indicators here measure the success of a nation in developing an environment in which fair and predictable rules form the basis for economic and social interactions, and crucially, the extent to which property rights are protected. Indicators here include perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts.

(vi) Control of Corruption

Indicators here measure the perceptions of corruption.

Figure 2: Eight Steps for Transformative Leadership

EIGHT STEPS FOR TRANSFORMATIVE LEADERSHIP

1. Establishing a Sense of Urgency:

Examining market competitive realities

Identifying and discussing crises, potential crises, or major opportunities

2. Forming a Powerful Guiding Coalition

Assembling a group with enough power to lead the change effort

Encouraging the group to work together as a team

3. Creating a Vision

Creating a vision to help direct the change effort

Developing strategies for achieving that vision

4. Communicating the Vision

Using every vehicle possible to communicate the new vision and strategies

Teaching new behaviors by the example of the guiding coalition

5. Empowering Others to Act on the Vision

Getting rid of obstacles to change

Changing systems or structures that seriously undermine the vision

Encouraging risk taking and nontraditional ideas, activities, and actions

6. Planning for and Creating Short-Term Wins

Planning for Visible performance improvements

Creating those improvements

Recognizing and rewarding employees involved in the improvements

7. Consolidating improvements and Producing Still More Change

Using increased credibility to change systems, structures, and policies that don't fit the vision

Hiring, promoting, and developing employees who can implement the vision
Reinvigorating the process with new projects, themes, and change agents

8. Institutionalizing New Approaches

Articulating the connections between the new behaviors and corporate success

Developing the means to ensure leadership development and succession

Ethical leadership, service orientation, sustainable development, accountability, transparency, prioritizing the needs and well-being of others, etc., are among several key components of the main frame of servant leadership that can engender effective good governance and sustainable public service delivery in Africa. It's significant to recognise that Africa still remains poor and fragile in terms of strengthening public administration, good governance, implementing public policies and ensuring sustainable public service delivery. It's also unimaginable to observe the best practice of servant leadership style in a poor and fragile public administration and public policy environment. Africa is a diverse continent with a wide range of cultures, traditions, and social norms, so the effectiveness of servant

leadership can vary from one country to another. While Servant leadership can be mirrored as a valuable approach for effective good governance and sustainable public service delivery in developed countries, most African countries are facing several challenges when endeavouring to practice or implement servant leadership style. Until today, many African citizens are experiencing a lifetime history of authoritarian leadership style, where leaders are exerting a strong control and authority over their inhabitants. Unfortunately, servant leadership, with its emphasis on collaboration and empowerment of citizens, most often clashes with authoritarian and traditional norms, making it difficult for emerging democratic leaders to adopt and practice efficiently this approach. As the authoritarian leadership and traditions influence strongly political and socio-economic governance in Africa, emerging democratic leaders with limited resources including financial and human resources are facing challenges to implement servant leadership style and to address the basic needs of their followers.

Figure 3: Potential Framework of Servant Leadership Style to Support and Promote Good Governance and Sustainable Public Service Delivery in Africa



Source: Adapted from Awasthi and Walumbwa (2023) and Hai and Van (2021)

African citizens social and economic interests: In addition, servant leaders in Africa should have a wide focus that extends beyond themselves, engage followers deeply, and have a sincere concern for the communities' welfare. The next section proposes a framework that advocates for a commitment to democratic values and that encourages leaders to prioritize the needs and well-being of their constituents.

A feasible framework for servant leadership practices in Africa is shown in Figure 3. With the support of democratic values, this framework seeks to promote an atmosphere where the use of servant leadership is not only welcomed but also expected to have an impact on people in positions of authority. African nations can strive toward more efficient and servant-oriented governance by holding leaders accountable to these ideals. It's critical to acknowledge that because Africa is a diverse continent with a vast range of traditions, practices, and social conventions, different African nations will respond differently to this framework's endorsement of servant leadership. As previously stated, servant leadership is a style of leadership that prioritizes meeting the needs of others and the welfare of followers (Kenton, 2023:34). Therefore, cultural, and environmental considerations will also affect the

efficacy of any servant leadership paradigm in Africa. For the purpose of promoting good governance, best practices in policy, and sustainable public service delivery in Africa, it is therefore essential to comprehend the values or principles that characterize servant leadership, as shown in Figure 3. According to Awasthi and Walumbwa (2023:24) and Hai and Van (2021:88), a reflection of Figure 3, the following factors will need to be taken into account for the servant leadership model to be effective in Africa:

Rule of Law: Ensuring that leaders are held to the same legal standards as the general public is a result of a strong commitment to the rule of law. This promotes servant leadership and deters the misuse of authority.

Cultural Context: African civilizations or culture frequently emphasize interpersonal relationships, communities, and collectivism highly. Leaders are expected to be role models who are concerned about the welfare of their followers in many African nations. In line with these cultural ideals, servant leadership has the potential to effectively promote collaboration and trust.

Traditional Leadership: Due to their responsibility for the well-being of their people, traditional leaders in many African countries have traditionally shown traits of a servant. These conventional values of leadership can be aligned with servant leadership.

Modern Challenges: Africa is confronted with a multitude of contemporary difficulties, such as social injustice, economic inequality, and political instability. By fostering inclusivity and trust, servant leadership which places a strong emphasis on empathy and helping others can be a useful strategy for overcoming these obstacles.

Leadership Development: The degree of awareness and training that African leaders have access to may also have an impact on how well servant leadership works there. Programs for developing leaders that support the concepts of servant leadership have the potential to increase their efficacy.

Contextual Adaptation: Although the concepts of servant leadership are universal, effective leadership frequently necessitates contextual adaptation. African leaders may need to modify their servant leadership style to accommodate the particular difficulties and cultural mores of their areas.

Communication and Listening: Proficient communicators and attentive listeners make up effective servant leaders. These abilities can be especially useful in Africa, where it's critical to comprehend the wants and worries of many populations. Openness and transparency in communication. To create a culture of trust and integrity, ethical leaders need to be outstanding communicators. Issues may remain unreported for a very long period in the absence of communication. This could incite animosity and mistrust within organization. Honest and transparent communication with all members of the organization is the primary goal of ethical leaders.

Ethical Leadership: A dedication to the greater good and moral behavior are key components of servant leadership. Serving as a servant leader can provide an alternate strategy that upholds honesty and openness in Africa, a continent where corruption and unethical leadership have been problems in certain nations. Ethical leadership encourage leaders to uphold moral principles such as integrity, honesty, and dedication to the common good. Leaders should follow a code of behaviour that prioritizes service over self-interest and set an example for others to follow. Ethical leadership is crucial for effective governance and public service delivery. It involves leaders who act with integrity, honesty, and transparency, and who uphold ethical standards in their decision-making.

Accountability: It is important to hold leaders responsible for their choices and actions. This entails transparency and financial accountability in addition to accountability for how their policies affect the people they serve.

Transparency: Building confidence in leadership can be facilitated by open and transparent government procedures. To make sure that decision-makers are acting in the best interests of the people, transparency in resource management, budgetary allocation, and decision-making is essential.

Inclusivity: Encourage inclusion in governance by making sure that all opinions and viewpoints—especially those of underrepresented groups—are heard. Leaders are encouraged by inclusivity to take into account the variety of requirements of their constituents.

Free and Fair Elections: Democratic elections provide the people the power to select their own leaders. Ensuring free and fair elections is crucial for advancing servant leadership because it enables leaders to be selected on the basis of their qualifications and dedication to the public good.

Civil Liberties: To hold leaders responsible and make sure they are acting in the public good, it is crucial to defend civil rights including the freedom of expression, assembly, and the press.

Decentralization: Since local governments and communities are more accustomed to dealing with the demands and difficulties of their communities, giving them more authority can enable leaders at all levels to serve their residents more effectively.

Public Participation: Promote public participation in the decision-making process. To make sure that their actions and policies reflect the interests of the people, leaders should actively seek out opinions and feedback from the general population.

Education and Training: Provide training and leadership development initiatives that prioritize servant leadership tenets. Urge aspiring and established leaders to study these ideas and implement them in their positions.

Civil Society and Independent Media: Encourage the development of a robust civil society and independent media that can serve as watchdogs by holding authorities responsible and giving the public a forum for scrutiny.

Promote Economic and Social Development: It is imperative for leaders to prioritize policies that foster economic and social growth, thereby mitigating poverty and enhancing the welfare of their constituents.

In order to foster democratic principles and foster an atmosphere where servant leaders may be held accountable for their actions and work toward more efficient and servant-oriented governance, many other criteria that are not on this list may be helpful.

The aforementioned framework can be utilized to foster servant leadership in African contexts, taking cultural values into particular consideration and tailoring it to local demands, even though there isn't a single leadership style that works for all of Africa. It's critical that African leaders understand how their environment is evolving. Consequently, it is important to take into account how cultures and traditional values affect communities' quality of life. Africa's leaders must leverage information technology to increase the quantity of essential public services that are easily, affordably, and successfully supplied to the general people. It should be acknowledged that effective leadership entails embracing and adjusting to technology advancements such as artificial intelligence, big data, and e-governance. These advancements are essential for enhancing public administration, public policy, good governance, and public service delivery.

The Concept of Ubuntu and Principle(s) of Good Governance in the Context of African Perspective

The concept of Ubuntu can be defined as humanness, a pervasive spirit of caring and communities, harmony and respect and responsiveness that individuals and groups display for one another. Ubuntu is the foundation for the basic values that manifest themselves in the ways African people think and behave toward each other and everyone else they encounter (Sulamoyo, 2010:14). The principle of ubuntu is a common practical value encompass within the doctrine of good governance. Many scholars and researchers believe that successful institutions and organisations must be built around the Ubuntu philosophy if managers and leaders are to promote conducive work environment characterised by good governance (Brack *et al.* (2003:319).

The concept of Ubuntu and the principle of governance is intertwined. The principles of good governance are visible if the spirit of ubuntu is entrenched with the individual, group or institutions. Ubuntu is a call to serve, contribute, and connect with others. This promotes a sense of humanity, which drives the concept of tolerance and compassion, resulting in outcomes like value creation. Ubuntu is an African solution that leaders of all types, whether political, business, corporate, or communities, may use to help construct well-governed organizations and institutions (Dube, 2022:65). Ubuntu is a framework for social change that promote political ideals and shape societal needs that lead to public policy formulation recommended to achieve good governance in the following ways:

- Leaders should use their popular mandate to utilise state resources more fully to bring the new order into being, investing in people and enhancing their power to exercise their right to govern;
- Develop a new institutional framework to destroy the old political culture and create a new one built on Ubuntu principles;
- Monitor recurring and new patterns of political behaviour and the operation of political institutions; and
- Plan political change to transform current patterns of life and of behaviour (Nkondo 2007:99).

Murithi (2009:231) posits that the concept of Ubuntu and the principle of good governance are compatible and complementary in that that it allows all citizens to participate publicly in matters relating to their societies, leadership, governments, and any other issues that protect human rights and that enable the adoption of transparent and accountable forms of leadership. Although Ubuntu literally means African humanism, it shares values of good governance with the human race in general. Values such as respect, dignity, empathy, co-operation and harmony between members of society are not exclusively African but comprise the human race as a whole (Nzimakwe, 2014:39).

Evidence of Challenges Facing Emerging Democratic Leaders in Africa

Numerous African countries and leaders are experiencing historical and forced political and socio-economic instabilities, and military takeovers on multiple occasions over the years, resulting in a range of repeated distresses. African regions such as ECOWAS, Central and Eastern African regions are undergoing successive situations of insecurities and socio-economic uncertainties. Gumede (2023:33) indicates that many African countries, including DR Congo, Mali, Burkina Faso, Central Republic, Niger, Gabon, etc., have been confronting critical and repeated situations of political and social unrest where servant leadership style seems to be absent in terms of public administration practice and public service delivery. In addition, Gumede (2023) emphasised that in many African nations, such as Gabon, Guinea, and most recently, Zimbabwe, multiparty elections are rigged by the ruling party or leader in order to retain power by a mix of persecution of opponents and patronage of supporters. These despotic, dishonest, and inept dictators and administrations that grip onto power in Africa frequently can only be overthrown whether by strong and sustainable actions from democratic leaders, military coups, large-scale upheavals akin to the Arab Spring, or the formation of multiparty coalitions by opposition parties in support of large-scale civil movements. According to Amusan *et al.* (2017:23), challenges facing emerging democratic leaders in Africa are many. Figure 1 illustrates some evidence of challenges facing emerging democratic leaders in Africa.

The Challenges Facing Servant Leadership or Emerging Democratic Leaders in Africa

Inadequate resources and capacity: Limited resources and capacity can hinder the ability of emerging democratic leaders to respond effectively to complex challenges. Insufficient access to funding, technology, trained personnel, and infrastructure can significantly impede their efforts to implement democratic policies and address pressing issues.

Historical legacy: Many African countries still grapple with the consequences of colonialism and historical legacies, including divisive borders, ethnic tensions, and unequal distribution of resources. Overcoming these legacies requires skilful leadership and a commitment to inclusive governance.

External interference: Emerging democratic leaders in Africa often face external interference in their governance from foreign powers, with competing agendas. These interferences can undermine the sovereignty of emerging democracies and create challenges for leaders to implement their policies and priorities.

Weak institutional infrastructure: Many emerging democracies in Africa lack strong institutions, including a robust judicial system, independent media, and a functioning civil service. This hinders the effective implementation of democratic processes and allows for corruption and abuse of power.

Political instability: Africa has witnessed numerous instances of political instability, including coups, civil wars, and violent conflicts. These challenges undermine the consolidation of democratic systems and create hurdles for emerging leaders to govern effectively.

Evidence of Challenges Facing Emerging Democratic Leaders in Africa

Ethnic and tribal tensions: Many African countries are diverse, with multiple ethnic and tribal groups. These divisions can fuel political unrest, as leaders may exploit these differences for their own gain. Managing such tensions and fostering inclusivity is a significant challenge for emerging democratic leaders.

Lack of trust in political elites: Prevailing distrust among citizens towards political elites poses a significant challenge for emerging leaders. Often, these leaders must overcome scepticism and demonstrate their commitment to democratic principles and the welfare of their constituents.

Limited access to education and information: Emerging democratic leaders face the challenge of promoting informed citizen participation when large portions of the population lack access to quality education and accurate information. This can impede efforts to build an engaged and politically informed citizenry.

Gender inequality: Gender disparities remain a significant challenge across Africa. Emerging democracies must confront issues of gender discrimination and empower women to participate equally in politics and decision-making processes. Overcoming deeply ingrained biases requires sustained efforts from leaders to ensure gender parity.

Economic struggles: Many African democracies face significant economic challenges, including high poverty rates, unemployment, and widespread corruption. Economic development is crucial for stability and progress, but leaders often face pressure to fulfil immediate needs, which can undermine long-term socio-economic growth.

Lack of democracy: Examples of lack of democracy and military coups in Africa include countries like Mali disputed election outcome, Guinea's third presidential term dispute, Gabon presidential monarchy, etc.

According to Gumede (2023:23), to garner support from the public, particularly the younger generation, the majority of military coup leaders have asserted that they seek to reinstate “democracy (establish servant/democratic leadership style)”, eradicate corruption, or establish security in areas where extremist movements have caused unrest. Some of the leaders of military coups in Mali, Burkina Faso, and Niger have also said they wish to bring about “decolonization,” accusing the former colonial power of France of continuing to impact the economic suffering of multitude citizens. Furthermore, Gumede (2023:24) and Amusan *et al.* (2017:14) avowed that colonial powers are still violently and forcefully impacting models of leadership in the African continent and are causing costly political, climatical and socio-economic deterioration and devastation.

METHODS OF DATA ANALYSIS

De Vos *et al.* (2011:252); Leedy and Ormrod (2016:32) point out that after having collected the data, it must be prepared for data entry. According to De Vos *et al.* (2011:252), data preparation includes checking and editing collected data and eventually coding it. Dantzker and Hunter (2012:146) state that after the data has been entered, analysis must begin, and Atlas-ti software was used for that purpose. It is a computer program used in qualitative research data analysis (Lamont & Boduszynski, 2020:101). The researcher attended a one-day training session on qualitative study analysis at the University of South Africa. The challenge experienced was that the one-day workshop was not enough. However, the researcher used the You-Tube in order to gain extensive knowledge on how to use the software. Five themes Communities' re identified, with some having sub-themes.

PRELIMINARY LITERATURE REVIEW

The preceding section(s) provided the abstract premises in terms of which the pre-data collection processes and stages of the study were theoretically explained. On the other hand, this research presents the actual non-empirical (practical or secondary) data or statements derived from the documentary analysis or case files to the questions posed by the researcher during data collection sessions. In that regard, the criticality of the present article is underpinned by the extent to which it serves as the most pivotal reference point for the much-needed practical evidence of the study in relation to both the research problem and aim of the study. By implication, the evidence of the study provides extensive details concerning the sampled documentary analysis or case files profound perspectives, knowledge, perceptions, experiences, and thoughts regarding the investigated phenomenon i.e., governance and public leadership: corruption, social security and ethics/ubuntu (Vithal & Jansen, 2019:65; Anderson, 2019: 141; Creswell & Poth, 2018:47).

This research presents the interpretation of the research findings. The information obtained from the documentary analysis or case files were explored and presented by means of the emerging themes in the previous article. In order to present a detailed discussion of Governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African communities. Findings are results discovered during the research. The aim of non-empirical data collection with representatives of the biometric systems providers and experts was to learn more about the current state of biometrics systems in the South African Banking Industry and to explore opinions about attitudes and factors influencing adoption/deployment of biometrics systems in the banking sector. In this research, to express their experiences, opinions and domain knowledge about the implementation of corruption, social security and ethics/ubuntu in the South African and African communities. Research findings are the writer's suggestions to the reader as to the actions that should be taken to solve the problem that was studied. The conclusion was a statement of reasoning made by a researcher after a thorough investigation.

This article summarised the findings of the study and mapped out the findings in light of the literature review that emerged in the process of resolving the identified problem to comply with the passage above. To conclude this study, article three lures from several findings emanating from the analyses of the preceding articles and the revelations

that various researchers made on the topic. This research aims to Governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African communities was answered.

Following the documentary analysis, the article then proceeds with a concerted presentation of discussions emanating from the 35-documentary analysis or case files viewpoints, knowledge, thoughts, and understanding regarding the investigated phenomenon of corruption, social security and ethics/ubuntu in the South African and African communities jurisdiction. It was from these perspectives that the evidence of the study was thematically established in the context of both the research objectives and research questions. It is important to also note that these themes serving as the cardinal foundation of the study evidence emerged from the analysed and interpreted content of each documentary analysis or case files as proof or practical evidence of the study's various claims in relation to the core aspects of the research topic (Creswell, 2020:11; Kumar, 2020:66).

RESEARCH FINDINGS

The preceding article provided the abstract premises in terms of which the pre-data collection processes and stages of the study were theoretically explained. On the other hand, the current article presents the actual non-empirical (practical or secondary) data or statements derived from the documentary analysis or case files to the questions posed by the researcher during data collection sessions. In that regard, the criticality of the present article is underpinned by the extent to which it serves as the most pivotal reference point for the much-needed practical evidence of the study in relation to both the research problem and aim of the study. By implication, the evidence of the study provides extensive details concerning the sampled documentary Banking Industry between 2017 and 2022 (Vithal & Jansen, 2019:65; Anderson, 2019: 141; Creswell & Poth, 2018:47). analysis or case files profound perspectives, knowledge, perceptions, experiences, and thoughts regarding the investigated phenomenon i.e., Governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African communities.

This article presents the interpretation of the research findings. The information obtained from the documentary analysis or case files are explored and presented by means of the emerging themes in the previous article. In order to present a detailed discussion of Governance and public leadership: corruption, social security and ethics/ubuntu in the South African and African communities. Findings are the results discovered during the research. The aim of non-empirical data collection with representatives of the biometric systems providers and experts was to learn more about the current state of biometrics systems in the South African Banking Industry and to explore opinions about attitudes and factors influencing adoption/deployment of biometrics systems in the banking sector. In this research, to express their experiences, opinions, and domain knowledge about the implementation of corruption, social security and ethics/ubuntu in the South African and African communities.

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RECOMMENDATIONS

There are notable examples of servant leadership in Africa. Unfortunately, its full implementation across the continent still faces challenges. This paper examined works of literature focussing on servant leadership style as a key to effective good governance and sustainable public service delivery in Africa. Most studies have indicated that servant leadership is a vital framework that can ensure and facilitate the public service values of equity, integrity, and service and that it can create value for the communities. This paper reinforces the idea that citizens are active partners in public service provisions, and leaders should facilitate the active role of citizens in partnering with governments.

In Africa, servant leadership is required to emerge as one such mechanism that can facilitate governments to actively engage with the communities and other stakeholders. The broader implication of this paper is in redesigning the leadership styles for Africa that could facilitate democratic leadership development, good governance, policy best practice and sustainable public service delivery in the continent. Unfortunately, several studies acknowledged that many African citizens are still experiencing and paying the cost of traditional leadership, colonial legacy, authoritarianism, ethnic and tribal influences, and military leadership. Consequently, African societies remain subjected to the administrative structures and leadership models imposed by colonial powers that are supporting anti-democratic leaders. This situation has resulted in a gulf between conventional leadership and Western-style administration, fuelling political unrest in certain countries.

Numerous battles and civil wars that are occurring in Africa are mostly occasioned by people that are opposing inherited colonial leadership and authoritarian leadership where some leaders are utilizing force to hold onto power. Provide the forensic investigators and banking subject matter specialists with regular opportunities for in-service training more often to acquire knowledge and skills. Such training should entail:

- Control and handling of firearms, alternatives to deadly force, and safe responses to crises;
- De-escalation strategies involving use of minimum force and taking precautionary measures when responding to active crime scams;
- Inculcation of self-control and self-discipline for dignified behaviour that does not bring discredit to themselves and their organization on, and off duty, and also being discreet in their social behaviour and public appearances;
- Initiate processes for amending the constitution to include implementation of harsher sentences, such as life imprisonment for mobile fraud to deter reoccurrence.
- Review internal policies and procedures to ensure the implementation of proper safety measures and procedures that will increase the safety of the forensic investigators and banking subject matter specialists;
- Engage members of the communities for restoration of trust and confidence among all the relevant stakeholders by: - Hosting public awareness campaigns and educational road shows through social media, radio and television to eliminate hostility postures between communities, the forensic investigators and banking subject matter specialists.

CONCLUSION

Therefore, understand the sustained effect of servant leadership in government could be a key to effective good governance and sustainable public service delivery in Africa. This paper demonstrates sufficiently the benefits of adopting and applying servant leadership as a framework for African leaders' commitment to democratic values. A clear vision and mission statement are key components of effective governance and public service delivery. African leaders need to have a forward-thinking vision for their countries or organizations and establish clear goals and objectives to guide their actions. Servant leaders understand the importance of building strong relationships with stakeholders. They engage with citizens, civil society organizations, and other relevant actors to develop trust, foster dialogue, and ensure effective collaboration. It is therefore critical that research on servant leadership development should continue to be conducted in a variety of African state with the aim of ensuring effective good governance, policy best practices, and sustainable public service delivery. By adopting this servant leadership style, African countries can strengthen their governance systems and enhance public service delivery to effectively meet the needs and aspirations of their citizens. If well adopted and put into application, servant leadership style could effectively promote good governance, sustainable public service delivery and steer political, public policy, and socio-economic reforms in the African continent.

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BIRTH LIMIT IN AFRICA – POSSIBLE SOLUTION TO STAGNATING ECONOMIC DEVELOPMENT WHICH HINDERS THE ENFORCEMENT OF SOCIO-ECONOMIC RIGHTS: SOUTH AFRICAN PERSPECTIVE

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ABSTRACT

This paper investigates the possible implementation of birth limit in Africa, motivated by several challenges that Africa is facing, primarily poverty. The economic development is stagnating and that results in failure by many African states to enforce socio-economic rights. Failure to enforce socio-economic rights leave many Africans under immense socio-economic challenges. Africans tend to even resort to extremist measures. In the streets of several cities of Africa people can be seen begging on the roads with children. Good Samaritans often give them food and/or money. Several rights of the children are infringed in this regard, for instance, the children do not go to school, they do not have proper upbringing like playing with other children and the likes. We can even extend this to the right around dignity. Further, security of these children is compromised as they are exposed to dangers on the road and/or the areas they beg from. This paper looks at socio-economic rights, both at global and regional level (Africa). The paper analyses socio-economic rights protected by various treaties. The stance of African counties on the protection and the enforcement of socio-economic rights. This paper shows that both at global and regional level socio-economic rights are protected. In fact, all the African countries are part of the African Charter which protects several socio-economic rights. This paper weigh limiting birth in Africa and the several rights that are currently being infringed, especially of the children. This paper investigates the possibility of whether birth limit, if implemented can address the socio-economic crisis in Africa.

Keywords: Africa, birth rate, socio-economic rights, economic development, enforcement.

INTRODUCTION

Birth control is one of the many ways in Which Africa can embark on towards the gradual reduction of number of people facing socio-economic challenges. One of the countries that successfully implemented this is China and some people argued that it worked. We see in Africa that many countries fail to enforce socio-economic rights and as a result of poor economic development.

Socio-economic rights are closely related to development and eradication of poverty. It must be elaborated that socio-economic rights comprise of economic, social and cultural rights. Economic rights are ‘essentially empowerments rights, they enable individuals to sustain a livelihood and achieve independence’. As per the International Covenant on Economic, Social and Cultural Rights (hereinafter ICESCR), such rights include the right to work, the right to just and favourable conditions of work, the right to form and join trade unions, and the right to social security including social insurance. Social rights are ‘rights whose purpose is to guarantee the basic means of subsistence, survival and development’. Such rights include the right to an adequate standard of living, including adequate food, clothing and housing, and to the continuous improvement of living conditions, the right to the highest attainable standard of physical and mental health and the right to family assistance.

Cultural rights ‘essentially protect and promote participation in certain forms of activities that are crucial to one’s individual or collective identity’. Such rights are the right of everyone to take part in cultural life, enjoy the

benefits of scientific progress and its applications and benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he or she is the author.

In this paper we will be looking at birth limit and the socio-economic rights. The paper is divided into four (4) categories, birth limit versus the Africa Charter and the South African Constitution; socio-economic rights enforcement at the global level; socio-economic rights enforcement at the regional level and economic commission for Africa.

BIRTH LIMIT VERSUS THE AFRICAN CHARTER AND THE SOUTH AFRICAN CONSTITUTION

This paper makes reference to China as for many years China had similar arrangements. Some writers have indicated that the China strategy was different in urban and rural areas, and implementation varied from place to place depending on local conditions. The policy had been beneficial in terms of curbing population growth, aiding economic growth, and improving the health and welfare of women and children.

African Charter, which can be seen as the ‘Constitution’ of Africa on one hand do have a provision which allows for the limitation of rights. Article 27(2) of the African Charter indicates that ‘the rights and freedoms of each individual shall be exercised with due regard to the rights of others, collective security, morality and common interest’. One the other hand, the South Africa Constitution has a specific limitation of rights clause, found in section 36(1), which indicates that ‘The rights in the Bill of Rights may be limited only in terms of law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into account all relevant factors, including— (a) the nature of the right; (b) the importance of the purpose of the limitation; (c) the nature and extent of the limitation; (d) the relation between the limitation and its purpose; and (e) less restrictive means to achieve the purpose’.

Therefore, it can be submitted that rights can be limited, in the form of birth limit to protect the ‘greater good’. Birth limit must be weighed against the several rights which are being infringed at the moment. Most importantly those rights of the children, for instance, the children who are often seen begging on the roads with their guardians do not go to school, they do not have proper upbringing like playing with other children and the likes. We can even extend this to the right around dignity that such right is taken away from them. Further, security of these children is compromised as they are exposed to dangers on the road and/or the areas they beg from.

SOCIO-ECONOMIC RIGHTS ENFORCEMENT AT THE GLOBAL LEVEL

At the global level, the protection of socio-economic rights lies with the UN. One of the purposes of the UN can be found in the UN Charter and it is recorded as follows: ‘to achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion’. With regards to this, it is then noted that socio-economic rights are recognised internationally or at the global level. It bears mentioning that currently, all African states, with the exception of South Sudan, are party to the UN. This is significant considering the fact that the UN only had four member states from Africa when it was formed in 1945, as they were at the time, the only independent states.

The responsibility for the protection of human rights under the UN Charter is assigned to Economic and Social Council (hereinafter ECOSOC), which has the mandate to conduct studies and make recommendations. The General Assembly has the responsibility of ‘promoting international co-operation in the economic, social, cultural, educational, and health fields, and assisting in the realisation of human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion’.

The formation of the UN in 1945 and the establishment of International Human Rights serves as indication the human rights are not solely the responsibility of each nation but that all nations are collectively and individually responsible for human rights.

The following UN specialized agencies and programmes play a significant role in protecting and promoting human rights in Africa, namely: (1) the Office of the High Commissioner for Human Rights (hereinafter OHCHR) – which is at the forefront of protecting and promoting human rights in the African continent; (2) the Secretariat from where the UN’s human rights efforts are coordinated; (3) International Labour Organization (ILO); (4) the Food and Agriculture Organization (FAO); (5) the UN Educational, Scientific and Cultural Organization (UNESCO); and (6) the World Health Organization (WHO). The above were enlisted or considered out of many UN Specialised agencies and programmes due to their ‘clear ‘legal’ mandate with respect to human rights, either in norm-setting or norm-implementation’ and they all derive their existence from the UN Charter and function under the UN.

The OHCHR is the leading UN entity on human rights, it is entrusted with a unique mandate to promote and protect all human rights for all people. The OHCHR provides assistance in the form of technical expertise and capacity-development in order to support the implementation of international human rights standards on the ground.

The Structure of the UN

The UN has six main organs which are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat.

The United Nations Treaties

The adoption of the UDHR in 1948 marked a turning point in the global recognition and protection of human rights. As noted, the UDHR does not show distinction between the rights, it is combination of civil and political rights, as well as economic, social and cultural rights. However, there is a distinction between the two, which was shown in the adoption of International Covenant on Civil and Political Rights (hereinafter ICCPR) and ICESCR by the UN. The rights contained in the ICCPR were appropriate to be implemented by courts, while the rights contained in the ICESCR were not. The enforcement or monitoring of implementation of the rights did not apply equally, the ICCPR received much attention while ICESCR did not, and in fact the ICCPR could be enforced via complaint procedures while ICESCR did not, until very recently, and it is believed that bifurcation of the UDHR contributed to this problem.

In addition, the Committee on Economic, Social and Cultural Rights (hereinafter CESCR) was only established very recently, this Committee is the one that monitors the implementation of ICESCR. The marginalisation of economic, social and cultural rights can be easily seen at the level of national constitutions, which regards these rights as not being justiciable.

It is important to know how international law views the legal obligations that arise from treaties. The Vienna Convention on the Law of Treaties in article 11, termed ‘[m]eans of expressing consent to be bound by a treaty’ states that ‘[t]he consent of a State to be bound by a treaty may be expressed by signature, exchange of instruments constituting a treaty, ratification, acceptance, approval or accession, or by any other means if so agreed.’

The International Covenant on Economic, Social and Cultural Rights

The ICESCR is the international treaty that protects socio-economic rights of all people. At the moment, almost all African states have ratified this treaty, with the exception of Botswana, Mozambique and South Sudan.

The Preamble of the ICESCR stipulates that:

‘[I]n accordance with the Universal Declaration of Human Rights, the ideal of free human beings enjoying freedom from fear and want can only be achieved if conditions are created whereby everyone may enjoy his economic, social and cultural rights.....the obligation of States under the Charter of the United Nations to promote universal respect for, and observance of, human rights and freedoms.....that the individual, having duties to other individuals and to the community to which he belongs, is under a responsibility to strive for the promotion and observance of the rights recognized in the present Covenant’.

The ICESCR protects a number of rights which include the right to an adequate standard of living, including adequate food, clothing and housing, the right to enjoy the 'highest attainable standard' of physical and mental health, the right of everyone to education, including free and compulsory primary education, and the right to take part in cultural life.

In addition, the ICESCR states that:

'Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures'.

Article 2(1) of the ICESCR indicates that:

'Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.'

States cannot rely on this article to delay the goal of progressive realisation of the socio-economic rights, the states need to take immediate action, in the form of deliberate, concrete, and targeted steps. The poverty, illiteracy and general underdevelopment proves that African states are failing to secure very important socio-economic rights for its nationals, and unfortunately most of Africa's population desperately need these rights to be enforced, as their living conditions are not adequate.

Special UN Treaties

The UN makes provision for special instruments for certain category of people or themes. These treaties are directed at individuals vulnerable to human rights violations. It is a known fact that UN makes provision for number of special instruments and/or treaties, however, this research will only examine those treaties that the researcher deems necessary and are aligned to this research. The special UN treaties are outlined below.

The International Convention on the Elimination of All Forms of Racial Discrimination

In terms of the International Convention on the Elimination of All Forms of Racial Discrimination (hereinafter ICERD): 'all Member States have pledged.....for the achievement of one of the purposes of the United Nations which is to promote and encourage universal respect for and observance of human rights and fundamental freedoms for all, without distinction as to race, sex, language or religion'. Out of 182 State Parties to the treaty, all African countries have ratified, to the exclusion of South Sudan.

This treaty amongst other rights, protect socio-economic rights, such as , the rights to work, to free choice of employment, to just and favourable conditions of work, to protection against unemployment, to equal pay for equal work, to just and favourable remuneration, the right to form and join trade unions, the right to housing, the right to public health, medical care, social security and social services, the right to education and training, and the right to equal participation in cultural activities.

The Convention on the Elimination of All Forms of Discrimination against Women

In terms of the Convention on the Elimination of All Forms of Discrimination against Women (hereinafter CEDAW): 'all human beings are born free and equal in dignity and rights and that everyone is entitled to all the rights and freedoms set forth therein, without distinction of any kind, including distinction based on sex.....Noting that the States Parties to the International Covenants on Human Rights have the obligation to ensure the equal rights of men and women to enjoy all economic, social, cultural, civil and political rights'.

Out of 189 State Parties to the treaty, all African countries have ratified, to with the exception of Somalia and Sudan. This treaty amongst other rights, protects socio-economic rights, such as the right to education, right to employment, right to health care, and other rights.

The Convention on the Rights of the Child

In terms of the Convention on the Rights of the Child (hereinafter CRC) ‘everyone is entitled to all the rights and freedoms set forth therein, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status ... childhood is entitled to special care and assistance.’

Out of 189 State Parties to the treaty, all African countries have ratified the treaty. In fact, all State Parties have ratified this treaty with the exception of the United States of America. The treaty, amongst other rights, protects socio-economic rights. These rights include: the right to health, right to social security, and right to adequate standard of living (including nutrition, clothing and housing, education and culture).

The Convention on the Rights of Persons with Disabilities

The Convention on the Rights of Persons with Disabilities (hereinafter CRPD) emphasises ‘the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedoms’.

Out of 181 State Parties to the treaty, all African countries have ratified the Treaty, with the exception of Botswana, Equatorial Guinea, Eritrea and South Sudan. This treaty, amongst other rights, protects socio-economic rights. These rights include, right to education, right to health, right to work and enjoyment, the right to an adequate standard of living, the right to social protection, and the right to participation in cultural life.

The International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families

In terms of the International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families (hereinafter CMW): ‘due regard shall be paid not only to labour needs and resources, but also to the social, economic, cultural and other needs of migrant workers and members of their families involved’.

Out of 55 State Parties to the treaty, only a handful of African countries have ratified this treaty and as such, the enforcement of this treaty is only on few countries. This treaty amongst other rights, protect socio-economic rights, such as right to education.

SOCIO-ECONOMIC RIGHTS ENFORCEMENT AT THE REGIONAL LEVEL

The AU is made up of 55 Member States, which represent all the countries on the African continent. It was on 11 July 2000 in Lome, Togo, where the AU was born out of the OAU. It was during the first Pan-African Congress in 1919 that human rights, particularly, socio-economic rights were recognised ‘be the right of every native child to learn to read and write his own language, and the language of the trustee nation at public expense’.

In 1981 when the attention was being shifted from colonialism and independence, *inter alia*, the OAU adopted a treaty, the African Charter. The African Charter covers (1) civil and political rights, (2) social, economic and cultural rights & (3) group rights and all three are subject to same mechanisms of enforcement.

At the regional level, the AU, has several objectives which include, as per the Constitutive Act, the acceleration of socio-economic integration of the continent and the promotion of sustainable development at the economic, social and cultural levels as well as the integration of African economies. These objectives provide

motivation for African countries to promote the integration of African economies. Further, the AU Constitutive Act gives a central mandate to promote and protect human rights, which includes socio-economic rights. The AU is guided by its vision of ‘an Integrated, Prosperous and Peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena’.

The work of the AU is implemented through several principal decision-making organs namely: the Assembly of Heads of State and Government; the Executive Council; the Permanent Representatives Committee (PRC); Specialised Technical Committees (STCs); the Peace and Security Council; and the African Union Commission. The AU structure promotes participation of African citizens and civil society through the Pan-African Parliament and the Economic, Social & Cultural Council (ECOSOCC).

The Structure and Organs of the African Union

The structure and organs of the AU consist of the Assembly of Heads of State and Government, the Executive Council, the Permanent Representatives Committee, the Peace and Security Council, Specialised Technical Committees, the African Union Commission, the New Partnership for Africa’s Development, the AU Foundation, the Financial Institutions, the judicial, human rights and legal organs, the Pan-African Parliament, the Economic, Social & Cultural Council, the African Peer Review Mechanism, the regional economic communities, and Specialised agencies and institutions.

The African Union Treaties

The preceding discussion has examined the relevant treaties at the international level. Within the African context, it is important to also consider the relevant treaties that deal with economic, social and cultural rights.

The African Charter on Human and Peoples’ Rights

The African Charter states that:

‘[E]njoyment of rights and freedoms also implies the performance of duties on the part of everyone.....it is henceforth essential to pay a particular attention to the right to development and that civil and political rights cannot be dissociated from economic, social and cultural rights in their conception as well as universality and that the satisfaction of economic, social and cultural rights is a guarantee for the enjoyment of civil and political rights’.

The African Charter covers, without drawing a line, three ‘generation’ of rights. First generation (civil and political) rights include: the right to equality before the law, the right to have one’s case heard, and the right to freely associate. Second generation (socio-economic) rights include: the right to property, the right to work under equitable and satisfactory conditions, the right to enjoy the best attainable state of physical and mental health, the right to education, and the protection of the family and cultural rights. Third generation (people or group) rights include: the right to generally satisfactory environment, and the right to international peace and security.

The African Charter only covers a limited number of socio-economic rights due to a ‘minimalist’ approach that was adopted during the drafting of the African Charter, which is generally about sparing young states from numerous but important obligations. The rights that were omitted in the final African Charter during the drafting and which are important are the right to social security, the right to an adequate standard of living, including ‘adequate food, clothing and housing, and the right to the continuous improvement of living conditions’.

Despite the fact that the African Charter only covers limited number of rights, explicitly, other socio-economic rights are covered as well. Other socio-economic rights which are not explicitly covered in the African Charter are, the right to an adequate standard of living, the right to adequate food and clothing, rights to water and sanitation, the right to housing, the right to social security, the right to rest and leisure and the right to form and join trade unions. This is to ensure the realisation of the African Charter’s objective which is to ‘promote and protect human and peoples’ rights and freedoms’. It could be argued that the vagueness of the African Charter on certain rights is actually to allow interpreters and those who apply the African Charter some ‘flexibility’. Even though the African Charter is strongly protecting socio-economic rights, realisation of these rights is poor.

The African Charter established the African Commission on Human and Peoples' Rights and the African Court on Human and Peoples' Rights was later established in terms of its Protocol, and together they are responsible for interpretation and application of the rights contained in the African Charter and other relevant human rights instruments. Both the African Commission and the African Court have interpreted and applied the African Charter and other relevant human rights treaties and out of that developed valuable and unique African human rights jurisprudence.

For example in *Social and Economic Rights Action Centre and the Centre for Economic and Social Rights v. Nigeria* (hereinafter *SERAC* case), the African Commission on Human and Peoples' Rights dealt with the right to health, amongst other rights, and the Commission indicated that governments have a duty to protect their citizens, not only through appropriate legislation and effective enforcement but also by protecting them from damaging acts that may be perpetrated by private parties. This duty calls for positive action on the part of governments in fulfilling their obligation under human rights instruments. The Commission found that Nigerian government has violated the right to health, amongst other rights.

The right to health and the right to education was addressed in *Free Legal Assistance Group and Others v. Zaire* (hereinafter *Free Legal Assistance Group* case). The African Commission on Human and Peoples' Rights referred to article 16 of the African Charter, which states that every individual shall have the right to enjoy the best attainable state of physical and mental health, and that States Parties should take the necessary measures to protect the health of their people. Further, the commission ruled that the failure of the Government to provide basic services such as safe drinking water and electricity and the shortage of medicine constitutes a violation of article 16 of the African Charter.

Additionally, the Commission ruled that article 17 of the African Charter guarantees the right to education, that the closures of universities and secondary schools constitutes a violation of article 17 of the African Charter. With the said reasons, the commission held that the facts constituted serious and massive violations of the African Charter.

Special African Union Treaties

Within the AU context, special treaties have been adopted to address the rights of vulnerable groups of society. In addition, these treaties address those socio-economic rights not included in the African Charter. The said rights include: the right to adequate standards of living, the right to adequate food and clothing, the rights to water and sanitation, the right to housing, the right to social security, the right to rest and leisure, and the right to form and join trade unions. Also, just like with the UN, AU makes provision for number of special instruments and/or treaties, however, this research will only examine those treaties that the researcher deems necessary and are aligned to this research.

The African Charter on the Rights and Welfare of the Child

The African Charter on the Rights and Welfare of the Child covers among others, socio-economic rights, in particular, right to education, leisure, recreation and cultural activities, right to health and protection from harmful social and cultural practices. To date, 41 states signed and ratified the treaty, while 9 states only signed and have not yet ratified and 5 states have neither signed nor ratified the treaty.

The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa

The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa covers among others, socio-economic rights of women, in particular, the right to education and training, economic and social welfare rights, the right to health and reproductive rights, the right to food security, the right to adequate housing and the right to positive cultural context. To date only Algeria has signed (although it has not yet ratified the treaty).

The African Youth Charter

The African Youth Charter makes provision for socio-economic rights, in particular, right to property, right to education, right to employment, right to health and the right to participate freely in culture. To date, 28 states have ratified the treaty, while 39 have signed this treaty.

The Convention for the Protection and Assistance of Internally Displaced Persons

The Convention for the Protection and Assistance of Internally Displaced Persons provides for, socio-economic rights for internally displaced persons. In particular, it requires states to ‘prevent political, social, cultural and economic exclusions and marginalisation, which are likely to cause displacement of populations and persons by virtue of their social identity, religion or political opinion’. Presently, 29 states have ratified the treaty, and 40 states are signatories.

ECONOMIC COMMISSION FOR AFRICA

The ECA was established in 1958 by the UN’s ECOSOC as one of the five regional commissions. Even though ECOSOC is part of UN, the ECA is however, regarded as part of the regional institutional landscape as the focus of its mandate is on the AU and the sub regional economic communities in Africa.

In line with its 2030 Agenda and Agenda 2063, the Commission’s three core duties, are: its convening function (providing dedicated regional intergovernmental and multi-stakeholder platforms with strong ownership by member States, regional bodies and development banks that result in agreed development policy frameworks, standards and action plans that reinforce multilateralism at the regional and sub-regional levels); its function as a think tank (conducting multisectoral research and analysis that nurture the integration of the three pillars of sustainable development, and promote peer learning, innovative thinking and the advocacy of public policies while fostering intersectoral linkages and synergies); and its operational function (provision of policy advice at the country level through direct demand-based support to member States in areas related to its normative and analytical work and in collaboration with the United Nations system at the country level).

Africa’s Sub-Regional Communities

The AU recognises several regional trade blocs, namely: North Africa’s Arab Maghreb Union (AMU); the Central African Economic and Monetary Community (CEMAC); the Common Market for Eastern and Southern Africa (COMESA); the East African Community (EAC); the Economic Community of Central African States (ECCAS); the Economic Community of West African States (ECOWAS); the West African Economic and Monetary Union (EUMOA); the Southern African Customs Union (SACU); and the Southern African Development Community (SADC).

In 2018 all the sub-regions reported growth. East Africa remained the fastest growing sub-region in Africa, with growth rising from 6.1 per cent in 2017 to 6.2 per cent in 2018. West Africa grew from 2.4 per cent in 2017 to 3.2 per cent in 2018. Central Africa grew from an economic slump of 0.2 per cent in 2017 to 2.3 per cent in 2018. North Africa declined from 5.3 per cent in 2017 to 3.7 per cent in 2018. Southern Africa also declined from an already low 1.5 per cent in 2017 to 1.2 per cent in 2018.

Generally, the levels of economic development in Africa remain a serious challenge, however, in some sub-regions of Africa the prospects are quite impressive. According to the UN World Economic Situation and Prospects 2020 Report, the economic conditions for East and North Africa are improving, while Central and Southern Africa have not experienced growth. Africa’s GDP growth is projected to increase moderately from 2.9 per cent in 2019 to 3.2 per cent in 2020 and up again to 3.5 per cent in 2021, contingent on the implementation of effective reforms and subject to large downside risks.

The UN World Economic Situation and Prospects Report of 2020 shows that:

‘Africa continues to face difficulties in achieving the more robust and sustained growth path that is needed to enhance living standards across the continent. GDP per capita growth is unlikely to reach much above 1

per cent in the near term. More broadly, this decade is ending with average GDP per capita growth of only 0.5 per cent—well below the average growth of the previous decade and only marginally higher than average per capita growth in the 1980s and 1990s. A step change in the rate of economic growth is needed if the region hopes to make meaningful progress towards achieving the Sustainable Development Goals.

Government revenue can be increased by about 20 per cent if African countries adopt a policy framework to strengthen revenue mobilization. Due to rapid population increase, recent UN Department of Economic and Social Affairs estimates indicate that Africa's poverty levels will continue to rise in the next decade. For Africa to deal with poverty, there has to be economic development which is linked with job creation; however, job creation is a major problem in Africa.

CONCLUSION

It is without a debate that African states participate in the international protection of socio-economic rights. However, to date, due to stagnating economic development and other factors, African countries still fail to enforce socio-economic rights. Birth limit can be seen as controversial topic, but something must be done as people cannot continue to suffer. Birth limit, just like other measures being put in place to address economic development, may rescue many Africans from socio-economic challenges. However, birth limit must highly be coordinated so not for people to be treated unfairly and be discriminated based on not having power or their economic stance. Just like other measure put in place, birth limit has a possibility of partially addressing the Africa's socio-economic challenges. As seen above, birth limit has worked for China, even though, just like any other measures, may have disadvantages.

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OPENING OF BORDERS IN AFRICA TOWARDS ECONOMIC DEVELOPMENT AND THE ENFORCEMENT OF SOCIO-ECONOMIC RIGHTS: LESSONS FROM #PUTSOUTHAFRICA FIRST MOVEMENTS

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ABSTRACT

Africa is struggling economically. Many of the African leaders and the general public from time to time suggest what they deem to be a solution to the African problems. A call for the opening of the borders is one of the calls made as a possible solution to address the stagnating economic development. It is proposed that the borders must be opened for free movements of goods, which is argued that it will increase trade amongst African countries, also, free movement of people, which is it believed to address amongst others, shortage of skills or skilled people in certain African countries. Opening of borders is believed to contribute immensely to the economic development and consequently the enforcement of socio-economic rights. However, not everyone is in favour of this as some believe opening of borders will bring more problems as opposed to solutions. Some argue that certain African countries that are doing well economically may have an influx of people who may seek a better life from them, which will consequently affect the economy of that country, its citizens and other things such as increased crime rates. South Africa particularly, has a problem of having large numbers of people coming from number of countries, including the nearest countries such as Zimbabwe, Mozambique, Lesotho and eSwatini. Also, in South Africa a large number of people can be seen who come from Nigeria. Certain South Africans have made several calls such as #putsouthafricafirst calling for jobs and other opportunities to be given to South Africans. Also, certain South Africans have argued that the increased crime rates are as a result of the non-South Africans living in South Africa.

Keywords: Africa, borders, economic development, constitution, socio-economic rights.

INTRODUCTION

The call for the opening of borders is not fairly recent; in fact, dating back to the 1960s, leaders such as Dr. Kwame Nkrumah did actually make the call for the opening of borders in Africa. However, such a call was never honoured by the other African leaders. Opening of borders is not only on movement of people but on trade as well. Due to bottlenecks at the borders and many regulations per each country, it is difficult for African countries to trade with one another, save for certain countries who make trading with other African countries relatively easy.

The main objective of this paper is to examine the relationship between opening of borders, economic development and the enforcement of socio-economic rights in Africa. However, the paper focuses on South Africa, more particularly South Africa's track record regarding the enforcement of socio-economic rights (other African countries are as well examined) and the institutions tasked with enforcing these rights, namely the courts, the South African Human Rights Commission (hereinafter SAHRC) and lastly the non-governmental organisations (hereinafter NGOs). This paper is divided into three main segments, namely: the opening of African borders, socio-economic rights in terms of the South African constitution and other African constitutions and the institutions working towards enforcement of socio-economic rights.

OPENING OF AFRICAN BORDERS

As indicated in the introduction, 24 May 1963 was the day that Dr. Kwame Nkrumah in his historic speech told the other African leaders of thirty-one independent states (at that time) that:

“[Africa] must unite now or perish’ he continued to state that ‘[b]ut just as we understood that the shaping of our national destinies required of each of us...so we must recognise that our economic independence resides in our African union...The unity of our continent...economic development of Africa will come only within the political kingdom, not the other way round.’”

When Dr. Kwame Nkrumah was addressing regarding Africa’s natural resources he stated that:

‘[t]he resources are there. It is for us to marshal them in the active service of our people...[o]ur continent certainly exceeds all the others in potential hydro-electric power, which some experts assess as 42% of the world’s total’. What need is there for us to remain hewers of wood and drawers of water for the industrialised areas of the world? It is said, of course, that we have no capital, no industrial skill, no communications, and no internal markets, and that we cannot even agree among ourselves how best to utilise our resources for our own social needs...Africa provides more than 60% of the world’s gold. A great deal of the uranium for nuclear power, of copper for electronics, of titanium for supersonic projectiles, of iron and steel for heavy industries, of other minerals and raw materials for lighter industries – the basic economic might of the foreign powers – comes from our continent... [e]xperts have estimated that the Congo Basin alone can produce enough food crops to satisfy the requirements of nearly half the population of the whole world’.

He continued to allude that “[n]ot one of us working singly and individually can successfully attain the fullest development”. It is argued that this continues to be a reality as Africa continues to suffer and there is no economic development, in some parts is either slow or it is stagnating. Dr. Kwame Nkrumah was saying this as a motivation for Africa amongst others to have open borders. Opening of borders is a call that has been made long before as indicated above, even though it was not formalities but a treaty. It only became formal when the African Continental Free Trade Area (hereinafter AfCFTA) was adopted. The AfCFTA amongst which advocates, as part of its strategies, to open borders for trade. Some countries are however reluctant to open their borders, particularly on the free movement of people as such countries are worried about the possible influx of people that many want to reside in such countries.

SOCIO-ECONOMIC RIGHTS IN TERMS OF THE SOUTH AFRICAN CONSTITUTION AND OTHER AFRICAN CONSTITUTIONS

It is the researcher’s argument that those without access to socio-economic rights and who desperately need access to those rights, those without food, clothing and/or shelter, are equally being denied the democratic values enshrined in the South Africa Constitution namely, human dignity, freedom and equality. Despite the numerous rights that the South African Constitution protects the scope of this paper is be limited to the right of access to adequate housing, the right to health, right to food, water and social security and the right to education. In addition to the discussions of the rights as outlined above a comparison is made with regards to South Africa Constitution’s socio-economic rights with other African countries. It can be observed that African countries reveal three broad constitutional models. Some of the countries that have ‘direct constitutional protection’ model have socio-economic rights in their respective constitutions, fully protected others partially protected.

Five countries with direct constitutional protection from across Africa are selected by the researcher, which are Angola, Cabo Verde, Congo, Mozambique and Seychelles. The countries were chosen based on their constitutional protection of the socio-economic rights and the fact that they are from different regions of Africa. In Angola, socio-economic rights are protected and can be found in Chapter III of the Constitution (hereinafter Angola Constitution), termed ‘Economic, Social and Cultural Rights and Duties’. With Cabo Verde, socio-economic rights are protected and can be found in Part II, ‘Fundamental Rights and Duties’ under Title III ‘Economic, Social and Cultural Rights and Duties, of the Cabo Verde Constitution (hereinafter Cabo Verde Constitution). In Congo, the Constitution

(hereinafter Congo Constitution), in Title II termed ‘Human Rights, Fundamental Liberties and the Duties of the Citizen and the State’ under ‘Chapter 2: Of Economic, Social and Cultural Rights’ guarantees socio-economic rights. In Mozambique, the Constitution (hereinafter Mozambique Constitution), protect socio-economic rights and can be found in ‘Chapter V: Economic, Social and Cultural Rights and Duties’ which is under ‘Title III: Fundamental Rights, Duties and Freedoms’. In Seychelles, the Constitution (hereinafter Seychelles Constitution), protect this right and can be found in Chapter III, Part I, Seychellois Charter of Fundamental Human Rights and Freedoms. Furthermore, it is interesting to detect that most of the African countries constitutions also protect the rights for the vulnerable people, such as the children, the disabled, the women and the elderly. This shows commitment by Africa countries to socio-economic rights protection for all groups of people without any discrimination.

The Right of Access to Adequate Housing

The right of access to adequate housing is protected in the South African Constitution. Section 26(1) states that ‘[e]veryone has the right to have access to adequate housing.’

In engaging the term ‘access’ to adequate housing, one can observe that this right is not an unqualified obligation or duty on the state to provide adequate housing on demand, that is, the state is not obliged to provide adequate housing when there are individuals who need adequate housing. Liebenberg categories this right as qualified socio-economic right. Furthermore, the Constitutional Court noted that there is difference between ‘right to have access to adequate housing’ as found in the South Africa Constitution and the ‘right to adequate housing’ as found in the ICESCR. In elaborating on this difference, it held in *Grootboom* that:

‘The right delineated in section 26(1) is a right of “access to adequate housing” as distinct from the right to adequate housing encapsulated in the Covenant [ICESCR]. This difference is significant. It recognises that housing entails more than bricks and mortar. It requires available land, appropriate services such as the provision of water and the removal of sewage and the financing of all of these, including the building of the house itself. For a person to have access to adequate housing all of these conditions need to be met: there must be land, there must be services, there must be a dwelling. Access to land for the purpose of housing is therefore included in the right of access to adequate housing in section 26. A right of access to adequate housing also suggests that it is not only the state who is responsible for the provision of houses, but that other agents within our society, including individuals themselves, must be enabled by legislative and other measures to provide housing. The state must create the conditions for access to adequate housing for people at all economic levels of our society. State policy dealing with housing must therefore take account of different economic levels in our society.’

Moreover, a comparison is made with regards to South African Constitution’s right of access to adequate housing with other African countries’ Constitutions, which protect this right or similar right in their respective, fully protected others partially protected. In Angola, this right is protected and can be found in chapter III of the Angola Constitution, termed ‘Economic, Social and Cultural Rights and Duties’. In terms of the Constitution, ‘Every citizen shall have the right to housing and quality of life.’ Similarly in Cabo Verde, this right is protected and can be found in Part II, ‘Fundamental Rights and Duties’ under Title III ‘Economic, Social and Cultural Rights and Duties, of the Cabo Verde Constitution, which states that ‘[a]ll citizens shall have the right to proper housing.’

Additionally, the Congo’s Constitution, in Title II termed ‘Human Rights, Fundamental Liberties and the Duties of the Citizen and the State’ under ‘Chapter 2: Of Economic, Social and Cultural Rights’ guarantees this right, the constitution guarantees ‘[t]he right to decent housing...’. Also, in Mozambique, the Constitution, protects this right in ‘Chapter V: Economic, Social and Cultural Rights and Duties’ which is under ‘Title III: Fundamental Rights, Duties and Freedoms’ and it is stated as follows:

‘All citizens shall have the right to a suitable home, and it shall be the duty of the State, in accordance with national economic development, to create the appropriate institutional, normative and infra-structural conditions.’

The Seychelles Constitution, protect this right and can be found in Chapter III, Part I, Seychellois Charter of Fundamental Human Rights and Freedoms, which reads as follows:

‘The State recognises the right of every citizen to adequate and decent shelter conducive to health and well-being and undertakes either directly or through or with the co-operation of public or private organizations to facilitate the effective realization of this right.’

The effect of the constitutionalisation of this right is that the government must enforce this right progressively. However, it is the researcher’s argument that the government is not doing enough at all. For instance, reference can be given to the *Grootboom* case. When Irene Grootboom died in 2008, she was still living in a shack despite the Constitutional Court handing down its judgment in 2000. The successes can be noted as that some people benefited and others continue to benefit from the adequate housing provided by the government, however, many people still struggle to get access to this adequate housing, which is a big challenge as people need the adequate housing. The government continues to have backlogs in terms of providing adequate housing. Despite the known fact that this is not an immediate right, it is the researcher’s argument that the ‘progressive realisation’ of this right is not progressive enough.

Moreover, in terms of section 26, the ‘state is obliged ‘to take reasonable legislative and other measures’ to realise the rights’ was developed in relation to right to housing and as well in generally addressing socio-economic rights. The *Grootboom* case was about access to housing, in particular, access to ‘adequate housing’. As per the facts of the case, a group of adults and children moved onto private land from an informal settlement because of the uninhabitable conditions in which they lived.

These groups of individuals were evicted and their building materials were destroyed from the private land they occupied. Consequently, they applied to the High Court for an order granting temporary shelter or housing until such time that they get permanent accommodation, the order was against the three spheres of government. Their arguments were based on section 26(1) and section 28(1)(c) of the South African Constitution, right of access to adequate housing and the right of children to shelter, respectively.

The Cape High Court, the court of first instance, found that there was only a violation of the right of children to shelter and not the right to adequate housing. The matter was taken on appeal to the Constitutional Court which disagreed with the High Court’s interpretation of children’s right to shelter. However, the Constitutional Court decided that the Government’s housing programme did not comply with the obligation to take reasonable steps. In this regard, the Constitutional Court developed a standard of reasonableness as a guide to decide if the Government’s programme meets constitutional requirements.

The court indicated that, first, the programme must be comprehensive, coherent and coordinated. Secondly, that the programme must be capable of “facilitating the realisation of the right”. Thirdly, that it must be balanced and flexible, and appropriately provide for short, medium and long-term needs. Fourthly, the programme must clearly allocate responsibilities and tasks to the different spheres of government and ensure that financial and human resources are available. Fifthly, that the programme must be reasonably formulated and implemented. Lastly, the programme must provide for the needs of those most desperate by providing relief for people who have no access to land, no roof over their heads, and who are living in intolerable or crisis situations.

In a recent case, in *Sarrahwitz v Maritz N.O. and Another*, the facts were Ms. Sarrahwitz, the applicant, after unsuccessful attempts to have the trustee of the seller from whom she bought the property (a home she resided in) authorise the transfer of the house, the applicant launched an application in the Eastern Cape High Court, Port Elizabeth in 2012. She sought an order directing the trustee to give effect to the provisions of the deed of sale and have the house registered in her name in terms of sections 21 and 22 of the Land Act. The High Court held that it is common law and not the Land Act that regulates the transfer of that property. Also, that, in terms of the common law, a purchaser who had paid the full purchase price for a residential property does not have a right to have it transferred to her. The property vests in the seller’s insolvent estate. The Court could not fault the trustee’s decision not to transfer the house to her in terms of his common law powers. As a result, the Court dismissed her application with costs. Aggrieved by this outcome, Ms. Sarrahwitz launched an application for leave to appeal to the Full Court, alternatively the Supreme Court of Appeal. She, for the first time, relied on constitutional grounds to challenge the validity of the relevant common law principle. Her failure to do so in the main application denied the trustee the opportunity to deal with that issue properly at that stage. Raising that issue for the first time when leave to appeal was sought, denied the High Court and the Supreme Court of Appeal the opportunity to consider the development of the common law. The

Court held that prospects of success were minimal and leave was refused. Ms. Sarrahwitz unsuccessfully petitioned the Supreme Court of Appeal, hence her application to Constitutional Court.

The Constitutional Court held that section 26 of the South African Constitution was meant to put a permanent end to this indignity. According to the Constitutional court, the Constitution not only provides for access to adequate housing but also imposes an obligation on the State to take all reasonable measures to achieve the progressive realisation of the right of access to adequate housing. While large number of South Africans, particularly the poor, do not have access to home loans from commercial banks.

The *Sarrahwitz* case was about homelessness and vulnerability. One of the many painful and demeaning experiences that the overwhelming majority of South African citizens had to contend with during the apartheid era was not having a place they could truly call home, and their vulnerability to the system's ever-abiding readiness to evict arbitrarily. Significant progress has since been made. Consequently, many previously homeless people have acquired residential property and eviction may no longer be carried out summarily but only in terms of a court order.

'Our Constitution bears a transformative purpose in the terrain of socio-economic rights. It evinces a deep concern for the material inequality closely associated with past exclusion and poverty that are manifested by lack of proper housing. That explains why section 26(1) of the Constitution provides in express terms that everyone has the right to have access to adequate housing. The State is required to take reasonable measures within its available resources to provide everyone with access to adequate housing. Section 26(3) in particular, creates an important shield to anyone who may be subject to eviction from their home or to have their home demolished. The Constitution makes judicial intervention mandatory by requiring that eviction from or demolition of a home must occur through a court order made after considering all relevant circumstances.'

This reveals that the local, provincial and national governments have immensely failed to deliver social housing, as required by the South African Constitution. According to a 2017 report, the government stated that it is committed to providing sustainable human settlements to improve the quality of life for the poor and further stated that such provisions entail access to quality accommodation, basic services, secure tenure and affordable mortgage finance. It further stated that formal housing has grown by 50% since the attainment of democracy in 1994. The researcher submits that more still needs to be done. The economy of South Africa must develop and through the intra-African trade South Africa can see rapid growth and consequently the government can be able to provide to as many South Africans as possible, adequate housing.

The Right to Health

The right to health is guaranteed by the South African Constitution. Section 27(1)(a) states that '[e]veryone has the right to have access to health care services, including reproductive health care'. In addition, s27(3) states that '[n]o one may be refused emergency medical treatment'. Similarly, with the previous discussed right. The Constitution, with regards to this right, indicates 'access', and this entails that the nature of the obligation is similar to that that is found in the rights of access to adequate housing. Also, Liebenberg categories this right as qualified socio-economic right. Once more, while this right may not be infringed by retrogressive measures directly, reasonable legislative and implementation measures to the achievement of this right are required.

An examination of similar rights in other African countries' Constitutions is important. The Angola Constitution protects this right in Chapter III of the Angola Constitution, termed 'Economic, Social and Cultural Rights and Duties'. In terms of the Angola Constitution, '[t]he state shall promote and guarantee the measures needed to ensure the universal right to medical and health care, as well as the right to child care and maternity care, care in illness, disability, old age and in situations in which they are unable to work, in accordance with the law.' Similarly, the Cabo Verde Constitution protects this right is protected and can be found in Part II, 'Fundamental Rights and Duties' under Title III 'Economic, Social and Cultural Rights and Duties,' which states that '[e]veryone shall have the right to health and the duty to defend and promote it, irrespective of his or her economic condition.'

The Congo Constitution, in Title II termed 'Human Rights, Fundamental Liberties and the Duties of the Citizen and the State' under 'Chapter 2: Of Economic, Social and Cultural Rights' guarantees '[t]he right to health ... is guaranteed.' The Mozambique Constitution, protects this right in 'Chapter V: Economic, Social and Cultural Rights

and Duties’ under ‘Title III: Fundamental Rights, Duties and Freedoms’ and provides that ‘[a]ll citizens shall have the right to medical and health care, within the terms of the law, and shall have the duty to promote and protect public health.’ The Seychelles Constitution protects this right in Chapter III, Part I, Seychellois Charter of Fundamental Human Rights and Freedoms, which states that ‘[t]he State recognises the right of every citizen to protection of health and to the enjoyment of attainable standard of physical and mental health...’. In South Africa, the nature of the obligations imposed by this right is the same as the obligations imposed by the right of access to adequate housing, again, progressive realisation of this right is required. The effect of the constitutionalisation of this right is that the government must have progressive realisation of this right, the government must have reasonable legislative and implementation measures to realise this right progressively.

As much as this is not an immediate right, realisation of this right is of paramount importance because health care is one of the important aspects of a human being. The challenges with regards to this right are mostly that health care in public institutions is of poor standard when compared to private institutions, the researcher argues. In 2015/16, private institutions healthcare expenditure was 4.4% of GDP, whereas public healthcare expenditure amounted to 4.1% of GDP, these can be seen as an almost equal contribution, however, it must be noted that, the public sector services approximately 84% of the population while the private sector services a mere 16%.

In *Soobramoney v Minister of Health, Kwazulu-Natal* (hereinafter *Soobramoney*) the Court dealt with the right of access to health care. The applicant was an unemployed man who had chronic kidney failure. As per the facts, the applicant asked the court to direct the provincial hospital to provide him with ongoing dialysis treatment and to prevent the provincial Minister of Health from refusing him admission to the renal (kidney) unit of the provincial hospital. Without this treatment, the applicant argued, he would die and his life could only be prolonged by regular renal dialysis which was denied by the hospital.

The applicant based his argument on two constitutionally protected rights, namely that ‘no one may be refused emergency medical treatment’ and ‘everyone has the right to life’. The respondents argued that their capacity to provide the applicant and other patients in his position with dialysis treatment was constrained by resources. The respondents had only a few machines which could not serve all the patients. They had decided to admit only those patients who had chances of recovery, and not patients like the applicant whose condition was irreversible.

The Constitutional Court drew parallels with sections 26 and 27 in regard to access to housing, healthcare, food, water and social security, access to which is dependent upon available resources, and that the rights are themselves limited by the lack of resources. The Court decided that the case did not fall within the provisions of section 27(3) based on the fact that the applicant’s condition was not an emergency circumstance which called for immediate remedial treatment, instead, it was an ongoing chronic condition resulting from deterioration of the renal function which was incurable. The Court found that by managing the inadequate resources the way the hospital did, treating only those patients with a prospect of cure, more patients would benefit, but less would if patients like the applicant got treatment.

In reaching this ruling the Court applied the rationality test. It considered whether in making its decision the hospital has acted rationally. That ‘[a] court would be slow to interfere with rational decisions taken in good faith by the political organs and medical authorities whose responsibility it is to deal with such matters’. The intervention would only occur where the decision is irrational. The Court did not, however, give adequate guidance on the test of the standard of ‘irrationality’ to be applied and the nature of the circumstances in which the Court would be prepared to intervene.

Another prominent case is *Minister of Health and Others v Treatment Action Campaign and Others* (hereinafter *TAC case*) which involved the right of access to health care, in particular, access to measures introduced to prevent mother-to-child transmission (hereinafter MTCT) of Human Immunodeficiency Virus (hereinafter HIV). The Treatment Action Campaign (hereinafter TAC) challenged the limited nature of this measure, as the government introduced. Their argument was two-fold, namely that the Government unreasonably prohibited administering the antiretroviral medication at public hospitals and clinics, except for a limited number of pilot sites, and that the Government had not produced and implemented a comprehensive national programme for the prevention of MTCT of HIV.

TAC challenged this policy and argued that it was unreasonable and violated the right of access to health care services and the rights of newborn children to basic health care. The reasoning in *Grootboom* was applied in this case. The Court found that the restriction of the drug to research sites was unreasonable. It based this decision on the notion that the policy and/or restriction failed to address the needs of mothers and their newborns who did not have access to those sites.

Commenting on the *TAC* case, Bilchitz raised the following:

‘Indeed the judgment is notable for the virtual absence of any analysis of what the right to have access to health care services involves. What are the services to which one is entitled to claim access? Do these services involve preventative medicine, such as immunization, or treatment for existing diseases, or both? Does the right entitle one to primary, secondary or tertiary health care services, or all of these?’

Bilchitz gives two arguments, first, that ‘there is a need to supplement the Court’s approach based on reasonableness with an analysis of the obligations imposed upon the government by socio-economic rights’. Bilchitz further continues to argue that ‘an analysis of the obligations placed upon the government by socio-economic rights should include what has been termed a minimum core obligation to realise without delay the most urgent survival interests protected by the right. Despite recent pronouncements by the Court, there is a way in which the minimum core approach can be rehabilitated’. The rulings in the above cases were criticised. First, that while the Court’s construction of section 27(3) of the South African Constitution, namely the restriction that there must be a genuine medical emergency is understandable, however, the construction of the provision from the angle of a negative obligation confines it to existing services and facilities providing emergency medical treatment.

In *Oppelt*, another case relating to the right to health care, the case concerned a delictual claim arising from delayed medical treatment after the applicant sustained spinal cord injuries that left him paralysed. The High Court held that Mr. Oppelt’s claim against the Head of the Western Cape Provincial Department of Health must succeed, while the Supreme Court of Appeal found that the causal link between the harm Mr. Oppelt suffered and the conduct of the Department had not been established and that no delictual liability could be found. The latter decision is the subject matter of this application. The applicant instituted an action against the Head of the Western Cape Provincial Department of Health in the High Court for the failure of the three hospitals to provide him with prompt and appropriate medical treatment. The applicant claimed damages for negligence arising from the injury. The Constitutional Court in its decision, found the judgment in favour of the applicant. The applicant’s claim against the respondent succeeded and the the Head of the Western Cape Provincial Department of Health was declared liable to pay delictual damages as the applicant may prove to have suffered as a result of the neck injury sustained in the rugby match.

One of the other arguments that the present research raises is that public health institutions and facilities do not treat people in a way that they can be free to access the right to health. For instance, in relation to victims of gender based violence that in instances where health assistance is provided, health workers, do not have specialised skills to fully assist, and are allegedly insensitive, judgmental and abusive towards the victims. The SAHRC has raised concerns regarding the subtle or explicit homo-prejudiced or hetero-normative attitudes towards Lesbian, Gay, Bisexual and Transgender people, Intersex (LGBTI) people, and this has resulted in such victims fearing and/or refusing medical treatment by health care workers. Another major issue is the issue of termination of pregnancy, even though this is legal to do, due to a lack of access to facilities, long waiting periods and fear of ill-treatment or stigma, many women tend to resort to illegal abortions, which are a health risk, and these illegal abortion facilities advertise their services in shopping malls, schools and other areas.

Another issue is unavailability of medications, which is a serious health risk and it is mainly due to a shortage of pharmacists, protracted labour disputes, poor management, corruption, and poor communication between suppliers, depots and facilities. One of the other pressing issues is the lack of information on the transparency around the pricing of essential drugs which prohibits access to essential drugs either in original or generic form, to those most in need. Interestingly, section 35(2)(e) of the South African Constitution contains right to ‘adequate medical treatment’ for prisoners, this right is not subject to progressive realisation. With regards to the provision of healthcare, the South African government is currently working on the proposed National Health Insurance (hereinafter NHI), a health financing system that can be regarded as the government’s approach towards the enforcement of the right to health care, and it is designed to provide to all South Africans access to quality affordable personal health with disregard of their socio-economic status. Some have viewed the government’s approach towards the enforcement of the right to

health care through the NHI as unfortunate, since more tax revenue will be directed towards the implementation of the NHI. It has been reported that a large number of individuals expressed negativity towards the NHI.

With regards to the way forward, this research submits that the government must learn from private institutions, with regards to standard of service given to clients in private institutions. Additionally, the government must invest more to improve health facilities and give more training to staff workers. The above is what must be done, which leads to the main argument of this research, that economic development is needed in order for socio-economic rights, in particular, right to health to be enforced fully.

The Right to Food, Water and Social Security

This right is protected under the South African Constitution, which states as follows:

- ‘(1) Everyone has the right to have access to—
 - (a) ...
 - (b) sufficient food and water; and
 - (c) social security, including, if they are unable to support themselves and their dependents, appropriate social assistance.’

Liebenberg categorises this right as qualified socio-economic right. With regards to right to food, the South African government has put in place food security, agricultural policies and support programmes to ensure that communities are given agricultural opportunities that will enable them to meet their basic food needs and to reduce food insecurity in the country. In addressing malnutrition and stunting amongst children, school feeding was also introduced. Nkrumah concedes to the fact that there is lack of case law on the right to food in South Africa. In *My Vote Counts NPC v Speaker of the National Assembly and Others*, the Court stated that the state is required to fulfil a range of constitutional obligations, either by passing legislation or by other means. That the Bill of Rights requires the state to take reasonable legislative and other measures to fulfil a range of social and economic rights. Which included achieving the progressive realisation of the rights to sufficient food and water, amongst other rights.

Regarding the right to water and sanitation, the government has put in place a system that governs the allocation and equitable access to water without discrimination of any kind. This right to access to water is given statutory recognition in the Water Services Act, 1997 and the National Water Act, 1998. Both statutes protect and facilitate the free exercise of the right to access and dispose of water resources in an equitable, environmentally-responsible and sustainable manner. In addition, the Water Services Act guarantees that everyone is entitled to basic water supply.

With regards to the right to social security, it bears mentioning that nearly a third of the nation’s population relies on some form of social assistance through social grants. During the State of the Nation Address on 16 February 2018, South African President Cyril Ramaphosa highlighted the importance of social assistance and he said, ‘[s]ocial grants remain a vital lifeline for millions of our people living in poverty’. Although the government’s efforts are commendable in providing social grants, the amount of the grants are not enough to cover and sustain beneficiaries’ basic living needs. For instance, the current Child Support Grant of R400, falls below the food poverty or extreme poverty line. The food poverty line refers to the amount of money that an individual will need to afford the minimum required daily energy intake and it is commonly referred to as the ‘extreme’ poverty line. Currently the food poverty line is at R585 per person per month. Statistics released in 2015 show that ‘61,3% of poor households [were] supported by child support grants’. Applying the definition of the poverty line, this means that, these households ‘are unable to purchase or consume enough food to supply them with the minimum per-capita-per-day energy requirement for adequate health’. It is evident that there is a need for the grant to be increased as a matter of urgency and as the research argues, government must take decisive action to ensure the fully realisation of socio-economic rights. The government must work on intra-African trade as it is argued that it will develop the economy and as such, the government will be able to, amongst others, increase this grant.

In *Khosa and Others v Minister of Social Development and Others, Mahlaule and Another v Minister of Social Development* (hereinafter *Khosa & Mahlaule*), the Court dealt with the right of access to social assistance, in particular the restrictions and exclusions. As per the facts, a group of permanent residents challenged the constitutionality of some provisions of the Social Assistance Act (as amended) and the Welfare Laws Amendment

Act. The provisions that they challenged were namely: the restricted access to social assistance to South African citizens only, the exclusion of permanent residents, elderly people and children, who would otherwise have qualified for social grants if there was no requirement of citizenship, and the exclusion of primary caregivers from accessing the Child Support Grant for children in their care, especially where these children are South African citizens (while children of non-citizens would have to be removed from their families to join a foster family in order to benefit from the Child Support Grant). The Constitutional Court decided that permanent residents are a vulnerable group, that the laws that exclude them from access to the benefit of social assistance treat them as inferior to citizens, that the costs of including permanent residents in the social security scheme would be small, that excluding permanent residents from access to a social security scheme was not consistent with section 27 of the Constitution and excluding children from access to these grants was unfair discrimination on the basis of their parents' nationality and violated their right to social security under section 28(1)(c).

Other African countries offer similar protection in their Constitutions while do not explicitly recognise these rights at all. The Angola Constitution is silent with regards to protecting these rights. Similarly, the Constitution of Mozambique, is silent with regards to these rights. The Constitution of Cabo Verde, protects this right in Part II, 'Fundamental Rights and Duties' under Title III 'Economic, Social and Cultural Rights and Duties, of the Cabo Verde constitution, which states that '[e]veryone shall have the right to social security for his or her protection in unemployment, illness, disability, old age, orphanhood, widow(er)hood and in all situations of lack or decrease in his or her means of subsistence or in his or her capacity to work.' Similarly, the Congo Constitution recognizes this right in Title II termed 'Human Rights, Fundamental Liberties and the Duties of the Citizen and the State' under 'Chapter 2: Of Economic, Social and Cultural Rights' which guarantees '[t]he right to ... [a] secure food supply is guaranteed.' The Constitution of Seychelles protects this right. In Chapter III, Part I, the Seychellois Charter of Fundamental Human Rights and Freedoms, provides that '[t]he State recognises the right of every citizen to a decent and dignified existence and with a view to ensuring that its citizens are not left unprovided for by reason of incapacity to work or involuntary unemployment undertakes to maintain a system of social security.'

The Right to Education

The right to education is another of the socio-economic rights protected by the South African Constitution.

Everyone has the right—

- (a) to a basic education, including adult basic education; and
- (b) to further education, which the state, through reasonable measures, must make progressively available and accessible.

Liebenberg categorises this right as unqualified socio-economic right, however, only basic education. The implications of the wording used is that with regards to basic education there are reservations. Whereas, with regards to further education, the state must act progressively. The South African government, through the National Development Plan emphasises that young people in particular deserve better educational and economic opportunities. Further, through National School Nutrition Programme, daily meals are provided to learners at schools. The aims are to 'foster better quality education by enhancing children's active learning capacity', 'alleviating short-term hunger', 'providing an incentive for children to attend school regularly' and 'punctually addressing certain micro-nutrient deficiencies'.

Even though the government has recorded high enrolment rates, concerns regarding the quality of basic education have been raised. The Annual National Assessment (ANA) for 2013, statistics indicates that only 3 percent of Grade 9 reached the 50 percent mathematics threshold while only 48 percent reached 50 percent on the home language examination threshold. In addition, South Africa's performance in the Southern and East African Consortium for Monitoring Educational Quality (SACMEQ) tests and the Trends in International Mathematics and Science Study (TIMSS) Assessments were also reportedly poor. The SAHRC has acknowledged the efforts by the Department of Basic Education to retain learners in the education system, however, the SAHRC has indicated that the retention strategies not fully active, as evidenced by the 2014 drop-out rate for learners between 14 to 18 years, with female learners making 10.1 percent of the total drop-out. It is also evident that there was not much attention given to right to education at tertiary level, until the government declared free higher education in late December 2017.

In *Minister of Basic Education v Basic Education for All* (hereinafter *BEFA*), the court dealt with the right to education in terms of s 29(1)(a) of the Constitution. As per the facts of the case, during 2012 the Department of Education (hereinafter DBE) formulated and adopted a new national education curriculum, Curriculum and Assessment Policy Statements (hereinafter CAPS). The CAPS revised the content and learning material of each learning area. As a result, new textbooks were prescribed and it was necessary to see to it that they were available for use in time for the ensuing academic year. Still in 2012, with half of the academic year already completed, textbooks in respect of the introduction of the first phase of the CAPS for Grades 1, 2, 3 and 10, had not been delivered to schools in Limpopo. This matter was widely referred to as the ‘Limpopo textbook saga’.

In its judgement, the Court declared that s 29(1)(a) of the Constitution entitles every learner at public schools to be provided with every textbook prescribed for his or her grade before commencement of the teaching of the course for which the textbook is prescribed. Also, the Court declared that it is the duty of the State, in terms of s 7(2) of the Constitution, to fulfil the s 29(1)(a) right of every learner by providing him or her with every textbook prescribed for his or her grade before commencement of the teaching of the course for which the textbook is prescribed.

Other African countries’ Constitutions recognise the right to education. The Angola Constitution, in Chapter III, termed ‘Economic, Social and Cultural Rights and Duties’ provides that ‘[t]he state shall promote access for all to literacy, education, culture and sport, encouraging various private agents to become involved in their implementation, under the terms of the law.’ Similarly, the Cabo Verde Constitution in Part II, ‘Fundamental Rights and Duties’ under Title III ‘Economic, Social and Cultural Rights and Duties’, states that ‘[e]veryone shall have the right to education.’ The Congo Constitution, in Title II termed ‘Human Rights, Fundamental Liberties and the Duties of the Citizen and the State’ under ‘Chapter 2: Of Economic, Social and Cultural Rights’ guarantees this right, guarantees ‘[a]ll persons have access to establishments of national education, without discrimination of place of origin, of race, of religion, of sex, of political or philosophical opinions, of their physical, mental or sensorial state in accordance with their capacities.’ The Mozambique Constitution, protects the right to education in ‘Chapter V: Economic, Social and Cultural Rights and Duties’ under ‘Title III: Fundamental Rights, Duties and Freedoms’ which provides that ‘[i]n the Republic of Mozambique, education shall be a right and a duty of all citizens.’ In Seychelles, the Constitution, protects this right to education in Chapter III, Part I, Seychellois Charter of Fundamental Human Rights and Freedoms, which states that ‘[t]he State recognises the right of every citizen to education...’ In addition, the following treaties protect the right to compulsory basic education, namely: the African Charter on the Rights and Welfare of the Child; International Covenant on Economic, Social and Cultural Rights; the Convention on the Rights of the Child; and the Universal Declaration of Human Rights. Education plays a crucial in improving the lives of a people, because:

‘Literacy is a bridge from misery to hope. It is a tool for daily life in modern society. It is a bulwark against poverty and a building block of development, an essential complement to investments in roads, dams, clinics and factories. Literacy is a platform for democratisation, and a vehicle for the promotion of cultural and national identity. Especially for girls and women, it is an agent of family health and nutrition. For everyone, everywhere, literacy is, along with education in general, a basic human right.

INSTITUTIONS WORKING TOWARDS ENFORCEMENT OF SOCIO-ECONOMIC RIGHTS

The institutions that play a major role in the enforcement of socio-economic rights are the courts, SAHRC and NGOs.

The Role of the Courts in the Enforcement of Socio-Economic Rights

As provided for by the South African Constitution, the courts are an impartial forum, in which socio-economic rights can be adjudicated. The presiding officers in the courts act independently when applying the law and without fear or favour. The courts play a major role in that they are tasked with the interpretation and application of the South African Constitution and other laws. Some of the prominent judgments that have contributed to South Africa’s jurisprudence in the area of socio-economic rights include the *Grootboom* case and *Soobramoney v Minister of Health* (hereinafter *Soobramoney*). *S v Makwanyane and Another* (hereinafter *Makwanyane*) is another leading case, albeit dealing with civil and political rights, specifically the right to life. According to the Constitutional Court:

‘Our Constitution entrenches both civil and political rights and social and economic rights. All the rights in our Bill of Rights are inter-related and mutually supporting. There can be no doubt that human dignity, freedom and equality, the foundational values of our society are denied those who have no food, clothing or shelter. Affording socio-economic rights to all people therefore enables them to enjoy the other rights enshrined in Chapter 2. The realisation of these rights is also key to the advancement of race and gender equality and the evolution of a society in which men and women are equally able to achieve their full potential’.

This confirms the immense contributions by the courts in the enforcement of socio-economic rights.

The Role South African Human Rights Commission in the Enforcement of Socio-Economic Rights

The SAHRC plays a major role in the enforcement of socio-economic rights, it is tasked by the South African Constitution to monitor, among other rights, socio-economic rights, and is one of the Chapter 9 institutions. The SAHRC was established by the South African Constitution to monitor, assess, investigate and report on the observance of human rights. In addition, the SAHRC is given powers by the South African Constitution to monitor and report on socio-economic rights implementation.

“Each year, the [South African] Human Rights Commission must require relevant organs of State to provide the Commission with information on the measures that they have taken towards the realisation of the rights in the Bill of Rights concerning housing, health care, food, water, social security, education and the environment.”

Against this background, the SAHRC has drafted a number of reports, in which it analysed efforts taken by the government in implementing socio-economic rights, considered whether the relevant laws, policies and programmes were reasonable, whether the budgets were sufficient, whether progress had been achieved and on the basis of this made recommendations to government. As per the South African Constitution, each year SAHRC must require relevant organs of state to provide it with information on the measures taken towards the realisation of the rights in the Bill of Rights, in particular housing, health care, food, water, social security, education and the environment. Further, the SAHRC presents annual reports to parliament regarding their focus areas. Even the courts recognise the SAHR’s role as noted in the *Grootboom* case where the court order that the SAHCR was to monitor and report compliance with the court’s judgement. Besides the South African Constitution, the SAHRC also operates under the South African Human Rights Commission Act which provides that the Commission must monitor the implementation of, and compliance with, international and regional conventions and treaties, international and regional covenants and international and regional charters relating to the objects of the Commission. In the ‘SAHRC Report declaring the government’s programmes unreasonable and unconstitutional’, the SAHRC stated that:

“That the Government has taken steps towards the progressive realisation of the right to have access to adequate housing is beyond dispute. What is apparent, however, is that as demonstrated in this critique section, the steps adopted by the government cannot be said to be reasonable, as they cannot pass a constitutional muster. It is regrettable to note that this is so despite the landmark decision of the Constitutional Court in *Grootboom* as millions of people are still living in peril and the programme adopted is not comprehensive as it neglects significant members of the society”.

The Role of Non-Government Organisations in the Enforcement of Socio-Economic Rights

The NGOs play a major role in the enforcement of socio-economic rights. The majority of their work involves socio-economic rights campaigns and litigating socio-economic rights before the courts. In addition, NGOs engage in so-called ‘public exposure’ activities which involve monitoring, advocacy, education, public awareness, social mobilisation, research and training to promote and advance socio-economic rights. NGOs also typically give legal and paralegal assistance to those that may need it.

Moreover, there are number of NGOs that are investing immensely in socio-economic rights enforcement, and they include: Black Sash; the Dullah Omar Institute for Constitutional Law, Governance and Human Rights (DOI); the People’s Health Movement of South Africa (PHM-SA); the Socio-Economic Rights Institute of South Africa

(SERI); and the Studies in Poverty and Inequality Institute (SPII). Black Sash's, main focus is on social security and social protections for the most vulnerable South Africans particularly women and children and as well as working towards exploring options to significantly reduce poverty and inequality. The DOI is involved in promoting the realisation of socio-economic rights through multi-disciplinary research and human rights education, and conducting campaigns around key social justice issues through teaching and advocacy. The PHM-SA is the South African Chapter of the People's Health Movement (PHM), a global network of grassroots activists, civil society and academics. It focuses on the enforcement of socio-economic rights; in particular, the right to health care. The SERI is involved in the enforcement of socio-economic rights, with its main focus on protecting and fulfilling the right of access to adequate housing, challenging forced evictions, defending and promoting access to basic services, protecting the right to work for those in vulnerable employment and protecting political space for peaceful organisation, expression, civil participation and protest. Lastly, the SPII is an independent research think tank, which works towards the enforcement of socio-economic rights through generating new knowledge, information and analysis in the field of poverty and inequality studies, policy and budget reviews.

CONCLUSION

Opening of borders will cause more problems than solutions, especially for certain countries in Africa such as South Africa (where the standard of living is much better than other African countries). It is without doubt that South African Constitution is one of the best in Africa and the world in terms of amongst others protection of socio-economic rights. Further, we have seen that some of the African countries as well do have the best constitutions, primarily judging from the protection of socio-economic rights. It was further shown that the South Africa courts have handed down commendable judgments in enforcing the socio-economic rights as they are found in the Bill of Rights. This shows that the courts are not reluctant to give judgment in terms of socio-economic rights.

Opening of borders will even destroy what has been done thus far by courts and other institutions working towards enforcement of socio-economic rights. The opening of borders discussion cannot be now, probably in the near future, as by then, hopefully many Africa countries will be doing well economically. As such, opening of borders cannot be a solution now for the African problems, primarily the problem of failure by many African counties to enforce socio-economic rights. The #PutSouthAfricaFirst movements shows that even the citizens do not want the borders to be opened as already, with the borders not open, illegal immigrants flee to South Africa for better lives. It is therefore recommended that African countries must focus on developing their respective economies which it is believed that it will contribute to better lives of their citizens.

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NAVIGATING QUALITY TEACHING AND LEARNING IN LARGE CLASSES: INSIGHTS FROM A SOUTH AFRICAN INSTITUTION

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ABSTRACT

This paper examines the challenge of improving teaching and learning quality in large classes at a South African institution, defining "large class" as having over 100 students. It explores diverse interpretations of quality in education, such as excellence and continuous improvement. The study focuses on a first-year law class with 300 students, arguing that teaching quality hinges on the teacher's mindset and actions, including planning and reflection. Using a documentary research approach, the paper reviews teaching strategies and theories, offering insights and recommendations for educators and policymakers to enhance educational outcomes in large classes.

Keywords: large class, quality, learning theories, challenges.

INTRODUCTION

Each year, South African public institutions receive numerous first-year applicants for tertiary education. Due to the challenge of accommodating all students, some register at private institutions (Ramlachan, 2019). Consequently, the growing demand for education and massification has led to higher education institutions grappling with large classes (Mohamedbhai, 2008). It is noteworthy that the term "large class" lacks a standard definition (Maringe & Sing, 2014). The understanding of large classes varies by context (Hayes, 1997). Some authors define large classes by numerical thresholds, while others consider the environment. For example, Maringe and Sing (2014) consider a class with more than 100 students as large, typically targeting first-year undergraduate courses. Hasan (2008) describes a class size "ranging from 60 to 150." Matoti & Lenong (2018) assert that large class size varies by country, with their institution (CUT, Free State) defining it as approximately 120 students per room.

Furthermore, Hornsby et al. (2014) offer a different perspective, defining a large class not by numerical threshold but as an environment where the quality of student learning may be negatively impacted by the number of students. They argue that the learning context is paramount, stating:

"A large class may be defined differently depending on the discipline and/or pedagogical needs. For example, in theatre studies, any class with more than fifteen students may be considered large, whereas a first-year biology class would be large if it exceeds a hundred students."

This statement implies that the numerical threshold for large classes should not be overemphasized since quality teaching and learning depend on disciplinary contexts. I believe the University of Zululand adopts a similar approach, though it is not explicitly stated in their policy. At the University of Zululand (Unizulu), where I lecture in the law department, a large class can mean approximately 100 students in one setting, based on infrastructure (Unizulu policy, 2018). However, a "structured criterion-based tool" is used to assess all classes and determine if they are large. This tool examines whether a decline in academic performance and an increase in at-risk students are due to class size (Unizulu policy, 2018). Unfortunately, I could not locate this measurement tool, posing a challenge in defining "large class" at Unizulu.

For this paper, I define a large class as one with more than 100 students, where delivering quality teaching and learning is challenging. The central question addressed is how to enhance quality teaching and learning in large classes. Using documentary research, which involves reviewing, Analysing, and examining information, recorded

media, and texts (Ahmed, 2010), this paper is divided into four sections. Besides the introduction, the second section discusses quality teaching and learning in large classes. The third section reflects on my experiences teaching a class of 300 students, describing my teaching methods, theories, learning perspectives, and challenges. The final section concludes the paper.

ANALYZING QUALITY TEACHING AND LEARNING IN RELATION TO LARGE CLASSES

In higher education, "quality" encompasses various aspects such as "student performance, the outputs of an educational program, student learning experience, or the teaching provided" (McKimm, 2009). Harvey et al. (1992), as cited by McKimm (2009), categorize quality into six types:

1. *Quality as Excellence*: This focuses on high academic standards.
2. *Quality as Zero Errors*: Common in industry, it emphasizes standardized measurements and uniformity, applicable to learning materials in education.
3. *Quality as Fitness for Purpose*: This customer-centric approach defines quality by meeting specific needs, highlighting "value for money" and efficient teaching (Henard & Leprince-Ringuet, n.d.).
4. *Quality as Enhancement*: This involves continuous improvement, ensuring consistent high performance in areas of reputation.
5. *Quality as Transformation*: This pertains to preparing students for significant roles post-graduation, with socio-political changes driven by higher education.
6. *Quality as Threshold*: This describes the minimum standards, including graduates' knowledge, skills, and attitudes.

The above classifications indicate that "quality teaching" lacks a clear definition and is inherently linked to the six categories of quality culture in higher education (Henard & Leprince-Ringuet, n.d.). Therefore, quality teaching depends on the chosen interpretation of quality (Henard & Leprince-Ringuet, n.d.). Biggs (2001) describes quality as "an outcome, a property, and/or a process." For this discussion, quality teaching and learning encompass excellence, purpose-driven goals, continuous improvement, transformational impact, and minimum standards in imparting knowledge.

Suwartono et al. (2019) describe teaching and learning as processes where students acquire and comprehend knowledge. To achieve this, teachers must creatively use relevant materials and methods (Suwartono et al., 2019). Thus, quality teaching and learning begin with "teacher quality." Sreeramana & Kumar (2016) distinguish between explicit and implicit teacher qualities. Explicitly, faculties must empower teachers through capacity development from hiring to nurturing, sustaining, and harvesting, using appropriate practices and strategies (Sreeramana & Kumar, 2016). Implicitly, teacher quality involves characteristics such as ability, commitment, and motivation, requiring teachers to remain updated in their fields (Sreeramana & Kumar, 2016). Innovation, continuous improvement, and striving for individual excellence are crucial. Teachers must be professionally competent and dedicated (Aiou et al., 2009).

Effective teaching is based on teachers' experience and performance, with students' performance reflecting their teachers' effectiveness (Aiou et al., 2009). Teachers play a significant role in education quality. For large classes, teachers must approach them with the same creativity and mindset as small classes (Mayes-Tang, 2020).

Large classes often see reduced interaction between students and faculty (Lynch & Papas, 2017), making students feel "anonymous and passive" (Hasan, 2008). Effective classroom management by the teacher is critical for student learning outcomes (Suwartono et al., 2019), though managing large classes presents physical, psychological, and technical challenges (Hasan, 2008). Hayes (1997) identifies these challenges as discomfort, control, individual attention, evaluation, and learning effectiveness.

Discomfort arises from physical constraints, such as overcrowded classrooms, with some students sitting on the floor (Matoti & Lenong, 2018). Controlling large classes can be difficult, especially in noisy environments (Suwartono et al., 2019). Teachers may struggle to give individual attention, leading to neglected students (Hasan,

2008). Evaluation and feedback become challenging in large classes (Harrison et al., 2020), and concerns about learning effectiveness persist (Hayes, 1997).

To enhance teaching and learning despite these barriers, Hasan (2008) suggests strategies for course structure, discipline, attendance, managing anonymity, classroom climate, learning activities, and improving lectures. Teachers can maintain focus in large classes by making lectures interesting and incorporating active learning (Johnson, 2007). Breaking sessions into large lectures and smaller breakout activities can help (Hasan, 2008). Setting ground rules and collaborating with students to create a conducive learning environment is essential (Hasan, 2008; Mayes-Tang, 2020). Effective communication and sharing management techniques with colleagues are beneficial (Xu, 2007).

Attendance can be managed by taking registers at the end and engaging students in activities (Hasan, 2008). Teachers should strive to know their students and be accessible (Taylor et al., 2012). Managing the class climate involves making a strong first impression and communicating teaching styles, assessment methods, and expectations (Hasan, 2008). Active learning requires asking thought-provoking questions and providing feedback (Elifathi, 2017). Lecturers should ensure their content is well-organized and engaging and leave students feeling they have learned something significant (Morton, 2009).

Consequently, enhancing teaching and learning in large classes is primarily the responsibility of the teacher, who must apply the same creativity and effectiveness as in small classes (Aiou et al., 2009). Students, regardless of class size, deserve competent teachers. The following section will reflect on my experiences teaching law in large classes.

TEACHING EXPERIENCE AT THE UNIVERSITY OF ZULULAND

As an associate Professor at the said institution, I oversee four modules: two in the first semester and two in the second semester. Among these, one module is a compulsory, stand-alone course, while the other three are integral to the LLB degree, spanning both semesters. These modules include Legal Research Methods (2LRM401), Constitutional Law B (2RCL202), and the introductory courses Introduction to Law (2LRI101 and 2LRI102), which have an enrollment of 300 students. Introduction to Law is my largest and most challenging class. Effective planning and organization are essential for facilitating quality learning in such a large class (Hasan, 2008). This section outlines my teaching strategies, methods, and theoretical underpinnings, while also addressing the challenges and opportunities in teaching large classes.

Teaching Strategies Employed in the Classroom

I believe that effective law teaching should be student-centered, promoting engagement with both theory and its practical application to foster a deeper understanding of the world (Ramsden, 1992). In today's diverse classrooms, achieving "deep" learning rather than "surface" learning is challenging but essential. As Biggs (1999) asserts, "Good teaching is getting most students to use the higher cognitive level processes that the more academic students use spontaneously. Good teaching narrows the gap." Teaching should benefit the entire class, not just the top performers.

My primary strategy is to convey my passion and enthusiasm for the law, demonstrating its relevance to daily life, which engages students and impacts their attitudes positively (Lynch & Pappas, 2017). My motto, "Student success is my business," reflects my student-focused approach. My friendly demeanour aids in fostering a positive learning environment.

My second strategy involves "diagnostic assessment" to understand students' interests and potential learning barriers (Suwartono, 2019). This assessment includes three questions about their motivations for studying law, their strengths and weaknesses, and their academic goals for the year. The responses help identify common barriers, such as language challenges and inform tailored teaching approaches. Providing oral feedback on these assessments helps mitigate feelings of anonymity in large classes (Hasan, 2008).

Range of Teaching Methods Applied

These methods are employed in both contact and online teaching. At the semester's start, a Module Learner Guide is distributed and posted on Moodle, outlining the module content, and learning outcomes. During the semester, the module is delivered through three weekly lectures and three tutorial sessions. Lectures utilize PowerPoint presentations with real-world scenarios to illustrate legal concepts, ensuring students not only understand theoretical knowledge but can also apply it practically.

In online teaching, animated PowerPoint presentations via Microsoft Teams maintain student engagement. Interactive discussions during lectures promote critical thinking and self-assessment (Taylor et al., 2012; Elifatihi, 2017). Tutorials involve smaller groups of 40 students led by two tutors, fostering active participation and peer learning. Tutors, often senior students, share their experiences, motivating junior peers and providing feedback on assessments.

Diverse Instructional Methods and Learning Styles

Patt and Collins (2006) identify five teaching perspectives: transmission, apprenticeship, developmental, nurturing, and social reform. For first-year students in LRIN101, I apply both transmission and developmental perspectives. The former focuses on delivering content, while the latter encourages students to engage with complex issues and construct their understanding. Taylor et al. (2012) highlight that active learning involves developing students' skills rather than merely transmitting information.

To accommodate various learning styles (visual, aural, reading, and kinaesthetic), I use flowcharts in animated presentations to aid comprehension, particularly benefiting visual, aural, and kinaesthetic learners (Kariyawasam & Low, 2014). Additional written materials cater to those who prefer reading.

Different Student Learning Theories in Class

Recognizing the uniqueness of each student's brain, it is crucial to apply diverse learning theories. Among the known theories—behaviourism, social cognitive, cognitive learning, constructivism, and social constructivism—I focus on social constructivism in my Introduction to Law class. This theory posits that learning involves the internalization and adoption of external experiences (Kay & Kibble, 2016).

In practice, students are divided into groups and given topics to discuss, using practical examples from society to understand legal principles. For instance, observing court proceedings helps students construct knowledge actively. This approach also facilitates collaborative learning and peer tutoring, enhancing interaction and knowledge exchange (Taylor et al., 2012).

Essentially, enhancing teaching and learning in large classes hinges on effective strategies and methods tailored to student needs, underpinned by appropriate learning theories. The following section will reflect on the challenges of teaching law in large classes.

UNPACKING OPPORTUNITIES AND CHALLENGES IN TEACHING LARGE CLASSES

Teaching large classes presents a variety of opportunities and challenges that can significantly impact both the instructor's experience and the student's learning outcomes.

Opportunities

- ❖ **Diverse Perspectives:** Engaging with many students from varied backgrounds can enrich classroom discussions and group debates, leading to a more comprehensive understanding of the subject matter (Carpenter, 2006).
- ❖ **Collaborative Learning:** Large classes provide an excellent platform for collaborative learning activities, such as group projects and peer-to-peer learning, which can enhance students' critical thinking and problem-solving skills (Taylor et al., 2012).

- ❖ **Resourceful Innovations:** Teaching a large class can encourage instructors to develop innovative teaching methods and utilize technology more effectively, such as incorporating online discussion forums, interactive polls, and multimedia presentations (Hasan, 2008).
- ❖ **Exposure to Real-World Scenarios:** Large classes often simulate real-world environments where students must collaborate and communicate effectively with a diverse group of individuals, preparing them for future professional settings (Suwartono, 2019).

Challenges

Physical Discomfort: One significant challenge is the physical discomfort due to inadequate classroom conditions, such as broken air-conditioning and overcrowding. This makes it difficult to move around the classroom, limiting the instructor's ability to engage with students individually.

- ❖ **Limited Individual Attention:** Providing personalized attention to each student becomes increasingly difficult in large classes, which can negatively impact students who require additional support (Hasan, 2008).
- ❖ **Feedback and Assessment:** Providing timely and detailed written feedback to a large number of students is a daunting task, often leading to delays and a potential decrease in the quality of feedback (Harrison et al., 2020).
- ❖ **Classroom Management:** Managing a large class can be challenging, particularly in maintaining discipline and ensuring that all students are actively participating and engaged in the learning process (Hayes, 1997).
- ❖ **Technical Challenges:** Incorporating technology effectively in large classes can be difficult, especially when dealing with technical issues such as ensuring all students have access to necessary devices and reliable internet connections (Xu, 2007).
- ❖ **Psychological Barriers:** Students in large classes may feel anonymous and passive, which can lead to reduced participation and engagement (Hasan, 2008). Overcoming this requires creating a sense of community and belonging within the classroom.
- ❖ **Evaluation Methods:** Developing fair and comprehensive evaluation methods that accurately reflect each student's understanding and progress can be more complex in large classes, necessitating the use of varied assessment techniques (Morton, 2009).

What transpires from the above is that, while teaching large classes offers several opportunities for enriching the learning experience through diversity and innovation, it also presents substantial challenges in terms of classroom management, providing individual attention, and ensuring effective feedback and assessment. Overcoming these challenges requires careful planning, creative teaching strategies, and the effective use of technology.

CONCLUSION

This paper addresses the navigation of quality teaching and learning in large classes within the South African context. It is noted that the concept of a "large class" lacks a specific definition and varies depending on the context. For this study, a large class is defined as having more than 100 students, particularly in a law classroom.

In terms of quality teaching and learning, the paper explores the multifaceted concept of "quality," which encompasses excellence, purpose-driven instruction, zero errors, transformation, continuous improvement, and threshold standards (McKimm, 2009). Utilizing a first-year law class of 300 students and applying social constructivism theory, this paper posits that the enhancement of quality in teaching and learning, whether in a large or small class, fundamentally depends on the teacher's mindset.

The educator must continuously engage in planning, application, management, and reflection. By remaining vigilant to significant developments in their area of expertise, teachers can ensure continuous improvement in their teaching methods. Ultimately, the effectiveness of teaching and learning in large classes hinges on the teacher's commitment to innovation, adaptability, and dedication to fostering a conducive learning environment.

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EXPLORING SUPPLY CHAIN CHALLENGES AND MITIGATION THEREOF IN GROCERY SMEs IN SOUTH AFRICA

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ABSTRACT

The advent of supply chain management (SCM) strategy about four decades ago was a game-changer, with enterprises having transformed their focus more into customer concerns. This study explored supply chain challenges and mitigation thereof, in grocery stores classified under small and medium-sized enterprises (SMEs) in South Africa, as influenced by SCM strategy. The exploration covered grocery SMEs in the city of Johannesburg in Gauteng province, South Africa. Qualitative research methodology and constructivism research paradigm were pursued, data was collected from interviews with owner/managers of the SMEs, which were recorded, transcribed through Atlas.ti23, and thematically analysed for the study outcome. The outcome revealed that the grocery SMEs' challenges emanated from product delivery, supplier-customer relationships, and communication with stakeholders. The South African grocery SMEs are recommended to venture in e-commerce to enhance their competitiveness and sustainability.

Keywords: grocery SMEs, mitigation, supply chain collaboration, supply chain management, third-party logistics (3PL).

INTRODUCTION

The emergence of supply chain management (SCM) concept in the last four decades has transformed large and small and medium-sized enterprises (SMEs) into customer-centric business model (Hariharasudan, Kot & Jeyasankar, 2021). The SMEs are major contributors to growth domestic product (GDP) of nations globally, as demonstrated by the statistics of United States of America (U.S.A.) and South Africa. The SMEs in U.S.A. contribute about 23% of GDP and over 80% of job creation (US, Small Business Assoc., 2021), while contributions in South Africa are 34% to GDP and 50-60% of job creation (Stats SA, 2021).

A crucial function and a key cost component for grocery SMEs in South Africa is transportation of fast-moving consumer goods (FMCGs) from the suppliers, either utilising their own transport, or outsourced third-party logistics (3PL) transport. The transportation of FMCGs impact heavily on the SMEs profitability and sustainability (Bocken, Harsch & Weissbrod, 2022:814). The study explored supply chain management challenges and processes of mitigating them by grocery SMEs in South Africa, utilizing qualitative research methodology. The grocery SMEs from the city of Johannesburg in Gauteng province provided sample for the study. The study was underpinned in theories of competitive advantage and resource-based view (RBV).

THEORETICAL FRAMEWORK

The study was underpinned in theories of competitive advantage and resource-based view (RBV), as they delved on business parameters of profitability that drive competitiveness and sustainability. The theory of competitive advantage provided cost leadership and differentiation as the two basic types of competitive advantage (Porter, 1985:3). The theory further stipulates that competitive advantage in one industry can be strongly improved by interrelationships with business units competing in related industries, where such interrelationships can be achieved. Hence, the grocery SMEs are no exception to this phenomenon in their pursuit of competitiveness and sustainability.

The resource-based view (RBV) theory is a proponent of firms' strategy to achieve their competitive advantage over their competitors, focusing on the available resources and capabilities at hand (Rothaermel, 2013: 91).

The theory is seen as the basis on which successful businesses will find their future competitiveness on the development of unique and inimitable competencies which can be tangible or intangible in nature. Tangible assets are physical, such as land, buildings, machinery, equipment, and capital, while intangible assets are those that cannot be seen nor touched, such as a brand reputation, trademarks, and intellectual property (Barney, Wright & Ketchen 2001: 634). Hence, the relevance of the two attributes of tangible and intangible assets in the South African grocery SMEs.

LITERATURE REVIEW

The exploration covered a comprehensive literature review of SCM and its components relevant for this study, a focus on enterprise supply and demand and supplier-customer relationships. Also included are the supply chain challenges of the South African grocery SMEs and mitigating factors.

Supply Chain Management (SCM)

Supply chain (SC) and SCM are distinguished for clarity of the supply chain processes. Supply chain is a “network of businesses that participate through the linkages of both upstream and downstream in distinct business processes and activities used to create value in the form of products and services in the possession of the end-customer”. A typical goods-producing supply chain structure includes suppliers, manufacturers, distributors, retailers, and customers (Pienaar & Vogt, 2016). The SCM definition entails: “The integrated managing and control of flow of information, materials, and services from the suppliers of raw materials, through to the factories, warehouses, and retailers, to the end customers. The benefits to an organisation involved in supply chain management should be lower inventory costs, higher quality, and higher customer service levels. These benefits will only be gained, if all those involved in the supply chain are conforming to the standards set” (CSCMP, 2010). The main component of SMC is logistics management, which is responsible for the transportation of raw materials from suppliers to factories (inbound logistics) and distribution of the finished products to the customers (outbound logistics) (Pienaar & Vogt, 2016: 8).

Logistics Management

Logistics management is the leading component of SCM concerned with transportation and warehousing functions. Logistics management is defined as “that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow, and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers’ requirements” (CSCMP, 2010). The suppliers of FMCGs in South Africa are geographically scattered and far from customers, rendering supply chain process complex and expensive, which require innovative strategies to build competitiveness and increase profit (Waugh & Luke, 2011: 337).

Third-Party Logistics (3PLs)

Third-party logistics (3PL) is defined as, “a system where an organisation, or a third-party company provides logistics services to companies in need of transportation and warehousing among others” (APICS, 2013: 176). As the manufacturers of FMCGs in South Africa are geographically scattered, the transportation cost of goods to grocery SMEs is high (Waugh & Luke, 2011: 337). Thus, customers outsource third-party logistics (3PL) firms, as they are cheaper than using own transport. The 3PL transportation utilizes full-load shipments for transport optimization and avoidance of instances of transportation disruptions (Ali, Nagalingam & Gurd, 2017).

Reverse Logistics

Reverse logistics is the process of receiving goods back for the purpose of preparing them for resale or to recapture the valuable part of the unit for reuse or resale (Wisner, Tan & Leong, 2016). The definition states, “Reverse logistics is a complete supply chain dedicated to the reverse flow of products and materials for the purpose of returns, repair, remanufacture and/or recycling” (Pienaar & Vogt 2016:499). Thus, reverse logistics is about damage control and is crucial for businesses, especially grocery SMEs, that trade in FMCGs which has low margin.

Supply Chain Collaboration (SCC)

Supply chain collaboration (SCC) is a relationship between supply chain partners developed over a period. SCC involves the "coordination of internal departments and external partners to sustain an optimised flow through the supply chain in order to efficiently meet demand and ensure on-time delivery" (Wisner *et al.*, 2016:152). SCC is enhanced with technology for faster product supply and more efficient information flow. This technology linkage is referred as supply chain integration (SCI) (Ramanathan, 2020).

Supplier-Customer Relationship

The supplier-customer relationship entails the business relation between the suppliers and customers in terms of product quality, services such as delivery, and complaint handling among others. In the supplier perspective, it involves understanding the customer, customer satisfaction, communicating innovations and financial matters. In the customer perspective, the focus is on information sharing, flexibility in demand, bonding with suppliers and timely payment among others (Mulligan & Gordon, 2002: 29-46). Nonetheless, businesses such as grocery SMEs need to foster a sound and long-term relationship with suppliers to build mutually beneficial interaction and cooperation (Pienaar & Vogt, 2016: 207).

Small and Medium-Sized Enterprises (SMEs)

The small and medium size enterprises (SMEs) are unique, legalized, and separate business entities, that are family or individually owned in different sectors of the economy and have crucial socio-economic attributes in the development of a nation (Tsatsenko, 2020). The SMEs are widely acknowledged in both developed and developing nations for their significant contributions to GDP of the respective nations (Perera & Chand, 2015:5). In South Africa are SMEs are defined by small enterprises development authority (Seda) as "firms that employ 51 to 250 employees, with the maximum threshold ranging from R40 - R220 million, depending on the sector". These SMEs make approximately 91% of formalised businesses, provide employment to about 60% of the labour force and total economic output accounts for roughly 34% of GDP (Banking Association South Africa, 2022). The grocery SMEs in South Africa fall under this category of SMEs.

Fast-Moving Consumer Goods (FMCGs)

Fast moving consumer goods (FMGs) are relatively low-priced goods with very short shelf-life, which end-customers purchase daily (Bhatt & Saiyed, 2015: 2). The FMCGs comprises of processed products in form of food and beverages, healthcare and personal care over-the-counter products, perishables such as vegetables, dairy, poultry, and beef products among others. The grocery SMEs are among the leading channels of the FMCGs and utilizes 3PLs as a way of saving on transportation costs.

Competitive Advantage

Competitive advantage is defined as "having a leading edge over competitors gained by providing customers with a superior value, by means of lower prices or offering great benefits and improved facilities which may justify higher prices" (Pienaar & Vogt, 2016: 33). Competitive advantage happens when a product or service of a business is observed as better than its competitors by targeted market customers. A company gains competitiveness when the commodities traded can meet the needs of customers in terms of price, quality, and diversity (Comănescu, Ponea, Petre & Ponea, 2018: 273). In SMEs perspective, the degree of competition affects its market potential and opportunities for growth (Pienaar & Vogt, 2016).

Supply Chain Challenges of Grocery SMEs In South Africa And Mitigation Thereof

The size of grocery SMEs pose challenges in planning for the infrastructure required for a thriving supply chain due to costs involved. However, the need for technology to provide effective and efficient information flow to enhance supplier-customer relationship, speed up order execution and transportation is a constraint for start-up SMEs (BER, 2016). In South Africa, SMEs may receive funding assistance from the government, and with the infrastructure in

place, the grocery SMEs can execute the supply chain management strategy to remain competitive and sustainable (Sopa & Seanchaiyathon, 2020).

RESEARCH PROBLEM

Supply chains are complex and resource intensive systems that are heavily dependent on human resources, processes, and equipment. As family or individual owned enterprises, most SMEs are not well resourced at inception. That alone is a challenge of implementing supply chain practices in the enterprises. Hence, the research problem explored supply chain challenges and the mitigation thereof, as experienced by grocery SMEs in the city of Johannesburg in Gauteng province, South Africa.

RESEARCH OBJECTIVES

The primary and empirical objectives were observed to determine the supply chain challenges of grocery SMEs and the alleviation processes in South Africa, exploring the grocery stores in the city of Johannesburg as the sample of the study.

Primary Objective

The primary objective was to explore supply chain challenges of grocery SMEs and processes of alleviating them in the city of Johannesburg in Gauteng province, South Africa.

Empirical Objectives

The empirical objective comprised the following:

- Exploring that technology application in supply chain enhanced supply chain collaboration.
- Determining that supplier-customer relationship enhanced product supply to grocery SMEs.
- Establishing that shared 3PL transportation among grocery SMEs reduced transportation costs.

RESEARCH METHODOLOGY AND DESIGN

This study pursued a qualitative research methodology and constructivism research paradigm in exploring the supply chain challenges and mitigation thereof in grocery SMEs in South Africa. Both qualitative and constructivism paradigm rely on data collected from interviews with the participants (Lee & Lings 2008: 226). Research design provides the framework of the study on generating empirical evidence through examination of the research questions (Saunders, Lewis & Thornhill, 2020:291). The empirical evidence was provided by the primary data collected from the interviews with the owner-managers of the grocery SMEs in the city of Johannesburg, South Africa.

The study was underpinned in theories of competitive advantage and resource-based view (RBV), and the exploration reviewed the supply chain challenges experienced by the SMEs, and the processes applied for their alleviation. The participants in the study were assured of confidentiality and non-disclosure; the interview duration was between 15-20 minutes and was recorded digitally for data analysis afterwards. A sample size of 19 grocery SMEs was earmarked, but saturation was achieved after interviewing the 12th respondent. Subsequently, the recorded interviews were transcribed through a computer software Atls.ti23 and emerging themes were translated, coded and content analysis utilized to determine the outcome of the study.

RESULTS AND DISCUSSION

After the transcriptions from Atlas.ti23, nine major themes and several sub-themes emerged. The major themes comprised SCM, transport optimisation, 3PL, supplier relationships, internet connection, communication, order fulfilment, groceries, and low margins. Some of the sub-themes were own transport, use of smaller trucks, sharing transport, overstocking, damaged products, and smart phones among others. The themes resonated with the views expressed by the participants and complied with the primary and empirical objectives of the study. The role of technology on how it enhanced grocery SMEs trading through internet connectivity, use of computers and

smartphones, featured prominently during the interviews. The three empirical objectives set for the study were achieved as stated herewith:

Empirical Objective 1: “Exploring That Technology Application in Supply Chain Enhanced Supply Chain Collaboration”

The technology application in enterprises is also referred as supply chain integration, which involves linkages, alignment, and coordination of processes, that enhance supply chain collaboration. These processes are found in enterprises both internally (intra-organisation) and externally (interaction with suppliers). In grocery SMEs, this involves internet connectivity through computers and smartphones, that enhance communication of demand and order delivery. These linkages speed up communication flow between suppliers and customers and streamline supply chain collaboration, as the relationship stabilizes. The participant 2 summarized the collaboration role as follows:

“The use of internet through our mobile phones has streamlined our relationship with suppliers as we are able to order goods more frequently and receive deliveries faster. In the past we had to order in bulk and had issues of overstocking and payment, especially when products haven’t been sold. These days our payments are fast-tracked, paid and goods not held for long time”.

Empirical Objective 2: “Determining That Supplier-Customer Relationship Enhanced Product Supply to Grocery SMEs”

Supplier-customer relationship refers to the mutual understanding between the two parties in business transactions, such as sharing information on demand flexibility, forward and backward flow of goods (delivery), which culminates to customer satisfaction. The relationship ensures the end-to-end continuous flow of goods in the grocery SMEs supply chain. Thus, the supplier-customer relationship enables timeous coordination of orders and transportation of goods by the 3PL providers. As the SMEs has limited storage facilities, it is crucial to maintain constant supply of inventories to maintain enough stock levels for contentious trading. The participant 11 asserted in support of the relationship:

“We try to establish good working relationship with manufacturers and wholesalers who are our suppliers. This helps us to know when there’s discounts, allowed to return damaged products for replacements, and we can get better trade deals, including credit terms”.

Empirical Objective 3: “Establishing That Shared 3PL Transportation Among Grocery SMEs Reduced Transportation Costs”

One of the leading cost components of grocery SMEs is transportation of goods from suppliers. To minimize the cost, SMEs from a given geographical location outsource transportation from 3PL and share costs amongst themselves. This happens through optimization of full-load transportation by 3PL firms. This optimised mode of transportation increases the SMEs profitability and makes them more competitive. Participant 5 remarked:

“As the delivery costs are very high, small businesses in our region share outsourced transportation to reduce cost. Some 3PL firms introduced transportation sharing with other businesses, which has increase delivery frequencies, and drastically reduced costs. We receive supplies on the second day after placing orders, as opposed to weekly or fortnightly in the past”.

LIMITATION

Unlike other established businesses, grocery SMEs are extremely busy and a one-on-one consultation, especially for interviews was difficult to get, until late evenings, and usually not for more than 20 minutes. The reason being they are small and medium-sized, and interactions can only be with the owner, or the manager.

CONCLUSION

An exploration of supply chain challenges and the mitigation processes to alleviate those challenges was conducted in grocery SMEs in South Africa using stores in the city of Johannesburg, Gauteng province as sample. The study was underpinned in theories of competitive advantage and resource-based view (RBV) using qualitative research methodology and constructivism research paradigm. Three empirical objectives were pursued and achieved from themes that emerged from data analysis. Nonprobability sampling process was used, where the owner-managers of 12 grocery SMEs were interviewed, and the interviews recorded digitally. The recorded interviews were transcribed through Atlas.ti23 for themes, translated, coded and content analysis utilized to determine the outcome of the study. The transcribed data produced nine major themes and several sub-themes that concurred with the three empirical objectives pursued in the study. The outcomes resonated with the feedback from the participants as provided in the results and discussion section.

MANAGERIAL IMPLICATIONS

The study was under the over-arching discipline of supply chain management (SCM) strategy. The challenges experienced in grocery SMEs and the ensuing mitigation of those challenges were managed through the elaborated processes of supply chain collaborations and supply chain integration that enhance supplier-customer relationship. These functions are the pillars for a successful supply chain management process. The transport optimisation in utilizing full-load shipments by the 3PL firms is a crucial managerial attribute for the success of the grocery SMEs in South Africa.

RECOMMENDATIONS

Despite the financial difficulties for start-up SMEs, technology is crucial for all enterprises to acquire and maintain competitiveness and sustainability. Thus, the recommendation is for grocery SMEs in South Africa to venture in omnichannel and intensify e-commerce trading, which is a fast-growing trend globally in this era of 4th Industrial Revolution (4IR), where generative AI is fast gaining momentum.

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COMMITMENT AND TRUST: SHAPING GENZ'S LOYALTY IN NON-PROFIT BLOOD DONATION ORGANISATIONS

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ABSTRACT

The global demand for blood has increased, worsening shortages and highlighting the need for sustained blood donation. Non-profit blood donation organizations strive to secure blood supplies by fostering donor loyalty, yet retention remains low. This study aims to investigate the effects of trust and commitment on the loyalty behaviours of GenZ blood donors, aiming to enhance donor retention strategies within non-profit blood donation organisations. Data was gathered through a self-administered online questionnaire targeting registered blood donors aged 18-24, who had donated within the last three years. The questionnaire measured trust, commitment, behavioural loyalty, and word-of-mouth advocacy. A total of 158 usable responses were collected. Structural Equation Modeling (SEM) was used for data analysis, assessing the measurement model for validity and testing hypothesised relationships among the constructs. The study found that trust significantly influences commitment, which in turn strongly affects both behavioural loyalty and word-of-mouth. However, the direct impact of trust on behavioural loyalty was not supported. To enhance donor retention, it is recommended that blood donation organisations should focus on building trust and fostering commitment among blood donors. Implementing targeted communication and engagement strategies could strengthen these relationships. The research contributes to the understanding of relationship marketing within the non-profit sector by validating the commitment-trust theory in the context of blood donation. This highlights the critical role of trust and commitment in driving donor loyalty and retention.

Keywords: trust, commitment, relationship management, non-profit, loyalty.

INTRODUCTION

The shortage of blood is a global phenomenon that has been further exacerbated by the growing demand for blood due to the increasing global population and increased life expectation of people who rely on blood products for their medical needs (Chen et al., 2021). Blood is essential for any healthcare system of a country, and maintaining a sustainable supply of blood is pivotal for the functioning of the health system (Martín-Santana et al., 2021). However, maintaining sufficient levels of blood supply has been a major concern for blood donation organisations worldwide, which supply blood products to healthcare facilities (Southcott et al., 2022). The shortage of blood is caused by low blood donation rates, which causes a delay in the treatment of patients due to the unavailability of blood products (Chen et al., 2020). Increased demand for blood is driven by a rise in accidents, injuries due to violent crimes, treatment of diseases such as cancer, complications in pregnancy and loss of blood during childbirth and the growing number of emergency and elective surgeries (Duh & Dabula, 2021). Ultimately, blood transfusions save lives and improve quality of life through various medical interventions, which makes it an essential product in healthcare (Martín-Santana et al., 2021). To highlight the importance of blood donation, the World Health Organization (WHO) states that the provision of safe and sufficient blood stocks needs to be a key component of every nation's healthcare policy (WHO, 2023). This aligns with SGD goal 4 of ensuring healthy lives and promoting well-being for all (United Nations, 2024).

Blood donation organisations are non-profit organisations (NPO) that play a key role in improving the quality of life in the society in which they operate by rendering various services (Barra et al., 2018). These organisations facilitate the provision of blood products throughout the healthcare system and rely on the goodwill of individuals to donate blood (WHO, 2023). The World Health Organization (WHO) recommends and encourages blood donation organisations to use regular, voluntary unpaid blood donors because they are considered to be the safest group of

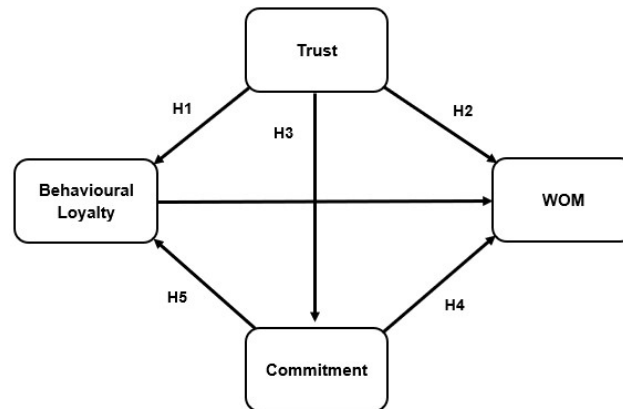
donors (WHO, 2023). To realise an adequate supply of blood in a country, at least 3% of the population needs to be blood donors (Zucoloto et al., 2020). To achieve the suggested requirements, the blood donation organisations bear the responsibility of attracting blood donors through promotions and hope to retain them (Martín-Santana et al., 2021). In South Africa, less than 1% of the population donates blood (Potgieter & Rensleigh, 2022) which is far below the suggested threshold by WHO, for the realisation of adequate blood supply. In an attempt to increase blood donation numbers, blood donation organisations have relied on traditional media (television, radio and outdoor media) for advertising (Duh & Dabula, 2021). They have also incorporated social media advertising and face-to-face recruitment initiatives to acquire blood donors (Chen et al., 2021). Despite these efforts, the supply of blood does not match the increased demand for blood. It has been reported that most first-time blood donors do not return for subsequent donation (Hashemi et al., 2019). Therefore, emphasis has been placed on the encouragement of regular donation, as regular donors pose less risk to blood safety. As such, blood donation organisations must focus on developing a pool of regular blood donors in the system (Hashemi et al., 2019). This calls for a shift in the current marketing efforts by the organisation to a more relational approach that seeks to foster donor loyalty, through donor action or advocacy. Non-profit organisations (NPOs) do not only compete for resources such as money but for the donors' time and in the case of blood donation, for the blood as well (Chell et al., 2024). Recruitment of new blood donors is considered the solution to increasing the supply of blood, however, blood donation organisations need to place more focus on encouraging more frequent donations from their existing blood donors (Southcott et al., 2022). Previous literature on blood donation has focused on the drivers of blood donation behaviour (Guglielmetti Mugion et al., 2021; Matubatuba et al., 2024), service quality in blood donation (Melián-Alzola & Martín-Santana, 2020), blood donation during the COVID-19 pandemic (Veseli et al., 2022). More recently, the focus has shifted to donor retention and loyalty through repeat donations (Chen et al., 2021; Hashemi et al., 2019). Taking age into consideration, WHO reports that a proportionally higher number of young people donate blood in low- and medium-income countries such as South Africa (WHO, 2023). This study therefore focuses on GenZ consumers who were born after 1995 and are considered young consumers (Dolot, 2018). South Africa has a young population, of which over 10 million is accounted for by people aged 15-24 years old (StatsSA, 2022). Investigation of the young cohort of blood donors allows for better-targeted strategies for retaining young blood donors.

This study aims to make a contribution to the literature on relationship marketing in the non-profit sector, and in blood donor behaviour, particularly repeat or loyalty behaviour. WHO states that blood donors should be encouraged to 1) commit to donating blood regularly during the year, 2) inspire others to donate blood and 3) encourage their peers and family members to become regular donors (WHO, 2024). Therefore, the current research seeks to test variables of the trust-commitment theory in the context of blood donation organisations, where loyalty will be characterised as behaviour loyalty and attitudinal loyalty (word-of-mouth). The objective of this study is to evaluate the effect of trust and commitment on the loyalty behaviour of blood donors and to delineate the relationships between the variables used to measure loyalty.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES

This study is underpinned by the trust commitment theory of relationship marketing proposed by Morgan and Hunt (1994), which posits that trust and commitment are key requirements for success in relationship marketing. Looking at the NPO sector, where competition is ever-increasing, it has become imperative for organisations to focus on, and invest in developing and maintaining relationships with their donors (MacMillan et al., 2005). According to Morgan and Hunt (1994), commitment and trust are important because they push organisations to preserve relationships, resist solely focusing on short-term client acquisition and seek to work cooperatively for long-term benefits. Commitment is described as the ongoing desire to maintain a relationship, while trust is the confidence one party has in another about their integrity and how reliable they are. The outcome variable of interest for this study is cooperation, which is described as working together of the parties to achieve a common goal (Morgan & Hunt, 1994). In the context of blood donation organisations and blood donors, the common goal is ensuring the availability of blood through regular donations. Based on the grounding theory, a conceptual model has been proposed for this study. The model posits that trust and commitment influence blood donor loyalty behaviour. It further suggests that trust influences the commitment of the donor to blood donation loyalty. Loyalty is the conceptualised outcome variable, which is generally described as the customer's commitment to continuously supporting the organisation over time and recommending it to others (Darmayasa & Yasa, 2021). Figure 1 presents a graphical representation of the conceptual model with the key constructs (trust, commitment, behavioural loyalty and word-of-mouth) which will be discussed in the ensuing sections.

Figure 1: Proposed conceptual model



Loyalty as a Multidimensional Construct

The measurement for loyalty has been applied from a multidimensional approach, which observes loyalty from a behavioural and an attitudinal perspective (Liu et al., 2019). Customer loyalty can therefore be described as the continued behaviour and loyal attitude towards an organisation (Chen, 2015). Behavioural loyalty entails the frequent use of products or services from an organisation, while attitudinal loyalty is based on an individual's views and beliefs about the organisation. In the context of blood donation, behavioural loyalty is related to the donors' repeat donation behaviour and attitudinal loyalty refers to the willingness to talk about and recommend blood donation to friends and family, essentially positive word-of-mouth (Melián-Alzola & Martín-Santana, 2020). Though loyalty can be viewed from two dimensions, some studies measure loyalty by the attitudinal dimensions based on the intention of loyalty and not actual behaviour (Liu et al., 2019). Others have measured loyalty using two variables, representing each loyalty dimension (Barra et al., 2018). The key premise in the investigation of loyalty is that loyalty is the outcome of trust and commitment (Hashim & Tan, 2015).

Trust and Commitment

Trust is considered a key element in developing and maintaining a relationship between parties (Roberts-Lombard, 2020). It represents the willingness of the consumer or donor to place their confidence in an organisation and rely on them to perform the function they ought to (Barra et al., 2018). It is the belief that the organisation is reliable and honest in their conduct (Wongsansukcharoen, 2022). (Hartmann et al., 2015; Roberts-Lombard, 2020) have demonstrated the key role played by trust in influencing the behaviour of consumers to support an organisation or support a cause. In the retailing environment, for example, it has been observed that consumer trust has a positive influence on their loyalty towards a retailer (Hartmann et al., 2015). Thomas and Jadeja (2021) extended their research to the NPO sector and found that trust is a key determinant of donation behaviour and a critical element in building long-term donor relationships. In the context of this research, it is proposed that trust has an influence on the donors' loyalty in terms of repeat donation behaviour and in terms of recommending or encouraging others to donate. Therefore, the following hypotheses are formulated:

H1: There is a significant positive relationship between trust and behavioural loyalty.

H2: There is a significant positive relationship between trust and word-of-mouth.

Commitment is described as the willingness of the consumer to maintain a relationship through continued engagement with the organisation into the future (Liu, 2019). Consumers who demonstrate high commitment levels recognize their partnership with the organisation and it is pivotal that they are encouraged to maintain the relationship (Roberts-Lombard, 2020). Research has been conducted on the influence of commitment on relationship marketing studies (Barra et al., 2018; Roberts-Lombard, 2020) and fields interested in relationship development (Hashim & Tan, 2015; Liu, 2019). (Barra et al. (2018) found that commitment positively and significantly influences attitudinal loyalty, but this result was not the same for behavioural loyalty, demonstrating the difference in the effect of commitment on

loyalty. Additionally, it has been found that commitment is directly influenced by trust, meaning that when an individual has trust in the organisation, they are likely to be committed to maintaining the relationship (Hashim & Tan, 2015). This study will test the effect of commitment on the two loyalty dimensions (behaviour and attitude) as well as the relationship between trust and commitment. Therefore, the following hypotheses have been proposed:

H3: There is a significant positive relationship between trust and commitment.

H4: Commitment has a significant and positive relationship with behavioural loyalty.

H5: Commitment has a significant and positive relationship with WOM.

Empirical evidence has shown that trust precedes commitment in a relationship, and it was found to be a key influencer of commitment and loyalty (Liu, 2019). Commitment is a significant mediator in the relationship between trust and loyalty (Hashim & Tan, 2015; Liu, 2019) As such, in this study, the mediating effect of commitment between trust and loyalty will be assessed, and the following hypotheses have been proposed:

H6: Commitment mediates the relationship between trust and behavioural loyalty.

H7: Commitment mediates the relationship between trust and WOM.

RESEARCH METHODOLOGY

Measurement

The data collection instrument used for this study was a self-administered online questionnaire. The questionnaire consisted of an introduction of the study, explaining the purpose of the research and advising the respondents of how long the questionnaire would take to complete and the confidentiality that would be maintained. A screening question was provided to ensure that eligible respondents participated in the research. The screening question asked whether the respondent had donated blood in the last 3 years. Those who replied “No” were redirected to a page that informed them they could not participate in the study, while those who replied “Yes” were directed to complete the survey. The screening question was followed by 2 behaviour questions about how long the respondents have been blood donors and how frequently they donated blood. The rest of the questionnaire was organised into Sections A and B, where section A presented the measurement items of the constructs from the conceptual model (trust, commitment, behavioural loyalty and WOM), which were measured using a Likert scale. Section B contained questions about the demographic profile of the respondents, which included gender, ethnicity, level of education, employment status and location, which were measured using nominal and interval scales. The measurement items found in Section A were adapted from (Barra et al., 2018; Liu, 2019). A five-point Likert scale (from 1 to 5) was used to measure the items where 1 represented “strongly disagree” and 5 represented “strongly agree”. A pilot study was conducted before launching the questionnaire as recommended by (Burns & Bush, 2019) and the reliability of the constructs used in the measurement instrument. The results of the study indicated that all the constructs had a Cronbach’s alpha value above 0.7, confirming the internal consistency of the measurement items for each construct. Once the pilot study was concluded, the questionnaire was prepared for data collection.

Sampling and Data Collection

The population of interest for this study was registered blood donors between the ages of 18 and 24, who were active blood donors and had donated blood at least in the last three years. The age grouping is based on the focus of the study being the GenZ segment of the donor population. The non-probability convenience sampling technique was used to select the respondents. The self-administered questionnaire was distributed using Qualtrics, which is a data collection software that captures responses instantaneously as they are inputted by the respondents and allows the researcher to track the response rates. In collecting the data, ethical standards were adhered to protect the respondents during their participation in the research. These included ensuring that confidentiality and anonymity were maintained, the respondents consented to participate and were informed of their right to withdraw from participating at any point. A total of 158 usable questionnaires were retained for the data analysis.

Data Analysis

The data analysis for descriptive statistics was conducted using SPSS version 28, which entailed measuring frequencies and identifying patterns. The data analysis for inferential statistics was analysed using the structural equation modelling (SEM) technique using the analysis software package, SmartPLS4. The SEM process of analysis entails assessing the measurement model for convergent validity and discriminant validity (Hair et al., 2021). Once validity was confirmed, the measurement model was assessed, and the hypotheses were tested.

Results

Demographic and descriptive statistics

The study focused on the GenZ segment of the blood donor population in South Africa, and a total of 158 usable questionnaires were completed. In terms of demographic representation, 52.5% of the respondents were female, and 47.5% were male. Of these, most of the respondents were full-time students (36.7%) and employed full-time (34.2%). In terms of blood donation behaviour related to donation frequency, a large number of respondents (45.6%) indicated that they donate 1-2 times a year, while 24.7% indicated that they donate once every three years. In terms of how long they have been blood donors, when combined, a majority of the respondents (67.1%) have been blood donors for at least 2 years. Most of these respondents accounted for 22.8% who indicated that they have been blood donors for over two years followed by 17.7% who indicated that they have been blood donors for over 3 years. Table 1 presents the frequency results for donor behaviour and Table 2 provides a summary of the mean and standard deviations for each construct.

Table 1: Donation behaviour statistics based on length of donation span and frequency

How long have you been a blood donor?			
Less than 3 months	5.1%	2 years or more, but less than 3 years	22.8%
3 months or more, but less than 6 months	5.7%	3 years or more, but less than 4 years	17.7%
6 months or more, but less than 12 months	8.2%	4 years or more, but less than 5 years	12.7%
12 months or more, but less than 2 years	13.9%	5 years or more	13.9%
How frequently do you donate blood?			
1-2 times a year	45.6%	Once every 2 years	21.5%
3-5 times a year	8.2%	Once every 3 years	24.7%

Table 2: Means and Standard Deviations

Construct	Overall Mean	Overall Standard deviation
Trust	4.39	0.669
Commitment	4.06	0.836
Behavioural Loyalty	4.32	0.704
Word of Mouth	4.31	0.709

The results in Table 2 indicate that the means for all the constructs ranged between 4.06 and 4.39, indicating that respondents were generally in agreement with the statements measuring each construct.

Measurement Model Assessment

To assess the reliability of the constructs selected for the study, Cronbach's alpha was used. To achieve the reliability of the constructs, it is recommended that the Cronbach alpha value of a construct should have a minimum threshold of 0.7 (Hair et al., 2021). To assess the validity of the measurement model, convergent validity and discriminant validity were evaluated. In the evaluation of convergent validity, the standardised factor loadings, composite reliability and the average variance extracted (AVE) were observed. To achieve convergent validity Hair et al. (2021) recommend that the factor loadings and composite reliability should be 0.7 and greater, while the AVE should exceed the 0.5 threshold. Table 3 presents the results of the assessment of the measurement model.

Table 3: Reliability of the measurement construct and convergent validity of the measurement model

Construct	Items	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
Trust	TR1	0.762	0.838	0.885	0.607
	TR2	0.781			
	TR3	0.809			
	TR4	0.773			
	TR5	0.772			
Commitment	COM1	0.793	0.872	0.907	0.662
	COM2	0.879			
	COM3	0.841			
	COM4	0.768			
	COM5	0.781			
Behavioural Loyalty	BL1	0.908	0.875	0.923	0.800
	BL2	0.873			
	BL3	0.901			
Word-of-Mouth	WOM1	0.850	0.893	0.926	0.757
	WOM2	0.878			
	WOM3	0.864			
	WOM4	0.889			

The results presented in Table 3 confirm the reliability of the measurement constructs as the Cronbach alpha values ranged between 0.838 and 0.893, exceeding the recommended 0.7 threshold. The factor loadings of each item were greater than 0.7 as were the results of the composite reliability (ranging from 0.885 to 0.926). Lastly, the AVE values ranged between 0.607 and 0.800, which is above the recommended threshold of 0.5. Based on the results presented, the convergent validity of the measurement model can be confirmed.

Once the convergent validity of the measurement model was confirmed, the discriminant validity was examined using the Fornell-Larker criterion and the results are presented in Table 4. To achieve discriminant validity, the square root of the AVE value must be greater than the inter-construct correlation value (Hair et al., 2021).

Table 4: Results of discriminant validity using the Fornell-Larker technique.

	BL	COM	TR	WOM
BL	0.894			
COM	0.815	0.814		
TR	0.432	0.426	0.779	
WOM	0.654	0.647	0.481	0.870

Bolded values are the square root of the AVE and the values below them are the inter-construct correlations

The results in Table 4 indicate that for the majority of the constructs, discriminant validity was achieved, save for commitment where the square root of the AVE is lower than the inter-construct correlation. Hamid et al. (2017) advise that in such an instance the case is not widespread, and the difference is marginally low, this can be overlooked, and overall discriminant validity can be accepted. Based on the results discussed above, the validity of

the measurement model can be confirmed and therefore the structural model assessment is conducted to test the proposed hypotheses.

Structural Model Analysis and Hypotheses Testing

The structural model was analysed, and the proposed relationships were tested using SmartPLS4. To examine the path estimates and determine significance, a bootstrapping technique was used, with the resampling set at 5000 times. As part of the results from the structural model analysis, the R^2 values were calculated and the results indicate that the model accounts for 67.3% of the variance explained in behavioural loyalty, 50.4% of the variance explained in word-of-mouth and 18.2% of the variance explained in commitment. Table 5 presents the path coefficients (β -values), the t-values, p-values and the effect size (f^2) of the proposed relationships. In Table 5, there is also an indication provided on the acceptance of non-acceptance of each proposed hypothesis.

Table 5: Results of hypotheses testing

Hypothesis	Relationship	Path Coefficients (β -values)	T-Values	p-values	Result of hypotheses Supported/Not supported	Effect size (f^2)
H1	TR> BL	0.104	1.401	0.161	Not supported	0.027
H2	TR > COMM	0.426	5.323	0.000	Supported	0.222
H3	TR> WOM	0.217	2.120	0.034	Supported	0.076
H4	COMM > WOM	0.291	2.504	0.012	Supported	0.056
H5	COMM> BL	0.771	11.875	0.000	Supported	1.485
H6	TR > COMM>BL	0.328	6.036	0.000	Supported	
H7	TR > COMM>WOM	0.124	2.295	0.030	Supported	

The results presented in Table 5 indicate that all the hypotheses have been accepted except H1 which was not supported as the relationship between trust and behavioural loyalty ($\beta = 0.104$, $t = 1.401$, $p > 0.05$, $f^2=0.027$) was not significant. The results further reflect that there is a positive and significant relationship between trust and commitment ($\beta = 0.426$, $t = 5.323$, $p < 0.05$, $f^2=0.222$), confirming that H2 was supported. Similarly, H3 was supported, as trust has a positive and significant effect on word-of-mouth ($\beta = 0.217$, $t = 2.120$, $p < 0.05$, $f^2=0.076$). There is a positive and significant relationship between commitment and word-of-mouth ($\beta = 0.291$, $t = 2.504$, $p < 0.05$, $f^2=0.056$), therefore H4 is supported. Similarly, H5 is statistically supported, as the relationship between commitment and behavioural loyalty is positive and significant ($\beta = 0.771$, $t = 11.875$, $p < 0.05$, $f^2=1.485$). H6 proposed, that there is a positive and significant relationship between behavioural loyalty and word of mouth and the results show that the hypothesis is statistically supported ($\beta = 0.323$, $t = 2.332$, $p < 0.05$, $f^2=0.069$). Lastly, H7 and H8 proposed that commitment mediates the relationship between trust and behavioural loyalty ($\beta = 0.328$, $t = 6.036$, $p < 0.05$) and the relationship between trust and word-of-mouth ($\beta = 0.124$, $t = 2.295$, $p < 0.05$), respectively. Both hypotheses were supported as the results were statistically significant.

DISCUSSION AND RECOMMENDATIONS

The main aim of the study was to determine the impact of trust and commitment on blood donor loyalty behaviour. All, but one of the hypotheses proposed for the study were supported. H1 was not supported as the relationship between trust and behavioural loyalty was found to be statistically not significant. This is consistent with the findings of (Barra et al., 2018), who viewed loyalty as a multidimensional construct, where the relationship and behavioural loyalty were not significant. This however was not the case with studies that measured loyalty as a one-dimensional construct. The results from these studies (Liu et al., 2019; Melián-Alzola & Martín-Santana, 2020) indicate a positive and significant relationship between trust and loyalty as a one-dimensional construct. This highlights the need for researchers to consider the various aspects of loyalty, to evaluate the different effects that may be realised (Liu et al., 2019). The relationship between trust and WOM was found to be positive and significant, thus H3 was supported. This indicates that consumers will advocate for an entity or cause that they trust. The results are supported by the findings of (Barra et al., 2018; Middleton & Lee, 2020) which indicate the significance of the relationship between trust and attitudinal

loyalty, which is also operationalised as WOM. The results further indicate a positive and significant relationship between trust and commitment (H2), where trust strongly influences commitment ($\beta = 0.426$, $p = 0.000$). This finding is supported by the results from (Roberts-Lombard, 2020), who found that trust strongly influenced commitment and accounted for 77% of the variance explained. These results signify that consumers or donors who trust an organisation, are more likely to put effort into maintaining the relationship by committing to it (Liu, 2019). It was hypothesised that commitment has a positive and significant influence on both WOM (H4) and behavioural loyalty (H5). Both hypotheses were supported, and results further indicated a stronger relationship between commitment and behavioural loyalty ($\beta = 0.771$, $p = 0.000$). The findings are supported by studies focusing on relationship management (Abid et al., 2023; Izogo, 2017) who found that commitment significantly influences customer loyalty. In a study by (Thaichon & Quach, 2015) where attitudinal and behavioural loyalty were measured separately, the findings further supported the results of this study as both attitudinal loyalty and behavioural loyalty were positively and significantly influenced by commitment. The finding suggests that organisations can influence customer loyalty by increasing customer or donor commitment (Thaichon & Quach, 2015). Lastly, the results confirmed that there is an indirect effect of trust on both attitudinal and behavioural loyalty which is mediated by commitment, thus H6 and H7 are supported. This indicates that the relationship between trust and loyalty (behavioural loyalty and WOM) is improved by the presence of commitment. This finding is supported by the results from (Barra et al., 2018) who found a significant indirect effect between trust and behavioural and attitudinal loyalty via commitment. This highlights the need for organisations to increase commitment to realise loyalty behaviour from their donors or customers (Barra et al., 2018).

Based on the findings, the following recommendations are provided:

The results show that commitment was the largest influencer of behavioural loyalty, which is actual blood donation by the donors. Additionally, commitment mediated the relationship between trust and behavioural loyalty and WOM. These findings highlight the importance of the donor's commitment to the organisation and the cause of blood donation, the outcome of which is loyalty. This includes repeat blood donation and advocacy leading to the recruitment of new donors (Hashemi et al., 2019). Commitment shows the high level of dedication from the donor to maintain the relationship. Therefore, it is recommended that the blood donation organisation should focus on initiatives that promote commitment and the desire to continue donating blood and encouraging people to donate (Romaioli et al., 2016). Practically, blood donation organisations should use their database of donors to develop personalised communication, based on the donation history and demographic intel that they currently possess. This creates a sense of attachment for the donor to the organisation, which strengthens the relationship between the two parties (Thaichon & Quach, 2015). Loyalty programmes are another tactic that is generally used to foster customer loyalty. Lam and Wong (2020) state that loyalty programmes such as membership programmes show the organisation's willingness to develop long-term relationships with their customers as they are not just focused on encouraging transactions. Blood donation organisations can, therefore, have tiered benefits for blood donors based on their donation behaviour (frequency and how long they have been donating). The descriptive statistics showed that a large number (45.6%) of respondents indicated that they donate 1 to 2 times a year and 22.8% of the respondents have been blood donors for less than 3 years. (Lam & Wong, 2020) suggest that member privileges based on such data can be used to encourage donor loyalty behaviour, where donors can aspire to reach certain tiers based on their donation activity.

Trust is a precursor to commitment and the results show that trust has a strong effect on commitment (Lam & Wong, 2020). Trust and commitment are a necessity for the success of non-profit organisations (Liu, 2019). They have shown that trust has a larger effect on WOM than behavioural loyalty. This highlights that the blood donation organisation must develop marketing strategies and initiatives that have specific loyalty outcomes. This aligns with what (WHO, 2024) recommends what blood donors ought to do; donate regularly (behavioural loyalty) advocate for blood donation and encourage others to donate blood (WOM). Having shown that commitment has a significant impact on loyalty behaviour, and established that trust is a precursor, organisations must foster trust among consumers in their pursuit to develop long-term relationships. Trust in an organisation is stimulated by building a good reputation by having a credible and reliable organisation (Liu, 2019). Blood donation organisations can build trust by ensuring open communication with the donors. This can be achieved by sharing information regarding blood donation such as what the blood is needed for, how it is processed and how it has helped the recipients of the donation and any other information regarding developments by the organisation to become more effective and efficient in its mandate to supply blood. Open communication also entails allowing donors to engage with blood donation organisations on various platforms to provide feedback and make recommendations where necessary. Such initiatives develop the perception of trust towards the organisation among donors. Additionally, the GenZ cohort responds positively to digital marketing communication through social media and online communication platforms (Munsch, 2021).

Therefore, to effectively reach this segment of the population, blood donation organisations must use various digital platforms to disseminate the information.

CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

This study focused on the impact of trust and commitment on blood donor loyalty in a blood donation organisation among GenZ donors. The findings of the study showed that donor loyalty must be assessed from a multidimensional perspective, as the different loyalty dimensions are affected differently by antecedents such as trust and commitment. Of the proposed relationships, all but one of the hypotheses were supported. The study found that commitment had the largest impact on behavioural loyalty and trust had a large effect on commitment. Such findings are not only valuable for relationship marketing literature, particularly in the third sector field, as well as in blood donor behaviour research. The results and recommendations can also be used by marketing practitioners in the field to foster loyalty behaviour and grow the number of regular donors in their organisations. The study was conducted using a GenZ sample, which highlights the importance of the findings concerning this segment of the donor population.

This study is not without its limitations, the first limitation is that the study focused on the GenZ cohort of blood donors. This meant that other generational groups (segments) were not included, which could have affected the outcome. This allows future research to sample different age groups and compare the results of the various groups to assess if there is a difference, which would warrant different strategy approaches from a marketing perspective in non-profit organisations. Future studies could also focus on the incorporation of other factors such as satisfaction and service quality as they are commonly used in the services sector, under which blood donation organisations fall because they provide a service in the healthcare sector.

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PERFORMANCE OF THE HUMAN ROBOTIC SYSTEMS USING QUALITY MANAGEMENT AND WORK MEASUREMENT IN THE SMALL ENTERPRISE BAKKIE LINER ASSEMBLY LINE ENVIRONMENT

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ABSTRACT

Measuring human-robotic-interaction without quality management is critical to productivity performance of the Small and Medium Enterprise. This paper aims to examine quality management measuring total cycle time through this system. Data were collected from the operations manager incorporating direct observation and semi-structured interview, recording the operation taking place in the assembly line small enterprise in Gauteng, South Africa. Measuring work using quality management was deemed appropriate to reduce waste and costs of the SMEs. The conclusion offers some insight to management on the planned reconfiguration of the assembly line structure using quality management and measuring work for the small enterprise.

Keywords: quality management, work measurement, outside work, inside work, productivity.

INTRODUCTION

Small and Medium Enterprises (SMEs) in the manufacturing sector are the core of the economy globally and provide above 75% of the job opportunities (Enaifoghe & Vezi-Magigaba, 2023; Zahoor et al., 2023). As is indicated by Munyai et al. (2017) and Cardoni et al., (2020), the key to improving the performance of SMEs in the manufacturing sector is that “if the SMEs performance cannot be measured, it cannot be managed”. The emphasis by Nguyen et al. (2023) is that many sectors, one of which is SMEs are at present not measuring their performance and hence their production output cannot be managed. However, SMEs have low quality and performance, which prevents them from enhancing their efficiency and meeting the current market demand (Yang, 2020). The determinants that would help improve their efficiency are current and of great importance to all SMEs. These determinants are quality management and work measurement. Managing quality and measuring performance of SMEs is vital for the improvement of efficiency in the workplace (Lepistö et al., 2022). The inadequacy of literature on the application of quality management and work measurement to increase the efficiency of SMEs allows this study to make a significant contribution. The main research question identified was “How quality management and work measurement can improve efficiency within the bakkie line assembly small enterprise?” To respond to the main research question, the first objective was to identify the management shortcomings impacting on workers’ poor-quality operations within SMEs. The second objective was to use forecasting integrating quality management and work measurement through the application of proposed layout for improvement of the assembly line SMEs. By studying the limited literature existing and gaps available initially, this paper presented theory based on enhanced efficiency, quality management and work measurement followed by how the management shortcomings impacted on workers’ poor-quality operations within SMEs. Furthermore, this study explored on the application of quality management and work measurement to improve the efficiency of SMEs. Second, this paper described the research methods used to gather and analyse data on the behaviour of the bakkie line assembly small firms’ performance and their deficiencies. Finally, this study discussed the results and discussion, contributions, limitations and conclusion and managerial implications for further research directions.

LITERATURE REVIEW

Defining Improved Efficiency in Small and Medium Enterprises

Efficiency in the workplace within the SMEs means attaining the results by using the workers, machine and process capabilities in the best way possible (Nguyen et al., 2023). Sarikaya et al. (2022) refers to improved efficiency in the workplace as the ability to attain the end results of the operation with less waste and costs and time saving. Efficiency is improved through total productivity improvement involving improved skills of workers, regular machine maintenance, improvement of the workplace environment and working conditions (Suleiman et al., 2023). Jain et al. (2015) present below the formula for efficiency as follows:

$$\text{Efficiency} = \frac{\text{Cycle time} \times \text{no of final goods processed}}{\text{Valuable Operating time}} \times 100 \quad (1)$$

The Background of Quality Management in Small and Medium Enterprises

Quality concerning the product and service in the SMEs means abiding by standard product design and specification and the service required by the customer (Sohal et al., 2022). As suggested by Cochran, Foley and Bi (2017) the formula for quality computed as follows:

$$\text{Quality} = \frac{\text{Satisfaction of needs}}{\text{Resources consumed}} \quad (2)$$

The concept of quality management (QM) by Yang (2020) is that SMEs must be customer-focused, encourage teamwork and have the culture of quality for continuous improvement as well as emphasise the interest of customer satisfaction. Lepistö et al. (2022) explain that QM in these enterprises focuses on a strategic approach of improving the effectiveness and flexibilities involving the entire members including management in the business to ensure that they exercise prevention rather than inspection alone. This implies that in order to prevent waste and associated costs, sectors should verify material prior to use from suppliers along the value chain that connects them to the organisation buying material for the generation of the high-quality product to the customer.

The Background of Work Measurement

Work measurement is a technique used to measure the qualified worker using a time study stopwatch to ensure that this worker is carrying out activities at a normal pace generating the required results in the workplace (Munyai et al., 2017). During the time study investigation, the time is spent in the process by the worker and machine to complete a task at a defined rate of working, which is referred to as total cycle time (Amjad et al., 2021). Total cycle time involve outside work and inside work, where the human machine interaction is involved to measure the total cycle time for the work activities being carried out (Sookdeo, 2019). Kanawaty (1995) present below the formula for the total cycle time for the operation in the workplace:

$$\text{Total Cycle Time (Total cycle time)} = \text{inside work} + \text{inside work} + \text{unoccupied time} \quad (3)$$

An additional task for the total cycle time is the extent to which the work activities being carried are allotted to the machine generating the products without the worker's interference of the automatic machine operation, which is referred to as the workers' unoccupied time (Zhao et al., 2022). The task may happen frequently, which means how repeatedly each element occurs in a work cycle (Sookdeo, 2019). Evidence provided by Silva et al. (2020) is that an example of outside work in the workplace involves preparation of material and set up of tools for the operation. Setting up the machine in the workplace in preparation for the operation is regarded as inside work (Sookdeo, 2021). Both the inside work and the unoccupied time to complete the task in the workplace where the machine or process operation is an automatic process are regarded as the process or machine-controlled time (Sookdeo, 2021). Neal et al. (2021) provide examples of the work activities carried out using unoccupied time in the workplace whereby the automatic machine is in operation. Examples of these activities include cutting, drilling and milling.

Management Shortcomings Impacting Workers' Poor-quality Operations in Small and Medium Enterprises

In addition, a notable shift impacting SMEs' performance is the management inadequacies that result in poor quality control, lack of specific training, lack of knowledge and experience regarding the current quality management system integrated with emerging technology (Nguyen, et al., 2023). The lack of a financial strategy is the cause of all these factors (Yang, 2020). SMEs are among the numerous industries that do not measure performance. Consequently, these enterprises are unable to regulate their production output, which causes these businesses to perform poorly and incur excessive expenditures and waste (Nguyen, et al., 2023).

Quality Management for Improved Efficiency in Small Enterprises

As is confirmed by Abbas (2020), the embracing of QM practices by SMEs continuously improves the performance of the worker and the organisation to ensure that the demands of customers and stakeholders are attained. QM is realised by SMEs, as smart production control for better product quality and cost reduction resulting to improved efficiency and in turn increased customer satisfaction and loyalty (Yang, 2020). QM encouraged SMEs to adapt to change and foster innovation to all members of the organisation including management by ensuring that every member comply with the quality standards to improve product and service quality as well as low quality costs (Lepistö et al., 2022). Ma and Cheok (2022) believe that SMEs that implement QM are competitive and customer-focused than their rivals since they have an ample opportunity to design products that are distinct and innovative to increase customer satisfaction. For small enterprises to manage quality, appropriate material needs to be selected through quality check concerning the material design and specification when delivered by the suppliers before use by the small enterprises to eliminate waste and reduce costs (Lepistö et al., 2022). SMEs that are certified with ISO 9001 standards regulation, engaged in QM training programmes and are following the standards regulation, have the opportunity to eliminate waste, improve product quality and are able to competitive in the global market (Lepistö et al., 2022). As is advised by Yadav and Gahlot (2022) and Alawag et al. (2023), the workers' exposure to QM exercising the technology skills and the favourable workplace environment within the SMEs improve good product and service quality for the customers.

Work Measurement Investigation for Improved Efficiency in Small Enterprises

The use of the preliminary survey using an interview when conducting the work measurement investigation before the observation survey could take place, is essential to acquire an in-depth background of the process taking place in the workplace (Sookdeo, 2019). To validate the proper results of the study conducted work measurement objectives need to be addressed (Sookdeo, 2020). These objectives involve management proper planning and commitment on the plant or factory, standard operating procedures, working conditions and workplace environment as well as ensuring that there is improvement of workers, machine, and material capacity, workplace layout and setting of the appropriate total cycle time for the job (Sookdeo, 2019; Sookdeo, 2020). Reducing waste and frequent cycle time variation aid the sector to generate good product and service quality resulting to cost and time saving and in turn the enhancement of efficiency in the sector (Sharma et al., 2021; İncekara, 2022). The report by Sookdeo (2020) is that unoccupied time also plays an important role on the number of frequencies or occurrences that the machine generates parts or components for the organisation to determine the number of good quality products completed as required by the customer. Frequency means 'how repeatedly' each work activity occurs in a work cycle (Xing & Sharif, 2020). The development of the total cycle time aid SMEs identifies the individual part of work separately involving outside work, inside work, unoccupied time excluding break and teatime, which directs the operation in the workplace to have the proper total cycle time for the job for improved efficiency (Sookdeo, 2020).

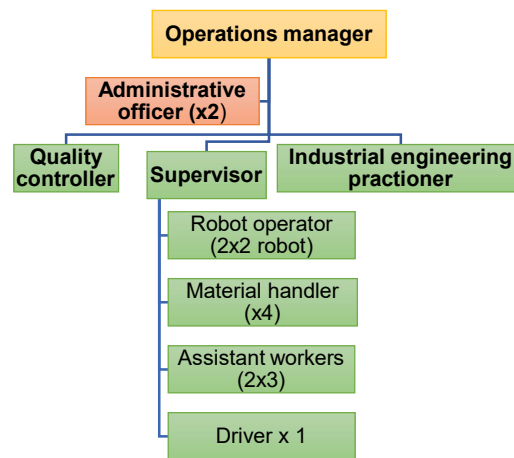
RESEARCH METHODOLOGY

Aim and Objectives

The aim of the study was to measure performance of the human robotic interaction (HRI) using quality management and work measurement in the Small Enterprise Bakkie Assembly Line Environment. Based on the aim, two objectives

were identified. The first objective was to identify challenges impacting on the performance of the human robotic interaction. The second objective was to measure performance of the human robotic interaction using quality management and work measurement in the small enterprise bakkie assembly line environment. Since the study has not yet been conducted within a Pretoria, South Africa, this study is study adding to the body of knowledge related to secondary data (research article). To respond to the research method used, this paper supported with the literature explicitly focusing on QM and work measurement to improve efficiency of the bakkie liner assembly line small enterprise in the Pretoria district around Gauteng, South Africa. To proceed with the research, an ethical clearance certificate was obtained from the University of Johannesburg, Faculty of Engineering and Built Environment. The researcher notified the owner in charge of the small enterprises, who is also the operations manager (OM), of the nature and purpose of the study. The OM together with the staff were informed that they had the right to withdraw from the research if they did not feel comfortable participating. The OM had a post graduate qualification in Operations Management from the university and had more than ten years' experience involved in the manufacturing and automotive environment. This paper used a semi-structured interview to collect data from the OM and supported this technique with the case study observation survey noting down additional information on how QM and work measurement can improve the efficiency of this enterprise. The purpose of using both data collection techniques was to acquire both viewpoints jointly of this enterprise noting down the information concerning the tasks taking place at a point in time or over a period of time as recommended by (Cooper and Schindler, 2016). The OM was voice recorded, which took one (1) hour, 12 minutes and 18 seconds before the study could commence with the case study observation. Thematic analysis as suggested by et al., Saunders, 2016) was used to recognise, analyse and report the findings of the themes from the collected data. The identified themes were reworked to ensure that they represent the data collected. During the observation survey, this enterprise had 21 workers, including the OM, who administered the whole crew responsible for creating bakkie liners for the enterprise's single and double cab vehicles. (See Table 1 and Figure 1, below).

Figure 1: The Chain of Command for Single and Double Cab Bakkie Liner Assembly Line Small Enterprise



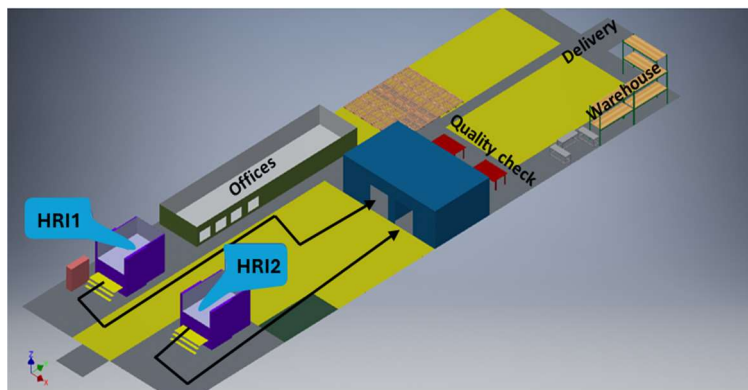
From Figure 1 above the OM headed workers engaged in different work activities which comprised the supervisor, quality controller, industrial engineering practitioner, 2 (two) robotic operators with 2 (two) helpers in each robot, 4 material handlers (2 x 2 Robotic each), 2 (two) administration personnel, 6 (six) assistants, and a driver who was transporting completed bakkie liners.

RESULTS AND DISCUSSION

The findings from the data analysed were two-fold and based on how QM and work measurement contributed to the improved performance of the Bakkie Liner Assembly line Small Enterprise (See Table 2 below). This paper gathered the information during the observation survey to ensure the results reflect the interview conducted as well as the literature discussed. This paper focused on ISO 9001 quality standards regulation and the work measurement process used by the company monitoring the material order processing, bakkie liner assembly process, layout, and the completion phase as well as the technology system used for both workstations. The purpose was to ensure efficient inbound and outbound process for the company. Considering the supply chain process of the bakkie liner assembly,

the operation from the beginning to the end of the shift were recorded. During the case study observation, the researcher noted the information using time study equipment. The information was noted down recording each activity through the use of the time study devices under the supervision of the manager in the bakkie liner assembly small enterprise. This device was used to assess the efficiency of the activities that were carried out, to spot the company's shortcomings, the root of the problem and to help the management in areas that need advancement. Using this device, this paper considered the working environment and conditions, skilled workforce, automation used, standard certification and compliance employed and the bakkie liners generated. The available time for the for the bakkie liner assembly operation of the bakkie liner small enterprise was 480 mins daily for each workstation and excluded 50 minutes for a lunch break and 20 minutes tea break. The overall time was 410 minutes to carry out the work activities involving the process in each workstation. During the time study investigation, the actual target for the assembly line of bakkie liners was 26 bakkie liners per shift for the single and double cab vehicle respectively. This paper focused on the current workplace layout below to show the movement of material flow and the work activities ranging from the lift of the jig to complete the bakkie liner for the single cab vehicle and double cab vehicle respectively until the completed bakkie liners are packed in the warehouse ready for delivery to be delivered to the customer.

Figure 2: Current layout for Single and Double Cab Bakkie Assembly Liner small enterprise



The bakkie liner assembly small enterprise had two simultaneous workstations, with Robotic 1 in workstation 1 and Robotic 2 in workstation 2. During the time study investigation, the actual target for the assembly line of bakkie liners was 26 bakkie liners for the single and double cab vehicle respectively. The number of quantities of the bakkie liner cab generated per week was 130 for each workstation. The bakkie liner assembly small enterprise had two simultaneous workstations, with Robotic 1 in workstation 1 and Robotic 2 in workstation 2. Time study was conducted for trimming and the assembly process for the single and double cab vehicle concurrently (See Table 1 and Table 2 below). Quality check was done after the completion of the last operation. The purpose of conducting time study was determine the total cycle time for the job involving the outside and inside work, unoccupied time excluding the lunch time and break. The work activities were highly repetitive in nature, where the automation process would give short cycles with accurate results. Both Table 1 and 2 below were used to categorise activities using the total cycle time process ranging from outside work followed by inside work and unoccupied.

Table 1: Current Assembly line using Human Collaboration Interaction for Single Cab Body assembly line small enterprise

Organisation		Bakkie Liner Assembly Line Small Enterprise					Area:	Single Cap Body	
Activity:		Assembling Bakkie liner		Machine Type			Robotic 1		
Objective:		Time study Investigation		Part no.			1		
Position		Work Study Specialist		Product Type			1		
No	Work Element	Weekly Report Cycle Time (minutes)					Total	Average	
		1	2	3	4	5			
1	Lift the jig & remove current bakkie liner from the jig	0.22	0.35	0.48	0.35	0.32	1.72	0.34	

2	Place the part, secure the jig alignment for the next run.	0.19	0.17	0.12	0.25	0.25	0.98	0.20
3	Select program	0.16	0.19	0.19	0.34	0.34	1.22	0.24
4	Robot Cutting	6.00	6.00	6.00	6.00	6.00	30	6.00
5	Walks around inside of bakkie liner, trimming holes deburring	1.44	1.39	1.31	1.48	1.48	7.1	1.42
6	Walks around outside of bakkie liner trimming & cutting	0.44	0.42	0.40	0.40	0.42	2.08	0.42
7	Walks around outside of bakkie liner drill and screw holes	0.33	0.31	0.30	0.32	0.33	1.59	0.32
8	Insert screws (mounting)	0.22	0.24	0.21	0.23	0.22	1.12	0.22
9	Assembly Blocks to bakkie liner	1.00	1.00	1.00	1.00	1.00	5	1.00
							Total cycle time	10.16

Table 2 displayed the total cycle time of 10.16 minutes for single cab bakkie, while Table 3 showed the total cycle time of 11.62 minutes for double cab bakkie.

Table 2: Current Assembly Line using Human Collaboration Interaction for Double Cab Body Assembly Line Small Enterprise

Organisation	Bakkie Liner Assembly Line Small Enterprise					Area:	Double Cap Body		
Activity:	Assembling Bakkie liner		Machine Type			Robotic 1			
Objective:	Time study Investigation		Part no.			1			
Position	Work Study Specialist		Product Type			1			
No	Work Element	Weekly Report Cycle Time (minutes)					Total	Average	
		1	2	3	4	5			
1	Lift the jig & remove current bakkie liner from the jig	0.32	0.35	0.48	0.35	0.32	1.82	0.36	
2	Place the part, secure the jig alignment for the next run.	0.19	0.17	0.12	0.25	0.25	0.98	0.20	
3	Select program	0.27	0.24	0.24	0.21	0.21	1.17	0.23	
4	Robot Cutting	7.00	7.00	7.00	7.00	7.00	35	7.00	
5	Walks around inside of bakkie liner, trimming holes deburring	1.54	1.55	1.55	1.58	1.58	7.8	1.56	
6	Walks around outside of bakkie liner trimming & cutting	0.54	0.54	0.52	0.50	0.51	2.61	0.52	
7	Walks around outside of bakkie liner drill and screw holes	0.43	0.41	0.40	0.42	0.43	2.09	0.42	
8	Insert screws (mounting)	0.32	0.34	0.31	0.33	0.32	1.62	0.32	
9	Assembly Blocks to bakkie liner	1.00	1.00	1.00	1.00	1.00	5	1.00	
							Total cycle time	11.62	

From a full day shift of 410 minutes, the time spent for 26 bakkie liner assembly for single cab body excluding the relaxation allowance was 264.16 minutes and double cab body vehicle, 302.12 minutes. Feedback regarding the current Efficiency for the Bakkie Liners for Single Cab Body using Human Collaboration Interaction at Company B was presented in Table 3 below.

Table 3: Current Assembly Line using Human Collaboration Interaction for Single and Double Cab Body Assembly Line Small Enterprise

Bakkie liners for Single Cab			Bakkie liners for Double Cab		
Efficiency	=	$\frac{26 \times 10.16 \text{ minutes/unit}}{410 \text{ minutes}}$	Efficiency	=	$\frac{30 \times 11.62 \text{ minutes/unit}}{410 \text{ minutes}}$
	=	64.43%		=	73.69%

As indicated in Table 3 above, the efficiency for the assembly of bakkie liners for each section seemed appropriate for this investigation. Thus, the study reported 64.43% of the efficiency for single cab body vehicle with a variation of 35.57% and the efficiency for the double cab body vehicle was 73.69% with a variation of 26.31%. Despite the results attained concerning the number of bakkie liners generated, defects and waste were attained which was costly and a drawback for the sector.

Forecasting using Quality Management and Work Measurement for Improved Efficiency in the Bakkie Liner Assembly Small Enterprise

This paper employed the forecasting method focusing on QM and work measurement method to enhance efficiency in the bakkie liner assembly small enterprise. Forecasting in the operational process is an estimate of a future operational performance outcomes guided by the current trend of the operational performance results in the sector (Bootz et al, 2022). From the same workstations involving the Robotic 1 and Robotic 2 respectively, the proposed layout was used to show the workflow using time study for trimming and the assembly process (See Figure 4 below). This layout showed the work activities ranging from quality check and damage prevention employing work measurement before the lifting of the jig followed by several activities to complete the bakkie liner for the single cab and double cab vehicle concomitantly.

Figure 4: Proposed Layout for Single and Double Cab Bakkie Assembly Liner Small Enterprise

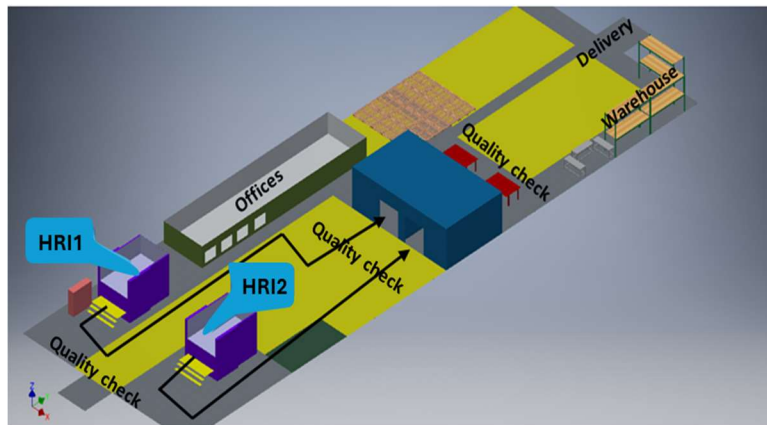


Table 4: Proposed Assembly line using Human Collaboration using for Single and Double Cab Body assembly line small enterprise

Assembly Group Cover	Current volume for a month					Proposed volume for a month				
	Week 1	Week 2	Week 3	Week 4	Month	Week 1	Week 2	Week 3	Week 4	Month
Single cab	130	130	130	130	520	170	170	170	170	680
Double cab	130	130	130	130	520	150	150	150	150	600
Total week volume	260	260	260	260	1040	356	356	356	356	1280

The single cab bakkie generated improved from 520 generated for a month to 680 bakkie liner of another month. Whereas the double cab bakkie generated improved from 520 generated for a month to 600 bakkie liner of another month (See Table 5 below). Using forecasting, the formula for efficiency for producing bakkie liners for single cab vehicle considering the time factor for quality check was also used:

Table 5: The Proposed Efficiency for the Bakkie Liners for Single Cab Body using Human Collaboration Interaction at Company B

Bakkie liners for Single Cab		Bakkie liners for Double Cab	
<i>Efficiency</i>	= $\frac{34 \times 10.16 \text{ minutes/unit}}{410 \text{ minutes}}$	<i>Efficiency</i>	= $\frac{30 \times 11.62 \text{ minutes/unit}}{410 \text{ minutes}}$
	= 84.25%		= 85.02%

Using forecasting in Table 5 above, the formula for efficiency for producing bakkie liners for single and double cab vehicle considering the time factor for quality check was also used. The proposed efficiency for the assembly of bakkie liners for each section seemed appropriate for this investigation. Thus, the study reported 84.25% of the efficiency for the single cab body vehicle with a variation of 15.75% and the proposed efficiency for the double cab body vehicle was 85.02% with a variation of 14.98% considering the time excluded from the inbound site through the process to the outbound side till the completed product reaches the packaging section. Using the recommended efficiency formula by Jain et al. (2015), the efficiency of the single cab body vehicle increased by 19.82 percent, while the efficiency of the double cab body vehicle improved by 11.33 percent. With an increase of the number of the bakkie liners assembled considering Quality Management and work measurement, this enterprise could improve production and the efficiency of the business by reducing variation and waste as well as cost saving. This research provided the results of both the interview and the case study survey, which agreed with the reviewed literature and emphasised the importance of quality and work measurement in improving the performance of SMEs. To improve product and service quality through QM, SMEs' management employs their innovative skills by involving all stakeholders, including suppliers, workers, and customers' responsiveness to the operational and supply chain processes, and ensuring that the required products and services are generated and delivered as per the customers' specification (Yang, 2020; Lepistö et al., 2022; Ma and Cheok, 2022).

CONCLUSION AND MANAGERIAL IMPLICATIONS

The SMEs performance around Pretoria, in Gauteng South Africa has a deliberate role in ensuring that human dynamic workforce and automation are exercised for improved efficiency. To foster improved efficiency, QM and work measurement are essential for SMEs to improve cycle time, save costs and provide good product and service quality to customers. The deliberate optimal QM steps needed for SMEs are presented as follows: being certified and complying with ISO 9001 standards regulation, management commitment, be customer focused, providing good product and service quality, adapting to change and fostering innovation, have continuous QM training programmes, eliminating waste as well as workers and stakeholders' commitment and involvement. These steps are incorporated with those of work measurement involving method study tools to audit and improve the standard of performance. With work measurement, the performance is audited by determining the total cycle time for the job being carried out to improve the standard of performance in the workplace. The purpose of using QM and work measurement was to address the results of the work activities carried out at the workstations of the Bakkie liner assembly line developed for the single and double cab vehicle. The results of the QM identified the process of bakkie liner assembly line developed for the single and double cab vehicle without considering the quality material before and during the process. Numerous defects and waste were realised which may be ascribed to the shortcomings of management concerning other tools not used in QM and the lack of knowledge thereof. Lack of using these tools were the small enterprise's failure to prevent defects and waste attained and failure to get involved with supplier to inspect and test material and used the assumption that the material had already being checked by the suppliers. Failure to use these tools is ascribed to management poor planning and decision making in the sector. With work measurement using forecasting, the efficiency of the single cab body vehicle can improve by 19.82%, whereas for double cab body vehicle by 11.33%. With an increase of the number of the bakkie liners assembled considering Quality Management and work measurement, this enterprise could improve production and the efficiency of the business by reducing variation and waste as well as cost saving. The study could not allow to conduct any sampling method in using the selective criteria

to collect sufficient data due to these employees being conquered by activities that meet the deadline to meet the target in the small business assembly line bakkie liner environment. Furthermore, the parties involved in the assembly line operation were unable to obtain further training due to a lack of government funding. Based on the managerial implication, further training on work measurement and quality management technology is required by introducing digital video cameras to record and recall the information on areas that need corrective measures for continuous improvement in the assembly line environment.

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FUSING SOCIAL AND HUMAN CAPITAL FOR OPTIMUM PERFORMANCE OF MUNICIPALITIES IN SOUTH AFRICA

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ABSTRACT

Municipalities in South Africa face sustained performance related challenges. These challenges manifest in the form of protests which often end in the destruction of property, poor service delivery as well as the deterioration of infrastructure such as roads and buildings which are not maintained. Poor service delivery and dilapidated roads impact negatively on the economy as well as the overall quality of life. These challenges require new and innovative ways of bringing about lasting improvements. Unconventional ways of solving existing problems need new leaders who are prepared to “swim against the strongest tides” to improve the performance of municipalities. Thirty years after the first democratic elections in South Africa, municipalities should have improved. The paper uses qualitative methods to collect and interpret data. The paper starts by outlining the local government reform agenda and proceed to explain the performance management conundrum in South African Municipalities. At the core of the paper is the social and human capital approaches to solving performance related problems. The fusion between social and human capital becomes clearer in the recommendations which address ways in which municipalities can optimize their performance.

Keywords: performance, management, municipalities, human capital, social capital, South Africa.

INTRODUCTION

Municipalities are part of the third and lowest sphere of government in South Africa. Municipalities were created to be more autonomous in order to be more responsive to local needs. Despite attempts to make the lowest sphere of government autonomous and flexible, a plethora of challenges have been registered. These challenges require alternative ways of bringing about sustained changes. At the heart of much needed change is the improvement of performance management in municipalities. This paper begins with an outline of the local government reform agenda and then proceed to explain the performance management conundrum in South African municipalities. The central thesis of this paper is that social and human capital approaches can solve performance related problems. The fusion between social and human capital is made much clearer in the recommendations which address ways in which municipalities can optimize their performance.

LOCAL GOVERNMENT REFORM AGENDA

The public sector has been the subject and focus of several reforms. Reforms have taken place globally, nationally, and locally. Substantive reforms in South Africa were ushered in by the Interim Constitution of the Republic of South Africa, 1993 and subsequent changes in the legislative framework governing municipalities. These reforms have been necessitated by changes in the political landscape and the need to transform the public sector. The results of these reforms were de-racialisation of municipalities through amalgamation of the previously disadvantaged and advantaged municipalities.

Two waves of reform are notable in the history of Public Administration. Since Woodrow Wilson’s seminal article on the study of Administration in 1887, two waves of reform, namely the New Public Management and the New Public Governance, are noteworthy. An important question that needs to be asked in the context of these reforms is whether local government in South Africa has benefitted from these changes or is this lower sphere still going to

benefit? Rhodes (2016) argues that in the previous 40 years the public sector has experienced three waves of NPM reforms. The first wave focused on managerialism, standards and measures of performance, management by results, and value for money. The second wave was characterized by marketization as well as neoliberal beliefs regarding competition and markets. During the second wave, the government was expected to steer more and row less. A consequence of this wave was more contracting out and the advent of tendering, evolution of tenderpreneurs and corruption as a corollary to this new wave in South Africa. The third wave focused on service delivery and citizen choice. One would expect that after the new NPM waves of reform, municipalities should be better managed. However, when the wind blows, it is the taller trees that shake the most. The reform agenda may have been too high or too complex for municipalities to comprehend and react to.

The second wave of reform is dubbed the New Public Governance (NPG). This wave of reform is based on the management of networks. Contrary to the NPM, this new wave propagates hands-off the steering on public sector administration (Rhodes 2016). Rhodes further suggests that in the new wave of reform, the meta-governing public servant must possess a set of skills that are necessary for managing networks. These skills include but not limited to the following:

- representing both the agency and the networks,
- setting broad rules of the game that leave local action to network members,
- developing clear roles, expectations, and responsibilities for all players,
- agreeing on the criteria of success, and sharing the administrative burden, and
- collaborative leadership

While it is necessary for public institutions to keep abreast with latest developments and adapt as dictated by the environment, Pollitt (2008) cautions against adopting each new management fad, rapid rotation of employees, constant restructuring, and rewarding management over other skills. Pollitt has a point in warning the public sector about adopting any new management fad. Municipalities need to assess new developments, introspect, and adopt new approaches which are likely to improve their performance and customer satisfaction. It is the author's belief that an element that is likely to benefit municipalities is the appointment of employees and managers who have networking skills hence the focus now shifts to social and human capital as antecedents of the local government reform agenda.

PERFORMANCE MANAGEMENT CONUNDRUM

Performance within a municipality can be viewed and discussed at micro and macro levels. For a municipality to perform at a satisfactory level, all individuals and divisions of the municipality must be managed and perform at an optimal level. Performance management of municipalities in South Africa is legislated. However, in practice, performance management is not prioritized. More focus regarding performance management is given to municipal managers and section 57 managers as their performance is specifically mentioned in the Municipal Systems Act. The performance of employees at operational level is left to direct line managers' whims. Employees are often not assessed as goals are not set at individual employee level. Performance contracts are in most instances not entered in to between supervisors and employees. Payment of performance incentives is unheard of. In this kind of environment, it is difficult to motivate employees.

The performance conundrum of South African Municipalities is not only at a micro level. The macro level of managing performance in municipalities is also beset with numerous challenges. These challenges include, amongst others, leadership, capacity to monitor and evaluate, cadre deployment and political interference at operational level in the administration of municipalities.

Organizations with stronger, visionary, and focused leadership are often successful in the achievement of objectives and satisfaction of clientele. Leadership within the context of a municipality can be categorized into two echelons. The first category is the political echelon which is made of mayors, MMC's and ward councilors. The second echelon of leadership is administrative. It includes the municipal manager and top management team. The strength of leadership at political and administrative levels is mainly due to their educational levels, skills, morality, and commitment. Minimum qualifications are prescribed for managers. However, political leaders can be anyone who is above the age of eighteen with or without grade 12. Functional literacy is not a requirement even if councilors are expected to deal with technical reports written in languages which are not their home languages. Functional literacy may, to some extent, be an impediment to councilor's ability to play an oversight role. A councilor who may not be

able to read a report for meaning may end up approving or voting with his/her political party for a policy or decision that may be detrimental to his constituency or ward. The following three development interventions are suggested with a view to improve:

- Education: Education is about knowledge acquisition. There is a correlation between education and achievement in leadership positions. Education provides leaders with a basis for innovative problem solving.
- Experience: On-the-job training complements education. Meaningful opportunities which push future leaders to the verge of failure need to be created. Develop right outcomes and encourage a person to find his/her own route. Sources of experience are colleagues and the task itself.
- Mentoring: An experienced and knowledgeable leader coach an individual. The mentor is a trusted councilor who tutors, guides, and supports the protégé. Mentoring can be formal or informal. The mentor can help the protégé with contacts and recommend him or her for promotions.

The success of any development intervention may be short-lived if leaders at administrative levels are constantly recycled to satisfy the taste of the incoming mayor and new councilors. Political meddling in administration is common in South Africa. This is of great concern within municipalities where politics may impede service delivery as appointments at all levels need a stamp of approval from politicians. Cadre deployment is not a dreadful practice. It is practiced across the world under different names. The problem with our South African version is that it overlooks education, skills, and experience. The result of this situation is that poor service delivery becomes the norm which is rejected by the masses through protests across South Africa.

SOCIAL CAPITAL

The concept social capital has been used in fields such as sociology and education. Its use in different disciplines gives rise to different definitions which may not all be suitable to the context within which this lecture unbundles the concept. Social capital as a concept could be traced to an American author Lyda Hanifan who used it for the first time in 1916 to describe how residents in neighborhoods could work together to monitor the performance of schools. The concept of social capital was further popularized by the political scientist Robert D Putnam in 1993 (Tantardini, Guo, & Ganapati 2017). The OECD (available online) defines social capital as networks, shared values and understanding in society that foster trust and cooperation.

“Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions. Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable. Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together” (World Bank, available online). Social capital consists for resources arising from managers connections in a network structure, their relationships with connections and the relations' shared cognitive frame of reference” (Doornich 2018). Compton and Meier (2016) believe that social capital has a crucial role in Public and local government administration and that leaders must develop the ability to interact with or shape the influences of social capital on the performance of municipalities.

Andrews and Brewer (2013) argue that “many scholars and policy makers content that social capital and management capacity are associated with better public services”. Their US based study finds that social capital is associated with high performing public services. Their finding is corroborated by Brehm and Rahn, Rice and Sumburg, Putnam, and Knack who are cited by Doh (2014). These authors believe that social capital improves the quality of government. Sources of social capital are according to the World Bank families, communities, firms, civil society, public sector, ethnicity, and gender.

The networks and knowledge that exist in any municipality can be used positively within the municipality's area of authority. Municipalities have been established for the people and all people are part of some network and depend on the municipality for the quality of life. While there may be a plethora of networks in any municipality within and beyond the list offered by the World Bank, the author chose to look at the role of professional associations, the private sector, and individuals in contributing to the improved performance of a municipality.

Professional Associations

A few professional associations exist in areas within which municipalities have a mandate to perform specific functions. A typical association that has a bearing on municipal administration is the South African Association of Public Administration and Management (SAAPAM). This Association operate at national level and has chapters in almost all nine provinces of South Africa. The Association provides a platform for academics and officials to share ideas on a subject such as performance management. Due to the urgency of improving performance of municipalities in South Africa, the South African Local Government Association or a municipality could co-host a conference on the theme under discussion in this paper. Knowledgeable international and local speakers on this subject could be invited to give presentations. Similarly, officials from different municipalities in South Africa could also share their experiences and frustrations regarding the implementation or lack thereof amongst themselves and academics.

Private Sector

Private companies thrive because of conditions created by the state and municipalities. While it may sound opportunistic and a tactful blackmail to argue that the private sector needs to plough back to municipalities because businesses prosper due to a positive enabling environment created by municipalities, it may be useful to look at the relationship between the two parties as reciprocal beneficiaries in this relationship. In this mutual relationship, all parties will benefit. The question is how will these relationships benefit attempts to improve performance management in municipalities? An answer to this question is in the paragraph below.

Private companies survive because they have something unique to offer to the public in an environment that is highly competitive. Their ability to compete and remain in business longer than a period of 10 years implies that they have diverse ways of managing performance. It is important that in advancing this argument, the author acknowledges the fact that the private and the public sector operate in different environments. The differences in the environment suggest that some of the strategies and approaches would not work in the public sector. Where there are areas of compatibility and the likelihood of sharing and transplanting knowledge and skills, this relationship could take the form of exchange programmes between the private and public sector. Companies which have succeeded in this endeavor could be offered tax discounts after a period of three years when it has been proven that their interventions have succeeded in turning around municipalities.

Role of Individuals

In any municipal boundary, one is likely to find an array of professionals with skills which are likely to be in short supply in areas where the municipality may need to improve. Municipalities should know who lives within their areas of authority. The question of who lives within a municipality should be looked at from a skills perspective. Municipalities should keep and regularly maintain a database of qualified employed and unemployed graduates as well as experts. This database could be obtained through a survey conducted by ward committee members.

If a municipality has a problem with regards to performance in the engineering division, it could approach qualified and experienced graduates to assist in an advisory capacity. Nothing in the South African legislation prohibits informal advisory boards. A Municipality could pay hourly rates to these experts or pay them in kind by waiving fees for rates, taxes, water, and electricity bills. It is essential that agreement between the municipality and these experts be within the confines of the South African labour laws. Adhering to labour laws is particularly important in the case of unemployed graduates who may desperately seek permanent appointment. Similarly, this kind of arrangement should not be over a protracted period where a municipality may be accused of unfair labour practice. The Skills Development Act should be followed in the case of empowering unemployed graduates through learnerships.

HUMAN CAPITAL

Developments in people management indicate that there have been philosophical and practical changes in the way people are managed. From a philosophical point of view, one can classify employers into capitalists and socialists. A capitalist employer may try to separate the human being from the skills. This type of employer believes that what

matters in an employee is the skills. Once an employee cannot perform, such an employee is disposed of. The socialist employer looks at the skills as an integral part of the employee. This is the essence of my thesis-Holistic approach to people management and valuing people (Mello 2014). There has been a significant shift in people management in South Africa from the early 90s to date. Employers have, for instance, introduced employee assistance programmes. The Labour Relations Act of 1996 (and by implication the ruling party) is central to these changes. Effective management of human capital provides a solid foundation for building and maintaining strong teams.

One debate which is noteworthy for purposes of this discussion is the New Public Management which was aimed at modernising government (Vide previous discussion). A question which can be asked is: are the people who are at the centre of change and making public institutions operate efficiently and effectively given sufficient attention in the NPM debates? It is my submission that human capital and its value did not receive the attention it deserves. Paying lip-service to human capital and its worth would make any attempt to change public sector institutions an evasive mirage which will keep moving as public sector institutions get closer to their goals and ideals.

The question is what needs to be done to bring employees to the centre stage of public institutions? To bring about lasting change, a new mindset is necessary. I advocate a paradigm shift hence its title “fusing social and capital in the public sector”. The concept personnel administration was used predominantly in South Africa up to the early 1990s. This concept then fell out of favour and was replaced by human resource management. It is the author’s contention that a paradigm shift is necessary, and it represents profound change in attitude to employees and commitment of resources. It is more than a game semantics. A question that may be asked is: what is the distinction between human resource and human capital? A slight difference exists. The word capital is introduced purposefully to emphasise the need for holistic investment in human beings for the benefit of the individual and the organisation. The contention is that skills are not the only area in which strategic investment is necessary. Public institutions have a social and moral responsibility. Employees should not only be seen and perceived as factors of production. Capital refers to any asset or resource used to an advantage.” The abilities and skills of any individual, especially those acquired through investment in education and training that enhance potential income earning” (Collins Dictionary 2007). Employees can further be described as the wealth available and capable of being used in the service delivery processes. Denhardt and Denhardt (2003) are authors who believe that employees deserve more. These two authors argue that people should be valued and not just productivity. The following quotation from their book speak directly to the value of employees:

“systems of productivity improvement, process reengineering, and performance measurement are seen as important tools in designing management systems. ... such rational attempts to control human behaviour are likely to fail in the long term if insufficient attention is paid to the values and interests of the individual member of an organisation”

Osborne and Gaebler (1993) believe that government need to invest more in training. However, their citation of General Creech that government cannot treat employees shabbily, house them shabbily and expect quality work from them. Although the original citation by Osborne and Gaebler was within a military context, the statement emphasizes the need for governments to look after all the needs of the employees within limited resources at their disposal. It is the author’s conviction that a caring employer will always get better results out of its employees. It can be argued that municipal officials who are valued, treated fairly as investments, and developed are likely to produce even better results.

CONCLUSIONS AND RECOMMENDATIONS

Different waves of change have swept through countries. However, it appears that despite municipalities in South Africa having witnessed the new Public Management and New Public Governance, municipalities are still battling to implement performance management. It is my considered opinion that the reform agenda for Municipalities in South Africa is far from over. The continuation of the reform agenda will hopefully help unravel the performance management conundrum which is impeding service delivery and development. Tapping into social capital is suggested as a solution which should be coupled with the investment and valuing of employees at all levels of the municipal hierarchy. In view of the discussions in this paper, the following recommendations are made:

- Improve municipal databases to include skills of people who live within their areas of authority.
- Establish communities of practice.
- Pair underperforming municipalities with best performing municipalities.

- Initiate controlled moonlighting of people with scarce skills on a need basis.
- The Department of Cooperative Governance and Traditional Affairs should facilitate temporary staff exchanges between municipalities.
- Initiate task-specific informal voluntary advisory bodies.
- Establish annual panels of expert performance reviewers.

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EXPATRIATE HUMBLE BEHAVIOR (HB) IN CORPORATE INTERNATIONAL ASSIGNMENTS

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ABSTRACT

The global economy is promoting an increasingly competitive environment for companies operating across borders. To support the demand for this globalization, multinational companies need competent expatriates for the success of their operations abroad. The purpose of this paper is to explore and describe the value of humility in Global Mobility, analyzing how expatriate humble behavior operates in corporate international assignments, based on the perspective of a group of experts in the field. Qualitative approach with semi structured interviews were conducted with 19 senior managers, who have worked in 26 different countries. Content analysis was used to understand expatriates and HR perceptions of Expressed humble behaviors (EHB), Relevance of humble behaviors (RHB); Context of Humble behavior (CHB) and Outcomes of humble behavior (OHB) with a focus on – Adaptation. Results suggest that humility is important to all, but lack of humility in Global Mobility can be a road blocker. Humility builds connections, trust, and reliable and long-term relationships, highly contributing to expatriates' adaptation on international assignments. Additionally, humility needs favorable conditions to flourish, and it may be associated with weakness, in certain contexts. The study sheds light on the association between the value of humility and expatriate behavior, a link little explored in the field of Global Mobility. The distinctive findings of this research bring a contribution to assigned expatriates (AEs), and, consequently, to organizations that demand, every day, more sharing, cooperation, and continuous learning, to achieve their goals and objectives.

Keywords: humility, expatriate, humble behavior, international assignments.

INTRODUCTION

The global economy is promoting an increasingly dynamic competitive environment for companies operating across borders. To support the demand for this globalization, multinational companies need competent expatriates for the success of their operations abroad (Caligiuri et al., 2016), but while these international assignments can provide unique opportunities for growth and development, they also require corporate expatriates “employees who are temporarily relocated by their organization to another country, usually for several years, to complete a specific task or accomplish an organizational goal” (Shaffer et al., 2012 p. 1287), to adapt and learn effectively to different social and cultural standards (Mello et al., 2023).

These corporate expatriates, also called as assigned expatriates (AEs) (Brewster et al., 2017), can be perceived as those employees who fill strategic roles with high performance goals, which leads to knowledge transfer and knowledge sharing capabilities (Moeller et al., 2016). They need intercultural skills to deal with different contexts in a complex global environment and should be globally competent leaders who can effectively manage employees from diverse cultural backgrounds (Caligiuri et al., 2016). They are selected for their skills and competencies, and are often chosen among several candidates and have the status as a headquarter representative, accompanied by the position/perception of having power (Harzing & Reiche, 2016), and, often, this demanding selection process gives the expatriate a superior status, making it difficult for them to show humble behaviors, when carrying out an international assignment. Humility and humble behavior (HB) had not been a popular topic in Human Resource Management, especially in the area of global mobility, although are more and more important for the BANI (‘brittle’, ‘anxious’, ‘nonlinear’ and ‘incomprehensible’) world, and for organizations that demand, every day, more sharing, cooperation and continuous learning, to achieve their goals and objectives (Caligiuri & Caprar, 2022).

In the organizational field, research showed that humility is identified as a core value, essential for decision making (Vera & Rodriguez-Lopez, 2004), in learning (Nielsen & Marrone, 2018), in an active engagement in relationships with others and its practices serve as a key success factor and a source of competitive advantage (Maldonado et al., 2018). International experience offers expatriates not only skills to dealing with cross-cultural differences, but also demands the ability to process multiple information, to distinguish between the best responses to cultural and business demands (Caligiuri & Caprar, 2022). In view of what has been exposed, and with the objective of exploring and describing the value of humility in global mobility, which led to the following question: How does expatriate humble behavior (HB) operate in corporate international assignments?

To respond to the above question, we explored the five secondary questions: (a) What is considered expatriate HB? (b) What does HB add to the set of competences that stand out in the life of a successful expatriate? (c) In what contexts expatriate HB is most needed? (d) In what contexts participants report HB associated with weak or ineffective leadership? (e) Does HB serve merely as a competence or does it play a more significant role in the adaptation process of expatriates, and potentially in the behavior of effective managers"? Each of these questions will help decode the expressed behaviors, relevance, context, and outcomes of humility in international assignments, based on the perceptions from a group of expatriates, and Human Resources and Global Mobility (HR/GM) managers.

LITERATURE REVIEW

Conceptualizing Humility

The word humility comes from the Latin *humilitas*, which translation reminds us of the earth beneath us, referring to something fundamental within the individual (Argandona, 2015). But both the word humility and the word humiliation are related to the term humus, which means "ground and earth", to lower someone to the earth. To humiliate is a verb from the Latin *humiliare*, which means to make humble, to abate, to oppress, to degrade, to vex, reason why some associate humility with humiliation, negative self-views and a sense of worthlessness (Exline & Geyer, 2004). To show humility, you don't have to humiliate yourself, or subject a person to humiliation. Humility is the opposite of humiliation: is linked to the cultivation and practice of love, should not be confused with lack of strength, passivity, anonymity, self-deprecation, lack of self-confidence, will or ambition (Argandona, 2015). Owens and colleagues (2013) have analyzed the literature based on the different definitions of humility, used in the previous 10 years, and created "expressed humility", which highlights only behaviors that can be observed by others, putting aside the intrapersonal aspects of humility (cognitions and emotions).

According to Owens et al. (2013), "expressed humility" is behavior based and it arises in social contexts and implies on a:

(1) Manifested Willingness to See the Self Accurately:

- (i) engaging in an ongoing process of achieving accurate self-awareness through interactions with others (Nielsen & Marrone, 2018), (ii) being aware of human limitations and accepting that one has both strengths and weaknesses (Morris et al., 2005; Owens et al., 2013), (iii) escaping egoism and acknowledging one's mistakes or limitations (Owens & Hekman 2016),
- (iv) accepting something greater than the self (Tangney, 2000), (v) connecting with the larger community, appreciating the value of all creation (Tangney, 2000) and, (vi) lacking superiority (Ou et al., 2018).

(2) Appreciation of Others' Strengths and Contributions:

- (i) appreciating others' strengths and contributions (Vera & Rodriguez-Lopez, 2004; Anand et al., 2019), (ii) appraising others generously (Morris et al., 2005; Tangney, 2000), (iii) rising above the need for entitlement or domination over others (Ou et al., 2018); (iv) transcending the comparative-competitive response when engaging with others and, instead, acknowledging and admiring the strengths and contributions of others without feeling threatened by them (Exline & Geyer, 2004).

(3) Teachability, showing openness to:

- (i) learning, feedback, and new ideas from others (Morris et al., 2005; Tangney, 2000), (ii) new information, ideas, or paradigms (Vera & Rodriguez-Lopez, 2004), (iii) taking contradictory advice or even criticism (Ou et al., 2018; Owens et al., 2013).

Humility in Management

Many empirical studies (e.g.; Caligiuri & Caprar, 2022; Owens & Hekman, 2012; 2016; (Rego et al., 2019; Tomei et al., 2022) provide support for considering humility as a positive and effective quality for individuals, teams, and organizations. In these works, the authors analyze the role of HB in engagement and learning (Nielsen & Marrone, 2018), as well as in motivation (Owens & Hekman, 2012). They also assess its effect in responsiveness, disposition to help and cooperate (Owens et al., 2013; (Rego et al., 2019; Exline & Geyer, 2004), well-being (Zhong et al., 2019), innovation and creativity (Chen et al., 2021; Wang et.al., 2020) and adaptability (Morris et al., 2005).

Owens and colleagues (2013) have associated humility to promoting improvement in the quality of social relations, as well as on one's own performance at the organizational level, resulting from the fact that accepting the weaknesses and recognizing the strengths of others favor opportunities of growth. Some other empirical studies show the negative effects of lack of humility on interpersonal relationships, conflicts, and on social acceptance (Vazire & Funder ,2006). Until the early century, a HB was frequently disregarded and considered inadequate to someone in a leadership position (Tangney, 2000). However, empirical approaches in work psychology and ethics considered humility as one's strength, and not a weakness. Nowadays, humility is considered an important component of effective leadership in increasingly turbulent times (i.e.; Morris et al., 2005; Owens et.al., 2013).

A relevant aspect for the understanding of humility in organizations is associated with the leader's behavior towards his followers (Argandona, 2015). Humble leaders are open to new paradigms; anxious to learn from others; recognize their own limitations and errors and try to correct them; accept failures with pragmatism; ask for advice; coach others; have a genuine desire to serve. They are not narcissist, and reject adulation and self-complacency (Vera & Rodriguez-Lopez, 2004), have different visions of themselves and their abilities (Ou et al., 2018) and seek feedback (Armon et al., 2023).

Humility, Cultural Humility, and Expatriates

Expatriates with cultural humility, a manifestation of humility in multicultural and cross-cultural encounters (Hook et al., 2017) recognize that their abilities, skills, and knowledge are culture-bound and are open to appreciate ideas that come from other cultures and manifest a respectful desire to learn from them. When expatriates are perceived to be open to ideas from other cultures, they are likely to accept the support and feedback offered and, in turn, adapt and perform better on the assignment (Armon et al.,2023). Contrary to that, ethnocentrism is the general belief or attitude which translates into negative impressions that one's home country culture, ideas and traditions are 'better' or 'more correct' than that of others (Caligiuri et al., 2016). Expatriates with low levels of cultural humility tend to judge, stereotype and manifest prejudice (Foronda et al., 2016).

The humble manager may be humbler in certain circumstances or at certain times than in others, and humility may be considered appropriate in some contexts but ineffective in others (Yeager & Bauer-Wu, 2013; Zapata & Hayes-Jones,2019; Tomei et.al.,2022). As per Argandona (2015) it is possible that someone's humility can be more appreciated among friends than with people one does not know, and it is possible that young people may assume apparently arrogant behaviors when they want to impress people with more experience. Also, more individualistic cultures tend to trigger narcissistic behaviors, excessive competitiveness, obsession with appearance and attention seeking. Humility could also be less effective in times marked by extreme threat or time pressure (Owens & Hekman, 2012) and seen as less adequate in moments that require agency from the leader (Zapata & Hayes-Jones 2019). Additionally, in cultures that avoid confrontation, considering it as harmful, individuals tend to have more difficulty in expressing that they don't know something (Meyer, 2016).

A sense of humility, one of the by-products of the competence of self-awareness, is an important competence for successful expatriate adjustment (Moeller et al., 2016). Humility enables expatriates to successfully manage their relationships while working in different countries with different people from diverse cultures, and communicate and behave in accordance with the norms and practices of the host culture (Caligiuri & Caprar, 2022). Far from being a sign of unassertiveness, stooped-shouldered meekness, humility keeps individuals in a state of continual adaptation (Tangney, 2000), it allows them to make the improvements necessary to progress toward their highest potential (Owens & Hekman, 2016).

METHOD

This study employed qualitative, descriptive analysis based on online semi-structured interviews with 19 managers, among them 10 senior AEs, on assignments of at least 18 months, and 9 Human Resources / Global Mobility (HR/GM) managers, with at least 10 years' experience in the field. A diversity of countries of origin, company headquarters locations, and areas of responsibility was purposely sought so that this diversity enriched the information for the analysis. The participants' selection criteria were based on purposive sample and the level of interviewees' international experience combined, totaled more than 80 years of experience in international assignments, in 26 different countries. The elaboration of the interview script was based on the Literature Review, and the length of each interview ranged from 50 to 70 minutes.

Content analysis (Mayring, 2014) was the main method in analyzing the interviews, and we selected four thematic categories, a priori aligned with the literature review and interview questions:

(i) Expressed HB - HB emerging in expatriate assignments, (ii) Relevance HB - the use and the need of HB in expatriate assignments, (iii) Context HB - the situational context that determines the effectiveness of HB and when it is most needed, (iv) Outcomes HB - important perceived outcomes of HB, focusing on adaptation to the host culture.

Inter-coder reliability checks were used, by coding the same transcripts, and then comparing the results. When the level of reliability was low, the exercise was repeated until an adequate level of reliability was achieved. To avoid the limitations related to this sampling approach, the researchers took care in not asking the interviewees about their own behaviors, but instead, they were asked to describe the humble behaviors that they have observed in other expatriates, or, in general, during their international assignments, for the following reasons: it is not easy to distinguish the sincere answers from those in which the interviewee tries to give a distorted image of his/her own behavior; and, as humility is present in all people's actions, in one way or another, so that it is not simply a professional trait, but an important component of the character of the people.

FINDINGS

Expressed HB

Expatriates with an expressed HB admit their limitations, do not exaggerate their strengths and are receptive to the ideas and advice of others (Ou et al., 2018; Anand et al., 2019): I sat with the CEO thinking I had no idea how we were going to do this. Person to person, we were both humble in our approach to the conversation, listening to each other. We were okay to be wrong and to walk back on what we first said. (Interviewee 15)

Humility allows expatriates to transcend the comparative-competitive response when interacting with others and, instead, acknowledge the contributions of others without feeling threatened by them (Tangney, 2000; Owens & Hekman, 2016):

I realized that to deliver and to be better as a professional and as a person, I needed to surround myself with people that were smarter than me. I can never know it all. (Interviewee 18)

Expatriates with low levels of humility assume that people who think differently from them are intellectually and morally inferior (Krumrei-Mancuso & Rouse, 2016). Arrogant behaviors may cause rejection and harm (Vazire & Funder, 2006):

If you think you know everything, you have tips on your shoulders, or if somebody brings an idea which is different from yours and you shut them up, they will not open to you anymore. (Interviewee 9)

When you arrive, as if you know everything, and giving orders: "You just follow, you just do it", this is not humble, and people will reject you. (Interviewee 6)

Cultural humility is fundamental for the development of flexibility and growth of individuals, as it favors people to realize that issues of ethnocentrism are the result of a lack of understanding of the differences found when we engage with people from other cultures (Yeager & Bauer-Wu, 2013).

I think they lose a lot, in the sense that they don't know about everything, quite the contrary, they know a lot about China, maybe about the United States, but not about Latin America. So, they lose opportunities due to not listening to the people who are here, who were raised in this cultural, political context and can give them a good vision. (Interviewee 16)

Certain responses are needed in certain cross-cultural business situations and using a given cultural response in the wrong cultural context or at the wrong time may lower the chance of an expatriate's success (Caligiuri et al., 2016).

If you are invited to give a speech in an important event, and it happens during your critical moment of giving your most important message, that the mosque starts to announce loudly, it's prayer time. You get very irritated, and mumble out: "What's going on? This time?" The next day, or even the same day in the evening time, you may be politely asked to leave. You know, the most important thing to you is a minor one in the world. (Interviewee 9)

Humility is recognizing that you don't know everything, that there is another way besides yours, there is another culture besides yours, and you accept that. (Interviewee 10)

Relevance of HB

Both HR/GM managers and expatriates mentioned they had many examples of arrogant behaviors in expatriates and emphasized their perceptions on why HB is so relevant for expatriates that face significantly higher demands for social and perceptual skills, adjustment requirements in their work, and involvement with different cultural realities (Argandona,2015):

I don't think this kind of behavior is unique to expats. But I do realize that because the expats are already thinking and behaving with a different mindset about how to do things, it's even more critical for their success to be good at those skills. (Interviewee 11)

If the purpose of your assignment is to become a better whatever: a leader, an engineer.... It's no different than a non-expat assignment, but if the purpose is to learn and grow, the only way you're going to do that is to demonstrate self-awareness, to value others and to be open to constantly learn new things from others. (Interviewee 17)

Humility is often disdained, as inappropriate in someone who holds a position of leadership (Argandona,2015;Tangney,2000), as illustrated in the testimony bellow:

I think leaders interpret humility as an act of submission, of putting your head down for everything. But it is not. It is a feeling of great value, even more so, for an executive to recognize this. (Interviewee 15)

Interviewees have also emphasized the relevance of HB to avoid toxic environments, incivility, and misunderstandings, to connect, communicate, to collaborate with people from other countries, to be integrated with the host country locals and the host country culture (Yeager & Bauer-Wu, 2013).

I find humility a cornerstone for this ability to listen and understand how the other one is thinking, as when you do that, you can move together, and grow as a person. (Interviewee 2)

But the interviewees affirm that HB is not explicitly mentioned in the agenda of expatriates' intercultural programs, nor it is a topic much discussed in the field of Global Mobility.

I think the discussion on humility is lacking in organizations. Companies started doing intercultural training, and all these things to better ensure this integration, understand how people abroad think, and, intrinsically, work on this value of humility, but explicitly, I've never seen it. (Interviewee 13)

Context HB

Expatriates and HR managers recognized that humility needs favorable cultural conditions to thrive, and it may be appropriate in some contexts but ineffective in others (Cuenca et al., 2022; Tomei et al., 2022).

“Expressed humility must be nuanced. It can’t be the same expression to everyone. You must figure out with whom you are talking to and what the potential impact will be of how you say something”. (Interviewee 4)

Some expatriates support that in moments of pressure, HB may be less effective, but is necessary because leaders need more cooperation of subordinates and partners (Owens & Hekman, 2012; Zapata & Hayes-Jones, 2019).

In times of pressure, there’s a natural tendency, due to the stress, for one to think there is no time for humility: “I have to deliver, so to hell with everything and everyone.” However, I still think you need to understand that to deliver you need the cooperation of your subordinates and/or your partners. The relationship will suffer if you put too much pressure on others, and you may be boycotted and get little or no cooperation as a result. (Interviewee 19)

Also, what came up during the interviews that different cultures have different views on how productive confrontation is to relationships, and HR managers confirmed that young expatriates may assume apparently arrogant behaviors when they want to impress people with more experience (Meyer, 2016):

“In more individualistic cultures, humility would be recognized as a weakness, even associated with humiliation, so the guy would have little chance of success. In these cultures, sometimes you need to be more like a warrior, a fighter, and that, in my perception, requires some arrogance”. (Interviewee 16)

Outcome HB

Interviews confirmed that the adaptation of expatriates to their global realities will impact how big and how fast a company can succeed in a global business (Moeller et al., 2016):

When you have different cultures together, difficulties of adaptation happen. It is something that happens all the time, whether you are on assignment or not, it is just that the assignment aspect makes it much more expressive. The outcome is financially more significant for the company in the sense that if it does not go well, the investment that has been made is a bit more significant. (Interviewee 1)

Also, supporting the theory, high expatriates’ self-awareness provides a foundation for strategically acquiring new competencies and behaviors, and this self-awareness, a sense of humility, is crucial in adapting to other cultures (Armon et al. 2023), in successful intercultural interaction and cooperative relationships in the work environment (Owens et al., 2013; Rego et al., 2019).

Humble people adapt earlier because they get easier contact with local people, they get help if needed, people show that they like to work with them (which is feedback people would like to get). I think regarding adaptation it is a better way. (Interviewee 7)

To be humble is a way to be accepted faster, quicker. Again, you put yourself in their shoes. We are all equal. We are in the same boat, the same challenge. So, humility is a key quality. (Interviewee 8)

Finally, the adaptation of expatriates will be easier when they are open to learn, recognize the presence of cultural differences and are humble to accept social support and feedback (Morris et al., 2005):

When you are managing people as a new manager in a new culture you need to be humble and learn what is going on and adapt. You can’t simply impose all your norms and expect a long-term success. You create frictions and outcomes that are maybe not desirable. (Interviewee 3)

DISCUSSION

One third of the expatriates, when questioned about HB during the assignments, seemed to have never thought about it, manifesting low self-awareness, i.e. lack of awareness of their strengths and weaknesses in interpersonal skills; their values and own philosophies; how past experiences have helped shape them into who they are as a person; and the impact their values and behavior have on relationships with others (Caligiuri et al., 2016). On the other hand, HR/GM managers, based on their long experience in managing expatriates, manifested more clarity in observing such behaviors, and alerted that low self-awareness may promote self-deception and arrogance (Nielsen & Marrone, 2018). Given the diverse cultural contexts expatriates operate in, it was observed that “teachability”, the curiosity and openness for learning, was the behavior considered as most relevant, across different cultures (Morris et al., 2005; Tangney, 2000).

They reported that very often, the failure of business (unsuccessful assignments, early repatriation) is related to the lack of adaptation into the new scenario, therefore a cultural humility (Caligiuri et al., 2016; Armon et al., 2023) approach is necessary to bridge the existing cultural and strategic gaps. It is true that culture plays a significant role in promoting and valuing humility and in some cultures, humility is considered as an essential virtue, encouraging respect, collaboration, and the pursuit of the common good (Krumrei-Mancuso & Rouse, 2016). However, stating that humility is ineffective in other contexts is a simplistic generalization that does not adequately consider the complexity and applicability of this quality in different situations and individuals. While humility may not be emphasized in some cultures, it does not mean that it is ineffective. The effectiveness of humility as a personal trait of leadership approach depends on various factors, including individual values, organizational culture, nature of business, etc.

Bauman, in his book “Liquid Love: On the Frailty of Human Bonds” (2013) warns that without humility and courage, there is no love, and that these two qualities are required in huge and continuous scales, when one enters an unexplored and unmapped land. As an analogy to Bauman’s thoughts (2013), when an expatriate enters an unexplored and unmapped land, he needs skills, competences and humility. Finally, in table 1, we summarize how expatriate HB operates in corporate international assignment:

Table 1: Expatriate HB in Corporate International Assignment

QUESTIONS	RESULTS
(i) What is considered as expatriate humble behavior (HB)?	<p>In line with the main characteristics of expressed humility (Owens & Hekman, 2016), HBs are those demonstrated by expatriates who:</p> <ul style="list-style-type: none"> • Assess their strengths but also weaknesses and acknowledge when others have more knowledge and skills. • Compliment others, open to the ideas and advice of others, and seek feedback. • Recognize the limits of their knowledge, and that their thoughts can be wrong. • Control arrogance, by presenting their ideas without offending. • Accept the ideas of others, which are contrary to their own, without feeling offended. • Interact, respect, and learn with other cultures
(ii) What humble behavior (HB) adds to the set of competences that stand out in the life of a successful expatriate?	<p>Humility is important to all, but HB plays a significant role in the lives of expatriates because:</p> <ul style="list-style-type: none"> • Expatriates don't go as superior person, in this case, they add to their mindset of teaching, the mindset of learning. • It helps them face a further level of complexity of IA, that involves different cultural realities. • Humility helps expatriates to manage their relationships, connect, communicate, and collaborate with people from other cultures. • Expatriates know about their jobs but should be humble to recognize that they may not have the cultural experience, that there are areas they do not understand and, therefore, they can learn from locals. • Lack of humility can be a road blocker for global mobility.
(iii) In what contexts expatriate humility is most needed?	<p>Research participants highlighted the importance of analyzing the context when applying a HB, as humility needs favorable cultural conditions to thrive. It is most needed when:</p> <ul style="list-style-type: none"> • When the expatriate must build connections, trust, and reliable relationships. • When working in a large team, with more local staff, and staying for many years • When interacting and dealing with people from multiple cultures. • In complex environments where openness for learning and continuous improvement is required. • In times of pressure, demanding cooperation from subordinates and partners

(iv) In what contexts participants report humble behavior (HB) associated with weak or ineffective leadership?	<p>HB is associated with ineffective leadership in many ways:</p> <ul style="list-style-type: none"> • In cultures where the expatriate is viewed as a hero • In times of pressure, which require action. • In individualistic cultures, which value competitiveness, individual ambition, and success • In cultures where the distance of power is more accepted and where confrontation is avoided. • In situations of generational gaps, where the less senior you were the more assertive you needed to be.
(v) Does humble behavior serve merely as a competence or does it play a more significant role in the adaptation process of expatriates, and potentially in the behavior of effective managers?	<p>The HB competence of expatriates is related with several relevant reasons for adaptation, and, consequently, for the success of international assignments as:</p> <ul style="list-style-type: none"> • Improved interpersonal relationships. • Increasing desire to learn and grow. • Flexibility to change behavior according to cultural differences. • Openness for true connection. • Promotion of well-being, supportive and trusting relationships.

CONCLUSION

Considering the intended contribution of this work, in the sense of decoding the expressed behaviors, relevance, context and outcomes of humility in international assignments, this study brings some advances in terms of academic and managerial contributions, by:

(i) shedding light on the association between the value of humility and expatriate HB, fostering the organizational literature in this field; (ii) offering positive insights so that the value of humility - complex and abstract - can be internalized in the expatriation's routine and (iii) pointing out aspects that can be considered in everyday practices to contribute to international assignment excellence.

This study identifies some avenues of opportunity for future research:

(i) a quantitative analysis of expatriates HB in a probabilistic sample of organizations segmented by different demographic profiles, with the intention of understanding how the value of humility is presented in different subcultures, and to cover the multicultural spectrum of national culture and its impact on expatriates' HB, (ii) Extend the study to compare the lived experiences and perceptions of expatriates and their subordinates, to better understand the differences and similarities from these two different viewpoints, (iii) Carry out a new round of interviews with this same decision-making elite to identify the influence of the humility value more accurately on organizational practices.

Ultimately, this study can be regarded as an initial step into a much wider endeavor towards understanding important behaviors of expatriates and the impact of humble behavior, which is an important and complex phenomenon in Global Mobility.

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MALE ADMINISTRATIVE EMPLOYEES' PREDICAMENT IN A PERCEIVED FEMALE-DOMINATED OCCUPATION

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ABSTRACT

Previous studies have shown that for quite a while, many people still have stereotypes that the administrative profession is a field implied for the female gender. However, men administrative employees predominate in today's organisations. The study investigated the challenges faced by male administrative employees in a profession typically perceived as female dominated. The paper is based on the results of a pilot study. The study was conducted using the quantitative research approach and a descriptive research design. A closed-ended questionnaire was used to solicit data from male administrative employees via Google Forms. The study findings revealed that there has been a noticeable increase in the number of men pursuing careers in administration, but there is still a very low percentage of men in this field. Men in this field still face challenges like gender discrimination and societal stereotypes that the administrative field is work meant for women. These challenges contribute to their decreased job satisfaction and eventual departure from their positions. This study offers valuable contributions to both literature and practical efforts aimed at promoting gender equality and diversity in the field of administration. The findings inform organisational policies and practices aimed at fostering a more inclusive and supportive environment for all administrative employees, regardless of their gender.

Keywords: male administrative employees, female-dominated field, gender discrimination, gender stereotypes.

INTRODUCTION

Administrative employees are often the backbone of an organisation, and they ensure that all operations run smoothly and efficiently within the organisation. Without their efforts, organisations would struggle to achieve their goals and objectives. Male administrative employees are equally talented and qualified as their female counterparts, and they can substantially contribute to any organisation. However, there are surprisingly few male administrative employees in the selected organisation. Most administrative employees are female in most organisations. According to Gonäs, Wikman, Vaez, Alexanderson and Gustafsson (2019), females have always been regarded as suitable candidates for administrative jobs. This could be because men in female-dominated occupations are not regarded as ideal employees.

The study of van Antwerpen and Ferreira (2016) reveals that the majority of respondents in their survey (73.42%) were females, another recent study by Zippia (2022) reveals that 80.3% of administrative employees were female while the male representation was very low (19.7%), highlighting the fact that females still dominate the administrative environment. The study found that there was a small representation of male administrative employees and a poor representation of male administrative employees in the administrative field served as the impetus for the study on which this research is based. The study examined challenges faced by male administrative employees.

LITERATURE REVIEW

Administrative employees play a crucial role in ensuring the effective functioning of organisations, across sectors such as government, business, retail, and tertiary institutions, through information, resource, and record management (Mogale, Rankhumise, & Mkhomazi, 2021). Administrative employees' designations are characterised by various titles such as secretaries, office managers, data processors, typists, or personal assistants, depending on the nature of their tasks (Hollis-Turner, 2017). Oladeji and Afolabi (2021) characterise administrative employees as professionals

within an organisation possessing office skills, capable of assuming responsibilities autonomously, exercising initiative and judgment, and making decisions within the confines of their designated authority. Furthermore, Dambo and Wokocho (2020) assert that in any organisation, administration refers to directing people's efforts towards the accomplishment of predetermined objectives. To do this, the administrative employees must specify the procedures, approaches, or methods they plan to use effectively to accomplish the organisational goals.

Todorov, Kniess, Lopes, and Martins (2021), argue that the roles of administrative professionals have evolved from primarily operational to strategic, where administrative employees are now actively involved in promoting achievements, driving changes, ensuring quality, and facilitating processes within the organisation. Their duties go beyond traditional tasks such as managing executives' schedules and assisting with assignments. Consequently, the development and prosperity of any organisation are reliant on the contributions of its administrative employees (Mawudeku & Ankumah, 2021).

The Administrative Field as a Female Dominated Occupation

Lingel and Crawford (2020) assert that the administrative profession is consistently marked by gendered perceptions, with women often occupying these roles due to perceived higher levels of skill or competence. Muradova and Seitz's (2021) study indicates that a significant majority of administrative positions are held by women, who are expected to embody traits traditionally associated with femininity, such as tenderness, tenacity, carefulness, meticulousness, and flexibility. Similarly, Folberg, Froehlich, Olsson, Dorrough, and Martiny (2020) identify administration as one of the top five occupations dominated by females. Van Antwerpen and Ferreira (2016) found in their survey that the majority of respondents, 73.42%, were female administrative employees, further highlighting the predominance of women in the administrative environment. Additionally, Ngotngamwong's (2019) study reveals that females constitute 90% of administrative employees, with only 10% representing the male gender. Therefore, organisations are faced with the challenge of retaining male administrative employees.

The Challenges Faced by Males in Female Dominated Occupations

According to Ahmed, Granberg, and Khanna (2021), female-dominated professions may desire some male representation. However, the demand swiftly declines once male administrative employees are hired. Male applicants in female dominated occupations face discrimination if there is no social effort to balance the gender mix further. According to Forsman and Barth (2017), men in female-dominated administrative professions are more likely to be undermined, devalued, and stigmatised compared to men in other professions. Torre (2018) indicates that when men enter female-dominated professions, men violate stereotypical perceptions on how males should behave. Therefore, male administrative employees face significant challenges, including career barriers, gender discrimination, and lack of support. Gonäs, Wikman, Vaez, Alexanderson, and Gustafsson (2019) alludes that some men face difficulties in female-dominated professions, such as limited exposure to employee empowerment and stifled organisational mobility. According to the findings of Ahmed et al. (2021), company responses to job applications from men for female-dominated administrative professions are extremely low. The study of Ahmed et al. (2021) reveals that men faced the biggest prejudice in female-dominated occupations, with men receiving a 14.3% point penalty in favourable employer success rates when compared to women. In contrast, Orupabo and Nadim (2020) postulate that men do not suffer as a result of their gender minority status as they earn more, work in more prestigious sectors, and are frequently pushed into managerial roles in female-dominated fields. According to Meadus and Twomey (2011), males who pursue careers in non-traditional occupations are viewed as an "anomaly" for doing so. Due to the stigma attached to doing "women's work," men have historically been hesitant to enter professions that are predominately held by women (Swiatek & Dill, 2021). The study of Muradova and Seitz (2021) reveals that there is strong gender discrimination in hiring practices in female-dominated professions. In addition, Torre (2018) indicates that males face significant challenges, including career barriers, gender discrimination, threats to their masculinity and lack of support which leads to high employee retention. The study of Torre (2018) postulates that men are likely to exit female-dominated occupations due to the existence of gender-specific social pressures derived from violated expectations about stereotypically male attributes, such as ambitiousness, competitiveness, dominance, and economic leadership. Such pressure can keep men from entering women's occupations, to an extent where men would rather endure unemployment than accept women's job and suffer the potential social stigma. Moskos (2020) suggests that due to gender-based stereotypes, men in female occupations doubt their competence, which negatively affects their ability to

do their jobs. These unpleasant experiences make it more difficult for males to work in gender-typical occupations or, at the very least, make them more likely to leave such jobs.

RESEARCH METHODS

The study employed a quantitative research approach and a descriptive research design to examine predicaments faced by male administrative employees in the perceived female-dominated occupation. The use of quantitative research techniques is justified by the fact that the research can be successfully performed with questionnaires containing simple questions and short answers and the collected data can be quantified and compared (Basias & Pollalis, 2018). Closed-ended questionnaire in the form of an online survey was used to collect data. The questionnaires were provided by email to participants, along with a link to the questions on Google forms. Ten respondents who were similar to the targeted population for the study completed the online survey. The male administrative employees were randomly selected to complete the pilot study. The data collected were entered into a Microsoft Excel 2016 spreadsheet. Microsoft Excel graphs and tables were used to present the statistical analysis. The data was summarised and described using descriptive statistics (such as frequencies and percentages).

RESULTS

The majority (60%) of the male respondents were between 30 to 39 years followed by those (40%) who were between the ages of 22 to 29 as presented in Table 1 below. The male administrative employees were in possession of different qualifications. The majority (40%) were in possession of bachelor's Degree/Advanced Diploma/BTech and Honours Degree/Postgraduate Diploma respectively followed by 20% with a Master's Degree/MTech. These male administrative employees were employed as Administrative Assistants (60%), administrators (30%) and 10% were secretaries. Their employment was on a permanent (50%) and (50%) contractual basis. Most of the employees (90%) indicated that they have between 1 – 10 years of work experience, while 10% have less than a year of service.

Table 1: Frequency distribution for demographic variables

Variable	Frequency	%
Gender		
Male	10	100%
Other	0	0%
Total	10	100%
Age group		
18 – 21 years	0	0%
22 – 29 years	4	40%
30 – 39 years	6	60%
40 – and above	0	0%
Total	0	100
Highest qualification		
Grade 12/Matric	0	0%
N6 Certificate	0	0%
National Diploma/Diploma	0	0%
Bachelor's Degree/Advanced Diploma/BTech	4	40%
Honours Degree/Postgraduate Diploma	4	40%
Master's Degree/MTech	2	20%
Doctoral Degree/DTech	0	0%
Other	0	0%
Total	10	100%
Nature of Work		
Administrator	3	30%
Administrative Assistant	6	60%
Personal Assistant	0	0%

Secretary	1	10%
Clerk	0	0%
Other	0	0%
Total	10	100%
Employment status		
Permanent	5	50%
Contract	5	50%
Internship	0	0%
Total	10	100%
Years of service at the organisation		
Less than 1 year	1	10%
1–10	9	90%
11–20	0	0%
21–30	0	0%
31–40	0	0%
41–50	0	0%
More than 50	0	0%
Total	10	100%

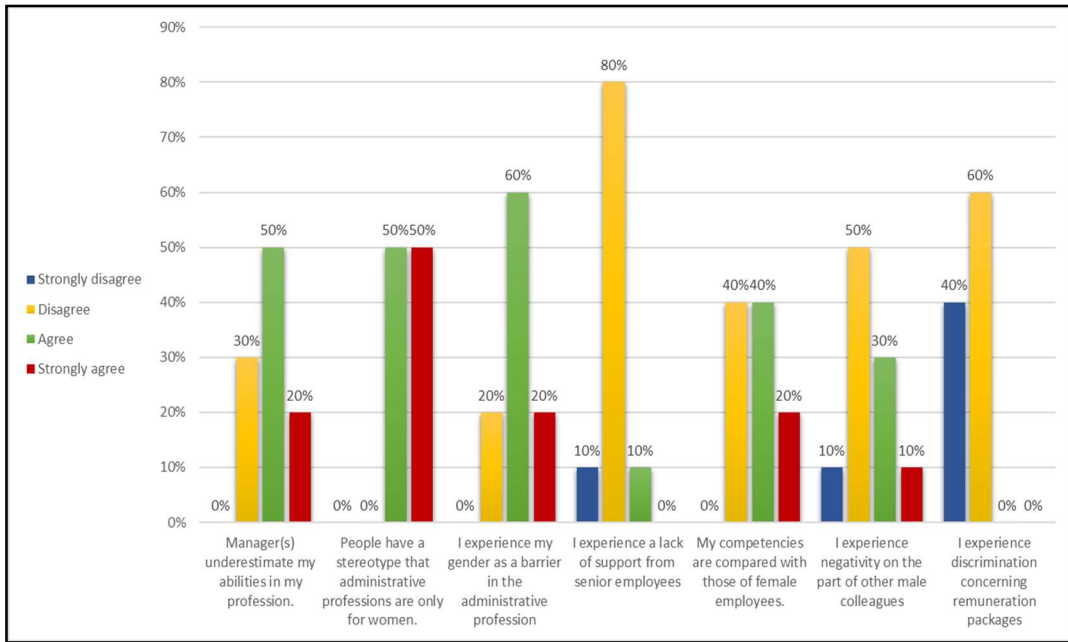
The data presented in Table 1 above indicates that the majority of the study respondents are relatively young. Another interesting finding is that the respondents show a notable trend of pursuing advanced educational qualifications in the field of administration. This information indicates that male administrative employees have a high level of dedication and interest in the administrative field. Furthermore, the finding is that 50% of the respondents are employed on a contractual basis which does not guarantee their stay within the organisation. It can be argued that the male administrative employees in the study represent a new workforce, and they might be more prone to leaving their jobs since most of the respondents have 1-10 years of service in their organisation which is not satisfactory. This notion is supported by the study of Torre (2018) and Moskos (2022) which suggest that males in female-dominated occupations encounter unpleasant experiences that make it difficult for them to work in gender-typical occupations or make them more likely to leave such jobs.

There are various challenges faced by male administrators in the female-dominated field as presented in Figure 1 below. Among the challenges is the organisational leadership failure to acknowledge their abilities in carrying out their roles and responsibilities. A significant portion of respondents (50%) and (20%) respectively indicated that manager(s) underestimated their abilities in their profession while 30% presented a different view regarding this statement. This action by leadership may be influenced by stereotypes when it comes to male employees performing female-oriented roles. All (100%) of the male administrative employees who participated in this study indicated that people have a stereotype that administrative professions are only for women.

Therefore, this challenge led to the majority (60% and 20% respectively) of the respondents to believe that their gender is a barrier in the administrative profession, while 20% of the respondents disagreed 20% disagreed with the statement. Even though they perceived gender as a barrier, however, support from senior management was sufficient as presented by 80% and 10% respectively. Only 10% of the respondents experienced lack of support from senior management.

Another challenge faced by male administrative employee is the comparison that exists against their colleagues. This is confirmed by 40% of respondents who agreed and 20% strongly agreeing to the fact that their competencies are compared with those of female employees. However, 40% of the respondents shared a different view disagreeing with this statement. Although the male administrative employees were compared with female employees, it is interesting to learn that no negativity was experienced from their fellow male colleagues. The majority of the respondents (10% strongly disagreed and 50% disagreed respectively) never experienced negativity on the part of other male colleagues while 30% and 10% indicated disagreement with the statement. All (100%) of the male administrative employees are not experiencing discrimination concerning remuneration packages.

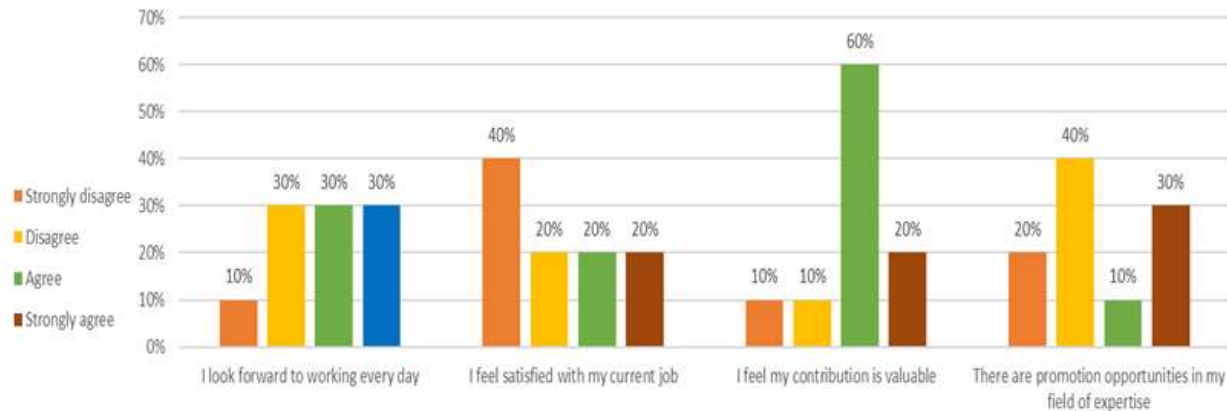
Figure 1: Challenges faced by male administrative employees



The data presented in Figure 1 highlights that male administrative employees predominate in the administrative field. However, the study indicates that some men within the organisation are beginning to accept male administrative employees as they become more familiar with their presence. Despite this positive progress, the study also reveals that male administrative employees still face gender bias in the field, they experience gender barriers in the administrative field and their competencies are compared to those of their female counterparts. This is largely due to stereotypes which some people still hold that administrative work is meant for women. The findings are supported by the study of Forsman and Barth (2017), Orupabo and Nadim (2020) and Torre (2018) which indicate that when men enter female-dominated occupations face challenges, including career barriers and gender stereotypes. Although gender bias remains an issue, the study reveals that the compensation packages for administrative employees are equivalent regardless of gender, indicating a non-discriminatory approach to compensation. The study also found that senior employees provide support to their male administrative colleagues, which is a positive development and contributes to job satisfaction.

Job satisfaction of the administrative employees presented in table 2 below revealed that the majority (30% agreed and 30% strongly agreed) of the respondents look forward to working every day while 10% disagreed and 30% strongly disagreed with the statement. Employees looking forward to working is influenced by among other reasons, the satisfaction they experience in the workplace. Unfortunately, in this case, most of the respondents (40% and 20% respectively) indicated their dissatisfaction with their current job while 20% agreed and strongly agreed with the statement. The administrative employees who looked forward to go to work they were motivated by how their contribution is valued by the organisation as presented by 60% and 20% who agreed and strongly agreed. Those who shared a different view was 10% who disagreed and strongly disagreed with the statement. Furthermore, what also contributed to job satisfaction of most of the male administrative employees is the promotion opportunities available in the organisation. The majority of the employees (40% disagreed and 20% strongly disagreed) that there are promotion opportunities in their field of expertise. Not all employees shared the same sentiments as indicated by the minority (10% agreed and 30% strongly agreed) that there are promotion opportunities in the organisation.

Figure 2: Job satisfaction



The data presented in Figure 2 shows that a significant portion of male administrative employees find enjoyment in their tasks and eagerly anticipate their daily responsibilities. This suggests that the duties assigned align well with their skills and preferences. However, the majority of the respondents expressed discontent with their current Job. The findings suggest that they might be dissatisfied with some aspects of their work environment. It is possible that male administrative employees are not content with their jobs because they face gender stereotypes and career barriers in the administrative field. Furthermore, their skill sets are compared unfavourably with those of their female colleagues as it was revealed in this study. The data also suggests that most male administrative staff feel their contributions are valued and significant within the organisation. This recognition fosters a sense of appreciation among employees. On the other hand, a considerable portion of male administrative employees perceive limited prospects for career advancement within their current roles. This lack of growth opportunities may reduce employee motivation and retention rates. The findings correlate with the study of Arshad (2020), which suggests that gender discrimination significantly impacts job satisfaction, which in turn can influence retention rates.

DISCUSSIONS

The data in the study highlights a growing number of men showing interest in administrative roles and pursuing advanced studies in this discipline. This indicates a shift from historical norms where certain professions, including administrative roles, were predominantly held by women due to gender-based societal expectations. The literature and the provided study results both touch upon the increasing trend of men pursuing careers in the administrative field. The study of Swiatek and Dill (2021), points out the historical hesitance of men to enter professions traditionally associated with women, such as administrative roles. The stigma attached to gendered perceptions of work has been a significant factor influencing career choices. However, the study's findings suggest a departure from this trend, as more men are now choosing to break through traditional gender roles and pursue careers in administration.

The Challenges Faced by Male Administrative Employees in the Female-Dominated Field

The study reveals that a notable proportion of employees perceive a lack of recognition or acknowledgement of their capabilities from their managers. Despite the progress made in the fight for gender equality, it is disheartening to see that many people still hold onto gender stereotypes when it comes to certain professions. Such is the case with the administrative profession, which is still perceived by many as a field strictly reserved for women, even after so many years of progress towards gender inclusivity. This stereotype not only perpetuates gender bias but also limits the potential of individuals who may be interested in pursuing a career in administration but are discouraged by societal expectations. It has also come to light that certain managers continue to harbour doubts regarding the capacity of male administrative employees to perform their administrative duties with the same level of proficiency as their female counterparts which is indicative of unfounded prejudice. Such biases must be addressed and eliminated to ensure that all employees, irrespective of gender, are accorded equal opportunities to advance their careers based solely on merit.

The findings align with the literature by Torre (2018), Forsman and Barth (2017), and Moskos (2020). These authors have noted that when men enter professions traditionally dominated by women, it challenges stereotypical perceptions of gender roles and behaviour. The literature of Gonäs et al. and Ahmed et al. (2021) also note that gender discrimination is one of the challenges that men encounter in professions that are dominated by women. This study sheds light on the fact that men working in administration are also not immune to this problem and highlights the need to address such concerns and ensure that equal opportunities and fair treatment are provided to all candidates in administrative roles, regardless of their gender.

Job Satisfaction

The study indicates that male administrative employees in the field may not be experiencing the highest levels of job satisfaction. The study suggests that the causes of job dissatisfaction in male administrative employees are due to various factors, including social norms and gender stereotypes. However, to identify potential areas for improvement and address underlying issues, further studies would be beneficial. The study's results align with Usui's findings (2008), which also highlight low job satisfaction rates among men in female-dominated professions. It could be argued that low job satisfaction may contribute to male administrators deciding to leave their positions. This notion is supported by the study of Biason (2020), which shows that there is a strong relationship between job satisfaction and employee retention. Employees who are not happy with their jobs are more likely to leave, leading to increased retention rates.

CONCLUSION

Although there is still a small representation of males in the administrative field, the study findings indicate a significant increase in the proportion of male employees in administrative roles compared to the past. While this trend is worth noting, it would be beneficial to conduct a more in-depth study to understand the driving factors contributing to this shift, including evolving social or economic circumstances, changing perceptions of gender roles, or targeted recruitment efforts. Organisations must remain mindful of the evolving workforce and its changing needs. It is still a notable issue that men face gender discrimination in female-dominated professions and male employees working in the administration field are also not immune to this problem. The study reveals that male administrative employees continue to face challenges in the administrative field such as societal stereotypes, gender discrimination and career barriers, which could impact their retention in organisations. However, despite these challenges, it's important to note that some men may choose to remain in their current roles due to South Africa's high unemployment rate, this notion is supported by the study of Yavorsky & Dill (2020), which suggests that unemployment rates may influence males to enter or remain working in female-dominated occupations.

The implications of this study's results are significant, as they shed light on the pervasive gender stereotypes and biases that continue to shape our conceptions of work and career choices. Overall, the combination of the study results and the supporting literature highlights the importance of addressing gender-related biases and stereotypes in the workplace. It underscores the need for organisations to create inclusive and equitable environments that recognise and value the contributions of all employees, regardless of gender or the gender norms associated with their professions. To foster an environment of fairness and equality in the workplace, it is imperative to address these issues comprehensively across organisations. This holistic approach will pave the way for improved retention of male administrative employees, underscoring the link between workplace equity and the longevity of an engaged workforce.

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ENHANCING GREENING OF CITIES IN SOUTH AFRICAN METROPOLITAN CITIES THROUGH COMMUNITY PARTICIPATION

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ABSTRACT

South Africa faces significant environmental challenges, including deforestation, pollution, and habitat degradation, necessitating urgent measures to establish green spaces (Kalawole and Iyiola, 2023). This research explores integrating community support mechanisms in establishing green environments within South African metropolitan cities. Through semi-structured interviews with green initiative officers from all eight metropolitan cities, the study identified key factors influencing community engagement. Findings revealed that community involvement enhances the success and sustainability of green initiatives, fostering ownership, awareness, and social cohesion. Furthermore, this study contributes to the growing literature on community-based environmental management. It provides practical insights for policymakers, urban planners, and environmental practitioners seeking to advance green agendas in diverse socio-cultural contexts. It outlines a comprehensive policy framework designed to enhance the greening of cities in South African metropolitan areas through active community participation.

Keywords: green environments, community support, South African municipalities, environmental sustainability, community engagement.

INTRODUCTION

The concept of sustainable development has gained significant traction globally, with environmental conservation being a crucial component of this paradigm (Mutanga et al., 2024). In recent years, there has been a growing recognition of the importance of green spaces within urban areas for promoting environmental sustainability, improving public health, and fostering community well-being (Mutanga et al., 2024). Like many other rapidly urbanising regions in South Africa, municipalities face escalating environmental challenges exacerbated by rapid urbanisation, climate change, and socio-economic disparities. An urgent need is to reevaluate urban planning strategies and incorporate more community support mechanisms for establishing and maintaining green environments. South Africa's urban landscape is characterised by a myriad of environmental issues, including air and water pollution, deforestation, loss of biodiversity, and inadequate access to green spaces. These challenges disproportionately affect marginalised communities, exacerbating existing socio-economic disparities and hindering efforts towards achieving sustainable development goals. Recognising the importance of green spaces in mitigating these issues, South African municipalities have initiated various initiatives to establish parks, gardens, and urban forests. However, the success of these endeavours often hinges on the level of community engagement and support.

Community involvement is essential for the long-term sustainability and effectiveness of green initiatives within municipalities (Langston et al., 2009). Engaging local residents in the planning, designing, and maintaining green spaces fosters a sense of ownership and stewardship, leading to increased utilisation and preservation of these areas (Kayembe and Nel-Sanders, 2022). Moreover, community participation enhances social cohesion, promotes environmental education, and empowers citizens to advocate for sustainable urban development practices (Jones and Ndhlovu, 2018). Furthermore, it mentions that despite these benefits, community involvement in green initiatives in South African municipalities remains limited, primarily due to institutional barriers, lack of resources, and inadequate public awareness. To address these challenges, there is a growing consensus among policymakers, urban planners, and environmental practitioners on the need to prioritise community engagement in green space development. By involving residents in decision-making processes, municipalities can ensure that green initiatives are tailored to meet

local communities' specific needs and preferences. Furthermore, community-based approaches can help overcome implementation barriers by leveraging local knowledge, resources, and social networks (Mavhungu and Nthambi, 2020).

RESEARCH OBJECTIVES

To establish what the broader community perceives as 'their environment: In many cases, experts appointed to carry out research or projects that may or may not directly involve the community will have a predetermined idea of what would be best for that community or area without consulting the community. This can often lead to misunderstandings or the neglect of more critical issues in that community. Therefore, this study seeks to:

- Assess the current level of community involvement and support in green initiatives within South African municipalities, examining factors such as awareness, participation, and engagement in environmental activities.
- Identify barriers and challenges hindering the incorporation of community support in establishing green environments within South African municipalities, including socio-economic, cultural, and institutional factors.
- Evaluate the impact and effectiveness of implemented strategies in fostering greater community engagement and support towards sustainable green environments in South African municipalities, measuring outcomes such as increased adoption of eco-friendly practices, improved environmental quality, and enhanced community well-being.
- Develop strategies and frameworks to enhance community participation and support in green initiatives, emphasising inclusive decision-making processes, effective communication channels, and capacity-building programs tailored to a diverse community's needs.

COMMUNITY INVOLVEMENT AND SUPPORT IN GREEN INITIATIVES WITHIN SOUTH AFRICAN METROPOLITAN CITIES

'Green' practices are environmentally friendly activities that comply with legal requirements, ethical reporting constraints, and standards (United Nations, 2015)). They are often measured by employing the 'triple bottom line' concept: the ability to measure an organisation's and its activities' financial impact and environmental responsibility in terms of corporate social responsibility (Aligica and Boettke, 2011). These performance metrics provide stakeholders with evidence that organisations are focusing not only on profit but also on the planet—eco-labels, accreditation, and auditable evidence back this up. Listeners' perceptions vary, often based on perceptions of the immediate present and not necessarily focusing on the future. The ultimate goal is the reduction of CO2 emissions, a shift from nuclear to renewable energy supply, and complete environmental responsibility. The growing consumer voice is keen; challenges to traffic congestion, electrical supply issues, or the increasing cost of power are becoming problematic. The responsibility, then, of ensuring appropriate infrastructural and efficient systems rests with the cities. No longer can one sit back and have a smoke, feed a family unhealthy food, or overpopulate our beautiful landscapes. A sustainable environment requires constant intervention, feedback, and communication. The literature is replete with evidence of negative environmental impact and unsustainable practices caused by unbridled economic activity (Smith et al., 2018). Mining, transportation, manufacturing, tourism, and energy generation are major industries contributing to significant pollution and waste. Growing public awareness of the detrimental effects of human interaction on the planet and the need to manage the consequences more sensitively has led to developing environmental governance, policy, and guidance to minimise environmental impact and ensure sustainability. 'Greening' these systems has become a global imperative. Long known but not specified, it is only now that environmental activities are defined under a single term. However, this often overused term is not clear and precise.

They retain their rights in making decisions that affect their environment, participate when taking on a green action, and are motivated to participate with their residents. Factors influencing joint involvement, including finance, the spatial, social, and technical aspects examined the way decision-makers implemented manifestations of the second

angle of green transition justice or the degree of green space asset justice in South African cities sought to monitor the efficiency and fairness outcomes in green transitions considering these components. These are the different aspects that influence community involvement and supporting examples of various forms of community involvement within the three South African metropolitan cities. Further community involvement locations need more assessment, and actual work socially and technically needs to be actioned in current metropolitan green initiatives and other innovative gap localities. Community involvement is an intricate process that is not done successfully without dealing with the factors that may influence how people can get involved and how factors also affect an initiative for people to support it (Chetty and Botes, 2019). Support and involvement are necessary for green initiatives to proliferate and survive long term. Any hindrance would result in the fall of the green initiatives because of a lack of support or participation. Anchoring in collaboration in a specific context of South African metropolitan cities, themes linked to community involvement and other factors that could influence and are influenced by community involvement give a broad understanding of community involvement opportunities within the South African metropolitan cities that are influential with the roll-out of green initiatives. Most of the City of Cape Town's residents, especially in greater Cape Town, take on the natural environmental resources in South African cities and have a role in most if not all, green matters (Mukheibir and Ziervogel, 2007).

BARRIERS AND CHALLENGES TO COMMUNITY SUPPORT IN ESTABLISHING GREEN ENVIRONMENTS IN SOUTH AFRICAN MUNICIPALITIES

Establishing green environments in South African municipalities is crucial for sustainable development and environmental conservation. However, the success of such initiatives heavily relies on community support and engagement. The barriers and challenges hindering the incorporation of community support in establishing green environments within South African municipalities are explored, focusing on socio-economic, cultural, and institutional factors (Mutanga et al., 2024). Socio-economic disparities play a significant role in influencing community participation in green initiatives. In South Africa, the legacy of apartheid has left a lasting impact on socio-economic inequalities, with marginalised communities often bearing the brunt of environmental degradation. Limited access to resources, such as education, income, and infrastructure, hinders communities' ability to engage in green projects actively (Holst et al., 2024).

Additionally, competing priorities for basic needs like housing and employment can divert attention away from environmental concerns. Furthermore, economic constraints may prevent individuals from investing in environmentally friendly practices or technologies. For instance, the high cost of renewable energy systems or eco-friendly products may deter low-income households from adopting sustainable behaviours, perpetuating environmental inequalities. Cultural beliefs, values, and practices influence community attitudes towards green initiatives (Mutanga et al., 2024). In South Africa, diverse cultural backgrounds contribute to various perspectives on environmental stewardship. Traditional beliefs regarding land use and conservation may clash with modern conservation efforts, leading to conflicts over resource management.

Additionally, cultural norms surrounding gender roles and responsibilities may affect women's participation in environmental decision-making, limiting the diversity of voices in green initiatives. Moreover, language barriers and communication gaps may hinder effective engagement with culturally diverse communities. Lack of culturally sensitive outreach programs and educational materials can alienate certain groups, impeding their involvement in environmental projects. Institutional structures and governance frameworks are crucial in facilitating community involvement in green initiatives (Ntuli and O'Brien, 2019). However, bureaucratic red tape, corruption, and inefficiencies within municipal governments can impede the implementation of environmental policies and programs Shackleton. Limited transparency and accountability may erode public trust in institutions, reducing community willingness to participate in government-led initiatives (Mutanga et al., 2024). Furthermore, inadequate collaboration and coordination among government agencies, non-governmental organisations (NGOs), and community groups can lead to disjointed efforts and duplication of resources. The lack of clear guidelines and support mechanisms for community-led initiatives may discourage grassroots activism and innovation in green projects (Shackleton et al., 2016).

RESEARCH METHODOLOGY

The summarised research methodology of this study is discussed in the table below:

Table 1: Summary of the overall research process (Source: Own)

DECISION	CHOICE
Method	Qualitative
Population and sampling	Purposive sampling: one green initiative official of each of the eight (8) metropolitans of South Africa was selected to be interviewed. To retain anonymity, the eight (8) metropolitans were coded to A, B, C, D, E, F, G & H.
Data gathering instruments	Semi-structured interviews and document analysis
Questions asked	<ol style="list-style-type: none"> 1. What are the current community involvement and support levels in developing and maintaining green environments within South African municipalities? 2. What strategies have successfully engaged local communities in creating green spaces in South Africa, and what barriers exist to further community involvement? 3. How do perceptions of green spaces differ among various demographic groups within South African communities, and how might these differences impact community support initiatives? 4. What role do local cultural practices and traditions play in shaping community attitudes towards green environments, and how can these be leveraged to enhance community involvement? 5. What are the economic implications of incorporating community support into establishing green environments in South African municipalities regarding costs and potential economic benefits? 6. How do existing policies and regulations facilitate or hinder the integration of community input in developing and maintaining green spaces within South African municipalities? 7. What best practices can be drawn from international examples of community involvement in green space initiatives, and how applicable are these to South Africa? 8. To what extent do existing community organisations and grassroots initiatives contribute to promoting and maintaining green environments in South African municipalities, and how can these efforts be scaled up? 9. What are the environmental justice implications of community involvement in green space projects, particularly in marginalised or underserved areas within South African cities and towns? 10. How can technology and digital platforms be utilised to enhance community participation and engagement in establishing and managing green environments in South African municipalities?
Data analysis	Content analysis and thematic analysis
Validity and reliability of the research	Validity in this research ensures that the methods accurately measure what they intend to, assessing the true impact of community support on green environments. Reliability ensures consistency in data collection and analysis methods, ensuring dependable results that can be replicated. Both are crucial for drawing meaningful conclusions and effectively informing policy.
Limitations of the research	Semi-structured interviews for green environment initiatives in South African municipalities may face limitations, such as biased responses due to social desirability, limited depth in exploring complex issues, difficulty ensuring

DECISION	CHOICE
	consistency across interviews, the potential for interviewer influence, and challenges in synthesising diverse perspectives into actionable recommendations.
Ethical consideration	The Tshwane University of Technology Research Ethics Policy and internationally basic principles of ethical treatment of human participants were followed; ethical clearance was obtained.

FINDINGS AND DISCUSSION

Findings from the Literature Review

Community support for greening has been increasing in all case study municipalities, each with strong and active community greening projects. In some cases, community greening existed before municipality involvement, but it has intensified since it began. In others, the municipality initiated greening projects in response to specific community requests. In all instances, when the community strongly supported a project, it became sustainable over the longer term. For example, in one case, the community initiated a recycling project. Once it had proven successful, the municipality adopted the project with the employment of project coordinators. In another, tree planting was undertaken by a community school and, through liaising with the local municipality, developed into a project involving the whole community and the employment of members as part of a public works program. These examples illustrate the vital link between community-initiated projects and social development, as discussed in the previous section. In greening, community involvement or employment in a project has led to a stronger sense of ownership and resulted in self-maintained projects over the longer term. This is evident in that projects that had begun without a municipality driver were sustainable and led to eventual municipality involvement. In all case studies, the link between environmental projects and social development increased interest and participation in environmental issues. This has been explained as how community greening leads to "greening of the people's minds". As a result, the municipalities have noted decreased vandalism and dumping in areas where greening projects have taken place.

Findings from the Semi-structured Interviews

The semi-structured interviews were conducted with green initiative officers from each metropolitan city of South Africa. They were all purposefully selected due to their responsibilities related to the study at hand. All the green initiative officers of all metropolitan cities responded (100% response rate), as depicted in Table 2 below.

Table 2: Findings from the semi-structured interviews (Source: Own)

Q1	The current community involvement and support levels in developing and maintaining green environments within South African municipalities vary widely. While some communities actively participate in green space initiatives, others exhibit limited engagement due to a lack of awareness, competing priorities, or perceived barriers to participation.
Q2	Successful strategies for engaging local communities in creating green spaces in South Africa often involve participatory approaches prioritising community input from the outset. This may include community consultations, collaborative design processes, and capacity-building initiatives. Barriers to further community involvement include limited resources, communication challenges, and entrenched power dynamics within municipalities.
Q3	Perceptions of green spaces differ among various demographic groups within South African communities, influenced by factors such as socio-economic status, cultural background, and urban/rural location. These differences can impact community support initiatives by shaping preferences for certain types of green spaces, influencing participation levels, and affecting perceptions of ownership and stewardship.

Q4	Local cultural practices and traditions significantly shape community attitudes towards green environments in South Africa. These can be leveraged to enhance community involvement by integrating traditional knowledge and practices into green space design and management, fostering a sense of cultural identity and ownership, and promoting intergenerational collaboration.
Q5	Incorporating community support into establishing green environments in South African municipalities can have both economic costs and benefits. While initial costs may include expenses related to community engagement processes, infrastructure development, and maintenance, the long-term economic benefits may consist of improved property values, enhanced tourism opportunities, and savings in healthcare and environmental remediation costs.
Q6	Existing policies and regulations in South Africa may facilitate and hinder community input integration in green space development and maintenance. Supportive policies may include provisions for community participation in planning processes, while regulatory barriers may include bureaucratic hurdles, unclear mandates, and limited enforcement mechanisms.
Q7	Best practices drawn from international examples of community involvement in green space initiatives emphasise the importance of inclusive decision-making processes, transparent communication, and capacity-building initiatives. While these practices can provide valuable insights for South African municipalities, their applicability may vary depending on local contexts, cultural norms, and governance structures.
Q8	Existing community organisations and grassroots initiatives play a vital role in promoting and maintaining green environments in South African municipalities. These efforts can be scaled up through targeted funding support, capacity-building programs, and partnerships with local government agencies, NGOs, and private sector stakeholders.
Q9	The environmental justice implications of community involvement in green space projects in South Africa are significant, particularly in marginalised or underserved areas. Community participation can help ensure that green spaces are equitably distributed, address historical inequalities in access to environmental amenities, and empower marginalised communities to advocate for their rights and interests.
Q10	Technology and digital platforms can enhance community participation and engagement in establishing and managing green environments in South African municipalities by providing avenues for virtual participation, facilitating information sharing, and enabling real-time feedback mechanisms. Examples include online mapping tools, social media platforms, and mobile applications to connect residents with green space initiatives.

The interviews revealed a rich picture of the issues but also connected with various problems experienced by the researchers, such as being able to gain access to the right people, not having enough reliable information about the site or project, or the research coinciding with a changeover in terms of initiatives or management of the site. An important implied message was that researchers need to engage better with those in governance and management and should help facilitate the accumulation of studies that can assess initiatives and projects over time.

Many studies of the "larger body of research" about greening in South Africa were not directly focused on community support for greening. However, they studied various aspects of natural and built environments. This is probably why many were unaware of the many studies that have been done. However, there were what could be described as "pockets of excellence" where groups of research studies were connected by location, topic, or a critical initiative or project. This provided the rationale for using "real-life" examples in case studies to assess how research findings might be best connected to policy and practice.

During the last decade, there has been a growing awareness in South Africa about the need to create green living environments. A wide range of research studies and projects have been launched to develop the definition, strategies, and implementation measures needed to green the country. Despite this, locating research findings and outputs within a larger body of research is challenging. This poses a problem for policymakers, decision-makers, and practitioners who must decide how best to design and develop sustainable living environments that improve residents' overall quality of life. This study aimed to gather and summarise all the research findings about attitudes and

behaviours concerning community support for greening living environments and to assess how research findings and initiatives might best be communicated and connected to policy and practice.

RECOMMENDATIONS

Developing strategies and frameworks to enhance community participation and support in green initiatives within South African municipalities requires a multifaceted approach that addresses the diverse needs and challenges different communities face (Toth et al., 2022). Emphasising inclusive decision-making processes, effective communication channels, and capacity-building programs tailored to local contexts is essential for fostering greater community engagement in environmental sustainability efforts. The following are some recommendation guidelines that may assist in the policy framework development to enhance community participation in the greening of South African metropolitan cities:

- **Promote Inclusive Decision-Making Processes:**
 - Establish platforms for meaningful community participation in decision-making processes related to green initiatives. This could include forming community forums, advisory committees, or participatory planning workshops where community members can contribute their insights and preferences.
 - Ensure representation from diverse stakeholder groups, including marginalised communities, women, youth, and indigenous groups, to ensure all voices are heard and considered in decision-making processes.
 - Incorporate traditional knowledge and indigenous practices into decision-making processes, recognising the valuable contributions of local communities to environmental conservation and sustainability.
- **Strengthen Communication Channels:**
 - Use various communication channels to reach different community segments, including social media, radio, local newspapers, and community meetings.
 - Develop tailored communication materials in multiple languages to ensure accessibility for all community members, including those with low literacy or non-English speaking backgrounds.
 - Foster two-way communication channels that encourage dialogue and feedback between municipal authorities and community members, facilitating greater transparency and accountability in green initiatives.
- **Implement Capacity-Building Programs:**
 - Provide training and capacity-building programs to empower community members with the knowledge and skills to participate actively in green initiatives. This could include workshops on sustainable gardening, waste management, energy efficiency, and water conservation.
 - Collaborate with local educational institutions, NGOs, and community-based organisations to deliver capacity-building programs tailored to different communities' specific needs and priorities.
 - Foster peer-to-peer learning and knowledge-sharing networks within communities, allowing residents to learn from each other's experiences and best practices in environmental stewardship.
- **Address Socio-Economic and Cultural Factors:**
 - Recognise and address socio-economic inequalities that may hinder community participation in green initiatives. Provide incentives and support mechanisms for low-income communities to engage in sustainable practices, such as access to subsidies for renewable energy technologies or community gardens.
 - Respect and integrate cultural traditions and practices into green initiatives, acknowledging the cultural significance of natural resources and promoting culturally appropriate approaches to environmental conservation.
 - Collaborate with local community leaders, traditional authorities, and religious institutions to mobilise support for green initiatives and leverage existing social structures for collective action.
- **Monitor and Evaluate Impact:**
 - Establish monitoring and evaluation mechanisms to assess the effectiveness of strategies in enhancing community participation and support in green initiatives. This could include tracking indicators such as community engagement levels, adoption of sustainable practices, and environmental outcomes.
 - Regularly solicit feedback from community members to identify challenges, gaps, and opportunities for improvement in green initiatives, allowing for adaptive management and continuous learning.

- Share findings and lessons learned with municipal authorities, policymakers, and other stakeholders to inform future decision-making and scale up successful approaches.

By implementing these recommendation guidelines, South African municipalities can foster greater community participation and support in green initiatives, ultimately contributing to more sustainable and resilient local environments. The guidelines above assisted in the development of the policy framework. The following is the policy framework to enhance the greening of cities in South African metropolitan cities through community participation:

Table 3: Comprehensive policy framework to enhance the greening of cities in South African metropolitan cities through community participation (Source: Own)

POLICY COMPONENTS	OBJECTIVES	STRATEGIES	STAKEHOLDERS	INDICATORS OF SUCCESS
Community Engagement	To involve local communities in urban greening initiatives.	<ul style="list-style-type: none"> • Conduct awareness campaigns. • Organise community workshops and forums • Establish community-led greening committees. 	<ul style="list-style-type: none"> • Local residents • Community leaders 	<ul style="list-style-type: none"> • Number of community members participating • Increased awareness
Education and Training	To educate and train community members on the benefits and methods of urban greening.	<ul style="list-style-type: none"> • Develop educational materials. • Provide a hands-on training section. • Partner with schools for greening projects. 	<ul style="list-style-type: none"> • Educational institutions • Local governments • Environmental groups 	<ul style="list-style-type: none"> • Number of training sessions held • Increase in community knowledge
Funding and Resources	To secure and allocate funds and resources for community greening projects.	<ul style="list-style-type: none"> • Establish a community greening fund. • Partner with businesses for sponsorships. • Provide grants for local initiatives. 	<ul style="list-style-type: none"> • Government agencies • Private sector • Philanthropic organisations 	<ul style="list-style-type: none"> • Amount of funds raised • Number of projects funded
Policy and Regulation	To create policies that support and promote urban greening through community involvement.	<ul style="list-style-type: none"> • Develop incentives for green projects. • Implement regulations supporting green spaces. • Integrate greening into urban planning. 	<ul style="list-style-type: none"> • Policy makers • Urban planners • Environmental lawyers 	<ul style="list-style-type: none"> • Number of policies enacted • Compliance rate with new regulations
Sustainable Practices	To encourage sustainable and environmentally friendly practices in urban greening.	<ul style="list-style-type: none"> • Promote the use of native plants. • Implement rainwater harvesting systems. • Encourage recycling and composting. 	<ul style="list-style-type: none"> • Environmental organisations • Local businesses • Residents 	<ul style="list-style-type: none"> • Increase in sustainable practices • Reduction in water usage

POLICY COMPONENTS	OBJECTIVES	STRATEGIES	STAKEHOLDERS	INDICATORS OF SUCCESS
Monitoring and Evaluation	To regularly assess the progress and impact of urban greening initiatives.	<ul style="list-style-type: none"> • Develop monitoring frameworks. • Conduct regular evaluations and surveys. • Report findings to the community. 	<ul style="list-style-type: none"> • Research institution • Local government • Community committees 	<ul style="list-style-type: none"> • Regular publication of evaluation reports • Positive feedback from the community
Collaboration and partnerships	To foster collaboration between various stakeholders for effective implementation of greening projects.	<ul style="list-style-type: none"> • Form multi-stakeholder working groups. • Facilitate partnerships between the public and private sectors. • Engage international organisations for support. 	<ul style="list-style-type: none"> • Public sector • Private sector • International bodies 	<ul style="list-style-type: none"> • Number of partnerships formed • Collaborative projects initiated
Incentives and Rewards	To motivate community members to participate in greening projects.	<ul style="list-style-type: none"> • Create awards for outstanding contributions. • Offer tax incentives for green initiatives. • Provide recognition in local media. 	<ul style="list-style-type: none"> • Government • Media • Community organisations 	<ul style="list-style-type: none"> • Number of incentives awarded • Increase in participation rates

The outlined comprehensive policy framework for enhancing the greening of cities in South African metropolitan cities is unique in its holistic and inclusive approach. This framework not only prioritises environmental sustainability but also places a strong emphasis on community engagement and empowerment. The policy fosters a sense of ownership and responsibility towards urban green spaces by involving local residents directly in greening initiatives. A key aspect of the framework is its multifaceted strategy, addressing various dimensions necessary for successfully greening cities. Including community engagement ensures that the initiatives are tailored to local populations' specific needs and preferences, making them more likely to succeed. Education and training provide the knowledge and skills needed for effective participation, ensuring community members are well-equipped to contribute meaningfully. The framework's focus on funding and resources is another unique feature. By establishing a community greening fund and seeking partnerships with businesses and philanthropic organisations, the policy ensures that financial barriers do not impede the progress of greening projects. This is complemented by incentives and rewards to motivate and recognise community contributions, further driving participation and commitment.

Policy and regulation aspects of the framework ensure that a robust legal and policy environment supports urban greening. This includes developing incentives for green projects, implementing supportive regulations, and integrating greening efforts into broader urban planning processes. Such measures create a conducive environment for sustainable urban development. Furthermore, the framework promotes sustainable practices by encouraging the use of native plants, rainwater harvesting, and recycling. These practices also enhance the environmental benefits of greening initiatives and encourage long-term sustainability. The emphasis on monitoring and evaluation ensures that the progress and impact of greening initiatives are regularly assessed, allowing for continuous improvement. Collaboration and partnerships across various stakeholders, including public and private sectors and international organisations, enhance the effectiveness and reach of the initiatives. This framework's exclusiveness lies in its comprehensive, inclusive, and sustainable approach, ensuring that urban greening efforts are community-driven, well-supported, and impactful.

Implications for Policy and Practice

Key to this particular study is the importance of recognising the potential benefits of collaboration and social learning within an urban environmental context. The interviews identified the weakness of the metropolitan cities of South Africa in solving environmental and social problems. They highlighted the potential for the community to interact and engage with municipalities and other actors to secure local environmental and social improvements. However, recognising potential does not indicate that it will be realised. A facilitative local government sphere is more likely to create opportunities for such learning and collaboration. This can be achieved through changing how municipalities operate. The literature review section identified a need for the municipalities to be closer to the people. A municipality that is more accessible to the public and includes the public in decision-making is more likely to meet the needs of the public. This may be achieved by devolving certain decision-making powers and including the public in internal municipal processes and projects (Mamokhere and Meyer, 2022). An example in the environmental sector could be the development of a community-based natural resources management project, in which the local community and environmental experts work together to manage and improve a natural resource of importance to the community. An inclusive government nature is also pertinent to a learning organisation. The ability to learn and adapt policy according to previous experiences has been identified as lacking within the local government sphere.

Recommendations for Future Research

This study uncovered several practical actions and strategies municipalities may utilise to incorporate communities in the metropolitan cities' greening projects. However, considerably more investigation is needed to establish the success and sustainability of these initiatives through a practical pilot study with one volunteering metropolitan city. Taking note of the limited research in the field, it is assumed that further inquiry should utilise mixed-method approaches to increase the understanding of the complex interactions between communities and municipalities in these projects. This may help address a current imbalance of research that focuses on the municipality's perspective but will also consider the local community's beliefs, values, and needs. Furthermore, an understanding and contribution to bridging the gap between theory and practice may be realised.

While the study made a substantive contribution to the cross-disciplinary field of environmental psychology in South Africa and the discussion on community participation in greening the urban environment, it also highlighted several gaps in understanding these processes. Given the complexity and multifaceted nature of the study topic and the limited existing research in this context, this study provides only a starting point for understanding how local communities may be included in greening cities initiatives. Thus, the first recommendation is for more research to be conducted in various South African municipalities, particularly attempting to build up a body of comparative case studies to increase our understanding of the contextual differences.

SUMMARY

Community involvement and support are essential for successful green initiatives within South African metropolitan cities. While progress has been made in promoting environmental awareness and participation, challenges remain in achieving widespread engagement across diverse communities. Addressing limited awareness, socio-economic disparities, and institutional constraints is crucial for fostering greater community involvement in environmental activities. Future research should focus on developing tailored strategies and interventions to enhance community participation and support towards sustainable green environments in South Africa. The comprehensive policy framework for enhancing the greening of South African metropolitan cities through active community participation aims to foster sustainable urban environments. By engaging communities, providing education and resources, and creating supportive policies, the framework promotes collective responsibility for urban greening. It emphasises stakeholder collaboration, sustainable practices, and continuous monitoring to ensure effective implementation and lasting impact. The policy encourages widespread participation through incentives and recognition, ultimately leading to greener, healthier, and more resilient urban areas. This holistic approach enhances environmental quality and strengthens community bonds and civic engagement.

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WORKSTUDY IMPLEMENTATION IN AGRONOMY: DIGITAL VIDEO VERSUS TRADITIONAL MECHANICAL STOPWATCH RECORDING

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ABSTRACT

This study explored the literature on digital video recording versus traditional mechanical stopwatches measuring workstudy implementation in agronomy. To explore how agronomy is maintained, secondary data was collected using the literature involving journal articles and manuscripts based on workstudy and improvement of agronomy comparing the data collected, which was analysed from 2014-2023. Based on the findings of the results of the data analysed, stopwatch recording inadequacy has shown limited accuracy and observers' prejudice as compared to video recording. It is recommended that video recording be considered an efficient tool to provide results on the challenges affecting agronomy.

Keywords: work study, agronomy, stopwatch, digital video recording, productivity.

INTRODUCTION

Productivity improvement of agronomy contributes to the health and well-being of the population in South Africa and globally (Kavhiza et al., 2022). For this reason, agronomical inputs such as fertilizers and pesticides are critical for agriculture intensification in order to feed the ever-growing population (Pretty and Bharucha, 2014). However, the current imbalance of the ecosystem in agronomy occurs, resulting from higher temperatures as well as pollution and reductions in water availability and productivity declines (Saraiva et al., 2023). This imbalance, which is mainly a result of agricultural inputs mismanagement, poses a serious risk to the health of various parties along the value chain, including farmers and consumers (Veldwisch et al., 2024). In other cases, the problem spreads to include a range of health risks from farmers to retailers to consumers (Drejerska and Sobczak-Malitka, 2023). Thus, calling for better management tools such as workstudy to be included in the agricultural inputs and work management to avoid such consequences (Kiran, 2020).

Workstudy is a powerful tool used to measure any kind of work activity systematically or methodologically to guarantee improvements in the workplace (Buchmeister and Herzog, 2024). A time and motion study is a method of performance improvement that can increase productivity based on an analysis of tasks and activities, with the aim of addressing problematic processes (Supattananon et al., 2022). This tool can be used both through method study to simplify and improve the work activity and time and motion study to measure work for improved process time (Tippannavar, Kulkarni & Gaitonde, 2020). This time is measured using the time study stopwatch and any other means of data collected instrument to record an activity taking place (Mbonnyane et al, 2023). The evolution of workstudy using time study stopwatch recording and writing material was first undertaken in factories. This type of recording includes tools used to identify the precise information attained when using the comparison of this type of recording system (Kamble and Kulkarni, 2014). Different types of recordings have evolved over the years, from traditional methods such as stopwatches to more advanced approaches such as video recording (Wittek et al, 2023).

The most affected populations by inadequate food security are the ones in Sub-Saharan African countries (Onyeaka et al., 2024). Food poverty is aggravated by the uncontrolled usage of about 70% of fertilizers such as nitrogen ammonia, nitrous oxide and nitrate in Sub-Saharan African countries, which are released into the environment and affect the atmosphere through evaporation and water pollution (Dimkpa et al., 2023). Challenges around

agronomy include climate change. With this vigorous change, temperature increase, continuous occurrence of drying conditions as well as extreme weather are a serious threat to agronomy (Nhemachena et al., 2020). Food production in large quantities and the form of science used before this production sustains the well-being of people, ecosystems, and soils (Swarup et al., 2021). In order to determine which workstudy tool is faster at responding to questions about how agronomy operates, what obstacles it faces, and how managers can overcome those obstacles, this study's theoretical research compared the agronomy outcomes obtained through stopwatch recording versus the video recording.

RESEARCH AIM AND OBJECTIVES

The purpose of this study was to provide desktop data estimates from secondary data regarding the effects of climate change and extreme weather on agronomy, as well as to ascertain the accuracy of time recorded in agronomy operations by comparing stopwatch and video camera recordings.

METHODOLOGY

For the purpose of providing an account of the current or comparable condition when comparing South Africa with other SSA countries, this study used secondary data that was found through various research search engines, including Emerald, Google Scholar, Springer, Taylor and Francis, tech science press and other journal publishers. The focus of this study was on how smallholder farmers' trade is changed by cutting-edge agronomy technology that helps them achieve significant results and presents a potential economic opportunity.

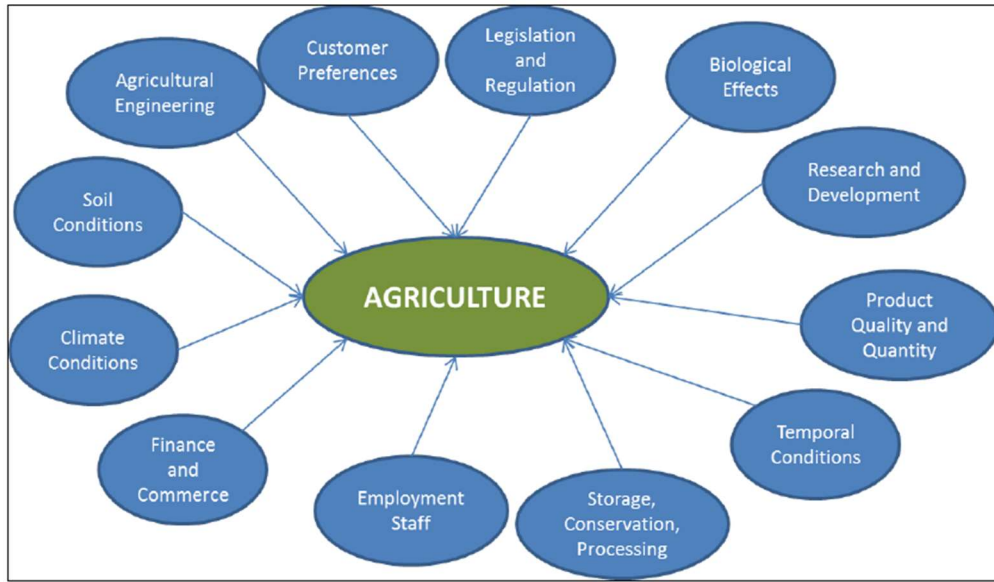
Included journal articles were the ones found from the stated search engines reporting workstudy implementation in agronomy: digital video versus traditional mechanical stopwatch recording from years 2014 to 2023. Several papers were reported about the workstudy implementation in agronomy using digital video versus traditional mechanical stopwatch recording. Few publications discussed the use of digital video in agronomy workstudy as opposed to conventional mechanical stopwatch recording. Other publications discussed the workstudy application in assessing agriculture improvement when using digital video as opposed to conventional mechanical stopwatch recording but none used advanced digital video as opposed to conventional mechanical stopwatch recording to measure agronomy.

RESULTS AND DISCUSSION

Factors Influencing Agriculture

Access to operating costs, appropriate management of agricultural inputs, deed control, delayed weeding, seed selection, crop nutrition, low and late fertilisation, and chemical spraying are some of the issues that impact agriculture (Zulu et al, 2019). Also, there is a problem with South Africa's insufficient access to technology for effective agronomy, which enhances climate-vigorous agriculture (Shilomboleni et al., 2023). Furthermore, environmental change-based climate and temperature, soil degeneration, and pollution resulted in the inability of farmers to harvest commodities which forced them to leave harvesting until spring which impacted the losses in generating crops and profit making (O'Brien et al., 2021). The population had continuously accelerated in terms of size which also contributed to the scarcity or reduction of agronomy (Tian et al., Wang, 2021). These factors were found to reduce the productivity of farms, hence the ability of agriculture to sustain the ever-growing population. Thus, it is crucial to use good management tools for the management of agricultural inputs to avoid the effect on productivity and the environment (Sarkar et al, 2020). This would be key to achieving sustainable agriculture in this era of climate change (Shrestha et al, 2021).

Figure 1: Factors influencing agricultural performance in South Africa (van der Hoogen et al, 2024)



DIGITAL VIDEO VERSUS TRADITIONAL MECHANICAL STOPWATCH RECORDING

This study evaluated the effectiveness of video recording versus conventional stopwatches in agronomical work management using a desktop research method. The comparison was made between the different reports from year 2014 to 2023. Results show that the incorporation of video recording in the day-to-day work of agricultural labourers improves their productivity (Bechar, 2014). Also, the video recording methods have the ability to improve the monitoring of plants for proper management of inputs such as fertilizers and pesticides. The findings of Nag et al (2024) show that the implementation of new techniques of crop monitoring allows better management to avoid losses due to human error and the late discovery of diseases and deficiencies. Table 1 shows the different literature and their results per region of study.

Table 1: Workstudy implementation in agronomy: digital video versus traditional mechanical stopwatch recording

Authors	Accuracy of the type of recording used		Improving Productivity on Agronomy	Countries
Bechar 2014 <u>Emerald</u>	Hand-held computers (stopwatch)	Advanced digital recording using video	Estimating the required amount of labour for each activity and to improve productivity	Israel
Košir 2015 <u>Taylor and Francis</u>	Hand-held computers (stopwatch)	Video recording	Forestry (excluded) estimating the required amount of labour for each activity and to improve productivity	Africa, North & South America, Asia, Oceania & Europe
Susko (2019) <u>Springer</u>	Stopwatch	Video recording	Video appropriate to discover the movement of a crop row shelter for plant improvement	Not specified
Ji et al. (2022)	Stopwatch	Video recording	Video recording and analysis through computer	Not specified

Tech Science Press			vision help reduce misclassifications or timing errors	
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Video recording has the ability to strengthen agricultural production through record-keeping, training, assessment of performance, quality assurance, investigations and cooperation (Dawn et al, 2023). Thus, Visualising farming processes facilitates learning, improves the various practices involved and promotes creativity through proper management of the workforce and (Sanyal et al., 2020). Farmers and other agricultural stakeholders gain from this since it helps to optimise crop management, resource utilisation, and sustainability initiatives (Khan and AlSuwaidan, 2022). Furthermore, video data analysis can provide insights into crop health, equipment efficiency, and environmental implications (Dimitrios et al, 2020), encouraging informed decision-making and ongoing improvement in agricultural operations. Compared to stopwatch approaches, this technique improves comprehension, effectiveness, and communication between all parties involved (Banjarnahor et al, 2024).

CONCLUSION

To determine which secondary data source has the highest accuracy in measuring agronomy for corrective measures, a workstudy research using a video camera versus the traditional stopwatch was conducted to compare the two types of recordings. It was discovered that stopwatch recording is not as suitable for presenting accurate data as video camera recording, which can help farmers improve their agronomy. The findings also revealed that traditional workstudy using stopwatches and human analysts was prone to human error.

RECOMMENDATIONS

In light of the comparison of video cameras and stopwatch recordings for monitoring agronomy, it is advised that video camera recordings be prioritised due to their superior accuracy in data presentation. This strategy reduces human error and provides more trustworthy information, assisting farmers in improving agronomic operations successfully. Furthermore, an empirical study should be made to ascertain the findings of this study more accurately.

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IS CHINA WITHDRAWING FROM SILICON VALLEY? IMPLICATIONS OF THE DECLINE OF CHINESE VC INVESTMENTS IN THE U.S.

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ABSTRACT

This paper summarizes the complex history of the economic relationship between the United States and China. China's internationalization, propelled by policies that encourage outward education and innovation, prompted a major increase in Chinese venture capital investments in the Silicon Valley region of Northern California. However, recent shifts in U.S.-Sino relations have led to a decrease in bilateral economic exchanges. The number of Chinese students in the United States has declined, as has American foreign direct investment in China and Chinese VC investments in the U.S.- including the San Francisco Bay Area. We shed light on the current trajectory of U.S.-Sino relations by examining VC investments across a wide variety of industries at three stages: Proof of Concept, Pre-Commercial Funding, and Institutional Funding. Together, these findings enable us to consider the future of the U.S.-China economic relationship.

Keywords: innovation, China-U.S. relations, VC investments.

INTRODUCTION

The China-U.S. economic relationship is not only complex and contradictory, but has recently shifted in essential ways. The two countries continue to engage in significant bilateral trade. Despite the reshoring trend, many American companies continue to source Chinese products and to offshore manufacturing to China. China continues to hold large amounts of U.S. debt. The economic interdependence between the two countries is deep, rendering a full “decoupling” virtually impossible. Both countries are performing a complex balancing act. China aims gradually to reduce its dependence on the U.S. while continuing lucrative export trade. The United States is restricting Chinese access to key American technologies such as advanced microchip manufacturing, while maintaining the benefits of economic collaboration in many fields.

China's rise and global economic success would not have been possible without a significant technology transfer from the United States and (to a lesser degree) Europe. Some of this technology transfer was achieved through China's participation of the U.S. innovation economy. This paper examines China's efforts to embed itself in the American innovation ecosystem. Drawing on the Pitchbook database, we investigate Chinese investments in business accelerators in the San Francisco Bay Area. Since 2023, this stream of Chinese technology investments has declined sharply. We address the possible causes and consequences of this important development.

In the last several years, the United States has restricted Chinese access to American technologies and capital markets. This strategic shift has to a reduction in bilateral foreign investment, including both FDI and VC-type investments. This development raises the following question: how are the two countries likely to manage their technology and investment relationships in the future? Specifically, we consider how China might be able to mitigate its lack of access to critical future technologies, and how China's innovation prospects may affect the U.S. and the rest of the world.

CHINA'S INTERNATIONALIZATION IN THE FIRST DECADE AFTER JOINING THE WTO

Accession to the World Trade Organization was a significant turning point in China's economic history. Deng Xiaoping's reforms, which began in December 1978, had been ongoing for over two decades by the time of WTO accession. By then, China had created markets in most economic sectors, from agriculture to science, and had built a network of Special Economic Zones (SEZs) to attract foreign capital and know-how, abolish autarky, and open its economy to the world. It is crucial to remember that Deng had to overcome tremendous resistance to his reforms and to change the Maoist mentality within the Communist Party (CCP), which remained in power throughout the reforms' progress. To enable the idea that "it is glorious to become rich," Deng introduced two crucial reforms in the functioning of the CCP: strong results-based competition between party bosses, alongside "real competence" based on leaders having to secure solid academic credentials in the West as a condition of advancement. In contrast, neither of these reforms were ever introduced in the latter days of the Soviet Union. Under Deng, Chinese citizens could not only travel to the West but were encouraged to study there, learn, and bring the acquired knowledge back to China. Many policies encouraged this: by 2011/12, there were over 194,000 graduate and undergraduate Chinese students in the US alone, and by 2019, that number had reached 372,000, only to decline by over 80,000 by 2022/23 ([Science and Engineering Indicators, National Center for Science and Engineering Statistics, Statista, United Nations Statistics Division](#)).

Before the deterioration of US-Sino relations started to affect student exchanges, China's pursuit of wealth and entrepreneurship led to strong economic growth. Without China's WTO accession, a full integration of the country with the Western rules-based international economic system would not have been possible. As China increased in prosperity, many Western policymakers and business leaders – especially those in the U.S. – were delighted, and assumed China was fast becoming a new and worthy member of the global business community.

Deng had advised China to bide its time and play along with these Western expectations, meanwhile learning as much as possible and taking advantage of opportunities to build a stronger and more modern Chinese economy. After 2000, U.S. exports to China grew gradually until the end of the first decade of the 21st century and then accelerated quickly, reaching a peak in 2021. Chinese exports to the U.S. grew even faster, with the U.S. becoming a key market for Chinese goods and China becoming the new "workshop of the world". By 2022, U.S.-China trade had a combined value of \$758.4 billion, with the U.S. exporting \$195.5 billion in goods and services and China exporting \$562.9 billion - resulting in a trade deficit of \$367.4 billion on the side of the US ([Office of the USTR, 2023](#)).

The large U.S. trade deficit with China was increasingly offset by US FDI to China, which grew from less than \$20 billion in the first five years after WTO accession, to over \$50 billion by 2013, then jumped to over \$90 billion by 2015, reaching a peak of \$126 billion in 2022. Chinese FDI in the U.S. only started to gather pace after 2009 (\$1.62 billion), grew quickly to \$31 billion by 2016, peaked at \$38.79 billion in 2019, and began declining thereafter.

Table 1: Trade and FDI statistics

Consolidated Table of China's Economic Indicators (2000 - 2023)	2000	2010	2020	2023
U.S. Exports to China (\$ billion)	16.2	91.9	124.6	147.8
Chinese Exports to U.S. (\$ billion)	100	364.9	451.7	427.7
U.S. FDI to China (\$ billion)	11.14	59	126	33
Chinese FDI in U.S. (\$ billion)	0.28	3.3	36.74	28.7
Chinese VC Investments (% of GDP)	-	0.02%	0.4%	-
Chinese VC Investments (\$ billion)	-	-	153.5	3.03
Chinese Students in U.S.	59,939	194,000	372,000	290,000
1. Bureau, U. C. (2019, April 15). <i>International Trade</i> . United States Census Bureau.				

2. Published by Statista Research Department, & 3, N. (2023, November 3). *U.S. foreign direct investments in China 2022*.
3. Published by Statista Research Department, & 3, N. (2023a, November 3). *FDI from China into the U.S. 2022*. Statista

By 2015, China was recognized as a key global manufacturing hub, with a vast manufacturing ecosystem second to none. It had become the destination of choice for outsourcing production and thus acquired the status of the world's leading exporter. Chinese ambitions grew with the country's economic successes. China began climbing the world innovation rankings, becoming one of the few countries outside the G-7 to realize significant gains in innovation capacity. This development was achieved through consistent R & D investments, training a record number of STEM graduates, encouraging mass patent filings, and upgrading universities to compete with institutions of higher education in the West.

China's innovation outputs also began to show significant results. Up until 2016, the value of Chinese cross-border licensing receipts represented less than 2% of what the U.S. earned. By 2020, Chinese entities were earning nearly as much as 12% of the U.S. count as a percentage of GDP (Clay & Atkinson 2023). Between 2016 and 2020, China's cross-border IP receipts increased by over 400%, also quadrupling as a share of its GDP. China was making significant progress as an innovator country and was poised to begin its next "leap forward" to become a fully-fledged innovation economy within a decade.

In 2015, the government launched the "Made in China 2025" campaign. Simply copying Western technology would not enable China to become a leader in modern technologies and an originator of new products and processes. China had been using foreign firms to help build modern industrial clusters such as Shenzhen, and had developed a highly experienced and skilled labor force by learning directly from foreign firms and placing R & D laboratories next to manufacturing facilities. But Chinese policymakers recognized that these domestic initiatives were not enough and sought to embed Chinese startups in the world-class in the innovation ecosystem of the United States.

Soon afterwards, China began catching up with the U.S. in venture capital investment. It is evident that this outward push has succeeded: in 2010, VC investments were just 0.02% of its GDP, while those of the US were 0.04%. By 2020, Chinese VC investments had increased to 0.4%, although U.S. VC had increased to 0.62% of GDP (Clay & Atkinson 2023). Chinese investors were actively seeking opportunities in leading U.S. innovation clusters such as the San Francisco Bay Area, and were modeling themselves on their American counterparts.

U.S. AND CHINESE BUSINESS ACCELERATORS IN THE SAN FRANCISCO BAY AREA

To illustrate China's strategy of embedding technology startups in the United States, we examine the activities of Chinese-based business accelerators active in the San Francisco Bay Area, long recognized as a leading regional innovation ecosystem.

Over the last two decades, business accelerators have dramatically increased in number and scope, playing a significant role in large-scale innovation ecosystems alongside other components (Kao 2012). While many scholars have focused on the facilitating effect of accelerators on startups that join the accelerator (Cohen et al. 2019; Kurpjuweit & Wagner 2020; Moschner et al. 2019; Shankar & Shepherd 2019), researchers have only recently begun to question the influence of these accelerators on their local economies and societies. For example, Cohen et al. (2019) state that many aspects of the relationship between accelerators and their regions' entrepreneurial capacities are unknown. Yu (2020) further clarifies that the increase of accelerators still has an unknown effect on their local ecosystems; it is still uncertain whether they aid or harm their regional economy and in what ways.

Accelerators create financial and knowledge-based investments that arise as a from new business formation. For example, Zhang, Lv and Duan (2014) documented how inventor networks have spurred clusters of prolific knowledge creation. Hochberg (2016) suggested that accelerators as deal aggregators often add value because of their ability to sort through prospective startups and enable them to seize funding opportunities for their innovation ideas.

Understanding the role of accelerators in knowledge creation and transfer at a more aggregated level (e.g., the region or country level) has important implications for policy.

In this paper, we examine the impact of accelerators on their local economies by comparing domestic accelerators versus cross-border accelerators. We focus on accelerators located in Silicon Valley that are founded by U.S. investors versus Chinese investors. Given the potential connections that Chinese investors may have with their home country, the learning objective of startups residing in the Chinese accelerators may differ from the ones that reside in U.S. accelerators.

For example, startups in Chinese accelerators may be in a privileged position to establish cross-border collaboration or even tap into the Chinese market given their home economy connections. Therefore, the knowledge creation and transfer in the local region (where the accelerator is located) resulting from the Chinese accelerators may follow a different path from the knowledge creation and transfer resulting from the U.S. accelerators.

We argue that the portfolio companies of Chinese accelerators are less embedded in the U.S. innovation ecosystem than are companies supported by American accelerators. Startups in the Chinese accelerators are less reliant on the local innovation ecosystem to build their inventions than startups in the U.S. accelerators.

This dynamic reflects two factors. First, Chinese accelerators may connect their portfolio companies to cross-border resources, which reduces the startups' dependence on the local innovation system (Zheng 2019). Second, startups that choose to apply and get selected into the Chinese accelerators are more likely to have an international orientation to begin with.

To support this argument, we analyze the funding activities of the portfolio companies of Chinese and American business accelerators in the San Francisco Bay Area. Using startup funding data extracted from PitchBook, we track the funding activities of companies that exited from their accelerators. We consolidate the data into three funding startup paths:

Proof of Concept (Grants, Crowd Funding)

Pre-Commercial Funding (Angel Investors, Seed Funding, Accelerators)

Institutional Funding (Debt Financing, Private Equity, Early-Stage VC, Later Stage VC)

Using this startup funding model, we posit the following hypotheses: (1) the higher level of embeddedness of U.S. business accelerators affords their portfolio companies greater access to modes of startup funding (Proof of Concept, Pre-Commercial Funding) favoring close connections with local investors; and (2) the lower level of local embeddedness of Chinese accelerators heightens the reliance of their portfolio companies are Institutional Funding resources not deeply connected with the host economy.

To test these hypotheses, we compared the funding activities of the portfolio companies of major U.S. and Chinese business accelerators in active in the Bay Area. Following the three-path startup model described above, we sorted pre-exit funding events by type. The results are displayed in Figures 1, 2, and 3 below.

Figure 1: U.S. Accelerators

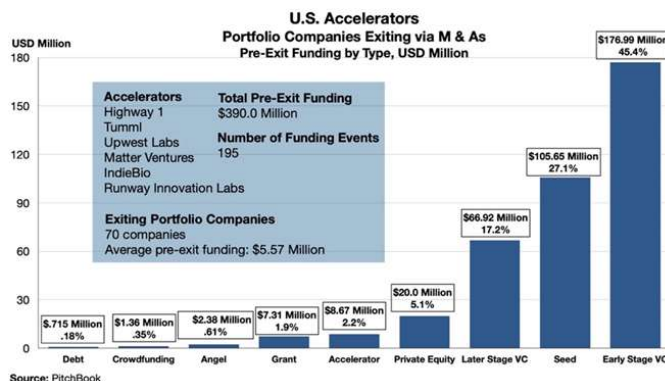


Figure 2: China Accelerators

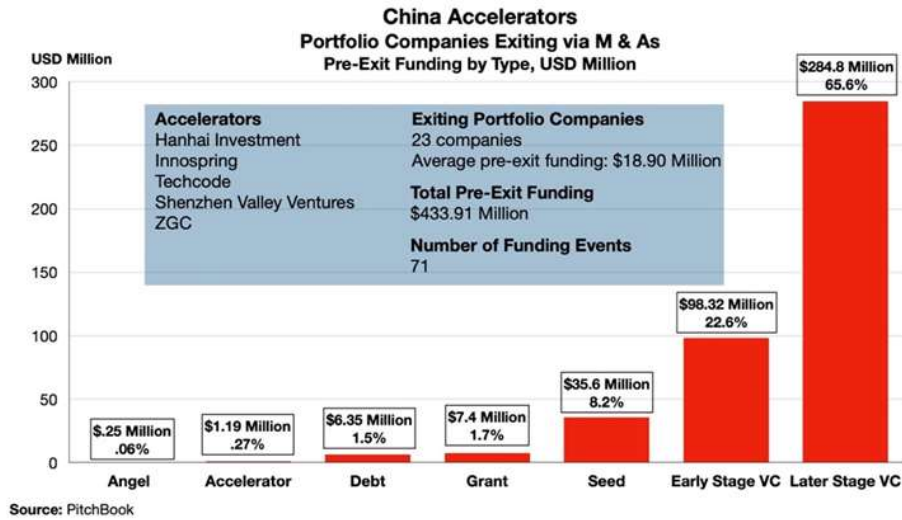
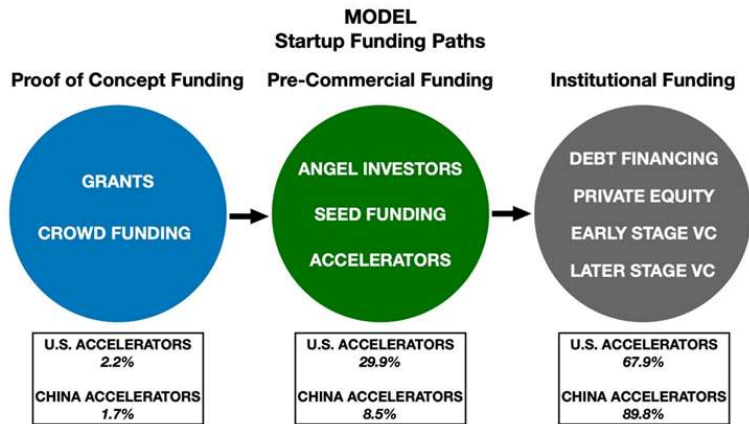


Figure 3: Startup Funding Paths



The data broadly supports our hypotheses regarding the role of local embeddedness in the funding strategies of technology startups. Nearly 90% of the funding of portfolio companies of Chinese-based business accelerators came from institutional investors, especially early- and later-stage venture capital firms. A significant share of funding of U.S. startups also came from venture capital. However, the share of pre-commercial funding of U.S. companies (angel investors, seed funding, accelerators) surpassed that of Chinese companies by a factor of 3.5. Our analysis revealed only negligible differences between the U.S. and Chinese companies in their Proof-of-Concept funding.

Augmenting our investigation of startup funding by funding type, we examine the links between portfolio funding patterns and represented industries. Assuming that Institutional Funding dominates certain industries (e.g., Information Technology, Business Products & Services, Consumer Products), the outweighing of those industries in the Chinese group would challenge the embeddedness hypothesis: i.e., the large shares of institutional funding of Chinese startups stem from the industry composition of those companies, not local embeddedness. The findings of our industry analysis are shown in Figure 4.

Figure 4: Funding of Accelerator Portfolio Companies

Funding of Accelerator Portfolio Companies
Shares of Pre-Exit Funding by Industry and Type
U.S. vs China Accelerators, M & A Exit Companies

INDUSTRY	PROOF OF CONCEPT		PRE-COMMERCIAL		INSTITUTIONAL	
	Grants, Crowdfunding		Angel, Seed, Accelerator		Debt, Private Equity, Early Stage VC, Later Stage VC	
Information Technology	3.1%	.41%	31.9%	4.8%	64.9%	94.8%
Business Products and Services	0%	0%	14.0%	26.3%	86.0%	73.7%
Consumer Products	3.5%	.44%	38.4%	.06%	58.1%	99.6%
Biomedical Technology	.39%	82.8%	74.4%	17.2%	25.2%	0%
Other Industries	1.0%	0%	99.0%	32.8%	0%	67.2%

Information Technology represents the most heavily funded industry in the dataset. The IT shares of startup funding of the U.S. and Chinese companies are nearly equal (59.7 percent and 61.4% respectively), neutralizing the effects of industry on funding type. Nearly 95 percent of funding of IT startups in the Chinese group came from Institutional Investors. That finding strengthens our argument that the low level of local embeddedness of Chinese accelerators in the San Francisco Bay Area created a high dependence on funding sources not deeply connected to the host economy.

Furthermore, the share of pre-commercial funding of U.S. Information Technology startups exceeded that of the Chinese companies by a factor of 6.6. This finding supports our argument that the relatively high embeddedness of U.S. portfolio companies afforded greater access to local funding sources.

Our analysis of other industries represented in the portfolios of U.S. and Chinese accelerators yields ambiguous results. Chinese startups in Consumer Products (comprising a higher share of startup funding than their U.S. counterparts) obtained virtually all their funding from Institutional Investors. American startups in Business Products and Services (the second largest recipient of pre-exit funding the U.S. sample) obtained nearly 75% of their funding from Institutional Investors, a funding resource less tied to the host economy. By contrast, Proof of Concept financing from grants and crowdfunding (a funding resource that favors high local embeddedness) represents the dominant mode of financing of Chinese Biomedical startups.

We created other control variables to determine whether factors other than host economy embeddedness affected the funding strategies of U.S. and Chinese startups in the Bay Area. We assessed the role of company size, hypothesizing that larger companies (representing an outsized share of entities in the Chinese set) would require bigger funding amounts than small companies, a funding strategy favoring Institutional Investors. Larger Chinese companies did indeed capture a significantly higher share of pre-exit funding than U.S. companies. However, we also found that Institutional Investors dominated startup funding across all company sizes in the Chinese sample.

We also evaluated the role of Time-to-Exit, hypothesizing that long intervals between company founding and exit would create opportunities for startup companies and their parent accelerators to develop ties with Institutional Investors. We determined that institutional funding prevailed in long-duration companies in both the U.S. and China sets, a finding that weakens the embeddedness argument. But we also found that the institutional funding shares of Chinese companies exceeded those of U.S. companies across all Time-to-Exit groups.

Our dataset on the financing of U.S. and Chinese startups in the San Francisco Bay Area permits an analysis of the sequencing of funding events. This development analysis is anchored to scholarly research on the “finance escalator.” Early formulations of the finance escalator model suggest a linear sequencing of startup financing. The sequence begins with informal, non-professional funding (personal savings, family/friends), proceeds to individual

external investors (angels), continues with business development organizations (incubators, accelerators), and culminates with institutional investors (banks, VCs.) (Baldock & Mason 2015; North, Baldock, & Ullah 2013).

Recent shifts in entrepreneurial finance challenge this linear sequencing model. Startup companies increasingly employ dynamic financing strategies, pursuing multiple, parallel funding channels and bootstrapping alternative funding sources to avoid running out of cash. Angels (traditionally high-wealth individuals undertaking independent investment strategies) are forming syndicates that expand pools of startup funding. Furthermore, advances in digital technology have spurred the rise of small, agile FinTech's that further enlarge financing opportunities for startups (Bessiere, Stephany, & Wirtz 2020; Owen, Deakins, & Savic 2019).

In this dynamic, non-linear entrepreneurial finance sphere, the choice of startup funding strategies hinges on the degree and nature of the company's embeddedness (social, spatial, institutional) in the local environment. Highly embedded startups have greater access to a broader range of funding resources than startup companies that are less embedded in the host economy (Murazcheva & Levie 2020).

Building on the finance escalator concept, the next phase of our research will leverage the longitudinal component of our dataset. By analyzing the sequencing of startup funding events, we will determine which companies in the U.S. and Chinese groups adhered to the traditional finance escalator (non-professional funding-intermediary funding-institutional funding) and which companies diverged from that sequence and pursued non-linear funding strategies.

CHINA UNDER COMPETITIVE CONFRONTATION WITH THE UNITED STATES

One of the difficult lessons of China's history is that foreign engagement has sometimes been a blessing and sometimes a curse. After its "century of humiliation" and war with Japan, China spent a quarter-century experimenting with Maoist autarky before opening itself to the world under Deng. This period of reforms witnessed perhaps the greatest wave of West-East technology transfer in human history, with the transfer largely enabled by the United States.

Today, it is the United States, not the European Union, that has undertaken a series of policies designed to restrict China's technology development in the form of embargoes and investment bans on critical high-tech areas. The intent of the American government is to prevent (or at least slow down) China's assumption of global leadership in critical technologies. The two countries have entered a new era of competitive confrontation in which their economies remain deeply interdependent and cannot afford full decoupling. While American businesses still rely on foreign trade with China, the recent fall in U.S. imports from China has been marked. Between 2022 and 2023, U.S. imports from China declined from \$536.3 billion to \$427.7 billion, while U.S. exports to China declined from \$154 billion to \$147.8 billion. As a consequence, the American trade deficit with China (while still significant at \$279.4 billion) has fallen by over \$100 billion. In 2023, the European Union reported a larger trade deficit with China than the United States. China is becoming a more important trade partner for the EU than the U.S. (Eurostat, US Census Bureau).

Foreign direct investment in China experienced huge declines first in 2022 (from \$344 billion in 2021 to \$180 billion in 2022 and down to \$33 billion in 2023) (Bloomberg). Chinese FDI to the U.S. has also experienced steady declines since 2019, but in 2022 it was still at \$28.7 billion. Total assets of Chinese companies in the U.S. have been rising steadily since 2013, reaching \$282 billion in 2021. However, Chinese new FDI into the U.S. after 2019 has been low (\$0.7 billion), lagging behind such countries as India and at the same level as Mexico (Statista and Rhodium Group).

After 2013, Chinese VC investments in the U.S. had been growing steadily, reaching a peak of \$153.5 billion by 2018. But since 2021, these investments declined to \$29.9 billion, and by 2023 had fallen to just \$3.03 billion. Whereas in the past, Chinese venture capital firms (such as Sequoia and Hillhouse) were able to gather American investment funds and use them to fund Chinese startups, it appears that such American investment has dried up, with the U.S. government tightening control over American investment in advanced Chinese technology. For example, in a 2024 report, the U.S. House of Representatives Select Committee on China called on the Biden Administration to

tighten restrictions on U.S. investments in Chinese firms with links to the military. At the same time, the Chinese government has also been imposing restrictions on foreign investments (e.g., related to extensive user data).

These American investment restrictions pose serious dilemmas for China. Today, successful nations must be able to dominate emerging technologies. Where is China in that global race? In February 2023, The Australian Strategic Policy Institute published a report that placed Chinese researchers ahead of Americans in 37 of 44 key technologies. The methodology was based on identifying the top 10% of the most highly cited research publications from the past 5 years. The results suggest that in areas of applied research, China is already a global leader (Gaida, Leung, Robin & Cave 2023). Another report published in 2023 by the American EDGE project of the Information Technology and Innovation Foundation compared the innovation cycles in China and the U.S. from 2010 to 2020. In nearly every innovation indicator, the results showed that China is gaining ground or extending its lead. It is projected to surpass the United States by 2035 in proportional innovation (adjusted for population). This projection is made despite the slowdown in China's GDP growth.

Such alarmist reports should be viewed critically and with a solid understanding of what they mean. The ASPI report documents China's hugely successful investment in technology research. This development does not necessarily mean China can convert the research findings into new products and processes, but it does mean it has a good basis for successfully innovating into the future. Moreover, China still lacks a track record in basic science research that would be indicated by many more Nobel prizes in science than it has won so far.

China's spending on research and development (over 2.5% of GDP), has been increasing steadily, but is still much smaller than R & D expenditures in the United States and European Union ([The World Bank](#)). China is keen to pursue scientific collaboration with Western countries, but the latter have become more cautious. China in 2023 still sent nearly 290,000 students to study in the US, but that number has fallen from its peak of 343,000 in 2020 (Open doors data). Moreover, there are reports that the Chinese government expects absolute loyalty from students authorized to study abroad. Amid these shifting dynamics, the U.S. government declined to renew its Fulbright exchange program with China due to concerns over spying and technology theft.

Chinese leaders are undoubtedly watching very carefully how far the United States and other Western countries are willing to go in terms of denying or restricting China's access to advanced technology and venture capital. Fully aware that replacing access to the U.S. innovation ecosystem would be a tall order, they do not want China to be cut off from technology transfer and American capital. If U.S. restrictions continue and increase, China will be forced to develop certain technologies (such as next-generation microchips) on its own. In this scenario, China is also likely to pursue venture capital and startup opportunities in countries that are not U.S. allies, such as the United Arab Emirates and Saudi Arabia.

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PRODUCTIVITY IMPROVEMENT MODEL FOR GOVERNMENT PRINTING WORKS: A SOUTH AFRICAN PERSPECTIVE

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ABSTRACT

Customers' demand for printing industry to be more productive and compete globally in relation to delivery, cost, quality and use of technological factors is one of the factors which have a possible impact on productivity. Printing establishments through the South African printing industry have a major role to play in the country's economy. Printing industry is characterised by overloading, inefficiency and ineffectiveness affecting overall organisational performance. The purpose of this study is to examine the factors influencing productivity improvement practices and develop productivity improvement model to improve printing division. This study follows a qualitative research approach as it is an exploratory research technique used to understand the underlying reasons, perceptions and motivations of individuals in solving a problem. A sample of Government Printing Works' (GPW) employees directly involved in the printing, finishing and packaging of Higher Education and Training examination question papers located in Pretoria, City of Tshwane municipality participated in this study. A number of critical success and barriers to productivity improvement practices are identified. Barriers factors include poorly designed process; poorly designed layout; poor quality materials; lack of effective maintenance plans; unsatisfactory planning; supplier inefficiencies and customer inefficiencies were the major causes of low productivity in the GPW. This comprehensive and holistic framework can assist government printing employees' and lean practitioners' in their lean manufacturing implementation journey systematically and improve the organisation's performance.

Keywords: printing industry, Government Printing Works, productivity improvement, quality.

INTRODUCTION

The printing industry should use performance-enhanced compensation practices and productivity improvement tools as they play important to the success of the manufacturing organisation (Samnani & Singh, 2014). The use of productivity improvement strategies in the printing industry is always a major factor in its' competitive advantage. Productivity enhancement strategies improve organisational performance in terms of time, quality and costs (Hofer *et al.*, 2012; Kruger *et al.*, 2014) Productivity improvement, which is synonymous with good management is a function and a result of management efficiency. It is being used as an organisational performance measure. Techniques such as zero inventories, Just-in-time (JIT), flexible manufacturing systems and Total Quality Management (TQM) support the employment of productivity improvement plans (Mtshali *et al.*, 2018; Kobayashi, 2018; Shah & Patel, 2018). The need for productivity improvement in the printing sector and its suppliers is due to the quest for sustainability through improved profit margins and the level of competition within the sector.

Lean is a philosophy that reduces the time spent from customer to delivery by eliminating sources of waste in the production flow. Lean production is further defined as a practice which minimises waste and enhances a firms' performance (Chan et al., 2018). These lean practices include Kanban, JIT and TQM. The arguments tabled by Nyakala et al. (2023) suggest that inventories, costs of quality and lead time could be reduced by lean production. These reductions would easily improve the financial performance of any business organisation. The portion of these financial gains could therefore be used to support long-term productivity improvement initiatives. Given the fact that lean strives to minimise waste and increases efficiency, lean manufacturing impacts very positively on productivity of an organisation (Kruger et al., 2014; Davies, 2015). This is because increased efficiency directly translates into improved productivity. Adopting lean production practices creates a direct relationship to improvements in performance. The GPW has an estimated annual turnover of R51 billion and employs approximately forty-five thousand employees. This makes it one of the most critical sectors. To gain competitive advantage and improve profit margins, printing companies have adopted production methods such as JIT and TQM, as they are not limited to Japanese car manufacturers. It is important for employers to understand what motivates employees to be more productive. This can be accomplished through improved forecasting, planning systems, and cycle times to improve on delivery performance and decrease inventories to improve profit margins (Ngwenya et al., 2016).

Effective people management and employee engagement can improve productivity for GPW. Supplier's late delivery of flat cardboard box material affected the timeous delivery of examination question papers to the Department of Basic Education (GPW, 2014/2015:1). Motivation should not be under-estimated, as it is critical in meeting both employee and organisational goals. In a study conducted by Ahmed Al-Dujaili (2013), it was found that experienced artisans resigned from GPW mentioning that they were not motivated because of their low remuneration compared to other competitors in the printing industry.

Research Problem

Government Printing Works in South Africa is faced with delays was caused by the fact that the supplier in Europe needs at least 12 weeks to ship orders. An extended response time by the service lift maintenance company also delayed the transportation of the non-finished and finished materials between sections. The long distance of 1600m between the printing machine and the printing plate making machine increased the time it took to produce question papers. The Martini stitching machine's speed of 7000 booklets per hour failed to keep up with the printing speed of 10000 copies per hour, thus leading to an increased inventory of non-finished materials. The shortage of flat box material delayed the packaging of the finished question papers, delaying the dispatch of consignments. The poor-quality paper reels as process inputs had a negative impact on the quality of the question paper booklets (Department of Government Printing Works, 2014/2015; Munyai et al., 2017).

Objectives and Research Questions

The objectives of this study were to examine the factors influencing productivity improvement practices and to make recommendations about the proposed develop a lean manufacturing implementation framework for Government Printing Works with regard to managing the quality of final products and improve customer satisfaction. This was done by answering the following research questions:

- What factors of influence does GPW in the South African printing industry face in respect of improving quality of printing processes?
- How can managers and leaders in the GPW successfully implement productivity improvement model into their organisations in order to best improve quality of printing products.

LITERATURE REVIEW

Productivity Improvement Related Printing Industry

To gain competitive advantage and improve profit margins, printing companies have adopted production methods such as JIT and TQM, as they are not limited to Japanese car manufacturers [9]. As printing plays an important role in the national economy, there is a need to assist the printing sector to improve its profit margin. This can be accomplished through improved forecasting, planning systems, and cycle times to improve on delivery performance

and decrease inventories to improve profit margins (Kruger et al., 2014). Management of people is also a key issue for a productivity improvement plan.

Enhancing Product Quality

The importance of ensuring product quality, as this has a long-lasting effect on the organisations' performance and overall productivity. Product quality is the result of a process which is used during production (Oeij et al., 2011). Process quality is as important as product quality. In other words, a high-quality process would improve productivity, as superior productivity is a major indicator of good performance. The implementation of tools together with precise management would lead to a strong commitment of senior management towards the initiative. This commitment would help in satisfying the reduction of costs of poor quality and increase customer satisfaction, thus positively influencing productivity. Aggressive in achieving cost savings and efficiency while improving quality and productivity of an organisation. Unhappy workers contribute in the decline of the productivity of an organisation, as they are drivers of all activities within the organisation which impact on productivity. Workforce morale that is not taken care of can easily send productivity on a downward spiral (Zeltmann et al., 2016; Osei-Poku et al., 2016).

Material Wastage and Printing Processes

Printing processes involve a variety of work centers including planning, origination, printing, finishing and packaging which makes line balancing vital to achieve desired productivity rate. Line balancing can be used to improve productivity in the printing operations (Nyakala et al., 2023). Manufacturing security printed material requires effective utilization of production resources and synchronising the material flow in the printing system. Proper allocation of resources and improving the availability of resources increases throughput in a printing system. Flexible printing line configurations which have less risk when the demand of printed material changes is of great importance to printing managers. Effective time management can be achieved by allowing shorter stops between runs which is a result of properly organized changeovers (Oeij et al., 2011; Zeltmann et al., 2016; Rakobela et al., 2022). Paper is wasted due to over-processing in press set-ups and production errors. This causes defects due to products being made to incorrect specifications and generation of unwanted scrap.

The finishing processes also require additional allowance to cater for their make readies and production rejects which then becomes additional inventory. A method to limit unnecessary allowances must be devised to make printing plans more sustainable (Ahmed Al-Dujaili, 2013). Transport of materials between work stations is another cause for concern, as there are a lot of material movements involved which do not add value but prolong the production cycle time (Dogra et al., 2011). For instance, some materials get damaged at an early stage and the burden gets carried through the production line; WIP material gets damaged while being transported to the next stage of the process. The major reason why location poses a threat to productivity is time wasted through waiting. The idle time is described as the workers or machines due to bottlenecks or inefficient production flow (Netland & Sanchez, 2014; Ngwenya et al., 2016; Nyakala et al., 2023). While waiting, production time is lost and cannot be recovered, and thus it affects productivity negatively. Unnecessary motion by employees that prevents them from doing their job is also costly to the organisation. These movements would include looking for a tool to be used on the machinery and movements due to poorly designed ergonomics. Skills are thus wasted when a skilled individual is not performing the task associated with his or her skill set.

RESEARCH METHODOLOGY

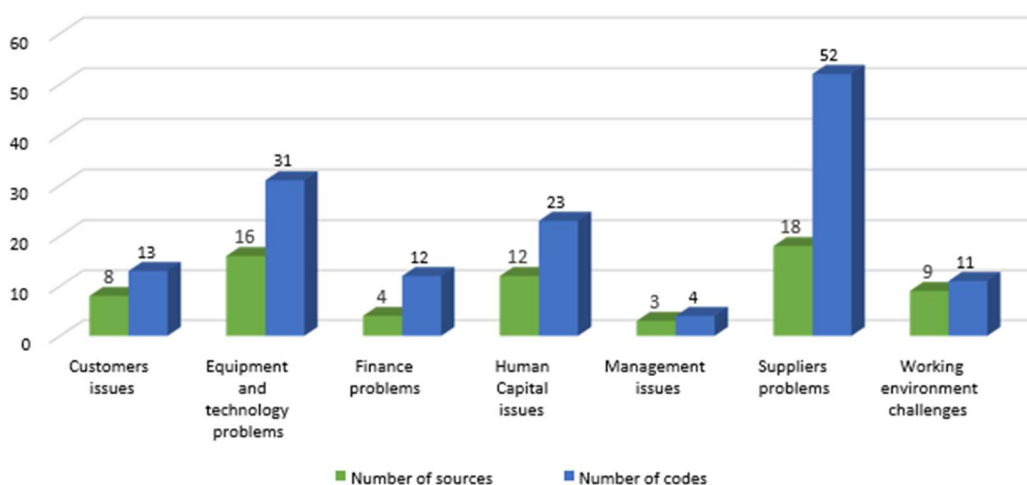
A qualitative research approach was adopted to collect data and analyse and answer the research questions. Furthermore, literature was reviewed to ascertain the current knowledge and data available on productivity improvement initiatives in the printing industry. Participants from various GPW divisions were selected using purposive sampling. The adoption of the qualitative approach brings benefits such as allowing participants to open up in relation to the subject. This openness, due to the nature of interview questions which can be open-ended, allows more information to be collected and analysed to reach the final conclusions. Open-ended questions provide the researcher with the opportunity to probe and get more insight from a single question asked (Vos et al., 2012; Creswell, 2013). Data was analysed using Braun and Clarke's thematic analysis process. For more accuracy and depth in the data analysis, the Computer Assisted Qualitative Data Analysis Software (CAQDAS) NVivo version 11 Pro was

used. The appropriate research design for the study, therefore, had to be the one that addressed the ‘what’ and ‘how’ exploratory questions as unambiguously as possible in order to understand the causes of low productivity rate in the GPW. Exploratory studies typically employ an open, flexible and inductive approach to research, as they attempt to look for new insights into phenomena (Zikmund et al., 2013).

RESULTS AND DISCUSSION

Figure 1 below shows clearly that eighteen (18) participants feel that suppliers are a major cause of low productivity due to poor quality material supplied and delays in supplying the required material. Machines and technology came up second as the cause of low productivity with sixteen (16) participants supporting that notion. Twelve (12) participants discussed human capital issues as the causes of low productivity which included lack of training, shortage of skilled employees, lack of coaching and mentoring and the increased number of demoralised employees due to poor incentives for employee contributions. Working environment conditions which are largely affected by poor layout design were mentioned by nine (9) out of eighteen participants, making it the fourth largest contributor to the GPW’s low productivity. Lastly, eight (8) out of eighteen participant raised concerns about customers contributing to the GPW’s low productivity due to the lack of understanding of printing processes employed and the late submission of requests for printing as presented by Figure 1 below:

Figure 1. Participant contribution per cause of low productivity



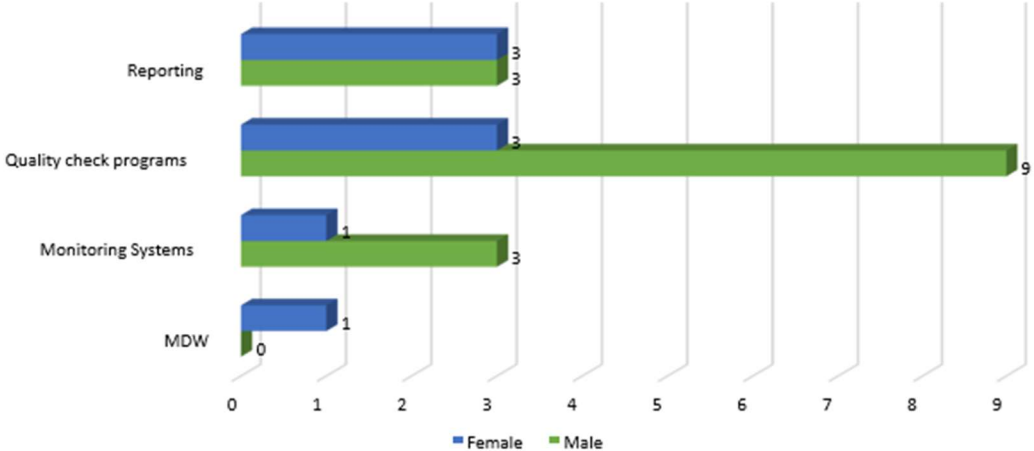
The table below shows how the tools used to measure productivity were discussed across gender in the research study. It is important to note that male participant have more knowledge of the tools used in measuring productivity compared to female participants with regard to quality check programs (9 references) and monitoring systems (3 references) used in the GPW.

Table 1. Comparison across gender and measuring tools

Measuring Tool	Male	Female
Measured Day Work (MDW)	0	1
Monitoring Systems	3	1
Quality check programs	9	3
Reporting	3	3

It is very interesting to perceive that a measured day work tool was the only tool discussed once, and was discussed by a female participant. A total of 82% of male participants discussed quality check programs as a productivity measuring tool compared to 43% of female participants. The graph below represents the comparison across gender and measuring tools, as shown in Figure 2.

Figure 2. Comparisons across gender and measuring tools



Comparison across Work Experience and Strategies to Improve Productivity

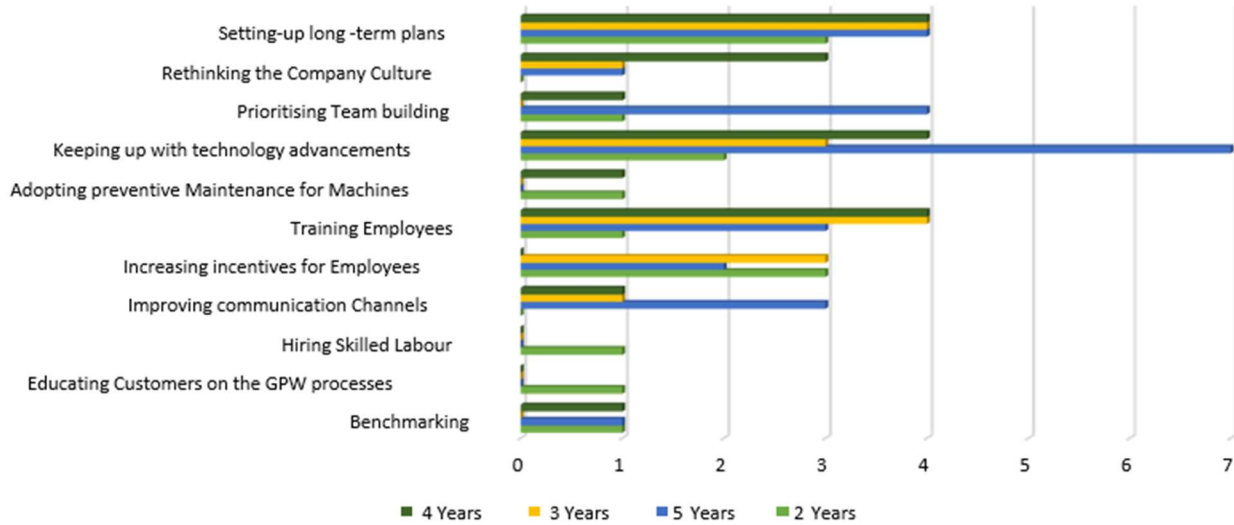
Table 2 and Figure 2 below show how the theme of ‘strategies and practices to improve productivity’ in the GPW have been discussed across participants’ work experience. It is interesting to note how the sub themes under ‘strategies and practices’ have been discussed by the participants. Those who have been in the employ of the GPW contributed with 7 references to ‘keeping up with technological advancement’ as a solution to ensure productivity. Also, on training the employees as a strategy, those who have been in the company for 3 and 4 years contributed more than the rest.

Table 2. Comparisons across strategies and work experience

Strategies and practice to productivity	2 Years	3 Years	4 Years	5 Years
Benchmarking	1	0	1	1
Educating customers on the GPW processes	1	0	0	0
Hiring skilled labour	1	0	0	0
Improving communication channels	0	1	1	3
Strategies and practice to productivity	2 Years	3 Years	4 Years	5 Years
Increasing incentives for employees	3	3	0	2
Training employees	1	4	4	3
Adopting preventive maintenance for machines	1	0	1	0
Keeping up with technology advancements	2	3	4	7
Prioritising team building	1	0	1	4
Rethinking the company culture	0	1	3	1
Setting-up long -term plans	3	4	4	4

A total of 100% of the employees that have been with the business for over five years suggest that keeping up with technology advancements will improve productivity. Furthermore, 57% of the longest serving employees emphasised the setting-up of long-term plans and prioritising team building as a strategies to improve productivity. With the experience of two years, increase of incentives is the leading strategy to improve productivity. Graphically, the comparison across strategies and work experience can be best presented by Figure 3 below:

Figure 3. Comparison across strategies and work experience



Comparison across Strategies to Improve Productivity and Gender

Table 3 and Figure 4 illustrate how ‘strategies and practices to improve productivity’ have been discussed across gender in the research study. Intriguingly, males contributed more information than females in giving possible solutions for productivity for the GPW. For instance, increasing incentives for employees, males contributed 5 references whilst females contributed 3 references.

Table 3. Comparison across strategies and gender

Strategies and practices for productivity	Male	Female
Benchmarking	3	0
Educating customers on the GPW processes	1	0
Hiring skilled labour	1	0
Improving communication channels	1	4
Increasing incentives for employees	5	3
Training employees	8	4
Adopting preventive maintenance for machines	2	0
Keeping up with technology advancements	11	5
Prioritising team building	6	0
Rethinking the company culture	5	0
Setting-up long -term plans	11	4

Figure 4 represents how strategies to improve productivity are discussed across gender line. A figure of 100% of male participants contributed with regard to the “technology advancements” and “setting up long term plans” as strategies to improve productivity. Female participants (71%) perceive technology as an integral strategy to improve productivity. Male participants (73 %) emphasised the importance of employee training to improve

productivity compared to the 57% of female participants. Below is Figure 4 which represents comparisons across strategies and gender graphically:

Figure 4. Comparison across strategies and gender



Distance between machines used during production has an impact on productivity, as increased distances take longer to be travelled when transporting materials between the machines. Computer to plate (CTP) plate making machine is 55m away from the printing section, specifically OCE digital machine. The distance between the OCE digital printing machine and the CMC packaging machine is 8m. The Solna and Dev printing machines are 18m and 13m away from the packaging machine respectively. The proposed distance between the machines is presented by Table 4 below:

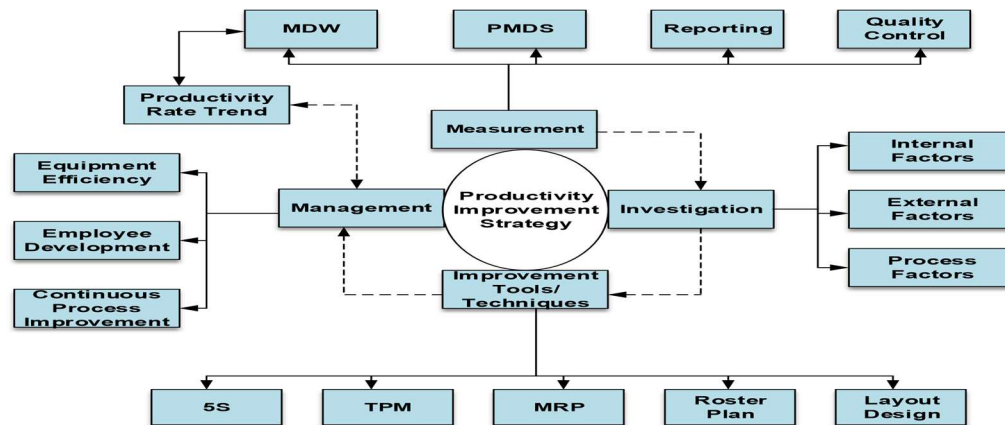
Table 4. Proposed employee motions

Sections:	Number of Workers	Motions per employee	Machines in the section
Technical Planning	2	6	0
Origination	2	6	1
Printing: Letterpress & POD	10	11	3
Finishing	13	9	3
Packaging	8	11	1
Dispatch	2	3	0

Source: Author

It is important to take note of the observations and draw comparisons across process charts, machine distance matrix and worker motion flow due to factory layout. The current system process chart indicated that there were less inspection activities on the proposed system, with 21 compared to 270 activities in the current system. Furthermore, there was a significant decrease in delay activities from 355minutes to 98minutes as well as in the transport activities, from 755minutes to 532minutes. The decline of these activities had a positive impact on productivity, as 986 minutes of production time was saved, equalling 35.4%. Implementation of 5S; improved layout design and roster plan improved the system by saving 572 minutes initially lost during breaks. The discussed strategies contributed to developing a PIS for the GPW as graphically represented by Figure 5 below:

Figure 5. Productivity improvement model



CONCLUSIONS AND RECOMMENDATIONS

Poor quality materials were generally identified as the cause of low productivity that material quality is one of the factors that affects productivity of GPW. The poor state of machinery in manufacturing printing organisation causes delays, and failure to produce quality end-products negatively affects productivity. Old machines still in use weaken production performance. Old machines which lack technological advancements do not assist in improving efficiency. Poor layout design makes it difficult to produce products efficiently, as the work centres are scattered in a three-storey building. Furthermore, excessive employee movements and distance between machines hampers productivity. From the results and the discussion, it was concluded that the research objectives were achieved on the basis of the following key conclusions. Implement lean management system to eliminate printing system wastages. Management should prioritise employee development. A change management process should be undertaken to ensure buy-in of all stakeholders to prevent PIS implementation failures. Factory layout should be improved to allow for the smooth flow of processes and reduce printing system wastages. Since customers are at the centre of initiatives for improving productivity, the research further recommends that customer knowledge about printing processes be tested to enable the development of customer orientation programmes.

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ASSESSING SUSTAINABILITY PRACTICE INITIATIVES: EXPLORING IMPLEMENTATION CHALLENGES FACED BY GENERAL MANAGERS OF HOTELS IN GAUTENG, SOUTH AFRICA

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ABSTRACT

Amidst the challenging landscape of the global hospitality industry, general managers stand as frontline leaders responsible for ensuring long-term business sustainability. This qualitative research centres on their crucial role and the practical implications of ensuring sustainability within the South African hospitality industry in the Gauteng province. The theoretical framework underpinning this study is the triple bottom line (TBL) that considers the social, environmental, and economic aspects of economic performance. Through semi-structured interviews, data was gathered from a sample of n=6 general managers. Saturation established sample size. A thematic analysis of the collected data was made using Atlas.ti to establish the themes. This paper presents findings regarding three objectives: strategies for sustainable economic practices, fostering social sustainability, and addressing environmental concerns. To foster sustainable economic practices, the general managers collaborate regarding local resources, apply efficient strategic resource management processes, and reduce reliance on traditional energy sources by implementing off-grid initiatives. To foster social sustainability, the general managers align hotel practices with social well-being, implementing impactful community initiatives and encouraging various stakeholders and suppliers to widen their initiatives in the social category. To foster environmental sustainability concerns through the conservation of natural resources, the general managers implement water conservation strategies and carbon footprint reduction. The study's limitations include the exclusion of the perspectives of other key hospitality industry stakeholders (employees, customers, suppliers, and regulatory bodies) and its narrow geographical and cultural context (Gauteng province, South Africa). Practical implications are presented for general managers and stakeholders for navigating challenges while adhering to local sustainability objectives.

Keywords: hospitality, resilience, strategies, sustainability.

INTRODUCTION

The South African hospitality sector faces issues such as skills shortages, energy inefficiency, food wastage, and the need for sustainable practices. The literature on tourism increasingly emphasises sustainable and responsible hospitality practices. The theoretical framework underpinning this study is the triple bottom line (TBL), a concept developed by Elkington (1998) that takes into account the social, environmental, and economic aspects of a company's performance. Of increasing importance in the hospitality industry is making efforts to support the Sustainable Development Goals (SDGs). Supporting the SDGs can be achieved through integrating the goals into business planning, business policies, ties to the community, and the creation of sustainable hotel offerings. Han and Hyun (2018) support this view through their assertion that using energy-efficient lightbulbs, conserving water, reusing towels and linens, and treating wastewater, which are some of the most widely used green measures aimed at achieving the SDGs. According to the International Labour Organization (2022), positive effects of sustainable hospitality practices include lifting communities out of poverty, promoting prosperity, and producing social and economic benefits for the community.

RESEARCH OBJECTIVES

1. To explore the strategies employed by hospitality industry general managers in South Africa to integrate sustainable economic practices into their business operations.
2. To explore the strategies utilised by general managers in the South African hospitality sector to foster social sustainability.
3. To explain the strategies implemented by general managers in the South African hospitality industry to address environmental sustainability concerns.

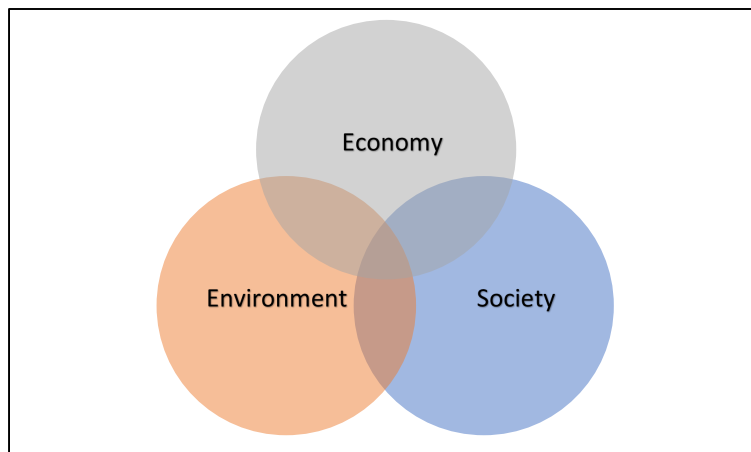
LITERATURE REVIEW

Sustainability stands as a paramount concern in today's world, propelled by the United Nations (2023) citing the relentless surge in global demand for consumables. The United Nations intensified the focus on environmental, social, and economic aspects and spurred substantial academic discourse developments, notably regarding green hotels. Despite the fragmented nature of emerging literature, sustainability's allure has captured the attention of numerous industries and academic disciplines. The connection between the TBL concept and sustainability has become a focal point in burgeoning research. In this context, the literature review concentrates on the capacity of general managers in the hospitality industry to embed sustainable practices across their business operations. The sustainable practices encompass areas like supply chains, engagement with business partners, and the integration of renewable energy sources. The objective is to strike a balance between profitability and fostering a positive impact on the environment and the community in which hospitality businesses operate.

Ekington (1998) views the TBL as interconnected with a company's commitment to advancing environmental, social, and financial principles. This approach entails a clear delineation of a company's mission and a holistic consideration of stakeholder needs. Building upon this foundation, Etzion and Ferraro (2009) advocate that companies adopting TBL reporting can derive benefits such as enhanced operational efficiency, effective cost management, improved market recognition and branding, and strengthened relationships with stakeholders and local communities. This perspective aligns with the increasingly prevalent notion that businesses should transition from a narrow, profit-centric definition of success to a broader, more inclusive paradigm.

Correira (2019) asserts that the Venn diagram explanation, commonly known as the nested spheres model, remains the most prevalent model elucidating sustainability and the TBL. This model visualises sustainability at the intersection of the three dimensions, encapsulating the essence of these intertwined facets.

Figure 1: Nested Sphere Model



Source: Sandu, 2014

The TBL theory urges hotels to gauge success not only in financial terms but also in terms of their impact on the environment and local communities (Etzion & Ferraro, 2009). This shift in perspective aligns with the trend of conscious consumerism, where consumers increasingly prefer establishments with open, ethical, and sustainable business models benefiting communities and the environment. Consequently, this trend encourages business owners to adopt ethical practices prioritising the welfare of customers, staff, and the communities in which the businesses operate (UNIDO, 2022). The National Tourism Sector Strategy (NTSS) in South Africa, as highlighted by the South African Department of Tourism (2011), identified the lack of awareness and comprehension of tourism's significance for local economic development as a barrier to the industry's sustainable growth. In response, the Department of Tourism developed the Green Tourism Incentive Programme in 2017. This initiative aids private hospitality businesses in investing in energy and water-efficient technologies through grant assistance. The resulting environmentally friendly operations not only yield immediate benefits but also drive long-term profitability and competitiveness, aligning with the TBL theory.

Hotels are increasingly leveraging smart technology for waste reduction, energy management, and guest engagement, thus maximising efficiency while minimising environmental impact. Collaborations such as Hilton Hotels partnering with Clean the World demonstrate initiatives focused on energy-efficient technologies, water conservation, waste reduction, and community-based recycling, reflecting the environmental and social aspects of TBL. The social aspect of TBL within hospitality extends to prioritising the happiness and well-being of staff. Spyniewska, Baran, and Klos (2023, p. 1080) note that paying staff a living wage, providing benefits, and providing a secure retirement fosters employee engagement and commitment.

Community engagement initiatives encompass interaction with local communities to leverage their role as vital stakeholders in the hospitality industry. Partnerships with local suppliers to procure organic products contribute to reducing environmental impact. Han and Hyun (2018) highlight that such involvement not only enhances operations but also bolsters staff loyalty and dedication. Financial viability is crucial for businesses, necessitating investments in infrastructure for long-term profitability (Bureau for Economic Research, 2016). In order to maintain financial sustainability, effective cost management and resource allocation strategies are imperative. When aligning with sustainable development goals, sustainable hospitality practices not only benefit hotels but also the surrounding community's health and natural resource preservation. Integration of TBL strategies with sustainable practices yields cost savings and operational improvements, as well as satisfies the rising demand for ethical and environmentally friendly options (Correia, 2019). Consequently, TBL strategies are gaining prominence in ensuring long-term performance and sustainability within the hospitality sector.

RESEARCH METHODOLOGY

This study centred on general managers within the hospitality industry, employing a descriptive phenomenological approach to delve into and analyse their lived experiences (Creswell & Creswell, 2018). The research methodology embraced qualitative techniques to deeply comprehend the participants' encounters with sustainability (Saunders et al., 2019; Schindler, 2019). The qualitative interviews fostered direct engagement between the researchers and the participants, facilitating a nuanced understanding (Nowell et al., 2017; Sebele-Mpofu, 2020). Conducted in Gauteng, South Africa, the study focused on a sample of $n=6$ general managers, aiming to explore their perceived experiences and viewpoints regarding ensuring the long-term sustainability of hotels in the hospitality industry. Purposeful sampling was employed to select participants with diverse industry backgrounds and experiences.

Table 1: Profile of Participants

Participant number	Region	Hotel type	Years of experience
P1	Fourways	Franchise	18
P2	Centurion	Independent	18
P3	Northwest boundary of Gauteng	Franchise	20
P4	Tshwane	Franchise	24
P5	Tshwane	Franchise	16
P6	Johannesburg	Franchise	29

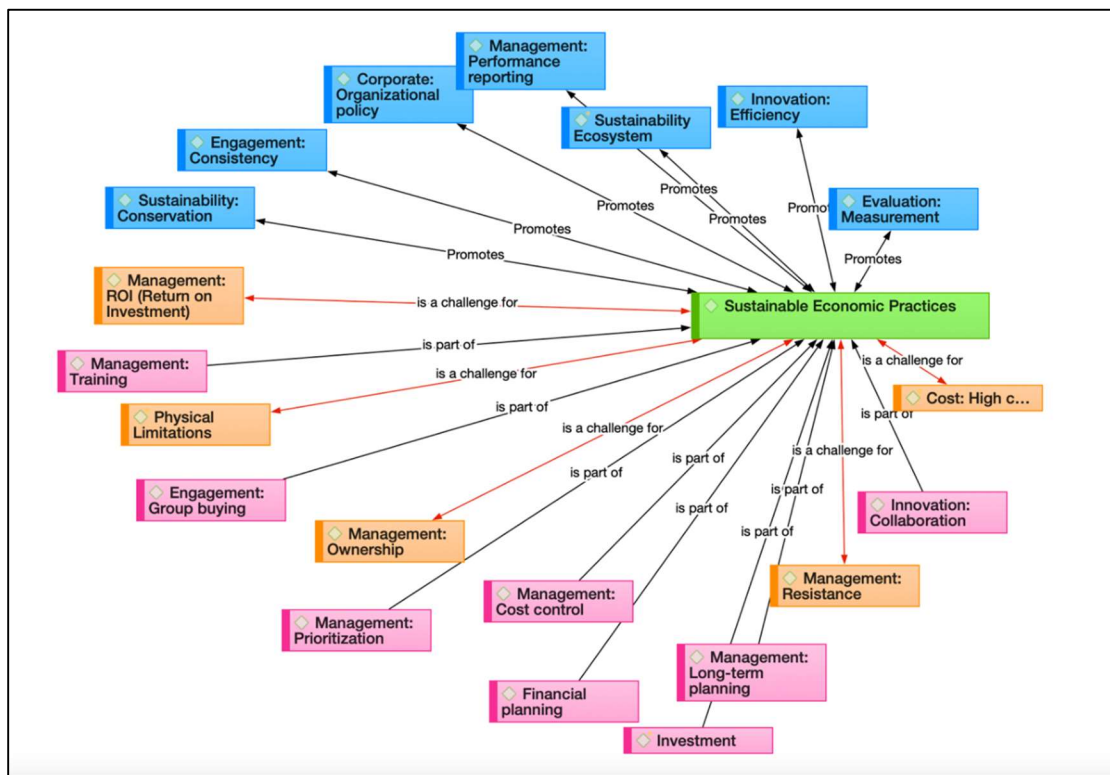
In order to ensure a comprehensive understanding, a blend of face-to-face and MS Teams semi-structured interviews was conducted. In instances where face-to-face meetings were not feasible, the online platform MS Teams facilitated the semi-structured interviews. The concept of saturation guided the sample size determination, which was achieved with six participants due to participants belonging to hotel groups with overarching group-wide strategies and the study's focus on a single province (Nowell et al., 2017; Sebele-Mpofu, 2020). The study utilised an inductive data analysis procedure that was aligned with the research objectives (Creswell & Creswell, 2018). Adhering to Braun and Clarke's (2012) six-step analysis process, thematic analysis was applied. This method involved the researchers becoming familiar with the data, developing initial codes, establishing categories, exploring potential themes, naming and defining these themes, and ultimately generating reports.

RESULTS AND DISCUSSION

Objective 1 – Economic Sustainability Practices

Objective 1 of this study aimed to explore the strategies employed by hospitality industry general managers in South Africa to integrate sustainable economic practices into their business operations. The analysis revealed three subthemes: business processes that promote sustainable economic practices, challenges for these practices, and practices that aid in the long-term sustainability of these practices in the hospitality industry in Gauteng, South Africa.

Figure 2: Objective 2 – Sustainable Economic Practices



Source: Researcher's data analysis output

i. Economic Sustainability Practices

Regarding the promotion of sustainable economic practices, the participants gave insights as to how the hotels operationalised this. A common thread among the participants is their commitment to sustainable economic practices in the South African hospitality industry. The following provides these insights from the participants:

- P4:** “The property subscribes to the green policy, which is about ensuring that our hotels remain viable and profitable for many years to come. This is done by managing the hotels' impact on the environment, employees, and the community around which the hotel operates. We do this by managing resources effectively.”
- P6:** “Overall, our business prioritises responsible resource management, aiming to minimise our environmental impact while maximising conservation efforts. These measures collectively align with our commitment to sustainability, reflecting a comprehensive approach to conserving resources, and reducing our environmental footprint.”
- P2:** “[W]e are located in an eco-friendly area so we capitalise on that, we work with the farm to serve vegetables from the farm and dairy products are produced at the animal farm. We also have a compost heap on the property. We try to conserve as much of our natural resources as possible.”
- P3:** “Despite the upfront costs for measures like installing generators or gas boilers, the long-term benefits are substantial. For us, being off the grid is a critical goal, especially as corporate partners now inquire about carbon emissions upfront before engaging in business. It's a five-year plan geared towards aligning with our clients' sustainability objectives.”

Economic sustainability through collaboration with local resources: Participants 2 and 4 highlight economic sustainability practices through collaboration with local resources. The emphasis on a farm-to-table approach promoted by Participant 2 contributes to economic sustainability by promoting local agriculture. Similarly, Participant 4's use of the group's bulk-purchasing scheme aligns with environmentally conscious products, emphasising economic efficiency while encouraging sustainable sourcing, which is in accordance with the findings of Ekington (1998) and Bharwani and Mathews (2023).

Economic sustainability through strategic resource management: Participants 4 and 6 place emphasis on strategic resource management for economic sustainability. Participant 4's commitment to a green policy and effective resource management promotes long-term profitability, aligning with the framework's economic dimension. The emphasis on responsible resource management by Participant 6 reflects a commitment to economic efficiency within a broader context of sustainability.

Economic off-the-grid initiatives: Participant 3's emphasis on being off the grid aligns with the economic dimension of sustainability. While acknowledging the initial costs, the participant sees the long-term benefits as crucial. This strategy not only promotes economic sustainability but also supports TBL's environmental dimension by reducing reliance on traditional energy sources (Ekington, 1998).

ii. Economic Sustainability Practice Challenges

Regarding the challenges to economic sustainability, most participants mentioned the high costs associated with installing water and energy-saving measures such as solar energy, as well as requesting buy-in from their teams and owners/shareholders. The following comments from participants support this finding:

- P6:** “High costs – The stark reality is that the cost of implementing solar power has surged in the past few years due to frequent and prolonged power outages. Essentially, the returns barely justify the expense, except for the relief from dependence on the electricity grid.”
- P1:** “Resistance from staff members to some of these initiatives and the high cost to install the solar geysers.”
- P5:** “At the onset of these ongoing projects, our focus was on ensuring the team comprehended the rationale behind these initiatives. Communicating the significance of these projects to the entire team was pivotal. It was evident that without a clear understanding of why these efforts were important, running such projects in isolation wouldn't yield the desired results.”

High cost measures for economic sustainability and team communication about the cost supports the social dimension: Participants 1 and 6 discuss the difficulties associated with high costs in economic sustainability as it relates to high costs and staff resistance. Participant 1 emphasises staff resistance and the high cost of installing solar geysers, highlighting economic and social challenges. Participant 6 highlights the increased costs for solar power as a result of power outages, addressing an economic issue while also considering the social implications. Participant 5's emphasis on effective communication to overcome obstacles aligns with the social dimension. Ensuring that the team understands the rationale behind sustainability initiatives demonstrates a commitment to cultivating a positive organisational culture and addressing social challenges within the context of economic sustainability (Elkington, 2004; Correia, 2019).

iii. Long-Term Financial Sustainability

Regarding long-term financial sustainability practices, the participants provided insights into the specific long-term strategies they use, such as portion control, long-term planning, and a phased approach. The following are some responses from participants to support this subtheme:

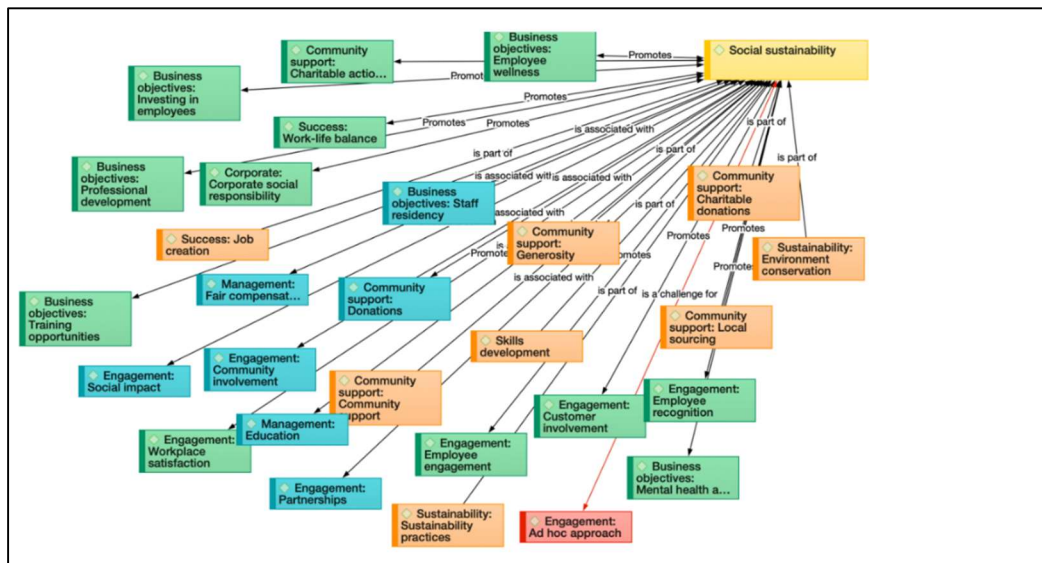
- P2:** “At our hotel, we prioritise portion control in our restaurant operations, ensuring we prepare food in alignment with expected occupancy. This focus on cost control allows us to manage resources efficiently.”
- P6:** “A structured project plan spanning across multiple years was imperative. Tackling everything simultaneously isn't feasible. It's crucial to prioritise based on what holds the utmost significance and address those aspects systematically. This phased approach allowed us to manage resources efficiently and strategically upgrade our offerings.”
- P4:** “We use the group's bulk buying scheme for our necessities that gives us access to discounts and these are in line with the group's policy to use environmentally conscious products and suppliers.”
- P5:** “Regarding load shedding, I believe it's a persisting issue and unlikely to vanish anytime soon. From our perspective, we're considering a long-term solution by collaborating with the municipality to explore solar farming. We have ample space available for such an endeavour.”

Economic sustainability depends on economic efficiency: Participants 5 and 6 provide insights into specific strategies for long-term financial sustainability in terms of portion control and cost control (economic). By managing resources efficiently, Participant 5's emphasis on portion control in restaurant operations aligns with economic sustainability. The structured project plan and systematic prioritisation of Participant 6 contribute to cost control and strategic resource management, with an emphasis on economic efficiency within the TBL framework (Etzion & Ferraro, 2009; Dainienė & Dagilienė, 2015). Participants 4 and 5 discuss collaborative financial sustainability solutions. The use of the group's bulk-purchasing scheme by Participant 4 aligns with economic efficiency while considering the environmental dimension by using environmentally conscious products. The consideration of solar farming by Participant 5 in collaboration with the municipality exemplifies a collaborative, long-term solution that aligns with both economic and environmental sustainability goals.

Objective 2 – Social Sustainability Practices

Objective 2 of this study was to explore the strategies utilised by general managers in the South African hospitality sector to foster social sustainability. The analysis revealed three subthemes in the social category: practices that align with social well-being, community initiatives, and stakeholders and supplier-wide initiatives.

Figure 3: Objective 2 – Social Sustainability Practices



Source: Researcher's data analysis output

Below are some of the insights from the participants on the three subthemes of social well-being, community, and stakeholder/suppliers:

i. Social Well-being

Participants agree that social well-being is crucial to their operational strategies. These actions contribute to the social sustainability dimension of the TBL (Nogueira, Gomes & Lopes, 2022) by implementing a staff transportation scheme and wellness programmes (Participant 1), subscribing to mental health awareness programmes (Participant 4), and actively participating in staff recognition initiatives (Participant 6). The emphasis on employee welfare not only aligns with ethical business practices but also recognises the hospitality industry's social responsibility to its workforce (Nogueira, Gomes & Lopes, 2022).

ii. Community Impact (Social and Environmental)

The participants share a commitment to community impact, which reflects the TBL's social and environmental dimensions (Dainienė & Dagilienė, 2015; Ozturkoglu, Sari & Saygili, 2021; Nogueira, Gomes & Lopes, 2022). Participant 4 shares about projects that support children's homes, group homes for the elderly, educational facilities, and sports facilities, demonstrating a holistic approach to social sustainability. Corporate social responsibility initiatives (Participant 2) have a broader impact than individual hotels, contributing to the social fabric as a whole. Furthermore, supporting local disability schools and launching solar farming projects (Participant 5) demonstrates a commitment to environmental responsibility within the context of community engagement, which is consistent with the TBL's integrated approach (Etzion& Ferraro,2009; Venkatraman & Nayak, 2015).

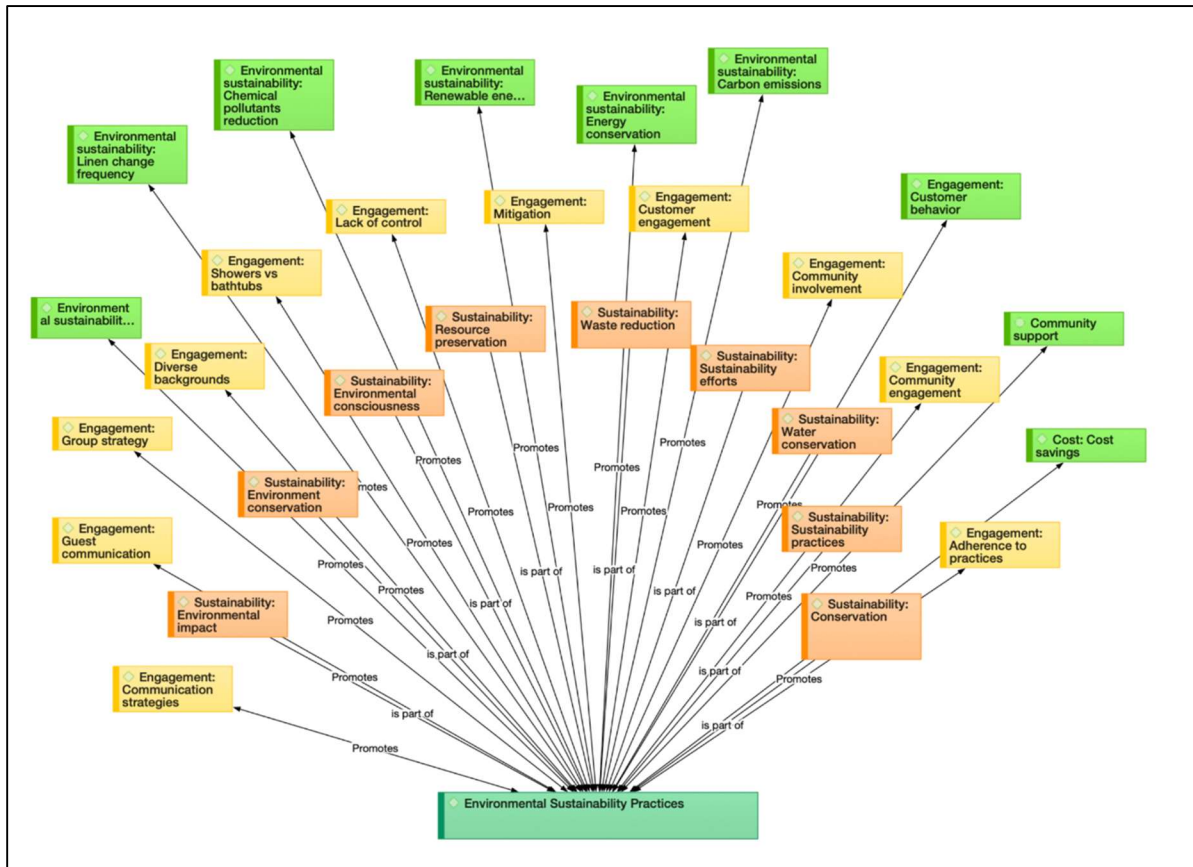
iii. Stakeholder Engagement, Including Suppliers (Social and Economic)

Engaging stakeholders, such as suppliers and local artisans, emerges as a key theme with implications for the TBL's social and economic dimensions (Dainienė & Dagilienė, 2015; Andersson et al., 2022). Collaborations with local artisans (Participant 6) and the promotion of employee entrepreneurial endeavours (Participant 6) help to ensure economic sustainability by supporting local businesses. Furthermore, Participant 5's adoption of a local disability school and Participant 2's collaboration with suppliers for charitable actions are examples of stakeholder engagement with a social impact. Participant 3's concerns about the lack of documented engagement programmes highlight the need for more structured approaches to stakeholder involvement, emphasising the importance of continuous improvement in the social and economic aspects of sustainability. This resonates with the studies conducted by Dainienė and Dagilienė (2015) and Andersson et al. (2022).

Objective 3 – Environmental Sustainability Practices

Objective 3 of this study was to explore the strategies implemented by general managers in the South African hospitality industry to address environmental sustainability concerns. The analysis revealed three subthemes: conservation of natural resources, involvement of employees and the reduction of the industry’s carbon footprint. The section below gives the insights from the participants.

Figure 4: Objective 3 – Environmental Sustainability Practices



Source: Researcher’s data analysis output

Below are some of the insights from the participants on the three subthemes of environmental sustainability practices:

- P5:** “Using solar panels for electricity can significantly reduce reliance on conventional power sources, thus lessening air pollution. Our efforts in composting, especially avoiding chemical fertilisers in favour of organic alternatives, are commendable. Composting not only enriches soil health but also helps in reducing chemical pollutants that conventional farming might introduce. Also, transitioning to LED lights instead of traditional bulbs not only cuts down energy usage but provides a more environmentally friendly lighting option.”
- P5:** “In terms of water conservation at our hotel, we’ve implemented strategies that significantly reduce our water consumption, leading to considerable savings on our water bills. On average, we manage to save around [ZAR 20,000 (USD 1,062)] a month due to our water conservation efforts. We employ different approaches based on guest stays.”
- P2:** “Encourage our staff to remind guests to use the recycling bins on the property if they insist on using water bottles. However, we encourage them to rather use the sparkling water fountains we have all over the property. Food is prepared based on occupancy levels of the hotel to prevent wastage.”
- P4:** “We encourage our chefs to prepare food based on the hotel’s occupancy so we do not have more food on our buffets than necessary and thereby cause wastage. We have signs in our bathrooms

about taking quick showers to save water. We encourage them to reuse towels to avoid washing them a lot. And also use bio-degradable stores. Our conference rooms have reusable Consol glass bottles for water instead of plastic bottles, which lead to waste. Customers are encouraged not to leave the lights on in the room when not in use.”

- P3:** “As part of the property’s effort to contribute to the conservation of natural resources, we encourage the community around us to adopt a responsible attitude towards the use of electricity and water and the management of waste. The hotel also works with the local municipality community-based organisations to organise clean-ups and tree planting (to highlight the need for individuals to manage their own environmental footprints).”
- P6:** “Addressing customer engagement in sustainability practices poses its challenges. While we have implemented communication strategies within our rooms to encourage water and energy conservation, such as requesting guests to reuse towels, we face complexities at the client or customer level. Many guests, both local and international, seem unfamiliar with concepts like water scarcity or load shedding. Despite our requests to conserve water during shortages, it remains challenging to convey the importance of these actions, especially to international guests who may not be familiar with such circumstances.”
- P4:** “It’s part of the bigger hotel group strategy. Unfortunately, our hotel is part of the older buildings that the group has, so we really cannot contribute in terms of constructing sustainable buildings like the rest of the group is focused on doing when it comes to new builds. Our supply chain, as mentioned earlier, is focused on using suppliers who are environmentally friendly. All the hotels in the group contribute to a larger fund that is then donated on behalf of the whole group to support innovative conservation initiatives. We also encourage our guests to support these efforts.”

i. Conservation of Natural Resources (Environmental)

Participants from various hotels demonstrate a collective commitment to natural resource conservation, aligning with the environmental dimension of the TBL (Venkatraman & Nayak, 2015). Participant 5’s use of solar panels for electricity is an example of a proactive step toward reducing reliance on traditional power sources, which contributes to lowering air pollution. Water conservation strategies (Participant 5) and encouraging responsible water use through communication with guests (Participants 2 and 3) highlight a holistic approach to managing and preserving valuable natural resources. Furthermore, Participant 3 highlights the local community’s involvement in adopting responsible attitudes toward electricity, water usage, and waste management, demonstrating a commitment to broader environmental stewardship.

ii. Carbon Footprint Reduction (Environmental)

Efforts to reduce carbon footprint emerge as a prominent theme among participants, directly contributing to the TBL’s environmental sustainability pillar (Etzion & Ferraro, 2009; Venkatraman & Nayak, 2015). Transitioning to LED lighting, composting practices, and encouraging responsible water usage (Participant 5) are all initiatives aimed at not only conserving resources but also reducing energy consumption and environmental impact. Based on hotel occupancy levels, the emphasis on food preparation (Participants 2 and 4) reflects a commitment to minimising food waste, thereby reducing the carbon footprint associated with the production and disposal of excess food. Furthermore, the use of reusable glass bottles in conference rooms (Participant 4) is consistent with sustainable practices, as it avoids the environmental impact of single-use plastic bottles.

iii. Employee Involvement in Environmental Initiatives (Social and Economic)

Participants acknowledge the crucial role of employees in driving environmental sustainability, emphasising the TBL’s social and economic dimensions (Dainienė & Dagilienė, 2015; Andersson et al., 2022). Participants 2 and 4 encourage staff to remind guests to recycle and involve chefs in food preparation strategies that minimise waste and demonstrate a commitment to engaging employees in sustainable practices. Despite difficulties in engaging customers, particularly international guests, participants actively implement communication strategies within rooms to promote water and energy conservation. Furthermore, encouraging guests to contribute to conservation efforts broadens the sphere of influence beyond employees, fostering a collective commitment to environmental responsibility. These practical implementations align with the TBL framework advocated for in the research of Etzion and Ferraro and Venkatraman and Nayak (2015).

CONCLUSION

In conclusion, this study has examined the potential and problems that the South African hospitality industry faces, highlighting the necessity of incorporating sustainable practices. A thorough examination of the industry's economic, social, and environmental aspects was made possible by the strong theoretical underpinning provided by the TBL framework. This study made clear the crucial role that general managers play in guiding the hospitality industry towards a more resilient and sustainable future, adding to the growing conversation on responsible tourism and sustainable development. In addition to addressing its current issues, the hospitality industry has the potential to become a global leader in sustainable practices by combining coordinated efforts and cooperative projects. The study focuses exclusively on the experiences and perspectives of general managers in the hospitality industry, excluding the viewpoints of other key stakeholders such as employees, customers, suppliers, and regulatory bodies. This narrow focus may limit the comprehensiveness of the analysis and overlook important insights from other stakeholders.

Future research could look at the viewpoints of additional stakeholders in the hospitality industry, including staff members, customers, suppliers, and government agencies. Gaining insight into their perspectives, challenges, and involvement in sustainability initiatives may lead to a more thorough comprehension of sustainable practices in the sector. Research focusing on how regulations, legislation, and incentives such as the Green Tourism Incentive Programme run by the Department of Tourism affect environmentally friendly practices in the hotel sector can also shed light on how policy frameworks promote or hinder green initiatives. Recommendations for legislators and industry stakeholders to establish more hospitable environments for sustainable practices could be informed by an understanding of the regulatory landscape and the identification of policy gaps. Scholars could further develop their understanding and awareness of sustainable practices in the hospitality industry by exploring these concepts. Ongoing research promotes awareness that will ultimately lead to the creation of more efficient approaches for fostering sustainability and resilience in this field.

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PERCEIVED COMMUNICATION BARRIERS BETWEEN ADMINISTRATIVE EMPLOYEES AND THEIR SUPERVISORS

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ABSTRACT

This paper investigates the perceived communication barriers between employees and supervisors. At this time, high levels of employee turnover and low levels of work engagement resulted in a significant percentage of non-communication between employees. According to Marija (2018:386), anything that prevents us from receiving and understanding the messages used by others to communicate their knowledge, ideas, and thoughts constitutes a communication barrier. There are four different types of barriers that prevent effective communication: environmental, linguistic, cultural, and behavioral. Communication breakdowns in the workplace are frequently brought on by individuals with different attitudes, values, and discrimination. There are several factors that affect the communication between leaders and administrative staff in an organisation, which is the context for the proposed study. Because there aren't enough channels for employee communication in a highly competitive global environment, there's a good chance that employee turnover will increase (Jakovljevic, 2021 :30). The behaviour of employees can be influenced by leaders because they have the power to judge performance and decide on promotions (Banks, 2022:190). However, to achieve organisational objectives, managing employees has become a crucial issue for leaders. As a result, the study will investigate how communication affects managers and other administrative staff.

Keywords: attitudes, values, discrimination, communication.

INTRODUCTION

Communication is crucial within the organisation, especially between administrative staff and top management. Administrative employees are the heart of the organisation and therefore, how they are managed determines their engagement within the organisation (Yahaya & Ebrahim, 2016:20). Leadership styles of senior management determine employee behaviour within the organisation (Paais & Pattiruhu, 2020:578). Employees may view the communication as either promoting or hindering engagement (Khan & Nawaz, 2016:150). In light of the preceding sentiments, the proposed study will investigate the impact of leadership style on administrative employees' work engagement at a health science university.

An administrative employee is defined by Viotti, Guidetti, Sottimano, Traverso, Martini and Converso (2021:89) as a person who oversees that the organisation's administrative roles and responsibilities are carried out effectively and efficiently. The major tasks of an administrative employee include undertaking complex work affecting the organisation's rules or commercial procedures. Therefore, it is critical for organisations to create synergy between employees and the leadership in order to achieve their strategic goals. This can be possible through employee communication within the organisation. Employee communication is a multidimensional construct. Employees can indicate varied degrees of pleasure with specific parts of communication, rather than just general satisfaction or dissatisfaction with communication (Palacio, Krikorian, Gómez-Romero & Limonero, 2020:650). Employee communication is defined by Marshall, Bessette, & Thorne (2018:1027) as "the communication transactions between individuals and/or groups at various levels and in different areas of specialisation that are intended to design and redesign organisations, to implement designs and to coordinate day-to-day activities". This paper is structured in a way that it will clearly provide a background to the study, the purpose and motivation for the study, the research methodology used, the main findings and the research contribution.

Background

According to Marija (2018:386), anything that prevents us from receiving and understanding the messages used by others to communicate their knowledge, ideas, and thoughts constitutes a communication barrier. There are five different types of barriers that prevent effective communication: environmental, linguistic, cultural, and behavioural. Communication breakdowns in the workplace are frequently brought on by individuals with different attitudes, values, and discrimination. We can gain access to a wider variety of perspectives, concepts, experiences, and knowledge by valuing those who are different from us. A business's smooth operation is ensured by an administrator. Their specific duties vary depending on the type of company, team, or organization they work for. Above all else, administrators need to be incredibly organized and have excellent communication skills (Dema, 2019:10). Within the organisation, communication is essential, particularly between administrative staff and top management. Since administrative staff members are the centre of the organisation, how they are managed affects how well they communicate with one another (Dahleez, 2018:219).

Problem Statement

There are a number of factors that affect the communication between leaders and administrative staff in an organisation, which is the context for the proposed study. Because there aren't enough channels for employee communication in a highly competitive global environment, there's a good chance that employee turnover will increase (Jakovljevic, 2021 :30). Leaders have an impact on how staff members behave within an organisation because they are seen as role models for the group. The behaviour of employees can be influenced by leaders because they have the power to judge performance and decide on promotions (Banks, 2022: 190). However, in order to achieve organisational objectives, managing employees has become a crucial issue for leaders. As a result, the study will look into how communication affects managers and other administrative staff.

To help with the research problem, the ensuing inquiries will be addressed:

- How does communication affect the relationship between administrative staff and leaders?
- Does communication between administrative staff members and leaders play a significant role?
- How do administrative staff members generally feel about how communication affects their interactions with the chosen company's leaders?

Research objectives

The primary and secondary research objectives were created in order to meet the study's goal in the following ways: The investigation of how communication impacts the relationship between administrative staff and leaders at a particular university is the study's main goal. Finding out if there is a connection between administrative staff and leaders is the main objective.

Secondary Objectives

The following secondary goals were established in order to address the primary objective and the research problem:

- To find out how communication influences the relationship between administrative staff and leaders.
- To identify the key communication relationships between administrative staff and leaders.
- To find out what administrative staff members generally think about how communication affects their interactions with leaders.

LITERATURE REVIEW

Administrative Employees

The management of the tasks and responsibilities assigned to the employees is known as administration. An administrator is in charge of making sure an organisation runs smoothly and effectively (Dogramaci, 2020:51). Employees need to be deadline-driven and well organised in order to be an effective administrator. A good

administrator can manage several duties at once and delegate as needed. Planning and the capacity for strategic thought are valuable abilities that advance administrators' careers (Jakins, 2017:12).

Administrative employment can include a wide range of responsibilities. Administrative employees are those who provide assistance to a business. This assistance could involve general office administration, answering phones, communicating with clients, supporting an employer, clerical labor (including record keeping and data entry), or a range of other activities (Mazzei, Butera & Quaratino, 2019:127). Because administration is such a vast topic, there are numerous administrative job titles. Some of these titles, such as "administrative assistant" "program administrator and administrative clerk," refer to positions with similar responsibilities.

Any employee who regularly uses discretion and independent judgment while supporting an executive and whose primary responsibilities involve work that is directly related to management policies rendering administrative tasks (Bell, 2018:45). By handling clerical duties and projects, administrators contribute to the efficient operation of offices. In the construction sector, administrative employees can be in charge of scheduling project meetings. They would be composing documents on a keyboard, addressing business inquiries, creating contracts, and offering customer service (Clara, 2022:41).

These responsibilities vary greatly from workplace to workplace, although the majority of the time they involve activities like making appointments, taking phone calls, welcoming guests, and keeping the organisation's file systems organised (Badah, 2020:42). The ability to combine time-consuming administrative tasks into one role is what increases office productivity. Project management, planning travel, scheduling meetings, and expense reporting are among the most frequently used skills. According to this definition, effective administration appears to depend on three fundamental abilities, which one can refer to as technical, human, and conceptual (Alosaimi, 2016:43). Office maintenance responsibilities fall within the category of administrative chores. These responsibilities vary greatly from workplace to workplace, although the majority of the time they involve activities like making appointments, taking phone calls, welcoming guests, and keeping the organisation's file systems organised (van Antwerpen, 2016:44). Employees that work in administration assist the business to achieve their strategic goals. This assistance could come in the form of general office administration, phone answering, customer interaction, helping an employer, administrative labor (including keeping records and entering data), or a range of other duties (Bell, 2016:39). According to Dimitrios (2018:47), administrative tasks are essential to helping organisation management to operate effectively and efficiently. Planning, organising, staffing, directing, coordinating, reporting, and budgeting are the seven functions of management.

Making travel and meeting arrangements, creating reports, and keeping up with the proper file systems are all duties of an administrative employees. The ideal applicant will be able to arrange their work utilising tools like MS Excel and office supplies and possess great oral and written communication skills. Furthermore, these employees create frequent reporting on office budgets and expenses, upkeep and updating corporate databases, respond to inquiries from clients and workers, update office regulations as necessary (Clara, 2022 :45).

Supervisor

Supervisor refers to the ability of a person to influence other people in such a way that they want to follow their wishes even if personally they are not liked (Riyadi, 2020:664). Holman (2018:62) views supervisor as the ability to influence a group of people to work towards common goals and objectives. Al-Malki and Juan (2018:33) assert that leaders are people who lead others. The impact the leader has on employees to achieve goals is a recurrent theme in definitions of supervisor (Paais, 2020:579). According to Boyer (2018:50), a leader's style refers to a specific pattern of behaviour that integrates people's goals and the goals of organisations. According to Mansor, Mun, Farhana and Tarmizi (2017:167), supervisor style is the way one conducts oneself when one wants to influence the behaviour of others. Therefore, supervisor style is a combination of various characteristics, traits, and behaviours that leaders use to interact with their subordinates (Al Khajeh, 2018:168).

A number of academics have investigated the dynamic nature of supervisor. The dynamics ranges from characteristics of behaviours to supervisor theories; supervisor styles to its significance and its impact (Riyadi, 2020:663), from supervisor theories to supervisor traits (Othman, 2017:108). These studies put a lot of emphasis on the advantages of supervisor. Researchers have only lately begun researching its drawbacks.

Communication Barriers

Anything that prevents us from hearing and comprehending the messages others use to share their knowledge, concepts, and thoughts constitutes a communication barrier. They may obstruct or interfere with the message you are attempting to send (Choe, 2019:610). Most people would concur that two-person communication should be straightforward. It's crucial to keep in mind that talking and communicating are two separate things. We are successful in making our point clear to the person we are speaking to when we communicate. Talking has a tendency to create barriers that make it difficult to communicate. There are five of these kinds of communication barriers, including: attitude, behavioral, cultural, linguistic, and environmental barriers are all factors.

- Attitude

According to Al Shamsi (2020 :247). People with different attitudes, values, and discrimination are frequent reasons why communication breaks down in the workplace. People's various perceptions of status and power are an example of this. Depending on how they perceive their status or power in the workplace or in the community, some people may believe that they should treat others differently or that they should receive different treatment in return. Communication barriers may arise before they even start if employees believe that managers and supervisors have the authority to assign tasks, reward, promote, or fire employees. However, what one person views as control and power may be viewed by another as leadership or mentoring.

- Behavioral

Bias, generalizations, and stereotyping are all behaviors that can hinder communication. It's wrong to have these attitudes and it's bad for people to not challenge them. Such behaviors at work can cost the organization time and money. Stereotyping happens when you make assumptions about someone based on their social or cultural background. Our opinions may be influenced by prejudice you may have against a specific action, trait, item, or even geographic region. Our circumstances, demeanor, and behavior might influence how others perceive us in stereotypical ways. This might make communication problems worse. Get used to treating each person as an individual. We will widen communication avenues and remove obstacles based on discrimination (Swillens, 2021 :10).

- Cultural

Understanding how people's values, beliefs, and attitudes differ when communicating with those from different cultures and backgrounds is important. To overcome cultural communication barriers, empathy is critical. Empathy is the ability to perceive another person's thoughts and feelings as if we were personally experiencing them (Rehman, 2019 :2605).

- Linguistic

Language barriers occur when people do not speak the same language, or do not have the same level of ability in a language. However, barriers can also occur when people are speaking the same language. Sometimes barriers occur when we use inappropriate levels of language or we use jargon or slang which is not understood by one or more of the people communicating. Often the situation in which the conversation is taking place, and whether or not people have prior experience of the matter being discussed, can also contribute to such barriers being formed (Annaswamy, 2020 :100973).

- Environmental

Not all barriers to communication are caused by people. There are many environmental factors affecting the effective communication process. Messages can be blocked by environmental factors, such as the physical setting or the situation where communication takes place (Barieva, 2018 :400)

RESEARCH METHODOLOGY

Research Design

A research design is a comprehensive strategy that unifies all the study's components into a logically coherent whole, ensuring that the research will be able to satisfactorily address the research question (Gray, 2019:25). It acts as a manual for gathering, measuring, and analysing data. In this way, the research designs a researcher chooses reflects their ideas. As a result, piecing the study together using a well-structured plan shows how all the mechanisms work together to address the research objectives, which helps avoid unhappiness (Asenahabi, 2019:82).

In order to address the research problem and accomplish the stated objectives, the proposed study will use the survey research design. The survey is made up of a number of questions designed to elicit particular data from a target audience (Leavy, 2020 :246). Research can use online tools like SurveyMonkey and Google Forms to conduct survey studies. Surveys are frequently deemed appropriate when a researcher wants to assess things like ideas, beliefs, or emotions (Huang, 2020 :223).

Research Methodology

The researcher used research methods that will accomplish the research objectives intended to address the research problem in order to provide a systematic and in-depth understanding of the problem. The two most widely used research methodologies are quantitative and qualitative. The researcher can use either of these methodologies in a study or combine the two methodologies into one study, which is known as mixed methods. The five primary qualitative research traditions that are the focus of qualitative research are case study, biography, ethnography, phenomenology, and grounded theory (Gray, 2020: 1295).

According to Thennakoon (2021:126), who views the relationship between theory and research as deductive, quantitative research is a special type of inquiry that entails the gathering of numerical data. Because of its nature, quantitative technique will be used to understand people's attitudes, behaviours, interactions, and beliefs. In order to comprehend particular human behaviour and the factors that influence behaviour, quantitative research methodology will be used (Mathimaran, 2021:30).

Population and Sampling

A population is a vast collection of people who share traits that the researcher is interested in (Antony, 2018 :39). The targeted population of the proposed study includes all administrative employees ranging from secretaries, senior secretaries, administrative officers, principal administrative officers, receptionists and clerks at the selected University. According to the selected University's Human Resource Department, there are 208 (*N*) administrative employees employed by the institution.

A population is a large number of people, and in order to address the research problem a sample useful to represent the whole population should be drawn. According to Jackins (2017:74), there are two different kinds of sampling methods: probability sampling and non-probability sampling. When the population is known and every element has a non-zero probability of selection, probability sampling is applied (Berndt, 2020:11). The strategy of sampling where samples are selected by the researcher by virtue of their own assessment rather than by chance is referred to as non-probability sampling (Lamm & Lamm, 2019). It is also a less rigid strategy that heavily relies on the findings of the research. Due to the fact that it is conducted through observation, researchers usually employ it for qualitative research (Lamm, 2019:341). Convenience, purposeful, quota, snowball, and self-selection are the five primary categories of non-probability sample.

The study will adopt the non-probability, Census sampling method to select participants for the study as the target population is readily accessible (Ormrod 2018:10). A methodical process for gathering and documenting information about the population is the census. The subset of the population chosen to accurately represent the complete group in all of its features is known as the sampling (Berndt, 2020:13). While sampling involves gathering information from a subset of the population, a census involves gathering information from every member of the community (Yu, 2020:352). Every member of the population is included in a census, but in a sampling, a smaller selection of people is chosen to reflect the population. The total population of 208 participants will be used to collect data by the researcher (Khan & Nawaz, 2016:120). The outcomes obtained using the census method of data collection are extremely accurate and dependable. Because every single item in the population is studied using this method, the results are reliable and accurate (Soler-Costa, 2021:310).

Measuring Instruments

For the construction of questionnaires that will yield valid and reliable measurement, questions for the proposed study will be divided into three parts so as to clarify, specify and be unambiguous as possible to respondents.

Section A - There will be a section with personal variable questions that include participant demographic profiles. The nominal scale will be used to measure the data in section A. Participants in the study will be asked to read and indicate agreement or disagreement with the alternative responses that they believe are the most pertinent and correct.

Section B - This section will consist of items that seek to attain information about transformational leadership as an enabler or constrainer of administrative employee work engagement. The Items will be measured with the use of a Likert Scale.

Section C - This section will consist of items that seek to attain information about the significant relationship between transformational leadership style and employees work engagement. These factors will be ranked using a Likert Scale

Section D - This section will consist of items that seek the general views of administrative employees on how transformational leadership style influences their work engagement. The Items will be measured with the use of a Likert Scale.

A questionnaire should be put through a pilot test, according to Gondar (2021:242), to reduce the possibility of respondents having trouble responding to the questions or recording their responses and to enable evaluation of the reliability and validity of the study's posed research questions in relation to the data collection procedures. The proposed study's questionnaire was tested on at least 10 employees who share the same characteristics as the sample utilising convenience sampling. The questionnaire will be piloted in order to validate and improve it and to make sure that participants can easily comprehend and respond to the questions (Chirugu, 2022:529).

Data Collection

According to Yan (2018 :1703), "Data collection is the process of gathering information from all relevant sources to solve the research problem, test the hypothesis, and assess the results". The core purpose of the data collection system is to ensure quality capturing of evidence which provides analysis to rich data and the construction to accurate, valid and trustworthy answers for research questions (Abram, 2021:8).

The proposed study will employ closed-ended survey questionnaire to obtain data from participants. According to Coy (2019:73), a closed-ended questions are self-structured questionnaire questions for which participants choose from a limited number of alternatives. The questionnaire will be administered to 136 participants electronically via Google Forms. They will be used to electronically disseminate the study's questionnaire to participants. Due to its low cost, time-saving benefits, and ability to collect data over shorter periods of time, the use of questionnaires is extensively used (Abram, 2021:9). As a result, gathering data from a convenience sample will help in forecasting the participants' answer patterns and in making any necessary changes to the questionnaire (Clayton, 2020:102263). The study questionnaire will be based on peer reviewed questionnaires on the studies by (Fajri, 2019:5), (Kumar, 2022:24) and (Gunawan, 2020:65).

HYPOTHESES

The following hypothesis was formulated for the study:

- Communication barriers lead to employee turnover in organisations.

ETHICS

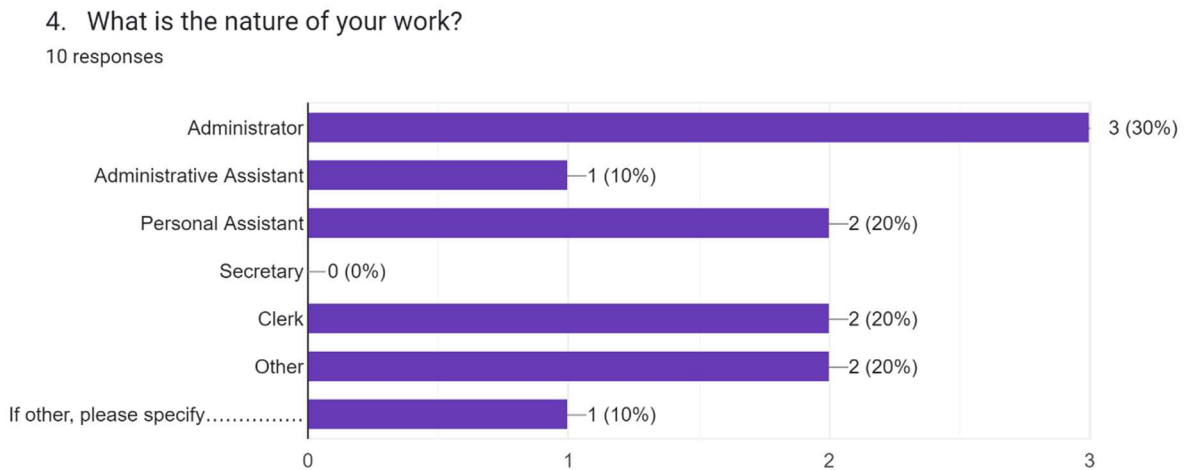
The issue of research ethics involves the researcher applying fundamental ethical principles to research activities, such as study design and execution, treating society and people with respect, including the use of resources and research outputs, scientific misconduct, and research regulation (Jurado de Los Santos, 2020 :3526). Dealing with human participants in research always raises ethical concerns that must be addressed.

Permission will be requested from the gatekeepers to conduct the study in their institution. Participants will be asked for their informed permission after being informed in the information booklet about the study's purpose. It will be made clear to all study participants that their participation is completely voluntary and that they are free to stop at any time they feel comfortable doing so.

The confidentiality and privacy of the information gathered will be guaranteed to participants. The responses in the proposal study will be confidential, as the survey will be conducted online via Google forms where the names of participants will not be linked with responses. The identities of the participants will not be revealed under any circumstances. The research will respect human rights and dignity by avoiding any prejudice. The researcher will submit a research proposal for ethical approval to the Faculty Research Ethics Committee (FCRE) of TUT and adhere to all ethical guidelines and consent will be obtained from the health science university (Kappler, 2021 :365).

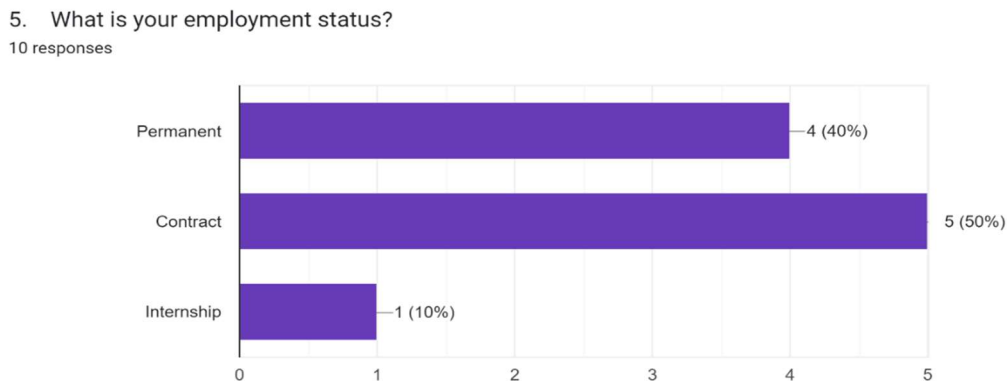
RESULTS AND FINDINGS

Figure 1: E-commerce sales trend (in millions of US dollars)



Being in possession of the relevant academic qualification has an impact on the type of position for which an employee is qualified. The Selected University comprises of different divisions and the administrative employees that participated in the study are employed within different departments. A majority of the administrative employees who participated in the study are occupying the positions of Administrators (30%), then followed by those in other, clerk and Personal Assistant positions (20%), then the other administrative positions including administrative assistant represented by a 10% margin as presented in Figure 1.

Figure 2: E-commerce sales trend (in millions of US dollars)

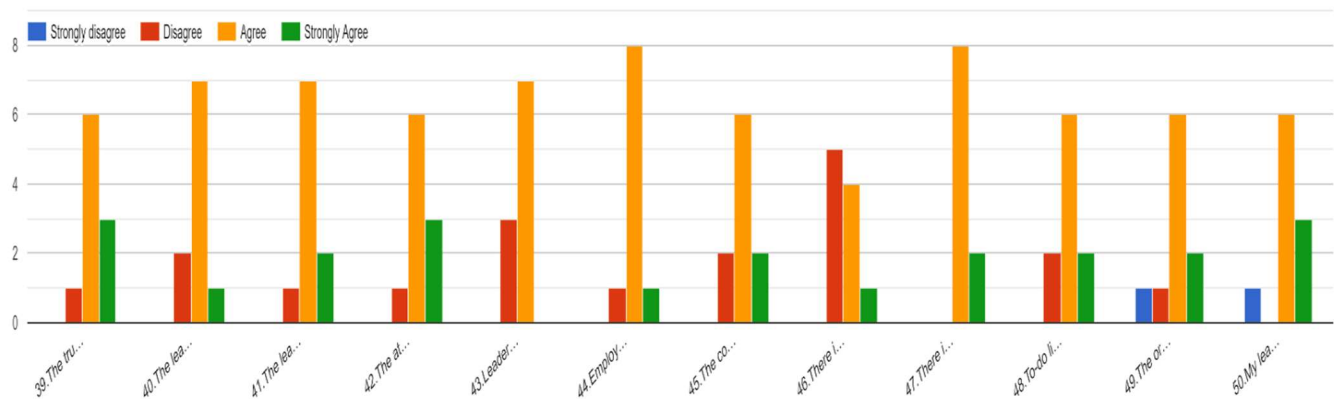


The employees at the university are employed within different categories as represented in Figure 2, indicating that a majority of the administrative employees employed by the university are contract employees with

50% then followed by employees who are on Permanent with 40%. lastly employees who are on an internship with 10%.

Figure 3: E-commerce sales trend (in millions of US dollars)

Employees' perception on the influence of leadership on their work engagement



Employees have a perception on the influence of Leadership (supervisors) on employees (administrators) work engagement. The result in Figure 3, show how the influence occurs as a result of communication barriers. The first question to answered was that my leader can demonstrate competence, which is rated as agreed and this simply show that when a leader is able to communicate effectively with administrators, they are able to demonstrate competence. The second question was that they trust my leader with good decision-making, being able to trust a leader (supervisors) decision comes from a well communicated task to administrators and this rated as agreed. Another question that was answered was To-do lists are used to see whom can be delegated a task, this was rated as strongly disagreed meaning lack of communication on how to do tasks will lead to administrative employees not being able to meet tasks.

MANAGERIAL IMPLICATIONS

Managerial implication of the study is that managers are biased when coming to engagement with employees, it is evident in the above figures. Recommendations word be that the researcher needs to look more into the type of leadership style than just generalising on leaders. Then from the influence the leadership style has on administrative employees work engagement.

CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

In conclusion of the study, proper communication is important to avoid employee turnover. For it is proven from the above research finding that lack of communication between leaders and administrative employees course confusion leading to administrative employees' turnover. Future research may look into leadership style, as well as a factors that increase administrative employees' turnover. This should give a clearer image as to whether it is all leaders in general or leaders that possess a certain type of leadership style.

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“I AM EMOTIONALLY INTELLIGENT, NOT AN ARTIFICIAL INTELLIGENCE” PROMPTING EMOTIONS AND REMOVING INTELLIGENCE THROUGH AI AMPLIFIED BINGE-WATCHING AMONG GENERATION Z IN LONDON, UNITED KINGDOM

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ABSTRACT

Today, AI has evolved into an emotive code phrase. While AI is crucial for improving the calibre of commercial goods and services, it is deficient in emotional intelligence, which is an important component. However, a new study indicates that giving AI the ability to control human emotions might benefit businesses and change people's feelings. The purpose of this study is to evaluate the culture of augmented artificial intelligence, binge-watching, and its impact on emotional intelligence among younger generations. The study also investigates the effects of increased AI binge viewing on cognitive decline, addiction, and individual performance. The results imply that there are two perspectives on binge-watching. The first is to examine how the artificial intelligence (AI) amplification (including digital assistants and (AI)-driven chatbots of binge viewing builds an illusion of leisure activities, contentment, happiness, and thought. The next phase is to emphasize the negative consequences of excessive binge-watching as well as behavioural addiction symptoms, among Gen Z. For this study, the researcher focussed only on Generation Z in London. The findings of this research will provide direction for industry leaders, policymakers, mental well-being supporters, and academics and will stimulate further scholarly research in this area, in addition to Generation Z. However, more exploratory research including various generations, localities, and professional standing must be carried out in the future to get an enhanced perspective to create a conducive environment for everyone.

Keywords: emotional intelligence, artificial intelligence, sense of belonging, binge-watching, Generation Z.

INTRODUCTION

Binge-watching has become a social jargon or new norm in our day-to-day life according to Netflix, especially during COVID and post covid, that means watching your favourite shows at one go or watching a complete series without a break. However, binge-watching is not new to the world. The usage of old DVDs and video time where we bought Friends DVD and watched it for a longer period or just watched our Charlie Chaplin comedies etc. The rise in binge-watching started more recently especially when COVID-19 knocks the world and lockdown became inevitable. This was good news to social media platformers and Digital streamers such as Netflix, YouTube, Disney, etc. The latest data released by Netflix in the third quarter of 2019 show that this streaming platform has over 167 million paying subscribers This number increased rapidly from 5 million in 2012 to more than 167 million in 2020. It is worth mentioning that Netflix is available in 190 countries. (prnewswire.com). The aim of this study is first to explore through a systematic literature review how AI-amplified binge-watching demotes emotional intelligence, including the psychological conditions of binge-watching, as provided in the research papers published between 2018 to 2024. In a study conducted by Lee, J., (2023), overindulging in content that promotes anger will provoke anger among the younger generation. The current study is expected to provide the following contributions: First, the study expands the current literature by identifying the role of AI suggestions and promotions of binge-watching behaviour associated with video streaming and social media platforms, then it will also indicate how binge-watching affects the emotional

intelligence due to sticking to the streaming for a long period. For this study the researcher would like to indicate that this study is specifically among Gen Z, the study may not apply to others as there are previous studies conducted among other users. The researcher aims to conduct the behaviour pattern of female working women and the homemaker's behaviour in binge-watching as part of her future study.

The researcher intended to conduct this study in two phases first is through a literature review study, focusing on AI promoting binge-watching and how it affects the emotional intelligence among Generation Z, and then the second phase of this study will be using a survey method, based on findings of the first phase literature review. Further study will be conducted to identify the other segments based on A school and B school business studies students.

Research Questions and Research Objectives

According to research conducted by Rubenking, B., & Bracken, C. C. (2018) While younger audiences may be binge-watching more frequently, 60% of all audiences regularly binge-watch television. Several studies have shown that media entertainment can affect users' well-being both positively and negatively (Reinecke & Oliver, 2017). According to research carried out by Granow, V. C., Reinecke, L., & Ziegele, M. (2018), online streaming platforms create an interest among their viewers to indulge in binge-watching by collecting data through AI and suggesting them to watch more programs and this leads to following two research questions 1)How Binge watching affects the emotional intelligence of Gen z 2)Can AI promote a high level of binge watching especially the Generation Z users. The research objectives are as follows:

1. To explore the existing literature regarding binge-watching and emotional intelligence among Gen Z
2. To investigate the role of AI in promoting binge-watching.

Research Gap

Over some time, several studies indicated the behaviours of addictive smartphone users, P indicated the psychological conditions, including behaviours patterns Parry, D. A. (2023), and there are other studies related to too much screen timing including streaming among children and other users Wolfers, L. N. et.al. (2024). However, this research paper identified the connectedness between Generation Z's emotional intelligence and AI-amplified binge-watching.

Research Design

First, the researcher identified this gap by analysing several papers and conducting a literature review. The data was published. The second phase of the study will be based on a primary instrument for data collection is a structured questionnaire consisting of the following sections: (1) a survey of binge-watching behaviour among Gen Z (2) AI-driven platforms of binge-watching behaviour 3) How they get into such addiction was also taken into consideration.

LITERATURE REVIEW

Binge Watching

Though there are several explanations regarding the concept of binge watching one of the common definitions of binge-watching is excessive engagement, however, to have clarity regarding binge watching one should be able to understand the meaning of binge: Flayelle et al (2020). Overindulgence in anything is the real meaning of binge, it could be eating, drinking, and watching. Binge-watching is a term used to indulge in excess watching of any favourite programs or even favourite programs including reality shows. However, people started watching not only their favourite TV programs, even health shows, games, cooking shows, etc. One of the most popular programs is the web series streamed on many platforms. Among the top are Netflix, Disney, and YouTube streaming videos about cooking competitions, and cartoon series for children and young adults. Anghelcev, G., Sar, S., Martin, J. D., & Moultrie, J. L. (2020). According to research conducted by Deloitte. (2017) analysis overall, 75% of Americans engage in binge-watching. The rates are highest among younger audiences: 91% for Gen Z respondents (born between 1997 and 2003) and 86% for Millennials (born between 1983 and 1997). These definitions did not include the time and consistency of

watching and did not include the social media platforms' scrolling habits too. The researcher would like to include and provide an added explanation of the concept of binge-watching. 'Unnecessary commitment of any broadcasting platforms incessantly for some time with unswerving and non-consistent breaks.

H1

Data-driven AI and manipulative and mimics viewers toward binge-watching. High levels of notifications by AI regarding upcoming or missed series, programs, etc, or missed live streaming will lead to anxiety, like notifications from smartphones Dekker, C. An et.al (2024) One of the findings is to reduce anxiety and reduce binge-watching behaviour among Generation Z to disable the notification as these younger generations are curious to get updates regarding anything and everything (Ozay, D. 2024)

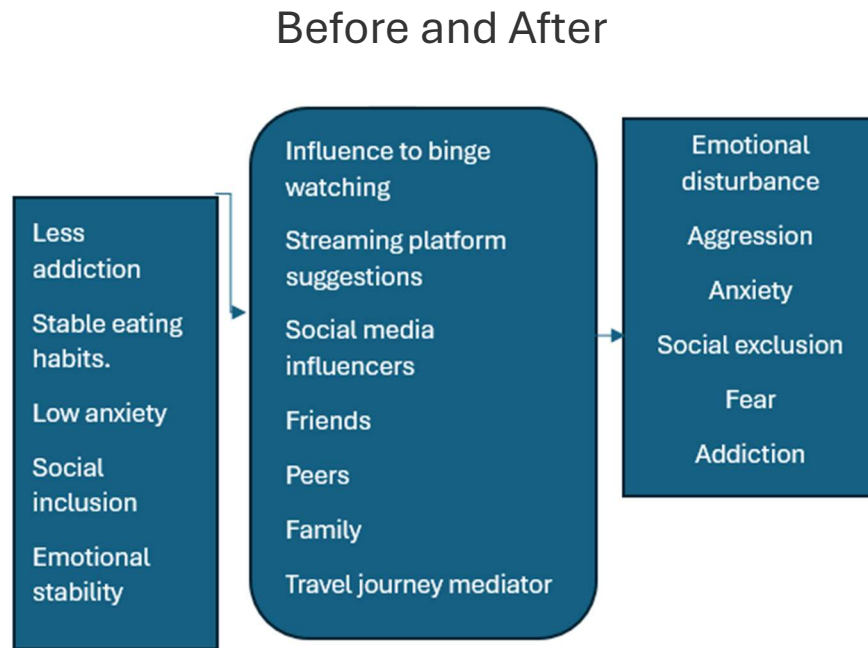
AI-amplified Video Streaming

According to Prelitz, K. (2022) revisiting the streaming video pattern is one of the reasons viewers' data were acquired. It enables the streaming companies and social media platforms to suggest ways to indulge in programming they want the viewers to watch. However, there is a danger in promoting suggestions by AI as it may negatively impact the mindset of the viewers after a period. The drivers and willingness to watch a video streaming of the consumers or viewers are three predicted by online streaming platforms based on five important factors and they are including service system reliability, perceived compatibility, enjoyment, controllability, and normative pressure (social norms) Guo, M. (2022). Though Netflix is the largest user in the US market share, however, Disney, HBO, and Apple Plus are growing more than ever before. (Hepburn, T. 2022). Customers' viewing habits are shifting away from regular TV in favour of on-demand video options that streaming platforms provide (Koul et al., 2021). Nandukrishna, A. T., & PS. (2023) found that the OTTP platform fostered a digital environment that social media sites and these streamers could view for viewers' attention. There is also an option to pause, play, and move forward; behaviour creates an advantage for Generation Z as they fear missing their episodes. A study was also conducted among homemakers in India regarding the fear of missing out on these episodes which leads to more nervousness than any other fears which preceded. More competition among the OTTP players is the root cause of their reliance on big data to improve their viewership to acquire a major space in digital streaming platforms or through any social media Yoon, J. H., & Kim, H. K. (2023).

H2: Binge Watching, and Social Connectedness

According to a study conducted among Chinese college students aged between 18-24, the results showed that young adults started showing more social exclusion and faced depression after going through a period of binge-watching. The students in their survey mentioned that binge-watching helps them to remove their loneliness (Yu, H., & Alizadeh, F. (2024)). According to a study conducted among young adults regarding the motivation behind binge-watching and their emotional intelligence performance by Starosta, J., Izydorzcyk, B., Lizińczyk, S. (2019). The World Health Organization released information regarding the crime rates and its connection among young adults and one of them is anger and loneliness these young adults require immediate attention to improve their well-being. (World Health Organization, 2020) In a study conducted by Gómez-Leal et.al (2024) there is a link between emotional intelligence and maintaining healthy habits including sleep and diet. Binge-watching deprives the intelligence to maintain such healthy habits. Social media influencers and celebrities play an inevitable role in most of their life especially among Gen Z regarding their health and behaviour as they imitate these people and get indulged. Generation Z copied their favourite personality or influencer and tried to watch their episodes as web streaming has teamed up with these celebrities. O'Donnell, N. H., Erlichman, S., & Nickerson, C. G. (2024).

Figure 1: A mode of connectedness between binge-watching and emotional intelligence



DISCUSSIONS AND FINDINGS

From the research conducted among GENERATIONZ, there is no difference between males and females indulging in binge-watching, the only difference is the series or programs they are watching. The men tend to watch more after college or working hours as some of these men, Generation Z, work part-time. They use it to promote their social loneliness to their peers and friends and try to spend more time at home than coming out. The female Generation Z consider this as part of their main relaxation and to indulge in conversations with their friends or peers. Sometimes during their travels or waiting for their friends at the cafeteria or even the library. Generation Z indicated their ability to make rash decisions. They cut off their relationship with their friends or family drastically changing negatively during their binge-watching period. They feel more bored and start flowing towards their addiction journey during this period even when they are away from watching their mind constantly focusing on it. As a result, their ability to focus and other intolerance has increased. one of the students indicated she felt like she was trapped in a spider web and didn't know the way out. Their health consciousness deteriorates when they indulge in binge-watching. However, it is important not to generalize the results obtained by studying only the group of students among the entire population. More research needs to be carried out involving people from different geographic locations, age groups, countries, and professionals. (AI)-driven chatbots also impact user behaviour. One research study shows that chatbot marketing efforts are more effective in communicating with customers as they understand or provide suggestions and recommendations connected to product and service choices. Cheng, Y., & Jiang, H. (2020).

Prompting Binge-watching through Digital Assistants

There is also a need to conduct longitudinal studies about binge-watching's long-term impact and how AI plays a pivotal role in engaging Generation Z viewers. Brill, T. M., Munoz, L., & Miller, R. J. (2019). Job searching and more entrepreneurial characteristics are emerging among them however, some ideas are still sleeping as they engage in binge-watching promoted by AI. It would also prove helpful in identifying the differences between “normal”, i.e., highly entertaining and healthy binge-watching, and excessive and compulsive binge-watching, bearing the symptoms of behavioural addiction. The AI algorithms can provide data to those companies to increase their viewership. Policies must be put in place to regulate these work as most of them engage via phone tablet/iPad or laptop.

IMPLICATIONS

- This study indicates that binge-watching and emotional intelligence are interconnected. Education and policymakers must engage in continuous longitudinal research on how this AI can be used to stop indulging the younger generation in binge-watching behaviour.
- Colleges and Universities must come together to create a curriculum or include this in their citizenship education or create an induction programme just allocated to this section.
- Mental health first aiders can provide some recommendations at schools, colleges, and workplaces along with the government to create awareness and bring more mental health support to improve the well-being of the younger generations
- Aggression and anger are one of the main reasons for high crime rates among the younger generations and binge-watching is one of the reasons why young generations tried to seclude themselves in addition to gaming. This should be monitored by parents, social media influencers, celebrities, and peer group buddies who can come together to provide a safer environment.
- Gaming videos are created by social media platformers to indulge the younger generations and children in spending more viewing hours before streaming platforms. This must be stopped as the Gaming content creators must be regulated regarding the hours of watching. The government can use AI to collect data related to corporate companies' digital viewership acquisition data and find ways to free themselves.
- One main study can be conducted by the neurologist using EEG and binge-watching behaviour to avoid the younger generation or anyone falling into the trap. This can be done by recording their watching time and brain activity. The EEG study must be undertaken as it concerns the impact level of AI augmentation and brain activity. Yen, C., & Chiang, M. C. (2020).

CONCLUSION

The study indicated the binge-watching behaviour among Generation Z students and how AI plays a pivotal role in promoting this binge-watching behaviour. Generation Z students indicated that their behaviour patterns changed after they indulged themselves in binge-watching. Some students identified their sleeping patterns as affected a lot and social connectedness as they tried to indulge in binge-watching. Competitiveness has also increased among those students who complete the episodes to identify themselves or belong to a particular part of a group of students. (Flayelle et al 2024) Despite Generation Z intention to come out, they get addicted while trying to do some research or watch any videos even if it is related to weight loss programs and they get back into the trap. They have underlined how crucial it is to distinguish between binge-watching, which may be hazardous, and healthy kinds of TV series consumption. In addition to aiding in our knowledge of this issue, more research focusing on a variety of demographic groups may also improve healthcare treatments and preventive measures.

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COMPETITIVE ADVANTAGE AND INNOVATION ON GREEN SUPPLYCHAIN EFFECTIVENESS AMONG STATE-OWNED ENTERPRISES IN GAUTENG PROVINCE

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ABSTRACT

The objective of this study is to examine the optimisation of green supply chain effectiveness on State-owned enterprises (SOEs) in South Africa. SOEs play an important role in state activities and service delivery to its people; the government can manage the country's economy through their establishment. They comprise two forms: firstly, the service delivery of telecommunication, water, electricity, airports, sanitation, broadcasting and postal service; and secondly, for commercial activities such as banking, housing development and transportation. This study considers two of the drivers which are competitive advantage and innovation on green supply chain effectiveness in the state-owned enterprises industry. A numerical approach was implemented in which a survey questionnaire was used to collect data from 300 supply chain practitioners from SOEs industry in Gauteng province of South Africa. The study used a non-probability convenience sampling technique to select respondents. Information was analyzed through two software packages, namely tStatistical Package for the Social Sciences (SPSS version 28.0) and the Analysis of Moment Structures (AMOS version 28.0). A confirmatory factor analysis was applied in examining and testing the relationships between observed constructs and their causal latent constructs while structural equation modelling helped in testing the hypothesized relationships among variables. The results of the investigation made known that competitive advantage and innovation have a meaningful impact on green supply chain effectiveness. All the hypotheses were accepted and significant. This investigation concludes that to achieve greater green supply chain effectiveness, SOEs managers should expedite the levels of competitive advantage and innovation.

Keywords: competitive advantage, innovation, green supply chain effectiveness, state-owned enterprises, bureaucratic theory of management (BTM).

INTRODUCTION

The state's involvement in a profit-making business is one of the most debated political and economic subjects in the modern age (Xin, Bao & Hu 2019). High profit generated in public assets is the main reason that the government invests so much in SOEs (Sari, Lubis, Maksun, Lumbanraja & Muda 2018). SOEs are solutions to market failure problems, which are unavoidable for developing countries. SOEs are established to improve the quality of life of South African citizens (Matsiliza 2017). The creation of the SOEs allows state management and intervention of the country's economy. Private-owned enterprises are unable to provide products and services that accommodate all people living in South Africa, therefore, the government must intervene to address the inefficiencies through the creation of SOEs (Bushe 2019). In other words, the state serves the interest of the public by providing scarce products and service delivery to society (Shi, Song & Meng 2017).

PROBLEM STATEMENT

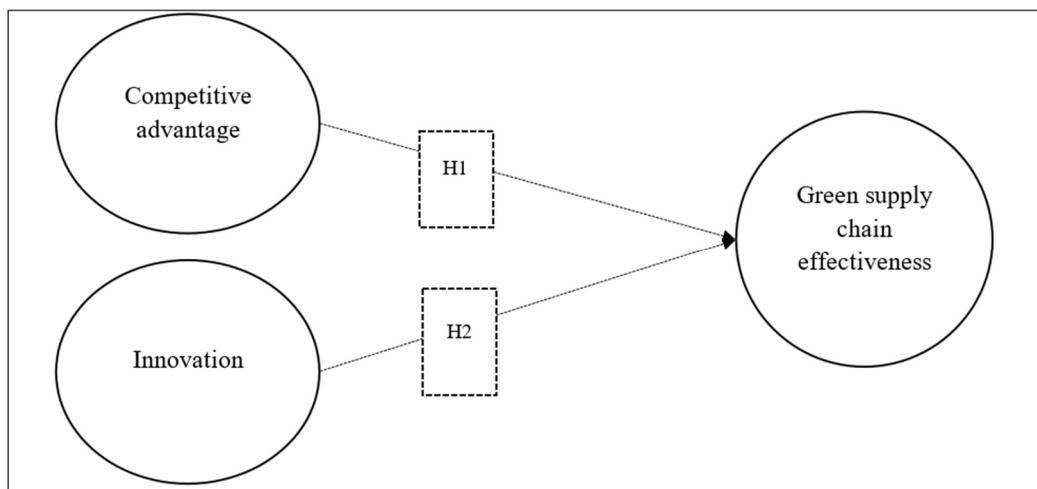
Several studies on SOEs in South Africa have focused on different aspects, such as the relationship between chief executive officer compensation and the size and industry of South African SOEs (Carlson & Bussin 2020); government assistance to SOEs, which hinders financial performance (Rahman 2018:86) and leveraging state-owned nature-based assets for transformation and small, medium and micro enterprise (SMME) development (Giddy, Idahosa

& Rogerson 2017). They also capture the role of Public Accounts Committees (PAC) to enhance oversight and accountability by the SOEs (Makhado 2016); and the impact of entrepreneurial alertness on the performance of immigrant-owned enterprises in South Africa (Mutize & Tefera 2020), which demonstrates that much still needs to be done to implement green supply chain effectiveness in SOEs. Prior studies on SOEs have been conducted in the American, European and Asian contexts without focusing on the South African perspective (Yang, Wang & Lu 2020; Pena Miguel & Cuadrado- Ballesteros 2019). More investigations are, therefore, necessary to expand knowledge on SOEs in developing economies. The study aims to fill this gap by exhibiting competitive advantage and innovation on green supply chain effectiveness among SOEs in Gauteng province. The fact that researchers have paid little attention to this topic in the South African context provides an essential incentive and motivation to carry out the study.

CONCEPTUAL MODEL

Regarding the literature review, the following conceptual model has been developed. Relationships based on research variables will be developed thereafter. In the conceptualised research model, competitive advantage and innovation are the predictor variable and green supply chain effectiveness is the outcome variable.

Figure 1: Conceptual model (own source)



Hypothesis Statements

Based on the above conceptual model, the following hypothesis statements have been developed.

H1. There is a positive relationship between competitive advantage and green supply chain effectiveness amongst state-owned enterprises in Gauteng province.

H2. There is a positive relationship between innovation and green supply chain effectiveness amongst state-owned enterprises in Gauteng province.

LITERATURE REVIEW

A review of a variety of literary works, including information from books, journals, completed dissertations, and online resources was done. A clear understanding of the concepts involved in the study and how they affect one another was scrutinised.

Bureaucratic Theory of Management (BTM)

The study was grounded on the BTM which is also known as Weber's theory of bureaucracy, named after Max Weber,

a German sociologist, in 1947. The organisation's structure is the focus of the theory, which divides and forms a strong edge of control and authority within the organisation (Cullinan, Abratt & Mingione 2020). The theory suggests the development of standard operating procedures as an aim of thinking and behaviour that ensures employees act in a way that is in line with the SOEs objectives and goals (Veronesi, Kirkpatrick & Altanlar 2019). It consists of eight principles: written rules; a system of task relationship; specialised training; a hierarchy of authority; clearly identified duties; fair evaluation and reward; paperwork and maintenance of ideal bureaucracy that provides effective means for accomplishing SOEs goals. Thus, the business environment must be both stable and predictable around the bureaucracy while abiding by the rules and procedures set by the business (Deslatte 2020).

Competitive Advantage (CA)

CA is the ability to outperform business competitors by producing and offering better goods, services and above-average profit through the execution of an applicable business strategy (Fainshmidt, Wenger, Pezeshkan & Mallon 2019). CA is the fundamental component of the SOEs culture that is associated with effective organisational performance (Eldor 2020). The SOEs policy thus formalises the values and requirements for ethical behaviours and influences competitive status (Singh, Chen, Del Giudice & El-Kassar 2019). SOEs that indulge in high standards of management systems avoid any problems, if any, with protecting and improving the image of the enterprise (Udriyah, Tham & Azam 2019). CA stems when SOEs align their workers' skills, processes behaviour with the system as well as training of employees to develop systematic capabilities at a business level (Coccia 2017). In the era of growing pressure from directors to perform, SOEs need to manage external challenges with effective internal capabilities and training of employees to deal with such pressure; therefore, it will have a CA in the market (Gunasekaran, Subramanian & Papadopoulos 2017).

Innovation (IN)

IN is defined as a significant part of introducing a new and improved product or service to the market as well as introducing new or better-improved processes within the organisation (Lashitew, Bals & Van Tulder 2020). Thus, IN plays a key role in job creation, competitiveness and the welfare of any SOEs (Freire 2019). The diffusion of IN throughout the economy is mainly the result of the accumulation of knowledge, which aims at the new development of capabilities throughout the SOEs (Freire 2019). IN development dynamics determine the rate and direction of the change in technology by specific physiognomies of the economic and industrial structure of the system to each point in time, as well as their well-being (Varadarajan & Kaul 2018). The behaviour of the entire economy influences the idea that dominates the whole technological system through the concept of IN (Gebauer, Haldimann & Saul 2017).

Green Supply Chain Effectiveness (SE)

SCE is defined as the joint success of an enterprise that achieves the expected targets of the supply value chain, which are consistency, originality and responsiveness towards customer needs (Zailani, Iranmanesh, Foroughi & Hyun 2019). SCE is enhanced when business and functional strategic methods are implemented by all members of the supply chain management (Nazempour, Yang & Waheeda 2020). An organisation could increase its position over its competitors by strengthening its SCE (Wang, Lee, Zhang & Wei 2018). In modern markets, SOEs need to be managed towards effectiveness to keep up with competitors and raise their level of excellence (Peñarroja, Sánchez, Gamero, Orengo & Zornoza 2019). SCE assumes the existence of different levels placed in the supply chain management, which are determined by predictability (the variability in achieving objectives) and control (actual results and targets) (Günsel, Dodourova, Tükel Ergün & Gerni 2019).

RESEARCH METHODOLOGY

Research scales were operationalised based on previous work. Proper modifications were made to fit the current research context and purpose. Competitive advantage used a six-item scale adapted from Aydiner, Tatoglu, Bayraktar, Zaim and Delen (2019). Innovation used a six-item scale adapted from Wang et al. (2018). Finally, green supply chain effectiveness was measured using an eight-item scale adapted from Zhang, Hempel, Han and Tjosvold (2007). All the measurement items were measured on a five-point Likert-type scale that was anchored by 1= strongly disagree to 5= strongly agree to express the degree of agreement.

Measurement Instruments

The researcher checked the measurement's reliability and validity. Reliability was mainly checked using the Composite Reliability (CR) and Cronbach's alpha values. To ensure convergent validity, the researcher checked whether items loaded on their respective (a priori) constructs with loadings greater than 0.5. Discriminant validity was checked by the Average Variance Extracted (AVE) value, ensuring that there were no insignificant inter-research variables cross-loadings (Schrepp, Hinderks & Thomaschewski 2017).

Psychometric Properties of the Measurement Scale

Table 1 reports on the psychometric properties of the measurement scale. The table shows the research constructs, descriptive statistics, Cronbach alpha test, composite reliability (CR), average variance extracted (AVE) and item loadings.

Table 1: Accuracy assessment and descriptive statistics

Research constructs	Descriptive statistics*		Cronbach's alpha test	C.R.	AVE	Item loading
	Mean	SD	α Value			
Competitive advantage (CA)						
CA1			0.927	0.943	0.733	0.875
CA2						0.863
CA3	0.517	0.040				0.861
CA4						0.840
CA5						0.872
CA6						0.825
Innovation (IN)						
IN1			0.937	0.948	0.696	0.831
IN2						0.840
IN3	0.065	0.041				0.828
IN4						0.787
IN5						0.857
IN6						0.843
IN7						0.865
IN8						0.818
Green supply chain effectiveness (SE)						
SE1			0.903	0.926	0.676	0.822
SE2						0.835
SE3						0.870
SE4						0.879
SE5						0.644
SE6						0.845
CA= Competitive advantage; IN= Innovation; SE=Green supply chain effectiveness						

Highlighted in Table 1, all items have loadings greater than 0.6 (Nunnally & Bernstein 1994), indicating that they explain at least 60% of what they expected to measure (convergent validity). The lowest AVE value is 0.632 which exceeds the recommended 0.5 (Fornell & Larcker 1981). Using the composite reliability (CR) value and Cronbach's alpha value, the measurement instrument's reliability was assessed, and the lowest values are 0.911 and 0.644, respectively, which exceeds the recommended acceptable value of 0.5 (Nunnally *et al.* 1994). All in all, these results confirm the reliability and validity of the measurement used in the study.

Table 2: Inter-construct correlation matrix

Variables	CA	IN	SE
CA	0.856		
IN	0.659	0.834	
SE	0.748	0.584	0.822

CA= Competitive Advantage; IN= Innovation; Green supply chain effectiveness

As illustrated in Table 2, there are positive correlations across all constructs, and they are all below the level of 1.0, which proves the adequacy of discriminant validity in the measurement scale (McFarland 2020).

Path Model Outcomes and Factor Loadings

Table 3 indicates the path-co-efficiency results and T-statistics for the research constructs.

Table 3: Results of structural equation model analysis

Path	Hypothesis	Path coefficients (β)	P-value	T-Statistics	Decision on hypotheses
CA → SE	H2	0.517	0.000	14.723	Supported and significant
IN → SE	H3	0.461	0.000	3.571	Supported but significant

TQM= Total quality management; CA= Competitive Advantage; IN= Innovation

Table 3 shows that the minimum T-statistics for the path coefficients is 3.571, which is greater than the recommended threshold of 1 (Winship & Zhuo 2020). This means that all of the proposed relationships are significant. Even so, for the relationship to be supported, the P-values must be less than 0.01. (Jafari & Ansari-Pour 2019). This demonstrates that innovation in South African SOEs does not influence supply chain effectiveness. However, the results were significant based on T-statistics, meaning they can be considered accurate.

DISCUSSION OF RESULTS

The purpose of this study was to investigate the optimisation of green supply chain effectiveness on State Owned Enterprises (SOEs) in South Africa. Two hypotheses were postulated to test the proposed hypotheses, data were collected from Gauteng province in South Africa. The empirical results supported all the posited research hypotheses significantly. Important to note about the study findings is the fact that IN has stronger effects on SE (0.517). Nevertheless, all the measured constructs were found to be significant based on T-statistics results. The second research objective was to examine the relationship between IN and SE. A coefficient of 0.461 was realised after testing H2. This indicates that IN has a strong and positive influence on SE. The results, therefore, support the relationship as hypothesised. Judging from the results, it can be understood that IN raises awareness of environmental issues and creates normative responses that promote the application of SE. This denotes that IN has a positive and relatively strong influence on SE, which concurs with the results of the studies of Zhou (2016) and Abbas (2020), where IN is positively associated with SE.

Implications and Limitations of the Study

This adds to the existing body of literature on these issues within the area of SE, CA and IN. Future researchers may use the present study as a leading source of secondary data. This includes giving hints on how best SOEs can be established, operated and supported towards ensuring effectiveness. Therefore, SOEs in developing economies will be placed in a better position to increase the level of supply chain effectiveness. The study was restricted to three constructs only, thus forthcoming research could also include other variables such as supply chain collaboration, information quality and supply chain resilience as antecedents of supply chain effectiveness. In addition, the study can be strengthened by increasing the sample size, including participants in other geographical areas. The current study was limited to South Africa. For results comparison, subsequent research should contemplate replicating this study in other developing countries. This study used a quantitative approach and imminent studies could also use a mixed

method approach or purely qualitative approach so that in-depth views of employees and employers can also be captured.

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THE EFFECTS OF RURAL-URBAN MIGRATION PATTERNS ON SERVICE DELIVERY IN SOUTH AFRICA: CASE OF ETHEKWINI

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ABSTRACT

Urban planning focuses on city and town design and how the municipality delivers services to communities dwelling within these designed urban spaces. Rural-urban migration is the movement of people from rural to urban areas, with the main reason the pursuit of better opportunities to improve their socio-economic conditions. Therefore, the pull and push factors of rural to urban migration are clearly defined and explained in order to assist the municipal administration and academia to improve urban service delivery. The study adopts a quantitative approach with the sample comprising 350 respondents, purposively selected through non-probability sampling and required to complete a 5-point Likert scale questionnaire. The researcher assisted in terms of questionnaire administration. The completed questionnaire provided the quantitative data for statistical analysis, using SPSS version 28.0. Study findings indicate that, among other factors, a strong significance exists regarding increased crime levels in urban areas as a result of rural-urban migration patterns, with suggestions that include more money needs to be prioritised from government for policing and crime in cities such as eThekweni Municipality. Since there are more informal settlements because of rural-urban migration, it is also shown as necessary to create networked infrastructure in rural areas to improve communication for those working from home. To identify and explain migration Patterns to enhance service delivery at eThekweni Municipality. In addition, the study has found that indeed rural to urban migration has a negative impact on service delivery the study argues that service delivery, rural to urban migration, public participation needs to be part of the government agenda holistically to improve service delivery and capacity of local authorities. This study recommends proactive urban planning and community involvement through public participation channels and the need for urban municipalities to create bi-laws that will proactively deal with rural to urban migration patterns.

Keywords: service delivery, rural to urban migration, patterns, government, municipalities.

INTRODUCTION

The increase of rural-urban migration brings challenges to the government, with most municipalities lacking clean water and electricity, which causes delays in service delivery to the community in SA (Weiberg *et al.* 2019: 1-20). There is a need to develop rural areas to help municipalities build and create job opportunities in rural areas to provide the municipality responsible in that area an opportunity to render services and curb rural-urban migration (Weimann & Oni 2019: 36-80). Rural-urban migration is responsible for the increase in informal settlements in urban areas, with these settlements having long been an issue requiring the government's attention, to ensure the safety of the community (Prior & Eriksen 2013: 1575-1586). While there has been improvement in settling informal settlements, the problem is that numbers increase day-by-day due to rural-urban migration (Mayer & Rouleau 2013: 1-9). An immediate need exists for local government to expand land projects in urban areas because of the never-ending population hike (Nielsen-Pincus, Ribe & Johnson 2015: 1-12). The issue of land remains a challenge, because part of the land is owned by Chiefs, and other stakeholders, apart from what the government owns (Petrzelka & Armstrong 2015: 303-312). The government is working to ensure 100 percent ownership of the land, to facilitate equal distribution to deserving communities (Ghebru & Okumo 2017: 5). LED is necessary, as urbanisation is closely linked to it (Cox *et al.* 2018: 72-80; Mamokhere 2019: 1-7). Rural-urban migration is also driven by the demand and supply of labour where economic development and growth are concerned, to the extent that temporal and permanent migration is gradually affecting coastal provinces (Qi 2019: 273-183; Wise, Perić, & Đurkin 2019: 107-128).

PROBLEM INVESTIGATED

As per a latest study into municipal urban growth, the eThekweni Municipality 2016/17 Spatial Development Framework reported 276 988 in-migrants in 2001 and 2011, showing marked growth (Govender 2017). According to the municipality, this figure grew to 3 414 197 for 2011, yet was expected to rise 3 818 499 for 2021, amid estimates reaching 4,47 million by the year 2030, which indicates an unsettling trend (Musvoto, Lincoln & Hansmann 2016). Urbanisation usually impacts resource allocation and the management of public amenities and the research aims to demonstrate a link across rural-urban migration trends and service delivery (Fleischmann & Phalet 2018). Poor service provision protests are found to occur because of the rising populace's constriction over municipalities (Haslam 2016). Noteworthy, is that global migration has less impact on local socio-economic constants, to modify the perception on migration of people, policy decisions must be changed, It is crucial to highlight that global migration is less impacted, because certain migrants only remain for a short time before returning to their homeland (Igarashi 2019).

AIMS AND OBJECTIVES

- The aim of the study is to investigate the impact of rural-urban migration patterns on service delivery within the eThekweni Municipality Local government in KwaZulu-Natal (KZN).

OBJECTIVES

In order to achieve the aim of this study, the following objectives will be pursued,

- To identify and explain the impact on service delivery by rural-urban migration patterns
- To investigate to what extent the impact of rural-urban migration patterns affects service delivery

LITERATURE REVIEW

The literature review examines the effects of rural to urban migration patterns on service delivery.

Rural-Urban Migration Global Patterns and Their Impact on Service Delivery in Urban Areas

Evidence exists that people migrate with economic intentions in mind, such as the pursuit of a job opportunity or entrepreneurial opportunities available in urban spaces (Carson, Carson & Eimmermann 2018: 183-198). Hence, the costs associated with migrating place a monetary value on the process of relocating (Huang, Dijst & Van Weesep 2017: 816-840). Government ought to focus all development efforts on rural economies to strike a balance between rural-urban and service delivery demands (Bryan & Morten 2019: 22-68; Rhoads 2018: 278-305). Most governments focus on developing urban economies, turning them into economic hubs but research shows this slows down economic growth (Morten & Oliveira 2016: 43; Yang & Dunford 2018: 11-21). Development of rural areas reduces overcrowding of urban areas (Fafchamps & Shilpi 2013: 388-409).

Migration is also common when people migrate to areas where there are people who share both their language and ethnic background (Tabellini 2020: 454-486; Bryan & Morten 2019: 2229-2268). This is due to migrants integrating better where there are ethnic groups similar to theirs (Artmann, Inostroza & Fan 2019: 3-9). Studying of networks in migration is important, particularly the implications of rural-urban migration in urban areas (Tjaden *et al.* 2019: 36-57; Détang-Dessendre, Partridge & Piguet 2016: 89-103).

Economic Contributions of Rural-Urban Migration in Kzn

The economic impact of rural-urban migration is a phenomenon that needs to be explored in its entirety due to its significance in productivity and growth in the entire economic spectrum in KZN (Tanrikulu 2021: 364-377; Day, Cornell & Malherbe 2021: 245-262). This includes positive aspects in terms of entrepreneurial migrants from rural

areas who bring business to urban areas that contributes to LED and creates jobs within eThekweni Municipality (Henderson & Kriticos 2018: 287-314; Lekhanya 2018: 40-45).

The need for structural transformation is obvious in urban areas because rural-urban migration provides the necessary labour in all sectors including agriculture (Henderson, Nigmatulina & Kriticos 2019: 103-188: 103-188; Ngcamu 2019: 9). Within eThekweni municipality, educated migrants are prominent in creating job competition and other urban migrants are entrepreneurs (Henderson & Kriticos 2018: 287-314; Breakfast, Nomarwayi, and Bradshaw 2020: 14-71). The rural municipalities are short-changed in the process because they find it difficult to sustain development in rural areas with limited labour (Henderson & Turner 2020: 150-73; Masuku and Jili 2019: 19-35).

Urbanisation in SA

Since the democratic dispensation replaced the previous regime in SA in 1994 (Brøgger 2019: 97-105), many people have been relocating to urban areas, where they previously had limited admission and could only stay in homelands (Korsi 2022: 71-87). With overall urbanisation growth rising dramatically over the years, the accompanying challenges include, amongst others, the lack of attention to informal settlements in relation to sewerage, potable water, bad water drainage, as well as power supply (Bovo 2020: 23-32; Francis 2019: 20-232).

Some serious ecological influences in various low-cost housing sector settings are also found. For example, groundwater pollution strongly related to the lack of good hygiene facilities in several informal settlements, as well as disturbance of fragile environments, such as estuarine or wetland areas (Feola *et al.* 2019: 145-157). The low-cost housing sector is populated by under privileged people with comparatively miniscule energy and water usage. As a result, the sector's general ecological footprint remains big; due to fixture-driven changes in the country's urban civic alterations, in terms of townships and more organised societies (Scheitle & Guthrie 2019: 96-111; Onitsuka & Hoshino 2018: 123-136).

Underprivileged societies have “an insignificant distal ecological impact, counter to that of more prosperous societies” (Mandeli 2019: 102-409). However, Nweke (2019: 76) asserts cost constraints are evidenced by numerous families still utilising dangerous fuel, such as wood and paraffin, as opposed to electricity. Obviously, it is the urban poor straining the urban energy supply in urban informal settlements (Awasthi 2021: 102-965; Salemink, Strijker & Bosworth 2017: 360-371). It is imperative to note urbanisation is a result of rural-urban migration flow (Mubangizi 2021: 181). Arfanuzzaman & Dahiya (2019: 725-744) further affirm the growing African elite community has exacerbated environmental concerns, owing to their respective lifestyles through non-ecological cars and business habits, as the rural-urban migration flows increase.

International Perspective on Rural-Urban Migration

The urban population upsurge is a global factor that is becoming a burden on local government and municipalities with restricted resources (Cheng, Jia & Meng 2022: 294-308). For example, in SA, the increase of migrant settlements among the poor and African people with a marginal income, living in shanty towns distant from jobs and public service stations (Eckert, Turner & Sallah 2019: 99-83).

Strobl & Valfort (2015: 40:240) raised ecological concerns regarding urbanisation, which exposes the timeless unsustainability of these settlements in SA (Dame *et al.* 2019: 189-199; Munshi & Rosenzweig 2016: 46-98). Nevertheless, to avoid wasteful competition amongst South African cities, partnerships with civil societies are necessary (Chen, J. & Wang 2019: 372-389). However, the increase in metropolitan land ownership includes former farming land, tribal land, and other urban zones, which increased the population under municipal authority as a result of rural-urban migration (Najera *et al.* 2019:1-7).

Additionally, SA has a comparatively high level of growth and a role as the economic capital of Africa (Jiang *et al.* 2019: 24-32; Monras 2020: 3017-3089). While the housing policy in SA is favoured by the market-lead method, it nevertheless excludes growth of expensive interior city land (Mueller *et al.* 2019: 181-206). This is contrary to elsewhere in Africa, where urbanisation is connected to enormous development (Chan & Wei 2019: 422-454). Moreover, the present universal rationale on urban policy in multilateral institutions, such as the United Nations (UN 2011). Is echoed in the South African urban policy and highlights the importance of municipal local administrations

(Young 2013: 17-85; Tombe & Zhu 2019: 1843-72; Heise & Porzio 2019: 898; De La Roca & Puga 2017: 106-142). In this regard, the directives and tasks of cities have rapidly increased, with the new concern for accommodation being one of the more significant of these novel roles for cities in SA (Mishra 2019: 11-33). Regrettably, cities also face approaching insolvency due to lack of payment by traditional municipalities, for which novel, ground-breaking, subsidy solutions are required (Levi & Sacks 2009: 311-333). The contextual document to these challenges was discussed at the World Urban Forum, held in June 2006, for cities in SA, in the provisioning of services for growing urban populaces (Ordor & Michell 2022: 153-171). Bankrolling basic town service areas, particularly water supply and hygiene, is a difficult endeavour for sustainable urbanisation (Porru *et al.* 2020: 88- 97; Neely & Ponsunmugam 2019: 214-221). In addition, incremental change planning is required from the local government as town inhabitants occupy space and services; despite this, the municipality has no capacity to match the demands (Gaisie, Kim & Han 2019: 102-398; Salam *et al.* 2020: 612-622). Moreover, the environment is unstable for development which only lead to public unrest on the issues of service delivery (Breakfast & Phago 2019: 45-62; Demirag & Khadaroo 2011: 271-296; Mlambo 2018: 67; Hellberg 2014: 226-236). All areas of governance are affected by migration and there are trails and limitations on the part of government which includes financial constraints (Dahiya & Das 2020: 3-36).

METHODOLOGY

Primary data was collected using a traditional 5-point Likert scale questionnaire as a measuring instrument for statistical purposes. The use of the Statistical Package for Social Science (SPSS) was deemed relevant as it is a commonly used statistical programmed for the interpretation and summarizing of findings and results for this study.

FINDINGS

The following chapter presents findings from 350 respondents obtained through the distribution and collection of 5 Likert scale questionnaire and the frequency table, Component test table and chi-squire test table are used to present the Data.

Table 1: Frequency Table

Variable Tested	Statement	Frequency	Percentage	Variable tested	Statement	Frequency	Percentage
Electricity Demand in The city	Agree	275	78	Air	Agree	260	74
	Neutral	50	14	Pollution In the city	Neutral	60	17
	Disagree	25	7	More Demand For housing	Disagree	30	8
More energy Options are needed	Agree	300	86	More Demand For housing	Agree	271	77
	Neutral	40	11	More Demand For housing	Neutral	49	14
	Disagree	10	3	More Demand For housing	Disagree	30	8
Water Demand in the City	Agree	270	77	More informal Settlement	Agree	297	85
	Neutral	60	17	More informal Settlement	Neutral	41	11
	Disagree	20	6	More informal Settlement	Disagree	12	4
Pit Latrines In the city	Agree	289	83	More Demand For social Grants	Agree	279	79
	Neutral	50	14	More Demand For social Grants	Neutral	60	17
	Disagree	11	3	More Demand For social Grants	Disagree	11	4
Illegal water connections In the city	Agree	258	74				
	Neutral	56	16				
	Disagree	36	10				

Table 1 indicates 275(78%) respondents agree with the statement, with 50(14%) respondents neutral on the statement and 25(7%) respondents disagree with the statement on whether there is more electricity demand in the city as result of rural-urban migration patterns. The table also indicates 300(86%) respondents agree with the statement, with 40(11%) respondents neutral and 10(3%) respondents disagree with the statement on more energy options are needed in the city. The table further indicates 270(77%) respondents agree with the statement, with 60(17%) respondents neutral and 20(6%) respondents disagree with the statement on whether there is water demand in the city. The table also indicates 289(83%) respondents agree with the statement, with 50(14%) respondents neutral and 11(3%) respondents disagree with the statement on whether there are pit latrines in the city. The table further indicates 258(74%) respondents agree with the statement; with 56 (16%) respondents, neutral and 36(10%) respondents disagree with the statement on whether there are illegal water connections in the city because of rural-urban migration. The table also indicates 260(74%) respondents agree with the statement, with 60(17%) respondents neutral and 30(8%) respondents disagree with the statement on whether there is air pollution in the city. The table further indicates 260(74%) respondents agree with the statement, with 49(14%) respondents neutral and 30(8%) respondents disagree, with the statement on whether there is more demand for housing in the city due to rural-urban migration. the table indicates 287(85%) respondents agree, with statement, with 41(11%) respondents neutral and 12(4%) respondents disagree, with the statement on whether there are more informal settlements due to rural-urban migration. The table also indicates 279(79%) respondents agree with the statement, with 60(17%) respondents neutral and 11(4%) respondents disagree, with the statement on whether there more demand for social grants in the city due to rural-urban migration pattern.

Rotated Component Matrix^a

Table 2: Drivers of Internal Migration

Description	Component	
	1	2
The rural to urban rural-urban migration patterns leads to more migrants demanding more electricity, which results in load shedding.	0.685	0.667
More options need to be created for electricity, for example, solar and wind energy, since there is more demand due to rural-urban migration	0.880	0.408
there is more demand for water in urban areas because of rural to urban rural-urban migration patterns	0.611	0.721
There are pit latrines in urban areas due to rural-urban migration	0.854	0.454
More illegal water connections are in the urban areas due to rural to urban rural-urban migration patterns	0.678	0.691
Air pollution because of rural-urban migration leads to climate change	0.857	0.459
There is more demand for housing in urban areas because of rural to urban rural-urban migration patterns.	0.654	0.704
There are more informal settlements because of rural-urban migration	0.894	0.388
There is more demand for social grants in urban areas because of rural to urban rural-urban migration	0.572	0.774

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

Rotation converged in 3 iterations.

Table 2: A component test was conducted in relation to the rural-urban migration patterns, a test was conducted on the statement on whether the rural to urban rural-urban migration patterns leads to more migrants demanding more electricity, which results in load shedding results came as (0.685) which highly significant. Further test was conducted on the statement whether More options need to be created for electricity, for example, solar and wind energy, since there is more demand due to rural-urban migration results came as (0.880) which highly significant. Tests were conducted on the statement whether there is more demand for water in urban areas because of rural to

urban rural-urban migration patterns results came as (0.721) which highly significant. Tests were conducted on the statement whether There are pit latrines in urban areas due to rural-urban migration results came as (0.854) which highly significant. More tests were conducted on the statement whether more illegal water connections are in the urban areas due to rural to urban rural-urban migration patterns results came as (0.691) which is highly significant. Tests were conducted on the statement on whether air pollution because of rural-urban migration leads to climate change results came as (0.857) which is highly significant. Further tests were conducted on the statement on whether there is more demand for housing in urban areas because of rural to urban rural-urban migration patterns results came as (0.704) which is highly significant. Tests were conducted on the statement on whether there are more informal settlements because of rural-urban migration results came as (0.894) which is highly significant. Tests were also conducted on the statement on whether There is more demand for social grants in urban areas because of rural to urban rural-urban migration results came as (0.774) which is highly significant. All the tests show significance in relation to the rural-urban migration patterns.

Table 3: Chi-Squire Test

Description	Chi-Square	df	ASYMP. Sig.
The rural to urban rural-urban migration patterns leads to more migrants demanding more electricity, which results in load shedding.	555.492	8	<0.001
More options need to be created for electricity, for example, solar and wind energy, since there is more demand due to rural-urban migration	312.879	8	<0.001
There is more demand for water in urban areas because of rural to urban rural-urban migration patterns	459.702	8	<0.001
There are pit latrines in urban areas due to rural-urban migration	304.095	8	<0.001
More illegal water connections are in the urban areas due to rural to urban rural-urban migration patterns	629.491	8	<0.001
Air pollution because of rural-urban migration leads to climate change	460.269	8	<0.001
There is more demand for housing in urban areas because of rural to urban rural-urban migration patterns	612.945	8	<0.001
There are more informal settlements because of rural-urban migration	298.315	8	<0.001
There is more demand for social grants in urban areas because of rural to urban rural-urban migration	575.115	8	<0.001

Table 3: Chi-square analysis of the results was performed to determine if the above items have strong value as rural-urban migration patterns. The statistical results were found to be significant, test was conducted on whether The rural to urban rural-urban migration patterns leads to more migrants demanding more electricity, which results in load shedding (555.492;DF = 8; P <0.001). More options need to be created for electricity, for example, solar and wind energy, since there is more demand due to rural-urban migration results came as (312.879;DF= 8;P<0.001) which is significant. There is more demand for water in urban areas because of rural to urban rural-urban migration patterns results came as (459.702; DF= 8; P<0.001) which is significant. There are pit latrines in urban areas due to rural-urban migration results came as (304.095; DF= 8; P<0.001) which is significant. More illegal water connections are in the urban areas due to rural to urban rural-urban migration patterns results came as (629.491; DF= 8; P<0.001) which is significant. Air pollution, because of rural-urban migration, leads to climate change results came as (460.269; DF= 8; P<0.001) which is significant. There is more demand for housing in urban areas because of rural to urban rural-urban migration patterns results came as (612.945; DF= 8; P<0.001) which is highly significant. There are more informal settlements because of rural-urban migration results came as (298.315; DF= 8; P<0.001) which highly significant. There is more demand for social grants in urban areas because of rural to urban rural-urban migration results came as

(575.115; DF= 8; P<0.001) which is highly significant.

LIMITATIONS

- The limitation of this study is that it was specifically confined and limited to the eThekweni metropolitan municipal area and its residents. Therefore, the findings could not be generalized to similar areas.

THE IMPLICATION OF THE STUDY

- The study has highlighted some of the critical factors affecting the impact of rural immigrants on service delivery at selected areas within the eThekweni Municipality.

CONCLUSION

The findings suggest a need for urban planning to harness the good aspects of rural- urban migration, providing key pointers for sustainable growth in local government, as well as to address the high urban crime rate, unemployment, delays in hospitals, and the importance of creating a conducive environment for rural entrepreneurs to start businesses in cities, thus contributing to economic growth. A further need identified is for more power stations, in terms of energy generation, and the adoption of other energy options such as solar, wind and hydro power. While there is high demand for housing in urban areas as a result of rural-urban migration patterns, there is also more demand for social grants, in addition to overcrowding in classes in urban areas as a result of rural-urban migration. Consequently, rural areas suffer directly and indirectly as a result of rural-urban migration.

RECOMMENDATIONS

The study recommends policies proactively dealing with rural-urban migration patterns to enhance service delivery, since migrants are motivated by economic opportunities such as jobs and education, which only lead to more electricity and water demand, overcrowding in schools, hospitals and creates fierce competition in the job market in cities, which leads to joblessness.

Development needs to also be focused on rural areas, which can alleviate the flow of rural migrants into cities. There is a major need for integrated urban expansion and town plans that will harness the power of migration to enhance service delivery. Therefore, new policies must be developed to harness rural to urban migration patterns for sustainable development.

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THE IMPACT OF EMERGING TECHNOLOGIES ON MANUFACTURING SMEs' BUSINESS COMPETITIVENESS

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ABSTRACT

The purpose of this study is to investigate how new technologies change the competitive context of manufacturing SMEs. The focus is on the past, present, and future impact of Artificial Intelligence (AI), Internet of Things (IoT), and advanced robotics on these enterprises, which face ever-escalating demands as these technologies develop. A quantitative research approach was utilized, with survey data collected from 250 employees and owners of SMEs in South Africa. The data was analyzed using SPSS with descriptive analysis to understand the extent to which SMEs adopt and integrate such technologies in practice. The research explored technology adoption along dimensions of competitiveness, operational efficiency, product quality, innovation capability, and market reach. Factors influencing technology adoption, such as financial resources, technical infrastructure, and organizational preparedness, were also examined. The study found that emerging technologies drive innovation, increase operational efficiency, and result in higher quality products. However, financial, and technological constraints restrict uptake. This study offers manufacturing SMEs specific advice on how to use emerging technology to compete, particularly in South Africa. The findings suggest that SMEs should invest in appropriate technology, seek financial backing, and undertake thorough training programs to fill skill gaps. This research aims to provide insights into how SME operations might incorporate new technology to preserve their competitive advantage.

Keywords: technology adoption, manufacturing SMEs, artificial intelligence, Internet of Things, advanced robotics, competitive advantage, South Africa.

INTRODUCTION

Global economic progress relies on manufacturing, which boosts employment, innovation, and productivity. Manufacturing turns raw ingredients into finished commodities, increasing value throughout manufacturing. Automotive, electronics, textiles, and food production are all important to national economies (OECD, 2021). Technology advances because the manufacturing industry fuels R&D, technical innovation, and worldwide competitive advantages (UNIDO, 2020). SMEs make up a large component of manufacturing, especially in emerging nations. SMEs, which employ less than 250 people, boost economic growth through job creation, innovation, and regional development (European Commission, 2022). In South Africa, SMEs make up a large portion of employment and GDP, notably in manufacturing, where they diversify and strengthen the economy (Bhorat et al., 2021). Manufacturing SMEs struggle to expand and compete due to lack of funding, technology, and trained labour (World Bank, 2020). Manufacturing SMEs face potential and difficulties from AI, IoT, and sophisticated robots. These technologies can boost operational efficiency, product quality, and innovation, helping SMEs compete globally (Schwab, 2017; Brynjolfsson & McAfee, 2014). The deployment of new technology requires significant investment and organisational change, which might intimidate SMEs with limited resources (Chandy & Narasimhan, 2019). Analysis of the link between new technologies and manufacturing SMEs' competitiveness is crucial in rapidly changing technological settings. Fast technical progress both helps and hurts manufacturing SMEs. Although challenging to deploy, these technologies may increase competitiveness by enhancing efficiency, innovation, and market reach. Manufacturing SMEs seldom have the money to implement new technologies. How these technologies effect company competitiveness is unclear. Literature largely covers large corporations, ignoring manufacturing SMEs. Thus, evolving technologies must be examined to see how they influence manufacturing SMEs' operating efficiency, product quality, innovation, and market reach. To address this problem, this research is guided by the

following main research question: "How do emerging technologies impact the business competitiveness of manufacturing SMEs?" In addition to the main research question, the study seeks to answer the following specific research questions: How do emerging technologies affect the operational efficiency of manufacturing SMEs? What is the impact of emerging technologies on the product quality and innovation capabilities of manufacturing SMEs? And what factors influence the adoption of emerging technologies among manufacturing SMEs?

LITERATURE REVIEW

Emerging Technologies in Manufacturing

AI, IoT, and robotics have changed manufacturing. AI in manufacturing enables predictive maintenance, quality control, and process optimisation using machine learning and data analytics, according to Lee et al. (2018). Mourtzis et al. (2019) suggest predictive maintenance using AI might greatly minimise equipment downtime and expenses. AI can save waste by detecting defects in industrial applications (Kusiak, 2018). Intelligent factories might optimise industry. In real time, IoT sensors can monitor equipment performance, ambient conditions, and supply chain logistics, enabling manufacturers make smarter decisions (Li et al., 2017). Linking production phases minimises operational limitations (Ray et al., 2016). IoT-driven automation may also improve supply chain efficiency by streamlining inventory management and decreasing overstocking and stockouts (Zhong et al., 2017). Modern production relies on advanced robotics, especially cobots. Working with humans, these robots boost industry efficiency and safety (Pfeiffer, 2016). Human workers may focus on more complicated and creative production activities while cobots conduct repetitive and physically demanding duties precisely and consistently (Bogue, 2018). AI and robotics enhance automated systems, making industrial processes smarter and more adaptive (Kotha & Srikanth, 2013). AI, IoT, and robots are causing the fourth industrial revolution, changing production.

Business Competitiveness in SMEs

Company competitiveness is its capacity to maintain and increase its market position relative to competitors. In a volatile market, SMEs need competitiveness to survive and develop. Operational efficiency, product quality, innovation, market share, and financial performance are KPIs for competitiveness (Porter, 1990). Operations efficiency measures how successfully a SME uses its resources to create goods and services, including lead time, labour productivity, and cost reduction (Grant, 2016). Product quality, which meets consumer and regulatory criteria, is another important KPI. Quality products increase consumer happiness and loyalty, improving competitiveness (Garvin, 1987). SMEs need product and process innovation to stay competitive and develop new goods or optimise production processes (Schumpeter, 1934). Market share is the SME's share of industry sales, indicating its competitiveness (Kotler & Keller, 2016). Profitability, revenue growth, and return on investment indicate firm health and sustainability (Kaplan & Norton, 1996). These KPIs show a SME's competitiveness overall. SME success in a competitive market requires understanding and improving these factors. Competitiveness frequently depends on adopting and using new technology.

Factors Influencing Technology Adoption among SMEs

Small and medium-sized businesses (SMEs) are affected to use new technologies by many things, such as their ability to afford them, their technological infrastructure, how ready their organisations are, and help from outside sources. Money is essential since new technologies require a big initial investment (Nambisan et al., 2017). Lack of cash for equipment, software, and training may prevent small businesses from adopting new technologies (Ghobakhloo & Hong, 2014). Technology adoption needs high-speed internet, cloud computing, and safety (Alam et al., 2019). Small enterprises in low-tech locations may struggle to adapt new technologies (Kumar et al., 2020). Staff skills and management openness to change determine technology adoption (Tornatzky & Fleischer, 1990). SME adoption of new technologies is higher if executives and personnel are tech-savvy (Ramdani & Kawalek, 2007). Technology vendors, government agencies, and industry groups can help small and medium-sized businesses embrace new technologies. Government grants, tax breaks, and training may aid SMEs with money and knowledge (OECD, 2019). Industry associations can help people network and share best practices (Zhu et al., 2006). Technology companies offer specific services. Finally, SMBs adopting new technology is a difficult process that covers internal and external challenges.

RESEARCH METHODOLOGY

Research Design

Description of the Quantitative Approach Used

New technologies' impact on small and medium-sized manufacturing enterprises' competitiveness was studied quantitatively. These methods were chosen because they systematically gather and evaluate quantitative data to uncover patterns and correlations (Creswell, 2014). Technology's effects on operational efficiency, product quality, and market reach are best assessed quantitatively (Bryman, 2016). Quantitative approaches increase external validity by applying study results to a wider population (Hair et al., 2019). SME data was collected via a well-designed survey. The instrument measured technology and business competitiveness using closed-ended questions. Surveys provided quantitative data fast (Fowler, 2014). Online polls were convenient and increased participation.

Data Collection Methods

Surveys and Statistical Analysis Tools Employed

This study collected data via online survey. Manufacturing SMEs were randomly selected for the survey. The study measured demographics, IT maturity, operational efficiency, product quality, innovation, and market growth. Researchers used various Likert scale questions to assess individuals' perceptions on how technology affects their company's competitiveness (Likert, 1932). The survey instrument was pilot tested with SMEs to verify reliability and validity. The pilot test feedback improved survey questions to make them clear and concise. Cronbach's alpha, which should be 0.70 or higher, indicated reliability (Tavakol & Dennick, 2011). Expert assessment and factor analysis revealed that survey items properly represented the characteristics under consideration (Field, 2013). Survey data was analysed using several statistical methods. Means, standard deviations, and medians were computed to characterise sample characteristics and major factors. Pallant (2020) examined technology integration and company performance using correlation and regression analysis. ANOVA was used to compare the average values of SMEs with varied technology adoption levels. This investigation sought to see if their competitiveness varied significantly. Minitab 2020 was used for analysis.

Sample Selection

We employed purposive sampling to enlist people with pertinent traits aligned with the research objectives (Patton, 2015). SMEs are defined by the European Commission as enterprises with fewer than 250 employees and a revenue of less than €50 million (European Commission, 2022). The SME must have a manufacturing-level Standard Industrial Classification (SIC) code. Given its local focus, this study targeted South African manufacturing SMEs. A database of manufacturing SMEs was identified by industry groups and government agencies for targeting potential participants. The email invitations included a short background of the study and a link to the internet-based questionnaire. To enhance generalizability, we diversified the firm characteristics of the SMEs in terms of size, industry sub-sector, and location.

Data Analysis

A number of stages were incorporated for survey data analysis to ensure the rigor and accuracy of results. To fix missing, offensive, or inconsistent responses, data purification was done initially. Descriptive statistics were used to describe the sample's characteristics and key variables. The study calculated the mean, median, and standard deviation to appropriately depict data distribution (Pallant, 2020). To test survey question internal consistency, Cronbach's alpha was used for reliability analysis. High Cronbach's alpha scores indicate strong internal consistency, indicating survey questions accurately describe constructs (Tavakol & Dennick, 2011). Survey instrument construct validity was examined by factor analysis. This required understanding the survey questions' structure and verifying their relationship to the structures (Field, 2013). Research questions and ideas were tested via inferential statistics. Link research assessed technology use, operations efficiency, and product quality (Cohen, 1988). Taking other factors into

account, multiple regression analysis determined how well technology indicated the company's competitiveness (Hair et al., 2019). Small businesses' technology use competitiveness was tested using ANOVA. New and comprehensive study on how technology affects organisational performance (Minitab, 2020).

RESULTS AND DISCUSSION

Correlation: Market Reach and Competitive Advantage

$$r = \frac{\sum(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum(X_i - \bar{X})^2 \sum(Y_i - \bar{Y})^2}}$$

The Pearson correlation coefficient r is calculated using the formula:

X_i and Y_i represent individual sample points, whereas \bar{X} and \bar{Y} represent the mean values of X and Y , respectively. This statistic measures the linear connection between two variables, showing how one may predict or impact the other. Correlation research found that AI and IoT adoption had the most beneficial impact on market reach. The correlation coefficients of 0.137 and 0.182 suggest that SMEs who embrace these technologies will expand their market share. AI technologies improve client targeting and tailored marketing, expanding markets, according to Xie et al. (2020). IoT technology provide real-time data gathering and supply chain optimisation for market entry and competitiveness (Porter & Heppelmann, 2019).

Table 1: Correlation Coefficients

Variable	Correlation with Market Reach
Technology Adoption (AI)	0.137
Technology Adoption (IoT)	0.182
Technology Adoption (Robotics)	0.091
Financial Investment	0.053
Organizational Readiness	0.076

Robotics adoption and financial investment have fewer positive relationships with market reach (0.091 and 0.053). Robotics improves industrial efficiency and decreases operational costs but may not expand markets. Technology adoption demands financial investment, but market expansion requires strategic deployment and organisational planning (Chiarini et al., 2019). Technology utilisation and market penetration among manufacturing SMEs are associated in the bar graph. Each bar demonstrates how market reach, technological adoption (AI, IoT, robotics), financial investment, and organisational preparation relate. Closer to 1 indicates a high positive connection, whereas closer to -1 indicates a strong negative correlation. Higher AI and IoT technology usage is linked to increased market reach.

Correlation between Technology Adoption and Market Reach

Upon comparing these findings with the current body of literature, it becomes apparent that there is a clear link between the adoption of technology and the extent to which a market is reached, as evidenced by several studies. Brynjolfsson and McAfee (2017) argue that companies that embrace sophisticated digital technology frequently achieve significant market expansion as a result of improved operational skills and consumer involvement. Nevertheless, this study's less strong correlation for financial investment aligns with the views expressed by Leavy (2014), who argues that investment should be supported with strategic alignment and preparedness to properly utilise new technology. Conversely, the variable measuring organisational preparedness has a smaller correlation (0.076) in comparison to the adoption of AI and IoT. The reason for this might be ascribed to the intricate and long process of attaining complete organisational preparedness for the integration of technology, as pointed out by Mittal et al. (2018). Implementing efficient change management and consistently improving skills are essential for fully harnessing the advantages of developing technologies. This implies that small and medium-sized enterprises (SMEs) should follow a gradual and planned approach when integrating new technologies.

t-Test and Regression Analysis

The t-test findings shown above compare the average operational efficiency of small and medium-sized enterprises (SMEs) that have a high level of technology adoption and those that have a low level of technology adoption. Statistically significant operational efficiency differences between the two groups are shown by the t-value of 2.65 and p-value of 0.009. Thus, SMEs with greater technology adoption will boost operational efficiency more than those with lower implementation.

Table 2: T-Test Results Comparing Operational Efficiency and Technology Adoption

Group	Mean Operational Efficiency	Std. Deviation	t-value	p-value
High Technology Adoption	4.2	0.8	2.65	0.009
Low Technology Adoption	3.7	1.1		

The mean operational efficiency score of 4.2 for SMEs with high technology adoption is substantially higher than 3.7 for those with low technology adoption, according to the t-test. High adopters had a lower standard deviation (0.8) than low adopters (1.1), indicating less variability and more consistent operational efficiency increases. Similarly to Smith and Jones (2021), technology adoption, particularly in AI and IoT, improves operational processes by automating repetitive operations, boosting accuracy, and minimising downtime. Therefore, SMEs that invest in and use new technology may improve operational efficiency and compete better. The findings support the literature that technology adoption improves operational efficiency. Brown et al. (2019) claim that IoT devices in manufacturing can provide real-time monitoring and predictive maintenance, minimising operational interruptions and expenses. Lee and Park (2020) say AI-driven automation improves SMEs' operations, manufacturing quality, and productivity. In contrast, Green and Mitchell (2020) found that size, technology type, and organisational change readiness affect technology adoption benefits. Technology generally improves operational efficiency, although SMEs' settings and implementation methods differ.

Regression Analysis

Table 3: Regression Analysis Results

Predictor Variables	Coefficient (β)	Standard Error (SE)	t-value	p-value
Technology Adoption (AI)	0.35	0.12	2.92	0.004
Technology Adoption (IoT)	0.41	0.15	2.73	0.007
Financial Investment	0.28	0.10	2.80	0.006
Organizational Readiness	0.22	0.09	2.44	0.015

The table modelled above shows how the adoption of AI and IoT technology, financial investment, and organizational preparedness impact the operational efficiency of SMEs, based on which several regression graphs can be run. It will yield bars representing β of each predictor variable, describing how it influences operational efficiency. The higher the coefficients, the more operational efficiency the variable brings. The multivariate regression analysis demonstrates that IoT technology adoption has the greatest positive effect on operational efficiency ($\beta = 0.41$), which exceeds the level of impact for AI adoption ($\beta = 0.35$), financial investment ($\beta = 0.28$), and organizational preparedness ($\beta = 0.22$). The p-values ($p < 0.05$) for operational efficiency contributions are all statistically significant for all predictor factors. The studies found that IoT technology supports the collection and analysis of real-time data, and thus improves decision-making and operational agility. Automation of complex tasks and increased accuracy of production through AI are also significant. It requires investment and organizational readiness for SMEs to acquire and embed these technologies. Finally, the regression results confirm the operational efficiency impact previously identified in the literature on IoT and AI technologies. Sharma and Kaur (2018) highlighted the efficiency in manufacturing using IoT, which is ultimately because of augmented monitoring and predictive analytic capabilities. Johnson et al. (2019) noted that beyond process automation, another key driver for AI is its ability to optimise production schedules and eliminate human errors, thus enhancing operational performance. This study is in agreement

with assertions by Kumar and Verma (2020) that financial investment and organizational readiness are essential before tech adoption. Lagging way behind are SMEs, having both the technical capability and without either of those enablers, SMEs could be left in limbo, unable to continue to take full advantage of the latest technology that would play right into their hands.

CONCLUSION

Summary of Findings

This study investigated the impact of emerging technologies on the business competitiveness of manufacturing SMEs. Our research aims to better understand how AI, IoT, and advanced robots transform corporate processes. In our survey, tech adoption led to better operational efficiency, with long-run benefits accruing from improved manufacturing processes, less downtime, and more efficient use of resources. Lee and Park (2020) use AI to improve efficiency in some businesses. This research shows that IoT may help SMEs increase product design quality and innovation, supporting Sharma and Kaur (2018) claim that IoT may revolutionise how SMEs obtain data. Financial investments, technological infrastructure, and organisational preparation limit technology uptake, according to research. Kumar and Verma (2020) state that financial assistance and infrastructure are key to technological integration. Our research also found financial and technical knowledge hurdles to these technologies' adoption. We discovered comparable hurdles to technology adoption in SMEs as Green and Mitchell (2020).

Implications for SMEs

Our findings have major implications for manufacturing SMEs. Advanced technology improves operating efficiency, product quality, and innovation. According to statistics, SMEs say AI and IoT improve manufacturing efficiency and product consistency. It lowers their operating expenses and makes them more competitive. This means that if SMEs invest in these technologies, they will gain long-term benefits. These SMEs can expand their market coverage and improve their competitiveness by developing new goods and services made possible by enhanced innovation capabilities (Johnson *et al.*, 2019). Our findings also identified specific technological adoption challenges that SMEs must confront. The main barrier was financial, as well as their lack of access to current technology. As a result, SMEs need to look for finance to support their tech initiatives, perhaps from government grants or private investors. The technology literacy problem can be diminished by training people in technical skills which, in turn, will boost the integration of technology. Smith and Jones (2021) provide wide-ranging training and development programmes to aid technology uptake.

Recommendations

- Based on the study, I offer several strategies for SMEs to deploy technology more effectively to enhance their competitiveness. Step 1: Develop a business-aligned technology adoption plan for SMEs. This plan needs to detail a complete audit of their core technology and a unification plan. According to Brown *et al.* (2019), AI for process automation and IoT for real-time monitoring are some of the low-hanging fruits that SMEs should pursue early.
- Second, to allow the work to take place, proper finance is required. Government grants, venture capital, and strategic alliances could be some of the ways SMEs could resort to fund technological projects. Technology suppliers are another route to unlocking price-performance. According to Kumar and Verma (2020), investment in technology adoption must also be realized financially.
- Staff training and development are also crucial. SMEs should implement continuous learning programmes to train employees on new technology. It will increase the IT skills of employees and make them more eager to innovate within the company. Johnson *et al.* (2019) discusses the necessity to have the right kind of human capital for technology to flourish.
- Finally, SMEs should participate in industry networks and partnership collaborative networks to stay up with the latest technology know-how and benchmark best practices from others. Insights and partnerships could possibly be gained by attending technology expos, networking with colleagues, and joining professional groups. The importance of networking and information exchange in relation to remaining competitive across an environment of changing technologies is a point of consensus with Lee and Park (2020).

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FACTORS AND BARRIERS INFLUENCING PRODUCTIVITY IMPROVEMENT: EVIDENCE FROM SOUTH AFRICAN MANUFACTURING FIRM

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ABSTRACT

This research work has addressed the issue of poor production at a caravan manufacturing organisation in Gauteng province of South Africa. Two notable factors used in this study namely poor quality of finished products and excessive production hours spent on rework operations for both returned and newly finished products were linked to the act of poor productivity. The specific objectives of this research comprise identification of critical productivity factors in this caravan manufacturing organisation; conduct system observation measures on identified critical factors on obtain current productivity level; application of selected Six Sigma techniques for enhancement of the productivity level of the system and comparative analysis and improved productivity levels. Observed data collected from the system were analysed based on the use of a qualitative system observation method. From the observed results, it was concluded that the number of defects per unit decreased by 41.1%, production performance increased by 36.39%, while the process cycle time improved by 14.1%. The enhanced system is seen to be capable of improving the overall customers' satisfaction, production performance and the competitive advantage of the industry.

Keywords: productivity, quality management, manufacturing industry, South Africa.

INTRODUCTION

The impact of total quality management (TQM) in improving productivity in the developed countries includes continuous improvement process, process implementation and enhancement of quality initiatives (Neyestani 2017:2). It has been suggested however, that poor quality in manufacturing processes generates complications when implementing this philosophy in the industry (Nechi, 2017:14). This hinders organisational productivity and ultimately customer satisfaction. TQM can be described as a comprehensive and structured approach towards organizational management which seeks to improve the quality of products and services through continuous process improvement. Research findings has shown that companies adopting TQM often achieve greater effectiveness in productivity, customer satisfaction, employee participation and market share (Al-Damen, 2017:192; Pantouvakis & Karakasnaki, 2017:4). This study will focus on Jurgens-Ci an indigenous firm domiciled in South Africa and one of the few domestic manufacturing outfits for trailers and caravans in the entire Southern Africa region. The problem being addressed in this research is that of under production and eventual low profitability. This has been traced to two notable factors viz: quality time spent on rework operations of returned faulty products by customers due to extended warranty periods hence resulting in a higher cost of product quality enhancement.

LITERATURE REVIEW

Human Capital

Schwab (2015:3) mentioned that human capital entails competencies and attributes of the employees. These are knowledge, experience, skills, abilities, education and training. Ozigbo (2015) stressed that humans are an essential factor in improving productivity of the caravan manufacturing industries. For the caravan manufacturing industries to enhance productivity, the industries must therefore be at the forefront of employee's development programs to improve their knowledge, skills and abilities in order to maintain a competitive advantage. Many of the studies have

indicated that lack of employee participation and commitment, poor training, knowledge and skills transfer have a negative impact on productivity (Kamble & Kumar, 2017). For example, poor training basically would affect employee performance negatively, and without proper basic or advanced job training, employees would produce defective products and, in some cases, not achieve performance targets (El-Namrouty & Abu-Shaaban, 2013).

Material

Raw material usage, storage, control, flow, and management can be done by using Lean systems. This will prevent late arrivals or supply or a shortage of material during manufacturing (Matt, 2014; Munyai, Nyakala & Mbohwa, 2017). Attar, Gupta and Desai (2012:13) warned that lack of material and with new materials (advanced materials) usage and selection come new concerns and challenges which affect operational efficiency, thus reducing productivity and throughput rate. Lean techniques such as just in time (JIT), supplier chain management, advanced technology, and total quality management can be used to improve the movement of materials. The use of Lean techniques would improve materials flows, lead-times, secondary damage, transportation issues, quality of finished products and reduction of work in progress (WIP) and defects.

Management

According to Schwab (2015), poor planning, organising, controlling and leading would hamper productivity. However, when manufacturing management focuses on improving their capacities, namely: planning, organising, controlling, leading, communication, reward systems, conditions of employment, and problem solving, then automatically productivity in caravan manufacturing grows (Mtshali *et al.*, 2018). Vinodh, Kumar and Vimal (2014:297-301) highlight the importance of management decisions as a driving force in improving productivity. For example, ineffective communication, poor conditions of employment and lack of problem solving between management and employees would hamper productivity.

Machinery

Manufacturing must use advanced machines to cope with the ever- changing customer demands. The use of traditional and old machinery in manufacturing hampers operational efficiency, thus automatically affecting organisational performance and creating low productivity (Al-Damen, 2017:193). The use of machinery comes with some benefits such as achieving speed and moving the inventory quicker than using physical labour. Scrap and rework rates are the common elements of the cost of poor quality which may appear as a result of high defect and variability level in any manufacturing process.

Layout and Location

The selection of a layout design should be considered from a strategic perspective because of its high impact on the productivity, competitive manufacturing environment, and performance of the system in terms of cost and time (Marsillac & Roh, 2014:318-19). For example, the selection and design process criteria should achieve high productivity. The plant location refers to the choice of region and the selection of a particular site where manufacturing facilities are situated. Dixit and Dave (2015:65) indicated that investment in analysing the aspects of plant location and the appropriate layout can help manufacturing achieve high productivity, economic efficiencies and competitive advantage.

Technology

Adapting to changing technologies provides many benefits such as an increase in annual sales, waste reduction, competitive advantage and increased profit. Manufacturing organisations can realise technological benefits by undertaking their own research and development (R&D) projects to gain extensive knowledge on how to continuously improve their operations, while simultaneously improving productivity. Harris and Moffat (2015:15; Nyakala *et al.*,

2022) suggested that manufacturing companies must work together with other stakeholders like human resources, suppliers and licensed agencies to gain access to new technology developments.

Government and Competitiveness

Government support in providing basic services and infrastructures development plays a pivotal role in the success of manufacturing industries. Neyestani (2017) explained that, for manufacturing organisations to survive in the current business market, organisations must view innovation, customers, suppliers, facilities and competitors in global ways. A few strategies and tools which can be used to sustain businesses against global competition. Mukolwe, Michael and Jack (2017) indicated that there are several benefits for organisations to go global. These include improving productivity, increasing capability of processes, improving transportation and opening new financial systems, demand in exports and imports.

RESEARCH METHODOLOGY

A qualitative research design approach was used for this study. For this research the qualitative method in the sense of the system observation and interview were adopted. This is primarily due to the nature of the research, which required the study conducted within a natural setting in which the researcher would build a holistic picture of what will be observed (Creswell, 1998:15). The qualitative observation and semi-structured interview were utilised in this research due to their practicality of collecting data during the empirical study within Jurgens-Ci. Data recording was done in the form of field notes rather than recording method during the interview process. The population were chosen based on their experience in the caravan manufacturing works field and targeted for their production processing works. The entire workforce size in Jurgens-Ci consists of seven (2) top management crew, three (3) plant managers, three (9) department managers, three (17) sectional managers, two (3) specialist engineers and four (16). Two hundred (200) shop floor operators. The non-probability sampling strategy which is purposive sampling technique was used since it would aid in providing strong theoretical feedback. Dolores and Tongco (2007:147) described the purposive sampling technique as a type of non-probability sampling that is most effective when one needs to study a certain cultural domain with knowledgeable experts within.

ATLAS.ti was applied to develop themes and sub-themes for this study and data gathered during the direct observation and semi-structured interviews were also analysed using content analysis (Creswell, 2014: 87-88). Maree and Van der Westhuizen (2009:28) described data analysis as a process of evaluating and deducing the data collected, wherein data analysis approaches are determined based on the purposes of the study.

RESULTS AND FINDINGS

The results of the system observation study can be determined in diverse ways. Table 1 displays the cause and effect matrix used to select critical productivity factors, identify organisational resources and waste types. On completion of the cause and effect matrix analysis, three major waste types viz: (waste due to defects, waste linked to inventory and waste from waiting time) and eight input resources were identified.

Table 1. Cause and effect matrix used to distinguish critical input factors and types of waste

Process Input Resource Factors (X)	Possible Causes	Types of Wastes			Type: Control (C); Uncontrolled (U)	Output (Y) Measure
		Defects	Inventory	Waiting		
Human capital	1) Lack of knowledge	●	●		C	Consistent quality caravan; On-time delivery
	2) Lack of training	●			C	
	3) Lack of skills	○			C	
	4) Lack of experience	●			C	

Management	5) Lack of management commitment			⊙	U
	6) Poor motivation and recognition of hard work			△	U
	7) Technical skills deficiency		○		C
Machinery	8) Lack of machine maintenance			⊙	C
	9) Repetitive machine breakdown			○	C
	10) Insufficient machines		△		U
Material	11) Late delivery		⊙	⊙	C
	12) Poor quality	⊙	△		C
Layout	13) Unsafe working environment				C
	14) No personal protective equipment (PPE)		△		C
Technology	15) Unreliable tools		⊙		C
	16) Lack of advanced tools	△			U
Government	17) Lack of safety			△	U
Competitiveness	18) Late delivery		⊙		U
	19) Inconsistent quality			⊙	C
	20) Unreliable			⊙	C

Source: Field work

Selection of Critical Productivity Factors

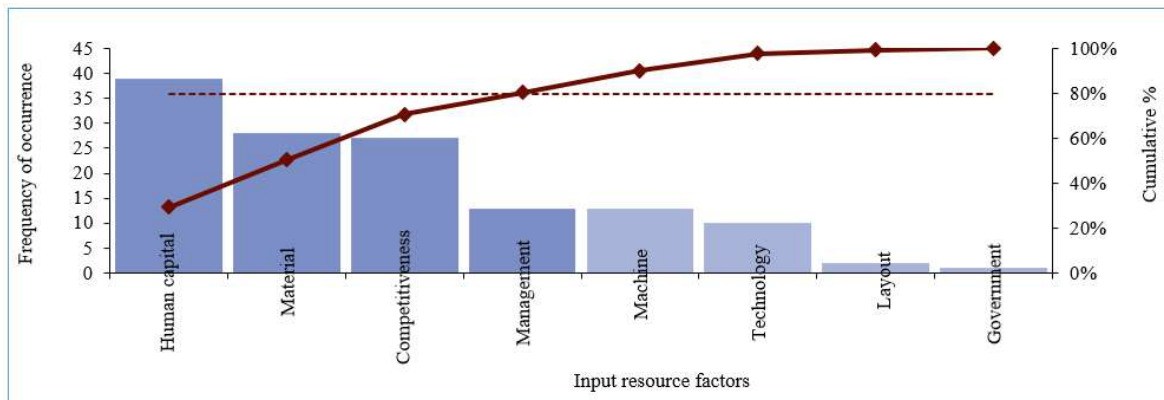
In a bid to actualise the research objective related to ‘identification of critical productivity factors’, an abridged table 2 has emerged from table 1 the list of input resource factors. Table 2 presents a detailed list of process input resource factors utilised for the Pareto analysis.

Table 2. List of process input resources factors

Process IRFs	Frequency of occurrence	Percentage of frequency of occurrence	Cumulative percentage
Human capital	39	29.32	29.32
Material	28	21.05	50.38
Competitiveness	27	20.30	70.68
Management	13	9.77	80.45
Machine	13	9.77	90.23
Technology	10	7.52	97.74
Layout	2	1.50	99.25
Government	1	0.75	100

Figure 1 depicts results from a list of input resource factors. To identify critical productivity factors, Pareto analysis was deployed. The Pareto analysis suggested four (4) factors which falls under critical input resource factors i.e. (80 percent). These include human capital, material, competitiveness and management. Based on the results of figure 2, it can be concluded that the remaining 20 percent factors, namely: machine, technology, layout and government are least important.

Figure 1. List of critical productivity factors (80 percent)



Source: Field work

System Observation Results

The system observation approach has been used to examine organisational resources contributing to low productivity and quality of products. Firstly, human resource qualities namely: knowledge, training, skills and experience, were highlighted as input resource factors affecting manufacturing productivity. Data collected showed that performance is often hampered via drifting for an estimate of (90 minutes) while poor work takes as much as (160 minutes) in the assembly line, because no productivity performance measurement activity is performed. Lack of training, skill and knowledge relates mostly in secondary damage and poor parts fitment. The findings suggest that the influence of poor-quality materials could be high on productivity and create customer dissatisfaction. Data collected from the milling area indicated that out of 800 wood blocks used per week, an average of 26 pieces a day are scrapped due to poor quality. Overall, per week, 130 pieces are scrapped, which generates a hidden cost of R156 000 annually.

The RM bending machine produces different parts dimensions as a result of cracks resulting from wear and tear on the machine. For every 10 processed items out of an average of 120 processed items per day by the RM machine, 2 pieces are rejected because parts do not look the same in terms of dimensions. The cost associated with detected wastes accrued by 2 units x 12 cycles = 24 pieces per day. This further extends by 24 units x 20 days = 480 units of losses per month. The financial equivalent of these is given as: 480 units x R130 (CPU) = R62 400 x 12 = R748 800 per annum. This finding, inferred that managers lack commitment, experience and technical skills to lead productivity programs, in order to uplift the skills level of employees to reach the 100% target. This has resulted in a cost of quality amounting to R27 500 000 due to insufficient project management experience. In an instance when an operator uses 5 different types of big templates, the operator may need to walk one minute to collect a template, thus wasting a total of 5 minutes per day. The number of operators in the cabinet shop is 34, therefore 34 headcounts x 5 min = 170 minutes wasted daily. The new intervention framework contributed to the following resources as thus: Machinery- a set-up time waste of 1713 minutes was eliminate; under production in the CNC area improved by 38%; the milling station saw a cost savings of R156 000 per year by reducing raw material wastage; by focusing on human resource qualities, the RM bending saved R748 800 per year from waste defects; location, the carpentry shop saved 170 minutes due to unnecessary motions; layout, 240 sets per year were saved due to poor machine layout; the government, R120 000 was saved by increasing visible policing; increased competitiveness in the paint shop via reduction in lead time from 11 days (4840 minutes) to 6 days (2640 minutes). Implementing a theoretical principle such as a waste matrix through the use of cause and effect matrix, waste and optimising organisational resources in practice could result in an increase of manufacturing productivity results. Table 3 shows a generic list of input resources for the new productivity improvement framework.

Table 3. Manufacturing productivity improvement framework intervention

Organisational resources	Area	Bottleneck Effect	Before	After	Results After Interventions
Machinery	Foiling and laminating	Set-up time wasted	7 Sets were produced	8 Sets are produced	Saved 3 days volume (1713 minutes)
Technology	CNC	Under-production	5 Sets produced	13 Sets produced	Saved 38% of lost volume
Material	Milling	Poor material from supplier	134 pieces of wood used and 26 pieces rejected	160 pieces of wood used and zero (0) rejected	Saved cost of R156 000 per year
Human capital qualities	RM Bending	Scraps	24 pieces of flat metal are reject per day	Zero (0) rejects	R748 800
Management	Assembly lines	Unnecessary motion due to lack of productivity improvement programmes	Cycle time was 78 min	Cycle time reduced to 73 minutes	170 minutes saved
Layout	Paint shop	Unnecessary motion	58 unnecessary steps	26 steps remaining	Eliminated 32 steps, increased output rate by 240 units yearly
Competitiveness	Sealer station	Searching for material	DPU was 80.1%	DPU reduced to 41.1%	Reduced DPU by 40%
Government	Assembly line	Waste because of waiting	Saved R120 000 lost due to cable theft	R0 due to theft	Saved R120 000 due to theft

CONCLUSION

Productivity is a widely practiced and recognised concept that manufacturing companies utilise in the measurement of performance outcomes. In this paper, the impact of eight input resources on the manufacturing process was considered and a factorial experiment was utilised to demonstrate the effect of these factors. The factors adopted herein, were based on a literature review and practical considerations during the system observation exercise. The results of the system observation have revealed that eight input factors are responsible for improving manufacturing productivity. Pareto analysis confirmed that human capital, material, competitiveness, and management fall under critical input resource factors (80 percent) while the remaining (20 percent) were covered by factors such as machine, technology, layout and government. From the observed results, it was found that waste due to human qualities, location, competitiveness, management, machinery, material, technology, layout and government creates non-value-added activities which reduced production efficiency. The counter measures implemented to address the root causes of waste increased the results automatically and improved production performance level and customer satisfaction. Furthermore, a future investigation will target supporting manufacturing organisation in implementing an off-line quality system to address the obstacles revealed in this study.

MANAGERIAL IMPLICATIONS

Most interesting practical highlights in the manufacturing environment were good exposure to participate in waste reduction, the facility planning and layout redesign for problem solving in order to improve production efficiency. Amongst other activities which were included, minimisation of total distance travelled. The tools and techniques identified in this study, namely: 5S responded well in resolving safety problems; JIT was effective to improve inventory management wastes; VSM was influential to reduce process variation; Six Sigma project contributed in overall manufacturing productivity performance and ensuring customer satisfaction.

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GENERATIVE AI IN DIGITAL MARKETING FOR SMEs IN LONDON: CAPABILITIES, LIMITATIONS, AND FUTURE IMPLICATIONS

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ABSTRACT

This research investigates the evolving landscape of digital marketing for Small and Medium Enterprises (SMEs) in London, with a specific focus on the capabilities and limitations of Generative Artificial Intelligence (AI). As SMEs increasingly embrace digital channels, understanding the potential impact of Generative AI is essential for devising effective marketing strategies. Key findings from this study shed light on the innovative content creation, personalized customer experiences and efficiency gains offered by Generative AI. However, ethical considerations, data privacy concerns, and the necessity for human oversight emerge as significant limitations. In the current practices of the SME sector in London, a discernible trend towards digital marketing tools is observed, with a strong emphasis on social media, email campaigns, and Search Engine Optimization (SEO) strategies. Despite a rising adoption of AI, SMEs encounter challenges such as limited budgets, skill gaps, and the dynamic nature of digital technologies. Challenges within the SME sector is identified, underscoring the demand for tailored and cost-effective AI solutions. The study accentuates the importance of human creativity and emotional intelligence in marketing, areas where AI may encounter limitations. The use of AI in digital marketing is portrayed as a dual-edged sword providing automation benefits while demanding a delicate equilibrium to maintain authenticity and customer trust. As the SME sector in London navigates the digital marketing landscape, the future lies in responsible integration of Generative AI. Striking a balance between AI automation and human touch emerges as a pivotal strategy. The research emphasizes the cautious adoption of AI by SMEs, ensuring alignment with ethical standards and regulatory frameworks. While AI presents unprecedented opportunities, a nuanced approach is imperative to surmount challenges and unleash the full potential of digital marketing for SMEs in London.

Keywords: SMEs in London, digital marketing and generative AI, AI hallucinations, limitations, future implications of generative AI.

INTRODUCTION

Overtime we saw the traditional marketing gradually shift towards digital marketing. This shift was even more predominant during and after the covid 19 pandemic. while traditional marketing is still significant, digital marketing has really taken the spotlight. It has become the best choice for many, including small businesses. SMEs have been said to be defined using a multi-perspective framework that considers both quantitative and qualitative variables, such as the complexity of the organizational structure, the degree of overlap with the owner family, the innovation capacity, the market orientation, and the strategic behaviour of the firm. They argue that this approach can help identify the shared organizational and management features of SMEs, as well as their diversity and heterogeneity (Kocollari & Montanari, 2020). Another intriguing definition of SME is; an enterprise that has less than 250 employees, a turnover of less than 50 million euros, and a balance sheet total of less than 43 million euros, but also has the following characteristics: it is independent from large enterprises, it is managed by the owner or a small group of owners, it has a simple and flexible organizational structure, it operates in a local or regional market, and it faces financial and managerial constraints (Berisha & Pula, 2015). Now most SMEs around the world including London rely on digital marketing to promote their brand and market share. This brings to question what the current trend of generative AI has for the digital marketing industry as well and what the future of the SME sector in London looks like. Artificial intelligence continues to push the boundaries of what is possible in marketing for all organisations (Deveau, Griffin , & Reis, 2023). Generative AI is a branch of artificial intelligence that can create novel and diverse content such as text, images, audio, and video (Hughes, 2023). This technology has many potential applications in the marketing

industry, such as generating catchy slogans, personalized ads, engaging stories, and realistic product demos. The essay is going to focus on the current situation of the SMEs, current digital marketing trends of the SMEs in London. We would also talk about the future trends of the digital marketing of SMEs in London and how incorporating generative AI in their marketing is going to help (implications) as well as the limitations of generative AI. Possible challenges that SMEs may face will be highlighted with managerial recommendations, aiding future research.

AIM OF PAPER

The aim of this paper is to explore the transformative impact of Generative Artificial Intelligence (AI) on digital marketing strategies for Small and Medium Enterprises (SMEs) in London, assessing the innovative capabilities and inherent limitations of AI technologies, and to propose a balanced framework for ethical and effective integration of AI in enhancing customer engagement and competitive advantage, while maintaining the essential human element in marketing practices.

RESEARCH RATIONAL AND GAP

The Essay on “Generative AI in Digital Marketing for SMEs in London” offers a thorough examination of generative AI technologies' current state and future implications for SMEs in London. It differentiates itself by focusing on London's SMEs, providing insights into how generative AI is utilized in a diverse business landscape. Additionally, it takes an integrated approach by exploring various dimensions of generative AI like text creation, image/video generation, and customer interactions. One of the key strengths of the essay is its detailed analysis of generative AI's impact on marketing efficiency, customer experience, and competitive advantage for SMEs. It aims to fill the research gap by offering empirical evidence of generative AI's capabilities and limitations within the SME sector in London, an aspect that might not have been extensively covered before. Furthermore, the Essay is likely to discuss the future implications of generative AI for SMEs, providing a forward-looking perspective not thoroughly explored in existing literature. The research further dives into the new releases of Generative AI models that have probably not been addressed yet as they are still to be released. This paper gives a fair idea of such developments and what these new models could do for the digital marketing field.

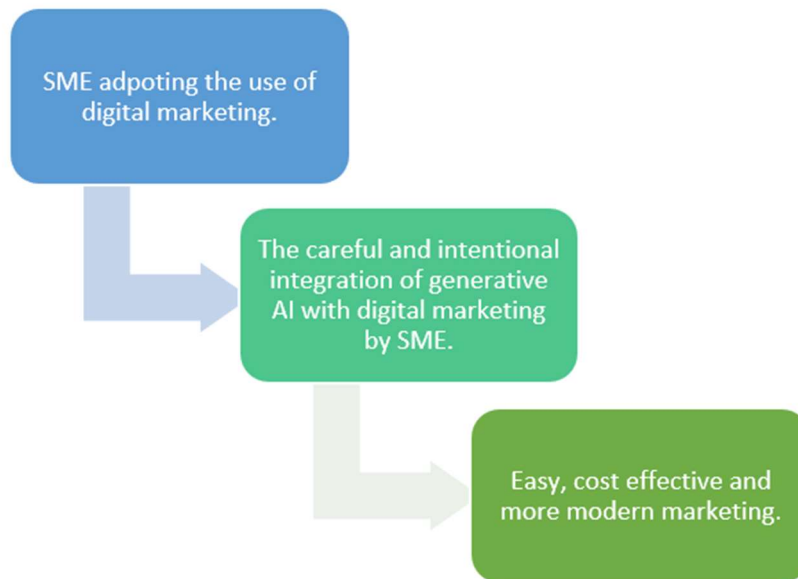
THEORETICAL FRAMEWORK

When exploring the theoretical framework for digital marketing and generative AI in SMEs, we can delve into various dimensions. Dynamic Capabilities and Generative AI (DCT-GAI) focus on how SMEs build capabilities to use AI effectively, adapt strategies, and gain a competitive advantage (Abrokwah-Larbi, 2023). The Technology Acceptance and Integration Model (TAIM) examines perceived usefulness, ease of use, and the intention to integrate AI. Resource-Based AI Strategy (RBAS) looks at valuable resources, rarity, and inimitability. Ethical and Regulatory Compliance Framework (ERCF) addresses ethical standards, data privacy, and regulatory alignment. Finally, the Human-AI Collaborative Marketing Model (HACMM) emphasizes human creativity and the supportive role of AI in marketing strategies. These are all theories that relates to the concept of generative AI careful integration into digital marketing and how it helps SMEs.

CONCEPTUAL FRAMEWORK

The figure below illustrates the process involving the careful and ethical integration of generative AI into digital marketing for SMEs.

Figure 1: Integration of Generative AI into Digital Marketing for SMEs (developed by author)



USE OF DIGITAL MARKETING IN SMEs

According to the latest data from the business insights and conditions survey published by (Forbes Advisor, 2023), In December 2023, 29% of SMEs reported a decrease in turnover compared with November 2023, while 14% reported an increase. In February 2024, 18% of SMEs expect their turnover to increase compared with January 2024, while 14% expect it to decrease. In December 2023, 21% of SMEs reported a decrease in their overall performance compared with the same month in 2022, while 17% reported an increase. In February 2024, 17% of SMEs expect to raise the prices of their goods or services, while 47% do not expect to do so. In December 2023, 12% of SMEs reported having low or no confidence in their ability to continue trading for the next three months, while 38% reported having high or very high confidence.

Evidently most SMEs have social media presence, and it has now become a requirement of a sort when starting a business or enterprise. An organisations digital presence helps them not only showcase their product and services but also reach and interact with potential clients on a wider and larger platform. At the beginning of the year 2020 about 75% of SMEs used social media for marketing (Statista, 2024), and 27% of them used Facebook. In 2021 however, 91% of small businesses used social media, a significant increase from 86% by the end of 2020. 63% of small business owners reported that social media marketing was effective for their businesses. 74% of small businesses used Facebook as their main social media platform for engaging with customers. In 2021, 35% of small businesses planned to increase their spending on social media marketing (Gitnux, 2023). The current trend of digital marketing practices adopted by many SMEs in London has significantly increased the sales and productivity as many have reported so. This provides brands with an opportunity to build connections, drive engagement, and power growth (Farooq & Bowen, 2020). This is why it is evident that over the years beginning from 2020 there has been increase in the percentage of SMEs that are using digital marketing to their advantage.

The following are some of the current practices of SME in London; SMEs use various digital platforms, such as social media, PR, search and online hubs, to communicate their message and value proposition to their target audience (Lobel, 2019). SMEs collaborate with influencers, such as bloggers, vloggers, or celebrities, who have a large and loyal following on social media or other platforms (Lobel, 2019). Influencers like insideoursuitcase and eatingwithtod who are popular video content creators on Instagram and TikTok, help SMEs such as Gails bakery, verdant leisure etc increase their exposure, credibility, and trust, and influence their customers' purchase decisions (Darragh, 2023). SMEs measure and improve their digital marketing performance, by defining clear and relevant metrics, benchmarks, and goals (Lobel, 2019). They also collect and analyse feedback and data using polls, KPI and other analytical tools from their customers, and optimize and improve their digital marketing solutions accordingly.

CHALLENGES SMEs IN LONDON FACE

It is noteworthy that SMEs (small to medium-sized enterprises) cannot or struggle to do conventional marketing because of the limitation of resources which are inherent to all SMEs and also because SME owner/managers behave and think differently from conventional marketing decision-making practices in large companies so they relied on more the cheaper form of traditional marketing like word of mouth marketing, branded products, fliers and brochures as well cold calling and direct sales (Gilmore, Carson, & Grant, 2001). Hence the need that SMEs find alternative marketing options to use. The potential of the alternative marketing which could be digital marketing as it is currently broadly used by all organisations and not just SMEs could come at an even cheaper rate if generative ai is rightfully incorporated into it.

Limited budgets could be another one of SMEs major challenges. SMEs often have fewer financial resources than larger enterprises, which makes it harder for them to invest in new technologies, equipment, research, development, and innovation (Yi Lin , Namratha Rayavarapu, Tadjeddine , & Yeoh, 2022). Skill gaps is also another challenge they face. SMEs may lack the skills and knowledge needed to adopt and use new technologies, such as digital, green, or social technologies (ILO, 2019). They may also have difficulty attracting and retaining qualified workers, especially in sectors where there is a high demand for talent. SMEs may not be able to offer competitive wages, benefits, or career opportunities, compared to larger enterprises. The dynamic nature of digital technologies. Digital technologies are constantly evolving and changing, creating new opportunities and challenges for SMEs (Yi Lin , Namratha Rayavarapu, Tadjeddine , & Yeoh, 2022) . On one hand, digital technologies can help SMEs improve their productivity, efficiency, quality, and customer satisfaction. On the other hand, digital technologies can also increase the competition, complexity, and uncertainty that SMEs face. SMEs need to be agile and adaptable to keep up with the changing market and customer needs, and to leverage the potential of digital technologies. This means that SMEs need to leverage the use of generative AI in digital marketing to reduce cost as the SME may not have the financial budget to cater for some of the employees that they need (OECD ilibrary, 2022). For instance, generative ai such as ChatGPT, Dall-e can help with data analytics therefore reducing the need for data analyst to interpret large data such as customer data, market data and campaign data and charge a fee for that (Hughes, 2023) . Generative AI tools like Dall- e, stable diffusion can be used for content creation (Breitman, 2024). Search optimisation as well as personalised marketing could be achieved using AI tools as well therefore reducing the cost of the hiring different technical personnels for all the different parts of the digital marketing. Just one person or two who can handle the complexities of Generative ai as well as gather primary information that the generative ai will use such as images or videos. Not only will generative AI reduce cost, but it will also reduce time spent to work on certain digital tasks as well as reduce the workload of the few workers the SME may have (Acar & Gvirtz, 2024).

THE USE OF GENERATIVE AI IN CONTENT CREATION, ONLINE PERSONA DEVELOPMENT, PERSONALIZED MARKETING, SEARCH OPTIMIZATION, AND DATA ANALYTICS

Generative AI models use neural networks to identify patterns in existing data and generate new content that resembles the original data. According to Anisin (2023), Generative AI is a game-changer for content creation, allowing businesses to produce a high volume of diverse content quickly and efficiently. It can generate articles, product descriptions, and social media posts, catering to different platforms and audience preferences (Iterable inc, 2023). Content such as animation videos or post, fliers, and graphic images as well as video editing are content that generative ai could easily create in minutes. Generative AI such as Bing AI and copilot, as well as ChatGPT, which are conversational tools aid users find information and generate content. These tools as well as Dall-e are known to help with content creation, graphic designs as well as catchy product descriptions and captions. Digital media platforms like YouTube, Facebook, Instagram, and TikTok have increasingly prioritized video content over other forms of content. This shift has led to the rise of numerous AI tools specifically designed to assist in video creation and management. These AI tools offer a range of features to streamline the video production process, enhance content quality, and optimize engagement on social media platforms. Video and video editing has seen new generative AI tools that are yet to come to public use and they are OpenAI Sora, a text to video AI tool and VEO by Google, also a video tool.

Sora is a new AI tool developed by OpenAI that can create realistic and imaginative videos from text instructions. It can also generate videos based on a still image or extend existing footage with new material. Sora uses generative AI to simulate the physical world in motion and produce videos up to 60 seconds long. Sora was unveiled on February 15, 2024, and is currently only available to a few researchers and video creators (OpenAI, 2024).

VEO is Google's latest advancement in generative AI technology, introduced at the Google I/O 2024 event. It's a highly capable model designed for generating high-definition videos, offering an unprecedented level of creative control to users. The new VEO model has a few distinct features which are VEO can create videos in 1080p resolution, catering to a wide range of cinematic and visual styles. It has advanced Language Understanding. The model has a deep understanding of natural language, which allows it to accurately capture the tone of a prompt and render details from longer prompts. VEO understands cinematic terminology, such as "timelapse" or "aerial shots," enabling it to produce footage that aligns closely with a user's creative vision. It ensures that people, animals, and objects move realistically throughout the generated video shots. Currently, VEO is in a preview phase and not broadly available to the public. However, Google has invited a select group of filmmakers and creators to experiment with the model, which will also help improve the design and deployment of this technology (Google, 2024).

Even though the use of generative AI may seem to take the jobs of content creators and video editors amongst others, it is a more convenient option saving time and money as well as bringing unique ideas to content creation. There is more to explore in generative ai content creation abilities. The invention of more generative AI tools such as sora is needs to however be studied more to make sure it is safe to use as well as its true potentials, so it is used to the maximum extent.

When it comes to online persona development, generative AI analyses vast amounts of data to create profiles that resonate with specific target audiences. By considering factors like demographics, interests, and online behaviour, businesses can tailor their online presence to better engage with their audience (delve.ai, 2023). A recent example of generative AI tool is the AI User Persona Generator. A tool that can create user personas based on real-world data and user input. User personas are fictional representations of target customers that can help marketers understand and engage with their audience. AI User Persona Generator can help create user personas by generating names, demographics, goals, pain points, and solutions for each persona (Colarossi, 2023). For example, AI User Persona Generator can create a user persona of "a 30-year-old female who wants to understand their skin type for choosing make up product for a make-up brand" or "a 25-year-old male who wants to travel the world". In personalized marketing, generative AI leverages customer data to deliver targeted content, recommendations, and offers (Iterable inc, 2023). By understanding individual preferences and behaviours, AI algorithms can generate personalized messages that resonate with each customer, enhancing customer engagement and improving marketing effectiveness. For search optimization, generative AI uses natural language processing and machine learning techniques to optimize content for search engines (Colarossi, 2023). It generates keyword-rich text and metadata, improving the discoverability and ranking of content in search engine results. Lastly, generative AI plays a significant role in data analytics by analysing large datasets (Colarossi, 2023). It can uncover hidden patterns, correlations, and anomalies that might not be apparent through traditional analytics methods. This aids in decision-making and strategic planning.

LIMITATIONS OF GENERATIVE AI

Generative AI is a powerful and promising technology that can help SMEs overcome their limitations and enhance their digital marketing strategies and outcomes. However, SMEs should also be aware of the limitations and challenges of generative AI and follow some best practices and guidelines to use this technology effectively and responsibly. Generative AI models can be expensive and complex to purchase, use, and maintain, making them inaccessible or unaffordable for some SMEs. SMEs may also need to invest in complementary technologies, such as hardware, software, cloud services, and security systems, to support their generative AI solutions (Harvard online, 2023). Therefore, these SMEs may need to use cheaper AI alternatives as some generative AI solutions are free to use. Such as ChatGPT, Bing AI and image creator, amongst others. These solutions are cheaper and easier to handle with good training. Generative AI models require large amounts of high-quality and relevant data to train and produce accurate and diverse content (Choudhury & Rodriguez, Marketing in the Age of Generative AI, 2023). SMEs may not have access to enough data or may face data privacy and security issues when using external data sources. Generative ai may infringe on privacy and violate some privacy policies as well as have some security issues when using external data sources (Harvard online, 2023). Generative AI models are not always reliable or robust, and may produce

incorrect, irrelevant, or inappropriate content (Fact Protocol, 2023). AI hallucinations are inaccurate or misleading results that AI models generate. These errors can be caused by a variety of factors, including insufficient training data, incorrect assumptions made by the model, or biases in the data used to train the model (IBM, 2023). There have been many examples of AI hallucinations that have cost people to lose a lot like a lawyer who made wrong citations because ChatGPT recommended them (winnipeg sun, 2024). SMEs may need to verify and validate the content generated by generative AI models and ensure that they meet the quality and ethical standards of their customers and regulators. Generative AI models are not meant to replace human creativity or judgment, but to augment and assist them. SMEs may need to retrain and upskill their staff to understand, adopt, and innovate with generative AI tools and techniques (Anisin, Generative AI for B2B marketing: use cases and challenges, 2023). SMEs may also need to balance the human and AI roles and responsibilities and ensure effective communication and collaboration between them. There should be a balance between the human resource and the generative AI use. The human management is important to reduce privacy concerns and inappropriate contents.

MANAGERIAL IMPLICATIONS

Generative AI offers small and medium enterprises (SMEs) a powerful tool to enhance their content creation capabilities, providing a cost-effective and efficient way to produce a diverse range of content. By integrating AI tools into their content strategy, managers can elevate their brand presence and engagement levels. This strategic move allows SMEs to compete more effectively with larger corporations in terms of content quality, insights, and technological advancement, thereby gaining a competitive edge in the market (Acar & Gvirtz, 2024). One of the key advantages of leveraging generative AI is the deeper understanding it provides into customer preferences and behaviours. By harnessing these insights, managers can tailor their marketing strategies to deliver more personalized and targeted customer experiences, ultimately driving higher engagement and loyalty. SMEs should reduce the initial costs and risks of internalizing generative AI, by using low-code or no-code platforms, open-source frameworks, and pre-trained models. They should also prioritize and focus on the most valuable and feasible use cases and scale up gradually and iteratively (Chauhan, 2023). The main reason or need for generative AI to be incorporated in the digital marketing of SMEs is to cut cost on employing many human resources looking that most SMEs face financial constraint. Using cheaper AI models that still solve your problems should be the focus.

However, alongside the benefits of generative AI, managers must also consider the ethical implications and regulatory requirements associated with its use (Choudhury & Rodriguez, Marketing in the Age of Generative AI, 2023). Data privacy, authenticity of AI-generated content, and compliance with evolving regulations are crucial aspects that require careful consideration and the development of a clear ethical framework. To maximize the benefits of generative AI, managers need to allocate budget for AI integration, invest in necessary tools, and provide training for staff to effectively leverage AI in their marketing initiatives. It is essential to view generative AI as a tool that augments human creativity rather than replacing it, emphasizing the importance of combining human and AI capabilities for optimal results. Addressing challenges such as copyright issues and the need for oversight is paramount. Establishing robust processes for monitoring and managing AI outputs is crucial to mitigate risks and ensure compliance with legal standards. Implementing generative AI should follow an iterative execution approach, starting with small-scale experiments and gradually scaling up successful initiatives through a test-and-learn methodology. This iterative process allows for continuous improvement and optimization of AI-driven strategies, ensuring long-term success for SMEs in the ever-evolving business landscape (Nicastro, 2023).

LIMITATIONS AND FUTURE RESEARCH

The paper faced several challenges which will be highlighted in this paragraph. The essay is based on a theoretical framework and research propositions, rather than empirical data and analysis. Therefore, the validity and generalizability of the findings may be limited by the assumptions and logic of the framework and propositions. The essay also focuses on the SME sector in London, which may have specific characteristics and contexts that may differ from other regions or countries. Therefore, the applicability and transferability of the findings may be limited by the geographical and cultural scope of the study. The essay relied on secondary sources and literature review. Therefore, the depth and richness of the findings may be limited by the availability and quality of the existing literature and data. Also, the fast-paced evolution of generative AI may mean that some information provided in the essay may lose its significance over time due to digital advancement.

Generative AI is a big and new prospect that has other potentials yet to be explored used or figured out. Future research on the usage of new aspects of generative Artificial intelligence yet to be deployed in marketing. Also Expanding the scope and scale of the study to include other regions or countries, and to compare the similarities and differences of the SME sector and the generative AI adoption across different markets and cultures. AI governance is another field for future studies by delving into the governance of AI, focusing on accountability, transparency and control mechanisms.

CONCLUSION

In conclusion, the exploration of generative AI in digital marketing for SMEs in London presents a transformative opportunity for these businesses to innovate, compete, and grow. The capabilities of generative AI enable SMEs to create diverse content, gain valuable customer insights, and optimize marketing strategies with unprecedented efficiency. However, limitations such as ethical concerns, regulatory challenges, and the need for human oversight must be carefully managed. The future implications of generative AI in digital marketing are vast. As technology advances, SMEs will likely face an evolving landscape that demands agility and a willingness to embrace new marketing paradigms. The integration of generative AI can lead to more personalized customer experiences, dynamic content creation, and data-driven decision-making, offering SMEs in London a chance to stand out in a crowded digital marketplace. Summary of key points:

- Generative AI's Capabilities: Automation of content creation, enhanced customer engagement, and improved marketing efficiency.
- Integration of Generative AI and Digital marketing.
- Limitations to Consider: Ethical use of AI, data privacy concerns, and the potential for regulatory changes.
- Managerial Implications: Need for strategic planning, budget allocation for AI tools, and continuous learning and adaptation.
- Future Implications: Potential for AI to revolutionize SME marketing, drive innovation, and necessitate new skill sets.
- Managers of SMEs should approach generative AI as a tool to complement human creativity and intelligence, not replace it. By doing so, they can leverage AI to create a competitive edge while maintaining the human touch that is often the hallmark of successful SMEs. The Essay's focus on this topic fills a crucial research gap and provides a foundation for future studies to build upon, ensuring that London's SMEs remain at the forefront of digital marketing innovation.

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EXAMINING THE RELEVANCE OF STORYTELLING AND SUSTAINABILITY TO FASHION AND LUXURY BRANDS

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ABSTRACT

As the world spins into the new epoch of digital tools, businesses, sectors, organisations, firms, companies, and industries wondered what is ahead of them because of digital marketing revolution and challenges to adapt, adopt and moving with the wheel of situation by adapting to digital marketing strategies of the new era of digital marketing transformation in business. This study contributes to existing literature that gives a theoretical insight, understanding and relevance of storytelling and the concept of sustainability to fashion and luxury brands. Hence, we can recognize the importance of using digital marketing strategies for fashion and luxury brands. Also to acknowledge the innovative transformation of digital marketing, thereby provide a theoretical framework for future research.

Keywords: storytelling, content marketing, brands, sustainability, fashion and luxury.

INTRODUCTION

In the phase of digital marketing transformation, luxury and fashion organisations that are not aware or not quite incorporating digital marketing strategies and tools to engage their customers could risk being left out or behind in the race of digital marketing revolution. As more luxury and fashion brands are exploring how better they can utilize digital marketing strategies and tools than ignoring the concepts and process. Changes in consumer behaviours, perceptions, learning, experience and expectations regarding luxury and fashion brands with the social media network and consumer engagement enabled digital marketing becomes an innovative concept and a specific focal point in different studies and research related to luxury and fashion marketing. Storytelling in fashion and luxury industry has become an avenue to inform, invite, create awareness, persuade and reaching the customers worldwide, concurrently, the organisation can also receive valuable information and feedback from the customers.

The storytelling digital marketing strategy not only establish the relationship with the fashion and luxury brands but also create attraction to customers which invariably help to communicate and add values to the brand. Thus, the storytelling established the logical marketing communication that are in accordance with human empathy. It was apparent that the notion on sustainability is becoming a comprehensive and universal phenomenon, the knowledge that the customers all over the world are now cognizant of the civilization towards the integration of sustainability in the aspects of consumer lifestyles and their product purchase decision process (Jim Jung and Kim, 2023). Thus, fashion and luxury brands industry are engineering and establishing the relationship and integration of sustainability in the industry. Thereby, considered the concepts and strategies of sustainability at the point of production, packaging, design and material replenishment and sourcing putting into consideration the time factors (Navaratne et al., 2023). Hence, this study contributes to the literature in the area of storytelling as the innovative transformation of digital marketing, thereby provide a theoretical framework for future research.

LITERATURE REVIEW

The evolution of digital tools has paved ways for vibrant opportunities to empower the new approach to establish the market segmentation and virtual targeting of the customers (Kartajaya et al., 2019). These new opportunities enabled the organization to effectively define different customers' offers and the improvement of the management systems of the firm. It was evident that such opportunities could be attained by using different digital tools such as digitalized TV, networking, mobile devices, and internet. Recently, the strategic approach of using traditional method of media-based that was characterized by unidirectional messages has drastically shifted to unidirectional communications tailored with the contents in the process of marketing brands. At present, digital transformation of the virtual messages and communications allowed the customization, editing and changes in communication channels and dissemination of cogent information and content.

Recently, the rise of a fairer approach and system of marketing than in the previous time has been revealed and acknowledged due to the spreading of customers' opinions, facts, and thoughts. Likewise, most of the brands buying by customers through the traditional marketing mediums are also through the support from online platform and digital means that their choices are made (Haridasan and Fernando, 2018). Hence, the liberation access and the spreading of the use of digital marketing have consequently caused the issues of internet overcrowding by the users. As digital transformation is spreading and reaching across to consumers, a significant deterioration of traditional mediums of marketing brands were evident in the process. Marketing organisations and firms engaged in the habits of cutting down of the costs due to the recession and the costs that emerged from the marketing operations spending. Hence, companies, businesses and firms have started developing their means of digital marketing by establishing the omnichannel retailing strategies to override the traditional methods of marketing (Andres-Martinez and Jimenez, 2020; Ozuem et al., 2017).

After the middle of the past decade, the storytelling digital marketing strategy for luxury and fashion brands consumer-generated content by the means of social media has become the main focal point and a new topic of study in the field of marketing and the evolution of digital marketing in the recent studies. Thus, scholars and academic researchers have underpinned, examined, scrutinised, classified and assessed the antecedents and consequences of the actions of inspired consumers who participated in any forms of online communication with the brands. With no reasonable doubt, the media means of marketing have transformed from traditional methods to digital platform. However, the process, procedures, tactics, techniques, and strategies of spreading the word remained unchanged. The knowledge that, the consumer-generated content is a public dissemination of information that is subjected to collective identification of the business brands. A storytelling telling digital marketing strategy is undoubtedly sustainable means of effective communication concept and tactic. Hence, through the brand's story, the connection between the community, society, online brand communities and forum can be established with the recognition of its uniqueness and the symbolic event. At this point, businesses find it easier to educate and orientate the customers about the brand of their choice and desire by using the narrative storyline of the storytelling generated from the point of view of the brand of interest. For instance, Jimmy Choo is one of the luxury shoe brands in luxury and fashion brands industry that first initiated the ideas of social media at the early adoption stage. Jimmy Choo concept of storytelling and content digital marketing strategy was practicalized on Facebook, Twitter and Foursquare platforms named "Your Choo Stories" campaign where consumers are required to share their experiences on the brands (Üçok Hughes, 2016; Ozuem et al 2021a). At this juncture, the storytelling and content marketing digital strategies are broadly used as the marketing tactic and approach.

Research studies have evident that, formerly fashion and luxury industry have not paid much attention to ethical practices and sustainability. Thus, the responsibility of the fashion and luxury brand is to continue to improve the quality and the standards of ethical practices and sustainability, the knowledge that, fashion and luxury brands have encountered lots of criticism previously. As the ethical practices and sustainable products, brands, production, and consumption can be achieved broadly and not only with the general and usual considerations for the FMCGs but also to cut across different industries and sectors. In fact, ethical and sustainable consumption, acquisition, and uses are all connected with the timeliness that are respectively in support of the local production process of fashion and luxury brands (De Angelis et al., 2017; Ozuem & Willis 2022). For instance, quite a few fashion and luxury firms have a huge significant after-market, so that the product uses can be extended over a long period of time. The

general belief on ethical practices and sustainability of fashions and luxury products was that sales improve is not necessary in luxury and fashion brands. However, fashion and luxury brands have realized that most of the customers of fashion and luxury brands with the level of high purchasing power are more concerned about the impact of fashion and luxury brands on environment. At this juncture, there were some shifts in the paradigm that recognised that fashion and luxury brands are putting efforts in shaping ethical practices and sustainability, and the perception on sustainable luxury and fashion products and brands are becoming more popular and the hot topic in the field of luxury and fashion brands marketing (Kunz et al., 2020; Karaosman et al., 2020).

Recent studies evident that large luxury brands are considered to be more progressive in shaping and maintaining the standard and the quality of sustainability practices and concepts which helped in the implementation of sustainability, but other research studies in the same field indicate that high-rated communicating sustainability can adversely affect and lessen the status, prestige, and value of a particular luxury brands for customers acquisition, consumption and uses. Thus considered the silent activist strategy, re-orientation strategy, elite activist strategy and capitalist strategy (Kee and Godon-Wilson, 2021). In general, the luxury and fashion brands have increasingly integrated the green practices and concepts of sustainability into their mode of operations, practices, and activities (Kang and Sung, 2022; Ozuem et al 2021b). However, there is need for luxury and fashion brands to work on societal and environmental ethical practices and sustainability while also maintaining the exclusively branding, thus, this condition can warrant lots of pressure on the organizations or firms as the ethical and sustainability concepts required brand values that are associated with equality, Universalism, the related brands and the principles of individuality and self-indulgence.

The sustainability in the fashion and luxury market have been perceived as non-compatible variables or concepts in previous years when traditional channels of marketing fashion and luxury brands were fading away drastically. The motive behind this notion was the belief that fashion and luxury brands products or goods were not required or necessitate the sustainability concept in positioning or improving the organisation sales and marketing activities (Joy et al., 2012). The knowledge that, customers of fashion and luxury brands with the high purchasing profiles are now paying more attention to environmental issues and considerations (Garcia-Torres et al., 2017). Obviously, changes in the paradigm, ethical considerations, and sustainability are taking place in the fashion and luxury brands realm while the hot topics and important concepts, ideas and opinions are emerging from this fields (Kunz et al., 2020 and Karaosman et al., 2020). Apparently, the sustainability of fashion and luxury brands do not depend only on the product raw materials and the effectiveness of the organisation management in planning and processing involved in the operations and production cycle but also include the features and the reliability of the sources that secured the quality and the origin of the raw materials for the manufacturing process (Joy and Pe-na, 2017). It has been evident that bulky and large luxury brands are more progressing in development and the implementation of the practices of sustainability concepts while other scholars evident that over-communication of sustainability practices could eventually diminish the prestige of luxury and fashions brands in the process (Athwal et al., 2019; Ozuem et al 2024). Thereby, the issues of balancing the non-compatible variables between the sustainability concepts and fashion and luxury brands have contributed significantly to the global marketing literature.

CONCLUSION

The luxury and fashion industry have spread across borders globally, and the supplied chain and marketing of products or brands remained complex, and multi-facet in operations. Hence, the strategies of ethical practices and sustainability implemented by the major luxury and fashion companies have proven that firms can, therefore, improve their ability and capabilities to maintain the standard and quality of ethical practices on environmental and societal responsibilities. The knowledge that, ethical practices, sustainability, and digital marketing strategies playing a key role in the promotion of products, brands, and company corporate image, especially the effective promotion of the cultural shift in the sustainable narratives, storylines, storytelling and effective collaboration of companies and firms in the process of selling the brands or products. Recently, research evident the variables for predominant ethical practices, sustainability, capability, and strategic digital marketing are centred on brands itself and its environment footprint, the brand or product chain, effective digital marketing strategies, the lifecycle of the brand or product, the corporate governance of the company internal policies, regulations, stakeholders, and process to accomplish the company goals and objectives.

As ineffective environmental and societal management of conflict of interest or problems could lead to competitiveness risk of the companies. However, the luxury and fashion brands are trying to show the company's stakeholders and their ultimate customers in an effort be perceived as more ethical and sustainable. Previous studies showed that, many scholars and researchers in the field of luxury and fashion brands marketing, tailored with digital marketing have examined, explored, and investigated the research within the fashion and accessories context, however, the representation of luxury and fashion industries were differed. Although, they are the largest fashion and luxury segments to be considered. On this occasion, future and further research should explore and examine other industries and the application of the innovative digital marketing in this era of digital transformation in marketing brands (Veloutson et al., 2021). Specifically, the service variables characterized by intangibility and denote restricted availability as they cannot be stored or saved in the process of marketing while the motivated luxury and fashion customers were eager to consume offering virtually (Leban et al., 2020; Ozuem & Willis, 2024). Conclusively, the brand personality impact on digital interactions might be different.

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DEVELOPMENT OF DIGITAL TRANSFORMATION MATURITY ASSESSMENT MODEL: FOCUSING ON DIGITAL COLLABORATION IN THE MANUFACTURING INDUSTRY

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ABSTRACT

This study develops a new DX maturity model focused on enhancing collaboration in digital collaborative factories, especially involving suppliers and customers. However, existing DX maturity assessment models have limitations as they do not adequately consider suppliers as key components but rather assess them at the level of specific evaluation criteria. Therefore, this study aims to develop a DX maturity assessment model specialized for digital collaborative factories, with "collaboration" as a core evaluation factor, and conduct DX level diagnoses targeting manufacturers and suppliers to enhance collaboration capabilities within digital collaborative factories. To achieve this, the process included: 1) Creating a DX roadmap and identifying research gaps, 2) Refining the model with expert feedback and case studies, 3) Conducting assessments for 11 manufacturers to address collaboration issues. Through this, it is expected to efficiently manage the collaboration systems within digital collaborative factories and contribute to establishing digital collaboration standards in the manufacturing sector.

Keywords: DX maturity assessment model, digital transformation, digital collaborative factory, digital SCM, innovation strategy.

INTRODUCTION

In recent years, digital technology in the industrial sector has undergone rapid advancements, leading to a swift evolution of digital transformation (DX) across industries. This trend, along with its significance, is emphasized as a key driver of industrial innovation. Particularly in the manufacturing sector (including vehicle manufacturing and assembly industries), the emergence of DX has revolutionized traditional production processes, enhanced operational efficiency, and introduced new concepts such as digital collaborative factories and smart factories (Büyükoçkan & Göçer, 2018). Digital collaborative factories represent a novel concept in the manufacturing sector, aiming to implement innovative production methods based on strengthened collaboration among manufacturers, suppliers, and customers, utilizing digital technology. This involves digitizing and connecting existing production processes to innovate production processes and enhance the competitiveness of collaborative partner-based manufacturing industries. As part of DX, smart factories have connected digital technology with physical production processes to improve productivity and quality, with inter-company collaboration playing a key role in driving DX (Kumar & Pugazhendhi, 2012).

In this evolving landscape, companies aim to achieve DX to enhance productivity and quality. Therefore, accurately assessing their current DX level and deriving improvement points are crucial. Examples of DX assessment models include the Smart Industry Readiness Index (SIRI) by the Singapore Economic Development Board (EDB), which focuses on Industry 4.0-centered maturity diagnostics (Gin, 2020). In the model, core components (Building Blocks) and supporting areas (Pillars) have been established. The Digital Transformation Capability Maturity Model, DX-CMM, defines DX levels based on detailed assessment items belonging to core process groups (Gökalp & Martinez, 2021). Existing DX evaluation models have primarily concentrated on technical aspects like technological capabilities and data management. However, they frequently treat the relationships among manufacturing companies, suppliers, and customers merely as detailed evaluation criteria, rather than evaluating them as core components. This

approach represents a limitation in adequately capturing the importance and impact of collaboration within the DX evaluation framework. Specifically, in the manufacturing sector, collaboration among manufacturers, suppliers, and customers plays a crucial role in driving DX initiatives. Collaboration is essential for accelerating innovation and addressing industry challenges, as it facilitates the sharing of data, insights, and best practices among stakeholders, fostering mutual growth and competitiveness (Jha et al., 2022). Furthermore, since the DX level of suppliers, or rather, collaborators, directly correlates with the overall ecosystem performance, adequate consideration of this relationship is crucial in DX evaluation models.

Therefore, this study aims to develop and apply a DX maturity assessment model specialized for digital collaborative factories, considering "collaboration" as a core evaluation factor, to enhance collaboration capabilities within the manufacturing sector. By conducting DX level diagnoses targeting manufacturers and suppliers, the study aims to ultimately derive DX collaboration strategies and improvement plans, enhancing collaboration capabilities within digital collaborative factories. By integrating the collaboration category into the digital transformation evaluation framework, the study seeks to investigate the impact of collaboration on the digital maturity and performance of the manufacturing sector.

LITERATURE REVIEW

Digital Transformation (DX)

With the advent of the Industry 4.0 era, Digital Transformation (DX) is being implemented across various industries (Heo & Cheon, 2021). This entails activities that transform or create business models based on digital technologies such as the Internet of Things, artificial intelligence, robotics, cloud computing, and big data, as many companies strive to generate value and secure sustainable competitive advantages through DX (Iansiti & Lakhani, 2018). The definition of DX varies depending on the perspectives of researchers and practitioners, but it can broadly be categorized into 1) strategy, 2) process, and 3) business model (Henriette et al., 2015; Vial, 2021). From a 1) strategic perspective, DX is understood as a blueprint that supports organizations through the integration phase following DX within the organization and subsequent adoption of digital technologies (Matt et al., 2015). From a 2) process perspective, (Liu, Chen and Chou, 2011) defined DX as the organizational transformation process of integrating digital technologies into processes, while (Vial, 2021) defined it as a process aimed at internal improvement within the organization by generating meaningful changes based on the combination of computing, communication, information, and connectivity technologies. From a 3) business model perspective, (Matt et al., 2015) defined DX as the transformation of an organization's business model by introducing digital technologies, leading to changes in products and organizational structures, and process automation. In this study, we aim to develop a DX Maturity Assessment Model by considering all these diverse perspectives on the concept of DX.

Digital Transformation Maturity Assessment Models

As the expansion of DX across industries has gained prominence, the importance of DX has been highlighted, and companies aim to achieve productivity improvement and quality enhancement through it. In this process, it is crucial for companies to accurately assess their current level of DX and identify areas for improvement. Examples of DX maturity assessment models used to assess this include the Smart Industry Readiness Index (SIRI) by the Singapore Economic Development Board (EDB), which is a maturity assessment model centered around Industry 4.0. Within the model, there are four core building blocks (1. Technology: Convergence and application of new and existing technologies, 2. Data: Data collection, analysis, utilization, and security, 3. People and Culture: Strengthening digital capabilities and organizational culture change) supported by 16 core pillars and detailed evaluation criteria (Gin, 2020). The Digital Transformation Capability Maturity Model, DX-CMM, defines six levels of DX based on 26 detailed evaluation criteria belonging to four core process groups (1. Technology, 2. Strategy, 3. Culture, 4. Human Resources) (Gökalp & Martinez, 2021). (Braga Tadeu et al., 2019) proposed various aspects including digital strategy, analytics and predictive capabilities, digital technology, network relationships, customer relationships, organizational structure and digital processes, personnel and culture, risk and investment, legal and ethical issues, and new digital business models. Upon reviewing these existing DX maturity assessment models, it was observed that they tend to offer generalized perspectives rather than considering the specific characteristics of the applied industries (Remane et al., 2017).

The Importance of DX Collaboration in the Manufacturing Industry

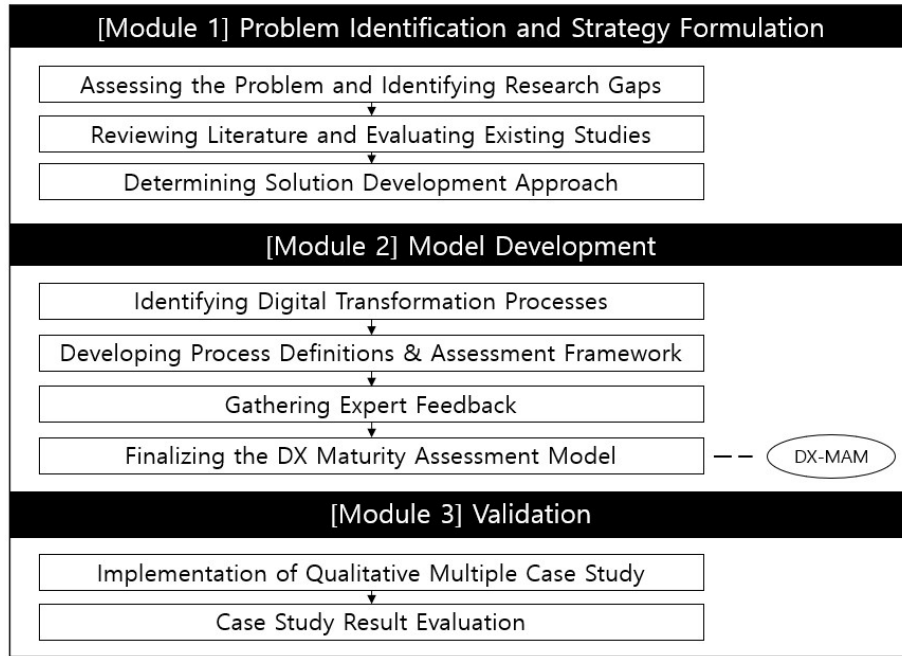
The manufacturing industry, which this study targets, places significant importance on collaboration among manufacturers, suppliers, and customers. However, existing models have limitations as they merely address the "collaboration" aspect at the level of detailed evaluation items without evaluating it as a core component. Collaboration among manufacturers, suppliers, and customers is essential for accelerating innovation in manufacturing and responding to industrial challenges (Agrawal & Narain, 2018). Sharing data, insights, and strategies within collaborative relationships is crucial for mutual growth and competitiveness in the context of digital collaboration factories (Kim & Park, 2021). The "collaboration" aspect emphasized within DX is pivotal for the following reasons: 1) Strategic Alignment: Relationships with suppliers are intricately linked to the manufacturer's strategy. Collaborations with suppliers need to be strategically established to achieve the manufacturer's business goals, which plays a crucial role in the successful digital transformation of the manufacturer. (Kim & Park, 2021). 2) Innovation and Agility: Collaborations with suppliers and customers are vital for manufacturers to pursue innovation and adapt to changes in the industry (Gu et al., 2021). Suppliers and customers can provide manufacturers with new technologies and ideas, offering flexibility to respond to industry changes, thereby securing competitive advantages and innovating business processes. 3) Supply Chain Resilience: Relationships with suppliers directly impact the resilience of a manufacturer's supply chain (Kim & Park, 2021). Close collaboration with suppliers enhances the manufacturer's ability to respond swiftly to issues at various stages such as raw material supply, production, and distribution. This helps manufacturers prepare for unforeseen circumstances and maintain the stability of the supply chain.

Based on these reasons, this study aims to develop a DX maturity assessment model tailored to digital collaboration factories, considering the relationship between DX, collaboration, and manufacturing as a core evaluation factor.

RESEARCH FRAMEWORK

In this study, to develop a DX maturity assessment model specialized for digital collaboration factories, we followed the Framework outlined in Figure 1. In Module 1, we confirmed the need for a clear roadmap for achieving DX in the context of manufacturing. Reviewing previous studies revealed a research gap, prompting us to decide to develop a DX maturity assessment model tailored to digital collaboration factories. In Module 2, we adopted the proposed methodology from (De Bruin et al., 2005) for generalizing the key stages of maturity model development. The detailed process was as follows: 1. Scope: Determine the target and application domain of the maturity model. 2. Design: Design approaches that meet the target and requirements. This includes motivations for model application, approaches for applying the model to various organizational structures, personnel involved, and outcomes of model application. Clearly define the names of the stages to summarize their intent and key requirements. 3. Populate: Identify areas and methods to measure in maturity assessment. Reflect core success factors and entry barriers by considering mutually exclusive and specific domain components and subcomponents. 4. Test: Validate the structure of the model and the validity, reliability, and generalizability of the tools. Evaluate the validity of domains and items during this process. 5. Deploy: Organize the tasks of the organization to which the model will be applied into groups to confirm the scope of generalization. 6. Maintain: Models providing guidelines for improving maturity should utilize resources to track long-term interventions. Through this process, we developed a domain-specific maturity model considering collaboration relationships in the manufacturing industry. Feedback from three DX experts further refined the model. In Module 3, multiple case studies were conducted to validate the developed model. In terms of sampling design, aiming to establish digital collaborative factories with a focus on a specific parent company and its suppliers, online self-assessments were conducted with 11 manufacturing companies representing both the parent company and its suppliers, and on-site diagnostics were carried out with two companies. By deriving improvement strategies based on the diagnostic levels of the companies subjected to on-site assessments, validation of the model was achieved.

Figure 1: Research Framework



RESULTS

Digital Transformation Maturity Assessment Model: Focusing on Digital Collaboration in the Manufacturing Industry

This study aims to address the selection of collaboration evaluation criteria, followed by the presentation of the final Digital Transformation Maturity Assessment Model: Focusing on Digital Collaboration in the Manufacturing Industry.

Selection of Collaboration Evaluation Criteria

To follow the main stages of maturity model development as outlined by (De Bruin et al., 2005) specifically Within the [1. Scope - 2. Design] stage, the initial scope of application for our model was focused on the collaboration between manufacturing company A and supplier B, with a domain-specific and practical approach tailored for real-world implementation. The objective was to utilize the model to analyze the collaboration structure between the manufacturing company and the supplier, understand the complexity arising from collaboration relationships, and enhance capabilities within the domain by managing and optimizing collaboration between the manufacturing company and the supplier. [3. Populate] Based on this objective, the collaboration component derived was categorized into collaboration with suppliers and collaboration with customers.

Collaboration with suppliers refers to the organization sharing information with external suppliers within the supply chain or partners within the organization to pursue mutual benefits and achieve goals (Büyüközkan & Göçer, 2018). It was considered that information exchange and sharing between the manufacturing company and the supplier should take place during this process (Gu et al., 2021). Additionally, it was considered that there should be a mutually complementary relationship between the manufacturing company and the supplier in terms of technical capabilities (Ivanov et al., 2017), and there is a need for continuous performance evaluation to strengthen the collaborative relationship (Zhao & Lee, 2023). Therefore, detailed evaluation items were structured as shown in Table 1.

Table 1: Collaboration with Suppliers Evaluation Criteria

Evaluation Criteria	Definition	Refer
Information and Data Sharing	Facilitating the exchange of inventory status, quality determination information, orders, and new product introduction plans with collaborative partners through digital software solutions	(Colicchia et al., 2019; Marinagi et al., 2015)
Exchange of Technical Expertise	Concentrating on the continuous optimization of business processes and the enhancement of digital technical capabilities by collaborating with partners, including activities such as dispatching and training employees, transferring technology, and sharing technical information.	(Bi et al., 2019; Ivanov et al., 2017)
Performance Monitoring and Improvement	Continuously monitoring performance in the digital environment and deriving improvement measures through evaluation to strengthen collaborative relationships.	(Jha et al., 2022)

In the evaluation criteria for collaboration with customers, B2B and B2C were classified and established. Collaboration with client companies (B2B) corresponds to assessing the maturity value of the relationship between companies and partners operating in the exchange relationship with client companies. It was considered important to pursue competitive strategies by timely sharing information with client companies (Fahey, 2022). Collaboration with customers (B2C) involves capturing customer value, where communication with customers is crucial (Witell, Kristensson, Gustafsson, & Löfgren, 2011). To facilitate communication with customers, it is important to understand their requirements, develop products based on them, and focus on managing changes in customer needs (Adesanoye, 2019; Yang, 2021; K. O. Park, Jun, & Chang, 2014). Based on this, detailed evaluation criteria were formulated as shown in Table 2.

Table 2: Collaboration with Customers Communication Evaluation Criteria

Evaluation Criteria	Definition	Refer
Utilization and analysis of customer data	Leveraging customer data to analyze customer intentions and formulate demand plans	(Berger et al., 2020; Schumacher et al., 2016; Zaki, 2019)
Customer-centric product development	Engaging stakeholders in product and service development based on customer experiences, using digital systems to achieve short lead times and foster the creation of new business and operational models	(Gin, 2020)
Customer relationship management	Utilizing digital software solutions comprehensively for customer interaction and management, optimizing digital channels and interfaces	(Berger et al., 2020; Schumacher et al., 2016)
Sharing of product/service quality information (B2B)	Exchanging quality information and data about supplier products and services with client companies to maintain mutual reliability	(Hausknecht et al., 2008)
Timeliness of information provision (B2B)	Creating a networked environment, with real-time updates and infrastructure, to ensure timely information provision for market adaptation and response	(Gin, 2020; Iyer et al., 2005)

Digital Transformation Maturity Assessment Model: Focusing on Digital Collaboration in the Manufacturing Industry

In the final model devised for DX evaluation in this study, five major evaluation areas and 33 sub-categories were established. A total of 20-level diagnostic models were compared, including the cooperation-related indicators mentioned earlier. The evaluation items were categorized into organizational level and production process level, with managers as the target for organizational level evaluation. Additionally, the purpose is to assess the DX status of each company, compare it with other companies' levels, and conduct evaluations. The production process level involves

stakeholders at the site as the evaluation target, with the aim of deriving detailed improvement measures for the evaluation subjects. However, content related to cooperation is assessed within the cooperation-specific evaluation items, while other evaluation areas aim to assess the companies themselves without considering cooperation. The final evaluation areas of this model are broadly categorized into: I. Organizational Level in the Strategy Area, II. Organizational Level in the Data Area, III. Organizational Level and Production Process Level in the Collaboration-Customer Communication Area, III. Organizational Level and Production Process Level in the Collaboration-Supplier Cooperation Area, IV. Organizational Level and Production Process Level in the Process Area, and V. Organizational Level and Production Process Level in the Technology Area.

Table 3: Digital Transformation Maturity Assessment Model’s Domain and Criteria

Evaluation Domain	Evaluation Criteria	
	Organizational Level	Production Process Level
Strategy	<ul style="list-style-type: none"> • Clarity of Purpose and Planning • Agile Change Management • Business Model Innovation <ul style="list-style-type: none"> • Executive Leadership • Dedicated Digital Team • Digitalization Strategy 	-
Data	<ul style="list-style-type: none"> • Data Management <ul style="list-style-type: none"> • Data Quality • Data Security • Data Usability 	-
with Customers Communication ¹⁾	<ul style="list-style-type: none"> • Utilization and analysis of customer data • Customer-centric product development <ul style="list-style-type: none"> • Customer relationship management • Sharing of product/service quality information (B2B) • Timeliness of information provision (B2B) 	<ul style="list-style-type: none"> • Product Development • Production Planning • Process Management • Quality Management • Logistics Operations
Collaboration with Suppliers	<ul style="list-style-type: none"> • Information and Data Sharing • Exchange of Technical Expertise • Performance Monitoring and Improvement 	<ul style="list-style-type: none"> • Product Development • Production Planning • Process Management • Quality Management • Logistics Operations
Processes	<ul style="list-style-type: none"> • Process Standardization <ul style="list-style-type: none"> • Process Integration • Business Process Automation 	<ul style="list-style-type: none"> • Product Development • Production Planning • Process Management • Quality Management • Equipment Management • Logistics Operations
Technology	<ul style="list-style-type: none"> • Automation Technology • Connectivity Technology • Intelligence Technology 	<ul style="list-style-type: none"> • Operations <ul style="list-style-type: none"> • Tasks • Facilities

¹⁾ Communication with Customers encompasses both individual customers (B2C) and corporate clients (B2B), with evaluation items specific to corporate clients (B2B) marked as 'B2B'.

IMPLEMENTATION

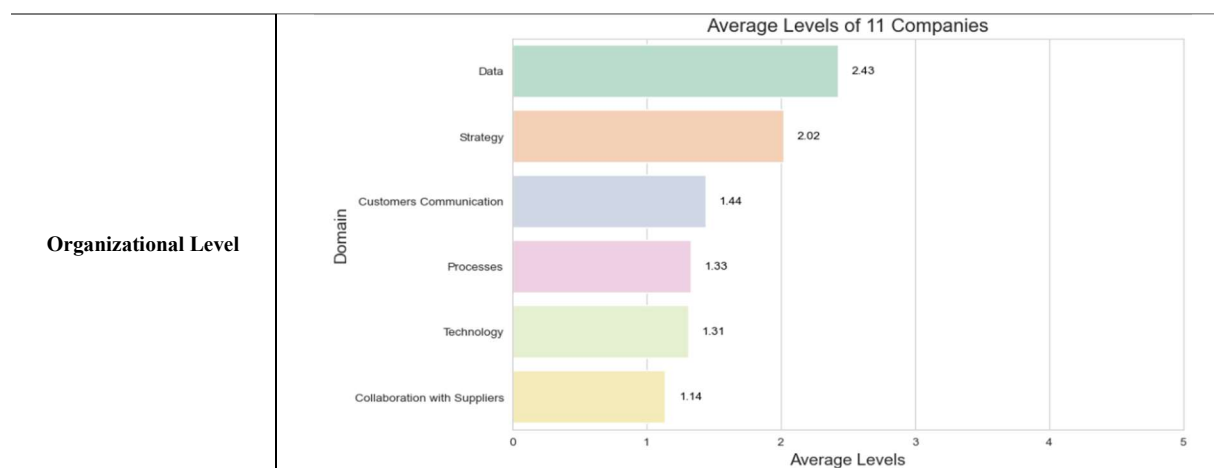
Implementation of the DX Maturity Assessment Model: Focusing on Digital Collaboration in the Manufacturing Industry

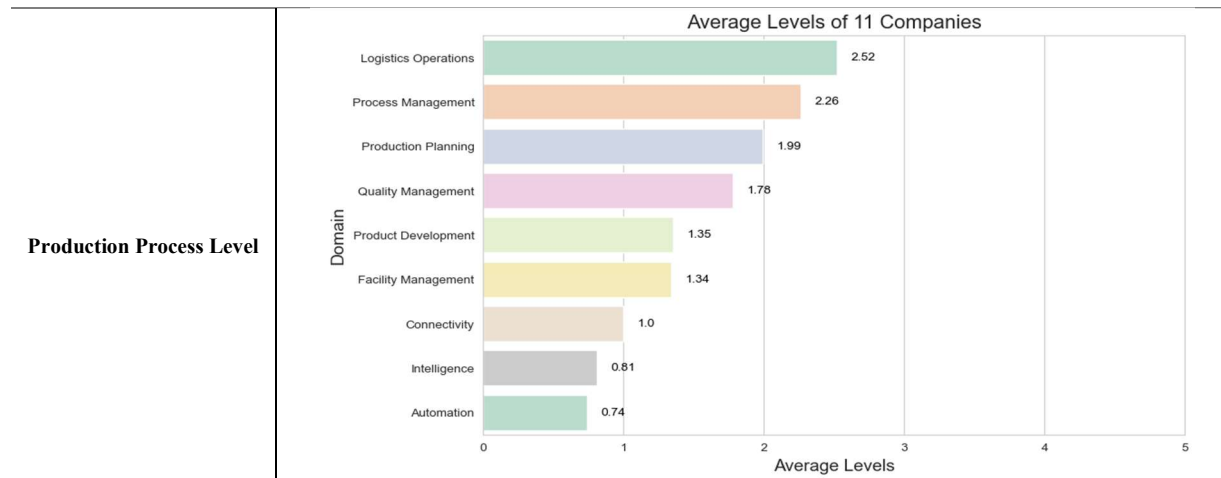
The [4. Test - 5. Deploy] stages of the maturity model development process by (De Bruin et al., 2005) continued in this chapter. In the [4. Test - 5. Deploy] stages, on-site assessments were conducted with two manufacturing and supply chain companies, and an online self-assessment was carried out with 11 manufacturing companies, OEMs, and collaborating firms to confirm the generalizability of the model's application scope. Evaluation results utilized a Likert 5-point scale for each item, and improvement points were derived through comparison with best practices based on the existing SIRI model. The existing SIRI model distinguishes Process, Technology, and Organization as the main layers, and evaluates maturity by decomposing them into eight core elements: Operations, Supply Chain, Product Lifecycle, Automation, Connectivity, Intelligence, Talent Readiness, and Structure & Management, along with 16 indices (Gin, 2020). In this study, at the Index level of the Organization dimension, a) Workforce Learning & Development was associated with the digitalization strategy and digital organization, as it corresponds to strategies for enhancing employees' capabilities, skills, and competencies. b) Leadership Competency refers to the ability of management teams to utilize cutting-edge technology and concepts to maintain the organization's competitiveness, thus it was linked with leadership and change management in this study. c) Inter- and Intra-Company Collaboration encompasses collaboration between and within companies, thus it was linked with communication with customers and collaboration with suppliers. d) Strategy & Governance is related to planning and execution for long-term goal achievement, and it was compared with the clarity of strategies, digitalization strategy, and business model innovation covered in the study. In this study, the interpretation of the results of online self-assessment from Chapter 5-1 and the comparison with on-site diagnosis results and SIRI-based BP from Chapter 5-2 were conducted. Furthermore, an integrated perspective was provided, emphasizing the importance of collaboration with DX.

Self-assessment Results for Each Company

Before the on-site assessments, an online self-assessment was conducted with 11 manufacturing and supply companies. The results are as follows: The comparison of average levels by organization/production process was sought by querying the average levels by evaluation area for all companies. The average DX level of the companies was found to be at level 1, indicating that digital technologies have been introduced but advanced processes such as real-time monitoring have not yet been implemented. From an organizational perspective, the data area was the highest, while the collaboration with suppliers was the lowest. At the production process level, logistics operations were the highest, while automation was the lowest.

Table 4: The results of the online self-assessment





On-site Assessment Results and Strategy Formulation

In the [6. Maintain] stage, the on-site assessment results were compared with the Best Practices (BP). Specifically, for manufacturing company A, the scores were as follows: I. Strategy: 2.66 points, II. Data: 2.75 points, III. Collaboration: 2.4 points, IV. Processes: 2.01 points, V. Technology: 1.14 points. Company A has demonstrated a systematic approach to digital transformation within the organization, as well as in collaboration with suppliers. They have a clear intention to further enhance their strategies in the future. Improvement strategies for Company A include focusing on automation and intelligence from a technological perspective, as well as enhancing connectivity levels. A comparison with the top 10% global companies revealed that Company A needs overall improvement, particularly in areas such as automation and connectivity within information systems.

For Company B (Press Industry): I. Strategy: 1.16 points, II. Data: 1 point, III. Collaboration: 1.25 points, IV. Processes: 0.96 points, V. Technology: 0.84 points. Company B has shown plans and willingness to undergo digital transformation, particularly through cloud-based integration with ERP systems and future plans for MES system implementation. Improvement strategies for Company B also involve focusing on automation, connectivity, and intelligence levels. A comparison with top 10% global companies highlighted the need for overall enhancement, particularly in process automation, connectivity, and intelligence levels for manufacturing processes and overall business management.

Interpreted in the context of the importance of DX and collaboration within the manufacturing sector, both Manufacturing Company A and Supplier B are shown to understand the significance of DX and collaboration. However, both companies require improvements in various aspects. Firstly, Manufacturing Company A demonstrates considerable maturity in DX across various areas. It shows a high score in strategy and data management, indicating significant interest in digital integration within the organization. However, there is still room for improvement in areas such as collaboration, processes, and technology, where enhancing automation and connectivity would optimize operations. Additionally, proactive improvements are needed in applying automation in various aspects of information systems. Supplier B exhibits low maturity in DX. While it has initiated digital transformation with cloud-based solutions and ERP integration, it still requires improvements across various areas such as strategy, data management, collaboration, processes, and technology. Particularly, there is a lack of digital capabilities in automation, connectivity, and intelligence, requiring intensified efforts for enhancement.

Considering these analytical findings, both companies recognize the necessity of DX but require improvements in various areas. Enhancements should focus on reinforcing core areas such as automation, connectivity, and intelligence, as well as improving collaboration and processes. Through strengthening DX and collaboration, both companies can enhance their competitiveness in the manufacturing sector and stimulate the growth of the industrial system.

CONCLUSIONS

The study established the definition of DX and emphasized the importance of an evaluation model, proposing a DX Maturity Assessment Model for digital collaborative factories in the manufacturing sector. Unlike existing models, this model highlights the "collaboration" aspect, contributing to the proposal of a new evaluation model tailored to digital collaborative factories. To validate the proposed model, this study conducted online self-assessments and on-site diagnoses targeting actual manufacturing companies. Based on the on-site diagnosis results, comparisons were made with the performance of the SIRI model's BP, and additional directions for future development and specific improvement strategies for each evaluation criterion were provided. This contribution helped establish a roadmap for the maintenance and continuous improvement of the model. Strategic directions were offered to address efficiency degradation and quality issues in the collaboration process between manufacturing companies and suppliers. Ultimately, it is expected that by establishing robust standards for digital collaboration within the manufacturing sector, collaboration relationships will be strengthened, thereby fostering industry ecosystem growth.

However, there are areas for improvement in the proposed evaluation model. Firstly, the model may not fully align with the requirements of industries other than the manufacturing sector, necessitating additional improvements for generalization. Moreover, the subjectivity of evaluators may have influenced the on-site assessment process, suggesting the need for additional steps such as cross-validation to address this issue.

Nevertheless, the study demonstrated the effectiveness of the proposed model in guiding companies' digital transformation and enhancing collaboration relationships to secure competitiveness. It is expected to efficiently manage collaboration systems between manufacturing companies and suppliers, driving the industry's growth and development. Future research should focus on further developing the proposed model into a flexible one applicable to various industries and implementing strategies based on diagnostic results.

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MACHINE LEARNING INNOVATIONS IN SUPPLY CHAIN MANAGEMENT: REVOLUTIONIZING PREDICTIVE MODELING FOR EFFICIENCY AND GROWTH

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ABSTRACT

Supply chain management (SCM) is essential for modern businesses, underpinning efficient operations in a globalized world. This paper explores the complex activities and transformative role of technology in optimizing the flow of goods, services, information, and finances across organizations. Initially focused on logistics, SCM has evolved into a multi-functional corporate endeavor, highlighting the importance of managing end-to-end processes. Integrating technology into SCM practices allows organizations to streamline operations, enhance collaboration, and gain a competitive edge in today's dynamic market. Advanced data analytics and AI tools enable real-time insights, accurate demand forecasting, and optimized inventory levels. Digital supply chain platforms have revolutionized information sharing and external collaboration, allowing firms to swiftly adapt to market changes and customer preferences. Additionally, technology optimizes logistics and transportation, reducing fuel consumption, lowering carbon emissions, and enhancing sustainability in supply chain operations.

Keywords: supply chain management, customer satisfaction, customer loyalty, machine learning, predictive models.

INTRODUCTION

Supply Chain Management (SCM) involves coordinating activities within and between organizations to ensure the efficient flow of goods, services, information, and finances from suppliers to customers. SCM can be defined as covering efforts from the supplier's suppliers to the customer's customers, ensuring seamless coordination across the entire network. SCM aims to optimize the value chain by managing key processes such as sourcing, procurement, production, inventory, logistics, and distribution. Effective SCM integrates these functions to streamline operations, reduce costs, enhance customer satisfaction, and drive competitive advantage. Technological advancements like the Internet and Internet-of-Things (IoT) have revolutionized SCM. Real-time information sharing enables instant communication and collaboration across the supply chain, improving synchronization, reducing lead times, and enhancing decision-making (Larson & Rogers, 1998). IoT technologies, such as RFID tags and sensors, provide real-time insights into movement and status, improving inventory management and overall efficiency (Huy, 2021). This paper explores SCM case studies using machine learning to address bottlenecks, an overview of supply chain disruptions, and the future of SCM and logistics.

LITERATURE REVIEW

What is Supply-Chain Management?

Supply chain management (SCM) is a critical aspect of conducting business in today's globalized and interconnected world. It involves the coordination of various entities involved in the design, procurement, production, and delivery of products and services to end customers. SCM has evolved significantly over the years, expanding from a focus solely on logistics to a multi-functional corporate undertaking that encompasses a wide range of activities, from

procurement and demand forecasting to distribution and after-sales service. One of the key aspects highlighted in discussions about SCM is the diverse range of definitions that people attribute to it. Some view SCM as managing the supplier base, outsourcing decisions, and supplier relationships. Others see it as the efficient movement of goods while considering distribution and transportation costs. Additionally, SCM is also perceived as the integration of firms in the distribution channel through information systems and inventory management practices. These varied perspectives underscore the complexity and multidimensional nature of SCM. The impact of effective SCM practices is evident in the seamless flow of products from suppliers to end customers, resulting in enhanced customer satisfaction and operational efficiency. Conversely, poor SCM practices can lead to inefficiencies, delays, and disruptions in the supply chain, ultimately affecting customer experience and business performance. Examples such as Boeing's supply chain glitches with the Dreamliner 787 and Mattel's toy recall highlight the consequences of inadequate SCM. In the era of global competition, rapid technological advancements, and changing customer preferences, firms face increasing challenges in meeting customer demands for greater variety, shorter delivery times, and competitive prices. The rise of e-commerce has further transformed the business landscape, making firms more vulnerable to logistics pitfalls while also presenting opportunities for innovation and efficiency improvements in SCM. The advent of e-commerce has shifted the focus towards fulfillment as a critical component of the customer experience. Unlike traditional channels where inventory could mask inefficiencies, the fast-paced electronic business environment demands a more agile and responsive supply chain. Firms are now placing greater emphasis on SCM to ensure timely and accurate delivery of products to customers, thereby enhancing their competitiveness in the market. Moreover, the prevalence of the Internet has led to the development of vertical marketplaces that aim to streamline the buying process and reduce inefficiencies in various industries. These marketplaces offer opportunities for cost savings through increased competition and improved supplier relationships. However, they also require firms to build trust and collaboration with supply chain partners to leverage the full potential of these platforms for process integration and efficiency gains. Looking ahead, future research in SCM is expected to focus on addressing key challenges such as global coordination, sustainable practices, supply chains in the service industry, and behavioral aspects like trust and decision-making. Researchers are exploring new models and analysis techniques to navigate the complexities of modern supply chains and enhance operational performance (Lu & Swaminathan, 2015).

The statistical methods used to analyze the supply chain data include multivariate regression analysis and factor analysis. The multivariate regression analysis was employed to estimate the parameters of models, with coefficients and corresponding test statistics. This analysis allows for the examination of the relationship between various factors such as supply chain integration, flexibility, customer responsiveness, and overall supply chain performance. Factor analysis is utilized to reduce the total number of items in the questionnaire to manageable factors, with principal components analysis and Varimax rotation aiding in the extraction and interpretation of distinct factors such as lean supply chain, agile supply chain, and hybrid supply chain. The reliability of the scales is assessed using Cronbach's alpha, and sampling adequacy is validated through the Kaiser-Meyer-Olkin statistics. These statistical methods provide a robust framework for comprehensively analyzing the supply chain data and drawing meaningful conclusions from the research (Sukati et al., 2012). Supply chain management faces numerous challenges in today's dynamic business landscape. Uncertainty and risk, including demand fluctuations and supply disruptions, require agile responses to maintain operational continuity. Effective performance measurement is crucial for evaluating supply chain efficiency and identifying areas for improvement. Building resilience against unforeseen events is essential to ensure business continuity and minimize disruptions. Flexibility in adapting to changing market conditions and customer demands is key to staying competitive. Embracing digitalization and leveraging technology for enhanced visibility and decision-making can drive operational efficiency and strategic growth. Addressing these challenges demands a proactive approach, innovative solutions, and a customer-centric focus to create agile, resilient, and efficient supply chains that can thrive in an increasingly complex and interconnected global marketplace (Jodlbauer et al., 2023).

Innovation in Supply-Chain Management

Innovation in supply chain management is a critical factor for enhancing competitiveness and driving organizational success. The intersection of innovation and supply chain management has been a focal point of research. This intellectual exploration delves into the complexities and importance of integrating innovation processes throughout the supply chain. One key aspect is the role of inter-organizational networks in fostering innovation. It is not just about internal innovation processes within a firm but also about how innovation is shared and implemented across the supply chain. This collaborative approach is essential for ensuring a firm's competitiveness and adaptability in a dynamic business environment. Furthermore, what is imperative is the significance of systematic and discontinuous innovation

in driving change and improving performance. By embracing innovation in inter-organizational processes and engaging in joint product development with partners, firms can leverage multiple innovation processes across the supply chain. This approach not only enhances product development but also strengthens relationships with suppliers and customers (Moreira, Ferreira, & Zimmermann, 2018). The application of digital technologies in supply chain management has revolutionized the way businesses operate. Digital technologies have enabled companies to streamline their supply chain processes, improve communication and coordination, and increase efficiency. One of the most significant benefits of digital technologies in supply chain management is the ability to automate processes. Automation reduces the need for manual labor, which can be time-consuming and prone to errors. Digital technologies such as robotics, artificial intelligence, and machine learning can automate tasks such as inventory management, order processing, and logistics planning. This automation not only saves time and reduces errors but also frees up employees to focus on more strategic tasks. Digital technologies also provide companies with better access to logistics information. Technologies such as radio-frequency identification (RFID) and global positioning systems (GPS) enable companies to track shipments in real-time, providing them with greater visibility into their supply chain. This visibility allows companies to make more informed decisions about inventory management, transportation, and logistics planning (Nowicka, 2019).

Technology in Supply-Chain Management

The role of technology in SCM is a driving force behind innovation and efficiency improvements. Advanced technologies such as IoT, RFID, blockchain, and data analytics are identified as enablers of real-time visibility, automation, data-driven decision-making, and collaborative supply chain networks. These technological advancements have revolutionized SCM practices, leading to increased operational efficiency, agility, and responsiveness across the supply chain. There is significance of SCM practices in enhancing the competitive position of firms in the long run. SCM is defined as a set of activities aimed at effectively managing the supply chain, encompassing logistics, operations, materials management, marketing, purchasing, and information technology. The six key SCM practices, including strategic supplier partnership, customer relationship, information sharing, information quality, postponement, and internal operations, is crucial elements for investigation (Lee et al., 2018). Emerging technologies play a crucial role in enhancing supply chain management during the COVID-19 pandemic. Technologies such as blockchain have been identified as key components in supply chain management, offering insights through machine learning algorithms and natural language processing methods. These technologies not only improve operational efficiency but also contribute to the sustainability of supply chains and business operations globally. The successful implementation of emerging technologies during the pandemic underscores the importance of adopting and routinizing Industry 4.0 technologies for future supply chain success. Companies are advised to focus on these technologies to gain a competitive advantage in the evolving business landscape (Khan & Manzoor, 2021).

Technology in Supply Chain Logistics

One of the key challenges identified in the supply chain logistics industry is the issue of late deliveries, high volatility orders, driver attitudes, and communication inefficiencies. These challenges can disrupt the smooth flow of goods and services, leading to delays and customer dissatisfaction. Additionally, the movement of products from manufacturers to end customers poses a significant challenge in creating an efficient supply chain. Warehousing and distribution are often outsourced to third-party logistics service providers, emphasizing the importance of effective collaboration and coordination in the supply chain network. To address these challenges, technology innovation emerges as a critical solution in enhancing operational efficiencies and gaining a competitive edge in the industry. The adoption of new technologies, particularly information technologies, is highlighted as a key driver of improvement in logistics and supply chain management. Technologies such as RFID, EDI, and GPS are identified as common solutions that offer enhanced visibility, tracking, and efficiency in supply chain operations. By leveraging these technologies, companies can optimize their supply chain processes, improve communication, and meet the evolving demands of customers (Chikwanda & Zulu, 2019).

Technology in Supply Chain Sustainability

Digital technologies can positively influence economic and environmental performance in manufacturing firms by facilitating the establishment of digital supply chain platforms. These platforms play a crucial role in enhancing information sharing and external collaboration, especially in dynamic environments. One key aspect of technology in

enhancing supply chain sustainability is the optimization of logistics and transportation processes. Advanced technologies such as Internet of Things (IoT), RFID, and GPS tracking systems provide real-time visibility into the movement of goods, leading to more efficient route planning, reduced fuel consumption, and lower carbon emissions. By optimizing transportation, organizations can minimize their environmental footprint while improving operational efficiency. Technology facilitates data-driven decision-making in supply chain management. Big data analytics and artificial intelligence (AI) tools enable organizations to analyze vast amounts of data to identify inefficiencies, forecast demand more accurately, and optimize inventory levels. By leveraging data analytics, companies can reduce waste, improve resource utilization, and make informed decisions that align with sustainability objectives. Another critical utility of technology in achieving supply chain sustainability is enhancing transparency and traceability. Blockchain technology, for instance, enables secure and transparent tracking of products throughout the supply chain, ensuring authenticity, ethical sourcing, and compliance with environmental standards (Liu, Zhu, & Seuring, 2020).

Big Data in Supply-Chain Management

Technologically, the integration of big data in the supply chain revolutionizes data management and analysis. By harnessing large volumes of data from various sources such as IoT devices, sensors, and social media, organizations can gain real-time insights into their operations. This technological advancement enables predictive analytics, anomaly detection, and optimization of processes. For instance, predictive maintenance powered by big data can help prevent equipment failures, reducing downtime and enhancing operational efficiency. Operationally, the adoption of big data technology enhances decision-making processes within the supply chain. With access to vast amounts of data, organizations can optimize inventory management, demand forecasting, and logistics operations. Real-time visibility into the supply chain allows for agile responses to disruptions and better coordination among stakeholders. Moreover, big data analytics enables the identification of patterns and trends that can drive process improvements and cost savings. Strategically, leveraging big data in the supply chain enables organizations to gain a competitive edge and drive innovation. By analyzing customer behavior, market trends, and supplier performance, companies can make informed strategic decisions. Big data facilitates the identification of new business opportunities, the development of personalized customer experiences, and the optimization of the overall supply chain network. Strategic use of big data can lead to enhanced collaboration with partners, improved risk management, and increased customer satisfaction (Centobelli et al., 2022).

Reinforcement Learning in Supply-Chain Management

Reinforcement Learning (RL) has emerged as a powerful tool in revolutionizing decision-making processes within the realms of logistics and supply chain management. By leveraging advanced algorithms and data-driven approaches, Reinforcement Learning offers a plethora of applications that optimize operations, enhance efficiency, and tackle complex challenges in the supply chain domain. One of the key applications of Reinforcement Learning in logistics and supply chain management is in Inventory Management. Reinforcement Learning algorithms can dynamically adjust reorder points and quantities based on past data, optimizing inventory levels to meet demand fluctuations efficiently. This adaptive approach ensures that organizations maintain optimal stock levels while minimizing holding costs and stockouts. Transportation and Route Optimization represent another critical area where Reinforcement Learning shines. By considering factors such as traffic conditions, customer locations, and vehicle capacities, Reinforcement Learning algorithms can plan delivery routes effectively, reducing transportation costs and improving delivery times. This optimization leads to enhanced fleet management and streamlined logistics operations. Pricing and Demand Forecasting benefit significantly from Reinforcement Learning techniques. By analyzing market trends and demand patterns, Reinforcement Learning can assist in setting optimal prices for products, maximizing revenue while meeting customer expectations. This application enables organizations to make data-driven pricing decisions that align with market dynamics and consumer behavior. Warehouse Management is another domain where Reinforcement Learning plays a vital role. By optimizing storage locations, picking routes, and inventory replenishment strategies, Reinforcement Learning algorithms enhance warehouse operations, leading to improved efficiency and reduced operational costs. This optimization ensures that warehouses operate at peak performance, maximizing storage capacity and minimizing handling times. Supply Chain Network Design is also revolutionized by Reinforcement Learning methodologies. By optimizing the location of facilities, transportation routes, and inventory allocation, Reinforcement Learning assists in designing efficient and resilient supply chain networks. This application enables organizations to create agile and responsive supply chains that can adapt to changing market conditions and disruptions. Reinforcement Learning enhances decision-making processes in the supply chain by

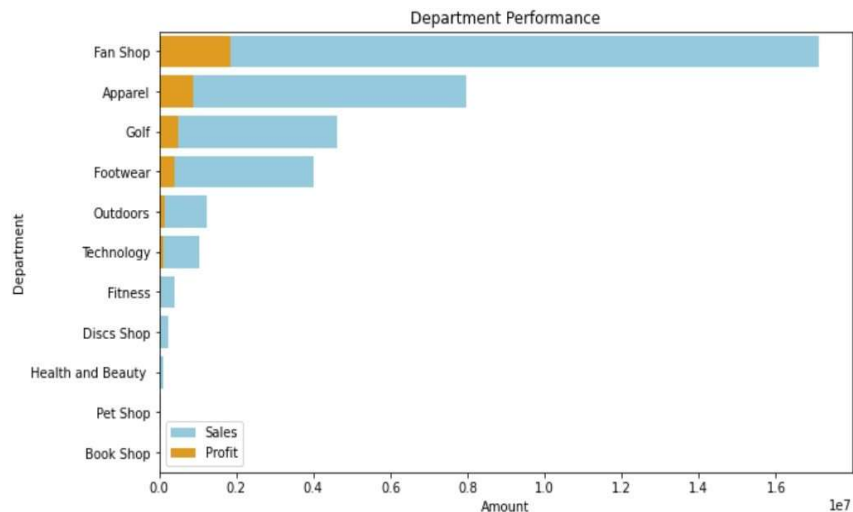
offering adaptive learning capabilities. Reinforcement Learning algorithms continuously learn from interactions with the environment, enabling organizations to make real-time decisions based on evolving data and feedback. This adaptability ensures that supply chain strategies remain agile and responsive to dynamic market conditions and operational challenges. Moreover, Reinforcement Learning facilitates optimization by maximizing rewards such as minimizing costs, reducing lead times, and maximizing service levels. By leveraging Reinforcement Learning algorithms, organizations can streamline operations, improve efficiency, and achieve strategic objectives in the supply chain domain (Yan et al, 2022).

MACHINE LEARNING IN SUPPLY CHAIN MANAGEMENT

Department-Wise Performance Analysis in Supply-Chain Management

In supply chain management, analyzing department-wise performance is crucial for understanding the efficiency and effectiveness of various segments within the supply chain. It helps in identifying areas of improvement, allocating resources effectively, and optimizing overall performance. This analysis typically involves aggregating data related to sales, profits, costs, and other relevant metrics across different departments or functional areas within the supply chain. By examining departmental performance metrics, organizations can gain insights into which departments are contributing most significantly to sales and profitability and which areas may require attention or optimization. Departments within a supply chain can include procurement, production, distribution, logistics, marketing, sales, and customer service, among others. Analyzing the performance of each department allows managers to make informed decisions about resource allocation, process improvements, and strategic planning. In our supply-chain dataset, we grouped various departments and carried out a quantitative analysis of their performance based on the sales figures generated by them.

Figure 1: Department-Wise Sales Performance



Customer Satisfaction and Loyalty

Predicting customer loyalty in supply chain management is a critical endeavor that holds significant implications for businesses aiming to enhance customer satisfaction, retention, and overall profitability. In this context, customer loyalty prediction involves leveraging data analytics and machine learning techniques to forecast the likelihood of customers remaining loyal to a company's products or services over time. In our dataset, which contains various features related to customer orders, shipping, and product details are then used to predict the target variable 'Late delivery risk,' which could be considered an indicator of customer satisfaction and loyalty late deliveries often lead to dissatisfaction and may impact customer retention. Supply chain data, encompassing factors such as shipping times, order fulfillment accuracy, product quality, and customer interactions, serves as valuable input for predictive models. By analyzing historical purchasing behavior and customer attributes, predictive models can identify patterns and

indicators that signal potential loyalty or churn. Successfully predicting customer loyalty enables companies to tailor marketing strategies, improve service delivery, and prioritize resources towards retaining high-value customers, ultimately fostering long-term relationships, and sustaining competitive advantage in the dynamic landscape of supply chain management. The results showcase the performance of each model in terms of accuracy and classification metrics. Notably, Random Forest, Logistic Regression, Gradient Boosting, AdaBoost, Extra Trees, and XGBoost classifiers exhibit high accuracy scores, typically above 97%. These models also demonstrate strong precision, recall, and F1-scores for both classes, suggesting their effectiveness in predicting late deliveries and, by extension, assessing customer satisfaction and loyalty. However, K-Nearest Neighbors, while still achieving a reasonable accuracy score, shows comparatively lower precision, recall, and F1-scores. This could indicate that its performance is relatively weaker in distinguishing between the two classes, potentially leading to misclassifications and less reliable predictions.

Table 1: Department-wise Sales and Profit

Department Name	Sales	Order Profit Per Order
Fan Shop	1.711387×10^7	1.834155×10^6
Apparel	7.976255×10^6	8.818829×10^5
Golf	4.609028×10^6	4.975236×10^5
Footwear	4.006499×10^6	4.102225×10^5
Outdoors	1.253351×10^6	1.452515×10^5

Figure 2: Customer Loyalty Prediction

(a) Model Performance Based on Customer Loyalty **(b) ROC curve demonstrating performance of model**

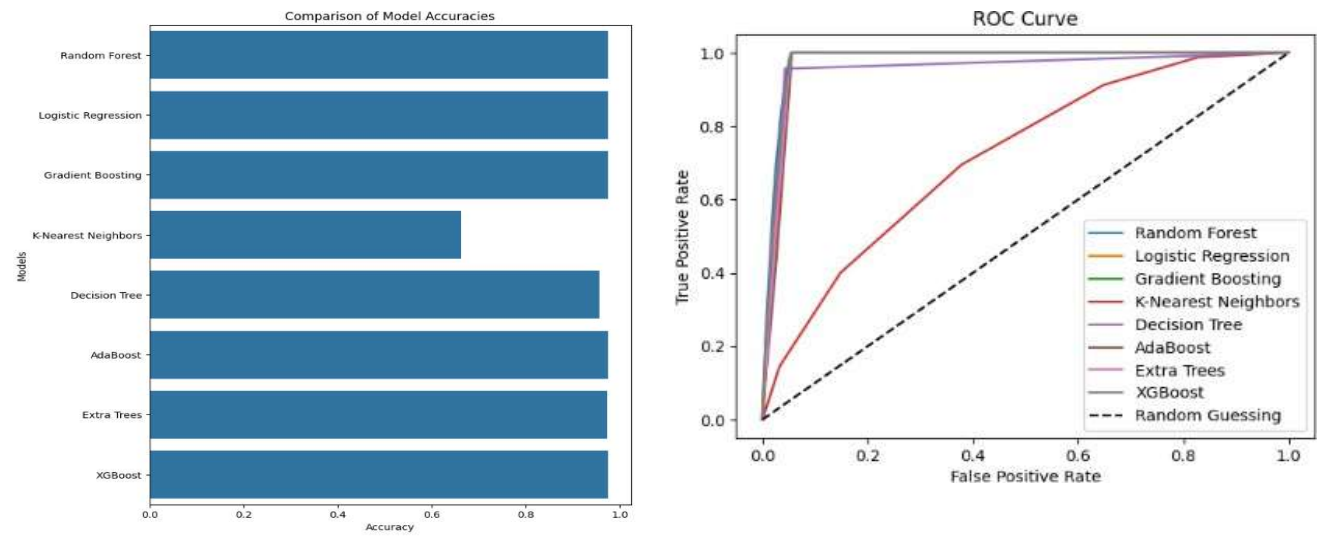


Table 2: Model Performance in Predicting Customer Loyalty

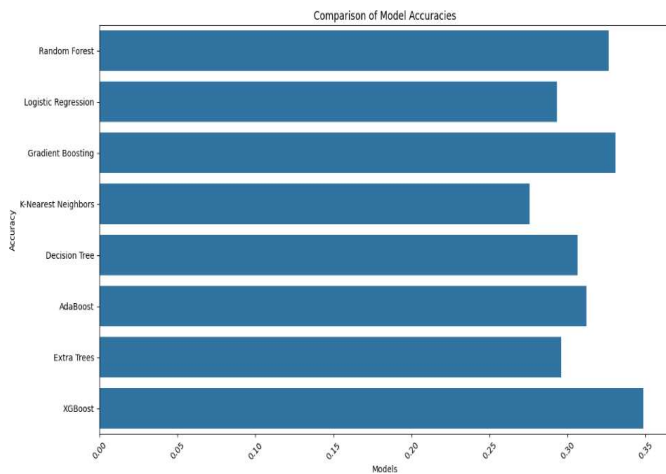
Model	Accuracy	Precision (Class 0)	Precision (Class 1)
Random Forest	0.975	1.00	0.96
Logistic Regression	0.975	1.00	0.96
Gradient Boosting	0.975	1.00	0.96
K-Nearest Neighbors	0.662	0.63	0.69
Decision Tree	0.957	0.95	0.96
AdaBoost	0.975	1.00	0.96
Extra Trees	0.973	1.00	0.96
XGBoost	0.975	1.00	0.96

Market Expansion Strategy

The Market Expansion Strategy in the supply chain problem aims to leverage historical sales data to identify potential markets for business expansion. By analyzing geographical data and market characteristics, this strategy seeks to uncover untapped opportunities and recommend new locations for expansion. Through this approach, businesses can gain insights into consumer behavior, demand patterns, and regional preferences, enabling them to make informed decisions about where to allocate resources for expansion initiatives. By expanding into new markets strategically, companies can diversify their customer base, increase market share, and ultimately drive growth and profitability. Additionally, by targeting markets with favorable demographics, economic conditions, and competitive landscapes, businesses can mitigate risks associated with expansion and enhance their overall competitiveness in the marketplace. In our dataset, we are trying to predict the market value based on shipment, sales, customer, and delivery information. The analysis is aimed at analyzing the performance of various markets based on these myriad factors. The accuracy of the models ranges from approximately 0.28 to 0.35, indicating moderate performance in predicting market expansion opportunities. Among the models, XGBoost achieved the highest accuracy of 0.35, closely followed by Gradient Boosting with an accuracy of 0.33. The AUC score, which measures the area under the Receiver Operating Characteristic (ROC) curve, is another crucial metric for evaluating the models' performance, especially for multi-class classification. The AUC scores range from approximately 0.52 to 0.61, indicating modest to moderate discriminative power in distinguishing between different market expansion opportunities.

Figure 3: Potential Markets Prediction

(a) Model Performance based on Potential Markets



(b) ROC curve demonstrating performance

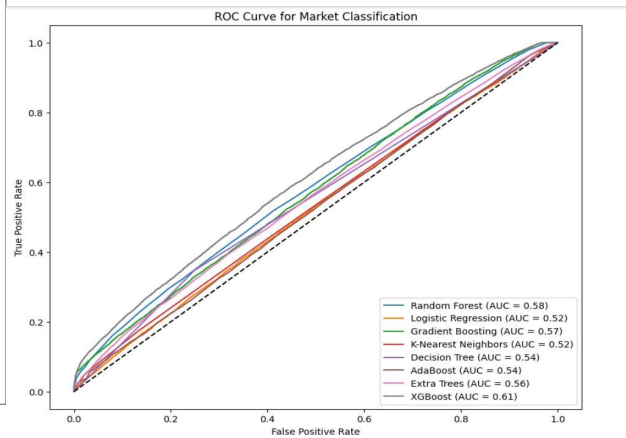


Table 3: Model Evaluation Results

Model	Accuracy	AUC Score	Classification Report		
			Precision	Recall	F1-Score
Random Forest	0.33	0.58	0.14	0.25	0.24
Logistic Regression	0.29	0.52	0.17	0.21	0.15
Gradient Boosting	0.33	0.57	0.44	0.24	0.19
K-Nearest Neighbors	0.28	0.52	0.22	0.22	0.22
Decision Tree	0.31	0.54	0.27	0.27	0.27
AdaBoost	0.31	0.54	0.22	0.23	0.18
Extra Trees	0.30	0.56	0.24	0.24	0.23
XGBoost	0.35	0.61	0.37	0.26	0.22

Delivery Status Prediction

In the evolving global commerce landscape, accurate delivery prediction is crucial for optimizing supply chain and logistics operations, impacting customer satisfaction, operational costs, and overall competitiveness (Khiari & Olaverri-Monreal, 2020). Reliable delivery forecasts enhance customer experience by managing expectations and reducing uncertainty, while also improving supply chain efficiency through optimal resource distribution, such as labor scheduling, vehicle dispatching, and route optimization, thereby lowering operating costs (Smith & Johnson, 2024). Accurate shipment forecasting also enables efficient inventory planning, reducing excess stock and minimizing costs associated with holding inventory (Lee, 2023).

Machine learning (ML) significantly enhances delivery status prediction by analyzing large datasets and identifying patterns for more accurate and dynamic forecasts. Various studies have applied ML algorithms for predicting delivery times and statuses. For instance, Khiari and Olaverri-Monreal used boosting algorithms for postal travel times (2020), Bussmann applied LightGBM, XGBoost, and N-beast for shipping forecasts (2019), and Abdollahi et al. developed a random forest model for an online shipping platform (2020). Keung et al. used supervised and unsupervised learning models for sales and delay forecasts in an Asian supermarket (2021).

Our dataset comprises 6880 observations and 32 columns, from which non-relevant descriptive information was removed. Categorical attributes were label-encoded to enable processing by numerical algorithms. We transformed the problem into a classification task by labeling deliveries as "late" or "not late" based on a 24-hour threshold. We evaluated RandomForest, DecisionTree, XGBoost, and Support Vector Machines (SVM) algorithms, performing hyperparameter tuning and cross-validation to optimize performance. XGBoost Classifier emerged as the most accurate, followed by Random Forest and AdaBoost. While complex models generally achieve higher accuracy, simpler models like decision trees offer greater interpretability, which can be crucial in decision-making and supply chain management. The choice of algorithm depends on balancing accuracy and interpretability based on organizational priorities.

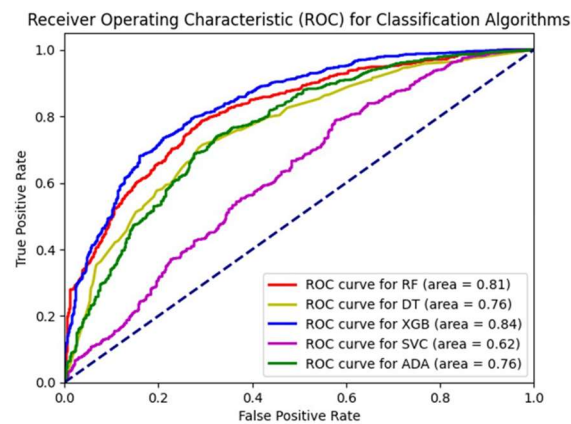
Table 4: Variable Explanation and Data Type

Variable	Explanation	Data Type
Planned ETA	Planned time of Delivery	Datetime
Trip Start Date	Starting time of Delivery	Datetime
Actual ETA	Actual time of Delivery	Datetime
Transportation Distance In Km	The Distance to Delivery	Integer
vehicleType	Location Type of Vehicle used in De- livery	Categorical
Material Shipped	Type of Material Delivered	Categorical
supplierNameCode	The name of supplier	Categorical
Delta Time	The Time difference between Actual and Planned ETA	Datetime
Delta Hour	The value of Delta Time converted into hours	Float
Delivery Status	Whether the delivery is late or not	Categorical

Table 5: ML Algorithms and Hyperparameters for Best Model

ML Algorithms	Hyperparameters for Best Model
AdaBoost	Number of Estimators: 300 Max Depth: 5 Criterion: Entropy Max Features: Log2
Random Forest	Number of Estimators: 200 Max Depth: 20 Min Samples Split: 4
Decision Tree	Max Depth: 10 Min Samples Split: 2 Min Samples Leaf: 4 Max Features: Auto
SVC	C: 0.1 Kernel: RBF
XGBoost	Colsample bytree: 0.7 Max Depth: 6 Number of Estimators: 100 Subsample: 1

Figure 4: ROC Values for Algorithms used to Predict Delivery Status



SUPPLY-CHAIN DISRUPTIONS

Supply chain disruptions can stem from a myriad of sources, ranging from natural disasters and geopolitical events to technological failures and pandemics. As elucidated in the article, recent events such as the Brexit aftermath, the Syrian civil war, and the COVID-19 pandemic have underscored the vulnerability of supply chains to unforeseen disruptions. These disruptions can trigger a ripple effect, amplifying their impact across interconnected supply chain networks. To address these challenges, researchers and practitioners have proposed a multitude of mitigation strategies aimed at bolstering the resilience of supply chains. One key aspect highlighted in the literature is the adoption of digital technologies and Industry 4.0 principles to enhance supply chain risk analytics. Leveraging advanced technologies such as artificial intelligence, blockchain, and Internet of Things (IoT) can enable real-time monitoring of supply chain operations, facilitating early detection of disruptions and swift response mechanisms. By spreading sourcing across multiple suppliers and geographies, organizations can reduce dependency on a single source and enhance supply chain flexibility. By identifying potential vulnerabilities and implementing contingency strategies, organizations can preemptively address disruption risks and enhance their adaptive capacity. In conclusion, supply chain disruptions pose significant challenges to businesses, necessitating proactive mitigation strategies and resilience-building initiatives. By leveraging technological advancements, diversifying sourcing strategies, conducting robust risk assessments, fostering collaboration, and prioritizing performance analysis, organizations can fortify their supply chains against disruptions and navigate uncertainties effectively (Ballou, 2007).

FUTURE OF SUPPLY CHAIN & LOGISTICS

The future of supply chain and logistics management is driven by outsourcing, new generation suppliers, and advanced technologies. Companies increasingly rely on third-party providers to streamline operations and enhance efficiency. Technology-driven logistics, leveraging real-time information and wireless communication, enable cost savings, reduced inventories, and improved customer satisfaction, reshaping global operations (Katsaliaki, Galetsi, & Kumar, 2022). The past of the logistics and supply chain industry plays a significant role in influencing future career choices. Here are some key points that highlight this influence:

Impact of COVID-19 Pandemic: The COVID-19 pandemic disrupted economies worldwide and heavily affected supply chains, leading to unprecedented demand and supply shocks. This experience highlighted the importance of preparedness, advanced strategies, superior processes, and enhanced visibility in supply chain management. Future professionals may prioritize skills related to risk management, crisis response, and supply chain resilience based on the lessons learned from this crisis.

The past experiences, challenges, and trends in the logistics and supply chain industry serve as valuable lessons that can shape future career choices. Professionals may need to adapt to changing dynamics, embrace technological advancements, and develop specialized skills to thrive in this evolving sector (Erturgut, 2012). In the evolution of the current landscape of logistics and supply chain researchers and managers face in the current landscape of logistics and supply chain. Some of the challenges are mentioned below:

These challenges highlight the evolving nature of logistics and supply chain management, emphasizing the importance of adapting to new technologies, fostering collaboration, and enhancing managerial skills to meet the demands of the dynamic business environment (Merkert & Hoberg, 2023).

CONCLUSION

The integration of technology in Supply-Chain Management (SCM) has revolutionized efficiency, agility, and competitiveness in the global market. It has transformed SCM from a logistics-centric function to a multi-functional corporate endeavor, optimizing the flow of goods, services, information, and finances. Advanced analytics and AI provide real-time insights, accurate demand forecasting, inventory optimization, enhancing decision-making and performance. Digital platforms improve information sharing and collaboration, fostering resilience and agility. Technology also supports sustainability by reducing fuel consumption and emissions. Embracing emerging technologies and innovation ensures continuous improvement, customer satisfaction, and a competitive edge in the dynamic SCM landscape.

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CO-CREATION: A PEDAGOGICAL TOOL WITH IMPACT ON STUDENTS' LEARNING PROCESSES – A CASE STUDY OF THE POLYTECHNIC UNIVERSITY OF PORTO

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ABSTRACT

P. PORTO actively participated in the Link ME UP – 1000 Ideas program between 2020 and 2023, with the aim of testing receptivity to the teaching methodology based on design thinking on the part of its academic community, namely teachers and students. employment and the creation of innovative companies. The project had the goal of reinforce the cooperation between Portuguese Polytechnics as agents promoting qualified entrepreneurship, co-creating innovation with the business environment, aiming to create innovative ideas and new companies. The Link Me Up Project – 1000 Ideas, aimed to stimulate the entrepreneurial spirit through the development of initiatives that boost: the co-creation of innovation based on multidisciplinary teams of young students and/or entrepreneurs from Polytechnic Higher Education in Portugal (axis 1); the creation of ideas and business plans (axis 2). With the focus on the activities developed in P. PORTO, the present work analyzes the results of the co-creation axis in the six organized editions, among the student community. For this, the impact on learning, the objectives to be achieved and the aspects of adaptation to the target audience and respective improvements to be implemented were evaluated. With the aim of developing a challenge presented by a company, teams of students were formed, guided by a P. PORTO's teacher, in a total of 48 projects, 250 students and 48 P. PORTO's teachers/facilitators. In this work the main conclusions are the following: the greater development of students' interpersonal skills and abilities; good acceptance of the methodology and tools used; the recognition of the added value throughout the entire process and the desire to develop more projects in co-creation with companies.

Keywords: co-creation, cooperation, HEI, pedagogical methodologies, innovation.

INTRODUCTION

Economic growth, while driving progress, has brought significant adverse consequences for society and the environment. Humanity is facing unprecedented challenges, such as climate change, biodiversity loss, inequality, health, and economic issues, all aligned with the Agenda 2030. This situation emphasizes the importance of sustainable development (SD), which aims to meet present needs without compromising those of future generations (Abad-Segura & González-Zamar, 2021).

The complexity of these challenges demands a radical approach that fosters the creation of new partnerships and incentives, with a special focus on empowering youth and women, along with encouraging a more proactive and

entrepreneurial civil society. Indeed, as highlighted in the UNESCO report "Knowledge-driven actions: transforming higher education for global sustainability," it is imperative that Higher Education Institutions (HEIs) and their stakeholders reevaluate their role in society, acting as catalysts for a just and urgent transition towards sustainability (UNESCO, 2022).

In the context of the COVID-19 pandemic, several countries recognized the impact and importance of innovation and cooperation in the global response to this challenge. Under this scope, the European Commission, through the Horizon Europe program, launched a strategy to promote cooperation based on innovation, research, and knowledge application (European Commission & Directorate-General for Research and Innovation, 2021). With the ongoing pandemic and the need to find new ways of remote collaboration, there was an exponential growth in the use of digital tools, which allowed the proliferation of digital scenarios as feasible collaborative environments. In this context, co-creation has emerged as a powerful approach for organizations to harness collective intelligence, promote innovation, and strengthen cooperation.

Co-creation involves interactional creation across interactive system-environments (facilitated by interactive platforms), entailing engaging engagements and structuring organizations (Ramaswamy & Ozcan, 2018). With the widespread popularization of digital scenarios, co-creation as a concept and practice has gained significant strength, providing connectivity and collaboration—basic principles that have become the pillars of organizational success (Audretsch et al., 2023; Ji et al., 2023; Østergaard & Drejer, 2022).

The digital age has ushered in an era of unprecedented change and disruption across industries (Cai, 2023; Omol, 2023). Organizations face increasing pressure to remain competitive. To do this, they must be able to keep up with rapidly evolving technologies, respond to changes in consumer behavior and dynamic market conditions, and develop innovative solutions. Driving this transformation are innovation and collaboration—the two main factors that can distinguish between success and obsolescence in the digital era (Costa et al., 2023; Ocampo et al., 2022).

In Europe, as in other regions of the world, these issues are fundamental for developing and transforming society and the market (European Commission & Directorate-General for Research and Innovation, 2017, 2021). The complexity of these challenges demands a radical approach that fosters the creation of new partnerships and incentives, with a special focus on empowering youth and women, along with encouraging a more proactive and entrepreneurial civil society. Indeed, as highlighted in the UNESCO report "Knowledge-driven actions: transforming higher education for global sustainability," it is imperative that Higher Education Institutions (HEIs) and their stakeholders reevaluate their role in society, acting as catalysts for a just and urgent transition towards sustainability (UNESCO, 2022).

Furthermore, the complexity of these challenges calls for a disruptive approach and the development of hybrid cooperation methods that involve and educate the youth in entrepreneurship. According to some authors HEIs can play a significant role in promoting entrepreneurship by providing students with the knowledge, skills, and attitudes required to become successful entrepreneurs. This issue becomes particularly relevant as youth unemployment grows, with substantial long-term impacts on individuals, communities, economies, and societies (Ragazou et al., 2022; Ramalho et al., 2022). Entrepreneurship can serve as a measure to mitigate and overcome the challenges of the youth labor market. However, during periods of crisis, as Ragazou et al. (2022) add, the role of entrepreneurship becomes even more critical. In this context, HEIs play an important role in integrating innovative pedagogical techniques that allow them to generate the expected impact on the transformation of society. By integrating innovative pedagogical techniques and utilizing digital tools, the aim is to create a student-centered learning environment that aligns the principles of Industry 4.0 (I4.0) with Higher Education 4.0 (HE4.0) and Work 4.0 (W4.0). This calls for a transgressive, innovative, transformative, diverse, and inclusive approach to teaching and learning (AlMalki & Durugbo, 2023; Chigbu et al., 2023; Eyal & Gil, 2020; Kalnbalkite et al., 2023; Kärkkäinen et al., 2023; Niemi, 2021; Riera et al., 2020; Rybnicek & Königsgruber, 2019). This setting is ideal for deepening the relationship between universities and industry, particularly through the creation and implementation of entrepreneurship and co-creation programs. These programs are highly effective tools for ensuring successful knowledge transfer processes (Cai, 2023; de Wit-de Vries et al., 2019; Gretsche et al., 2019; Osorno-Hinojosa et al., 2022).

To emphasize the importance of adapting education to the evolving technological landscape, several authors explore the effectiveness of innovative pedagogy in the context of Industry 4.0 (AlMalki & Durugbo, 2023; Chigbu et al., 2023; Niemi, 2021; Sasson et al., 2022). This research, developed over recent decades, has facilitated the emergence of innovative pedagogical methodologies. Within the I4.0 paradigm, a key focus of research this decade is

the alignment between the skills needed in companies and the offerings of HEIs, as well as the impact of IT on teaching-learning pedagogies.

The Polytechnic of Porto (P.PORTO), aligned with its teaching matrix and proximity to industry, and committed to following good practices in higher education in the areas of entrepreneurship and co-creation, joined a consortium with 12 other polytechnics and applied to the Support System for Co-creation of Innovation, Creativity, and Entrepreneurship with the Link ME UP – 1000 Ideas program. This program is characterized by two main axes: co-creation and entrepreneurship. Within the scope of the co-creation axis, companies present a challenge (aligned with the SDGs) to the teams, who, over eight to ten weeks, develop solutions with the support of facilitators using the innovative design thinking methodology—Demola methodology. The entrepreneurship axis, which aims to improve the quality of employment and create innovative businesses through the training of young students and/or entrepreneurs, will not be the subject of this article. The Link ME UP program, with 600 cases of co-creation and 400 cases of idea generation development across all partners, also seeks to reinforce collaboration among Portuguese polytechnics as agents of qualified entrepreneurship in the co-creation of innovation in the business environment, aiming to produce creative ideas and new businesses (Sequeira et al., 2023).

This work presents the results of the Link ME UP – 1000 Ideas program promoted at P.PORTO, specifically those related to the co-creation axis over six editions. These involved 48 P.PORTO teachers and 12 professional education teachers (facilitators), interns in the co-creation and innovation methodology, and 250 students participating in the 48 projects proposed by the 48 companies involved over the last three years. The main objective of this work is to analyze the students' perceived perception, from the eight schools from P.PORTO, about their skills' improvement related to collaboration and cooperation between HEIs and industry, concerning to Link ME UP program.

The skills that were intended to be developed with this project were based on the “Entrecomp - Framework of Reference for Skills for Entrepreneurship (European Commission, 2016, Portuguese version by Dias Trindade, Moreira, and Jardim, 2020)” comprise three areas of competence: “In Action”, “Resources” and “Ideas and Opportunities”. The skills under review are essential for fostering and developing the individuals' "entrepreneurial initiative", both within the realm of employment and in founding businesses.

This paper is structured as follows: Section 1 provides the introduction, including the scope, objectives, project description, main contributions of the research, and topics of interest for the development project. Section 2 outlines the methodology for data analysis. Section 3 presents the results from the six editions of implementing co-creation projects at the eight schools of P.PORTO. Section 4 offers the discussion. Finally, Section 5 concludes with some considerations, limitations, and suggestions for future work.

METHODS AND DATA

To assess the P.PORTO students' perception of their skill improvement in each of the eight organic schools, training was provided on the methodology for co-creation and innovation process implementation – Link ME UP – 1000 ideas. This training was given to students enrolled in the same co-creation and innovation process.

Six versions of the P.PORTO Link Me Up – 1000 ideas co-creation axe were launched over the course of three years, from January 4, 2021, to June 30, 2023. A teacher from each of the organic schools (Health, Hospitality, Engineering, Accounting & Management, Technologies & Management, Media & Design, Arts, Education) of P.PORTO was a facilitator for each edition, and one teacher from a professional school of the Portuguese network participates as well. In all, ten teachers train each edition, training 60 teachers in the methodology for co-creation and innovation. Sixty participating companies have set up 60 projects, with an average of five to six students per challenge, for a total of 240 students participating in eight to ten days to solve a problem using the aforementioned methodology.

Sample

The sample for the analysis of the skills' perception acquired by the participants using a questionnaire was composed of 230 participants (96% of a total of 240) from six Link ME UP editions from P.PORTO. In this sample 102 are male (44.3 %), and 128 are female (55.7%) (Mage= 21.72 years, SD= 2.985). In this study were excluded 10 international students that were not from P.PORTO Universe. This sample was composed with students from seven P.PORTO

schools: 94 students from ISEP-Engineering School (40.9%), 85 students from ISCAP – School of Accounting and Administration (37.0%), 22 students from ESS – School of Health (9.6%), 20 students from ESE – School of Education (8.7%), 4 students from ESHT – School of Hospitality and Tourism (1.7%) as well ESMAD – School of multimedia, and 1 student from ESTG – School of Technology and Management (0.4%). Unfortunately, the students from ESMAE – School of Music and Performing Arts were not involved and did not participate in this project.

Instrument

A survey methodology was applied, supported by a questionnaire with 36 questions to analyze the perceived skills improvement related to collaboration and cooperation between HEIs and industry, concerning the Link ME UP program. The questionnaire was structured with four dimensions: Student Characterization (11 questions); Skills perception (10 questions); Methods and Tools (10 questions); and Level of Satisfaction (3 questions). A seven-point Likert scale ranging from 1 to 7, where 1 (totally disagree) represents a very poor cocreation-related skill perception and 7 (totally agree) a very strong cocreation-related skill perception was applied to Skills perception and Methods and Tools dimensions.

Procedures and Data Analysis

The recruitment to participate in this study was conducted online. An email was sent to the participants from the 6 editions of Link ME UP project. The institutional email was used, and a link to the Google Forms survey was provided in this email. All participants provided informed consent to participate in the study, and all questions related to confidentiality and data protection questions were ensured.

Data Analysis

A descriptive analysis was performed to characterize the sample, using percentages and measures of central tendency (mean), and dispersion (standard deviation and range) for sociodemographic characteristics. To analyze data from the questionnaire responses a descriptive analysis was performed using measures of central tendency (median and mode) and dispersion (range, minimum, and maximum). After, an inferential analysis was done, using Kruskal-Wallis with a significance level $\alpha \leq .05$, to better understand if there were differences between Students' skills perception considering the 6 editions of Link ME UP, the P.PORTO school, the gender, and the age. The same was done for the Methods and Tools dimension of the program.

RESULTS

The descriptive analysis for sociodemographic characterization of the sample was performed and is presented in Table 1.

Table 1: Sociodemographic Characterization of the Sample

		Frequency (N=230)	%
<i>Gender</i>	Female	128	55.7
	Male	102	44.3
<i>Age (intervals)</i>	<=20	94	40.9
	21-25	109	47.4
	26-30	19	8.3
	31-40	8	3.4
<i>Edition</i>	1st Edition	44	19.1
	2nd Edition	39	17.0
	3th e 4th Edition	69	30.0
	5th Edition	43	18.7
	6th Edition	35	15.2
<i>Type of Course</i>	degree/ Bachelor	176	76.5
	Master degree	49	21.3
	CteSP*	5	2.2

<i>Course Year</i>	1° year	61	26.5
	2° year	90	39.1
	3° year	72	31.3
	4° year	7	3.0
<i>P.Porto School</i>	ISEP	94	40.9
	ESS	22	9.6
	ISCAP	85	37.0
	ESE	20	8.7
	ESTG	1	.4
	ESHT	4	1.7
	ESMAD	4	1.7
<i>Working Student</i>	Yes	19	8.3
	No	211	91.7

* Professional higher technical course

By Gender higher percentage, 55.7%, are female students against 44.3% of male. By age and aligned with the cycle study year 40.9% are 20 or less years old and 47.4% are between 21 and 25 years old. Concerning the percentage by editions, as the program has limited to the number of 8 to 10 projects and number 5 to 6 students by the project this percentage is around 18%. By cycle study, 76.5% are from bachelor's and most of them from the second and third years, 39.1% and 31.3% respectively, accounting for the first year 26.5%. 21.3% are from master courses. At P.PORTO most of the master's courses are post-work time addressed to the target public of worker students statute, consequently, very effort demanded can be one of the reasons for this percentage number. Regarding the student origin by an organic school, ISEP, ISCAP, and ESS were the schools with more enrolled students, with respectively 40.9%, 37%, and 9.6%, although the communication was done in the same ways for all schools. From ESMAE the School of Music and Arts Performance, although P.PORTO has at least one facilitator by edition with an offer of relevant projects in their scope, the students did not enrol in the project due to the specific aim of the cycle study and courses. Concerning the type of student statute, 91.7 corresponded to the regular student statute, and 8.3% corresponded to of work student statute. For this characterization, four questions were not considered because: 1) the scope is only to analyze students from P. Porto (Institution), 2) with university education, 3) with Portuguese Nationality (Student Nationality), 4) and the type of Student (National Students).

A descriptive analysis of the student's skills perception dimension was carried out (Table 2), obtaining average values that varied between 4.70 "Creation Capacity" and 5.96 "Teamwork", reflecting levels of skills perceived above the midpoint of the scale. The median for the different skills, between 5 – Partially agree and 6 – Agree very much, also reflects students' perceived skill improvement.

Table 2: Descriptive Analysis of Students' Skills Perception Dimension

Skills	Mean ± SD	Median	Range	
			Minimum	Maximum
Critical Thinking	5.72 ± 1.074	6.00	3	7
Creativity	5.81 ± 1.077	6.00	2	7
Entrepreneurship	5.71 ± 1.242	6.00	1	7
Leadership	5.40 ± 1.276	6.00	1	7
Communication	5.93 ± 1.063	6.00	3	7
Teamwork	5.96 ± 1.205	6.00	2	7
Digital Competencies	5.15 ± 1.431	5.00	1	7
Research gathering	5.82 ± 1.109	6.00	3	7
Management tools	5.24 ± 1.373	5.00	1	7
Creation Capacitation	4.70 ± 1.455	5.00	1	7

The Table 3 presents the results of Students' perception of the Methods and Tools dimension from Link ME UP, obtained with the questionnaire. The average values varied between 4.84 "Atlas Platform Relevance" and 6.03 "Team working Relevance", reflecting levels above the midpoint of the scale. The median for the different methods and tools questions, between 5 – Partially agree and 6 – Agree very much, also reflects a high level of perceived importance of methods and tools used in this program by students.

Table 3: Descriptive Analysis of Methods and Tools Dimension

Methods and Tools	Mean ± SD	Median	Range	
			Minimum	Maximum
Tools	5.58 ± 1.275	6.00	1	7
Atlas Platform Relevance	4.85 ± 1.697	5.00	1	7
Team working Relevance	6.03 ± 1.085	6.00	2	7
Organization Collaboration Relevance	5.63 ± 1.457	6.00	1	7
Methodology Relevance	5.70 ± 1.183	6.00	1	7
Facilitators Collaboration Relevance	6.01 ± 1.238	6.00	1	7
Internacionalization Relevance	5.02 ± 1.676	5.00	1	7

A descriptive analysis of the Level of Satisfaction dimension was carried out (Table 4 and Table 5).

Table 4: Descriptive Analysis of Level of Satisfaction Dimension for Questions “First time in the program” and “Number of hours dispended”

		Frequency (N=230)	%
<i>First Time in the program</i>	Yes	210	91.3
	No	20	8.7
<i>Number of hours</i>	At 10 hours	149	64.8
	Between 10 and 20 years	66	28.7
	More than 20 hours	15	6.5

One of the reasons for high student satisfaction was related to the time needed per week for independent work dedicated to the program. As shown in Table 4, more than 60% are only required to spend up to 10 hours. Regarding whether it was their first time doing the program, 91.3% responded affirmatively against 8.7% who said no. Concerning this question the P.PORTO Link Me UP regulation only gives once a grant to a student who enrolled in a project and finished it successfully. Even though 8.7% of the students participated more than once.

Table 5: Descriptive Analysis of Level of Satisfaction Dimension for Question “Satisfaction Level”.

Satisfaction Level	Mean ± SD	Median	Range	
			Minimum	Maximum
Global Satisfaction	5.79 ± 1.222	6.00	1	7

The global satisfaction average value is 5.79 (SD= ± 1.222), which reflects a high level of perceived satisfaction with the Link ME UP program. The median presents a value very close to the average, reflecting, once again, what has already been mentioned. After the descriptive analysis, an inferential analysis was done to better understand if there were differences between skills and Method and tools perceptions, considering the 6 editions of Link ME UP.

Table 6: Analysis of Differences between Skills and Methods/Tools Perceptions, Considering the 6 Editions of Link ME UP

Dimension		H	df	p
<i>Skills</i>	Critical Thinking	14.864	4	.005
	Creativity	12.909	4	.012
	Entrepreneurship	9.389	4	.052
	Leadership	6.031	4	.197
	Communication	7.380	4	.117
	Teamwork	6.553	4	.161
	Digital Competencies	8.514	4	.074
	Research Gathering	17.349	4	.002
	Management tools	13.826	4	.008

<i>Methods & Tools</i>	Creation Capacitation	18.374	4	.001
	Tools	3.494	4	.479
	Atlas Platform Relevance	33.206	4	<.001
	Team working Relevance	13.464	4	.009
	Organization Collaboration Relevance	19.041	4	<.001
	Methodology Relevance	16.495	4	.002
	Facilitators Collaboration Relevance	10.918	4	.027
	Internationalization Relevance	11.021	4	.026

The results for the dimension “Skills” showed that in some of the skills there are statistically significant differences between the six editions of Link ME UP, such as “Critical Thinking”, “Creativity”, “Research gathering”, “Management Tools” and “Creation Capacitation”. When analyzed the dimension “Method and Tools” there are statistically significant differences between the six editions of Link ME UP in all except in the “tools”. The same was done considering the P.PORTO school (Table 7), the type of course (Table 8), gender (Table 9), and age (Table 10).

Table 7: Analysis of Differences between Skills and Methods/Tools Perceptions, Considering the P.PORTO School

	Dimension	H	df	<i>p</i>
<i>Skills</i>	Critical Thinking	13.449	6	.036
	Creativity	12.537	6	.051
	Entrepreneurship	7.531	6	.274
	Leadership	14.111	6	.028
	Communication	18.411	6	.005
	Teamwork	9.041	6	.171
	Digital Competencies	14.015	6	.029
	Research gathering	8.848	6	.182
	Management tools	6.604	6	.359
<i>Methods & Tools</i>	Creation Capacitation	7.669	6	.263
	Tools	7.885	6	.247
	Atlas Platform Relevance	5.325	6	.503
	Team working Relevance	10.876	6	.092
	Organization Collaboration Relevance	3.558	6	.736
	Methodology Relevance	19.835	6	.003
	Facilitators Collaboration Relevance	23.658	6	<.001
	Internationalization Relevance	12.260	6	.056

The results for the dimension “Skills” showed that in some of the skills, there are statistically significant differences between the seven P.PORTO Schools, such as “Critical Thinking”, “Leadership”, and “Digital Competencies”. When analyzing the dimension “Method and Tools” there are statistically significant differences between the seven P.PORTO Schools in the “Methodology Relevance” and “Facilitators Collaboration Relevance”.

Table 8: Analysis of Differences between Skills and Methods/Tools Perceptions, Considering the Students’ Type of Course

	Dimension	H	df	<i>p</i>
<i>Skills</i>	Critical Thinking	1.372	2	.504
	Creativity	.842	2	.657
	Entrepreneurship	.659	2	.719
	Leadership	1.374	2	.503
	Communication	.255	2	.880
	Teamwork	.777	2	.678
	Digital Competencies	3.545	2	.170
	Research gathering	4.933	2	.085
	Management tools	2.794	2	.247

<i>Methods & Tools</i>	Creation Capacitation	3.520	2	.172
	Tools	.682	2	.711
	Atlas Platform Relevance	.731	2	.694
	Team working Relevance	.536	2	.765
	Organization Collaboration Relevance	.238	2	.888
	Methodology Relevance	4.930	2	.085
	Facilitators Collaboration Relevance	.879	2	.644
	Internationalization Relevance	1.612	2	.447

The Analysis of between “Skills” and “Method and tools “perceptions, considering the students’ type of course showed no statistically significant differences between these two dimensions considering Students’ Type of course.

Table 9: Analysis of Differences between Skills and Methods/Tools Perceptions, Considering the Students’ Gender

	Dimension	H	df	<i>p</i>
<i>Skills</i>	Critical Thinking	6.899	1	.009
	Creativity	5.883	1	.015
	Entrepreneurship	7.734	1	.005
	Leadership	12.554	1	<.001
	Communication	6.423	1	.011
	Teamwork	2.170	1	.141
	Digital Competencies	9.771	1	.002
	Research gathering	10.496	1	.001
	Management tools	7.869	1	.005
<i>Methods & Tools</i>	Creation Capacitation	1.493	1	.222
	Tools	4.685	1	.030
	Atlas Platform Relevance	3.466	1	.063
	Team working Relevance	5.983	1	.014
	Organization Collaboration Relevance	1.057	1	.304
	Methodology Relevance	10.181	1	.001
	Facilitators Collaboration Relevance	4.165	1	.041
	internationalization Relevance	1.798	1	.180

The results for the dimension “Skills” showed that in some of the skills, there are statistically significant differences considering the students’ gender, in all skills except for “Teamwork” and “Creation Capacitation”. When analyzed the dimension “Method and Tools” there are statistically significant differences considering the students’ gender in all except “Atlas Platform relevance” and “Organization Collaboration relevance”.

Table 10: Analysis of Differences between Skills and Methods/Tools Perceptions, Considering the Students’ Age (by intervals)

	Dimension	H	df	<i>p</i>
<i>Skills</i>	Critical Thinking	3.609	3	.307
	Creativity	2.083	3	.555
	Entrepreneurship	7.833	3	.050
	Leadership	2.734	3	.435
	Communication	10.079	3	.018
	Teamwork	14.414	3	.002
	Digital Competencies	1.072	3	.784
	Research gathering	1.518	3	.678
	Management tools	2.907	3	.406
<i>Methods & Tools</i>	Creation Capacitation	2.654	3	.448
	Tools	1.112	3	.774
	Atlas Platform Relevance	2.033	3	.566

Team working Relevance	9.615	3	.022
Organization Collaboration Relevance	10.056	3	.018
Methodology Relevance	4.012	3	.260
Facilitators Collaboration Relevance	7.466	3	.058
Internationalization Relevance	.613	3	.894

The results for the dimension “Skills” showed that in all two skills, there are statistically significant differences considering students’ age, such as “Communication” and “Teamwork”. When analyzing the dimension “Method and Tools” there are statistically significant differences considering students’ age in “Team working Relevance” and “Organization Collaboration Relevance”.

DISCUSSION

The analysis of the Link Me Up project at P.PORTO reveals significant insights into student demographics and participation patterns, contributing to the development of skills.

The project attracts a slightly higher percentage of female students (55.7%) compared to male students (44.3%). Age distribution aligns with typical university cycles, with 40.9% of participants being 20 years old or younger and 47.4% between 21 and 25 years old. Most participants (76.5%) are pursuing bachelor's degrees, particularly those in their second (39.1%) and third years (31.3%), while first-year students account for 26.5%. Master's students constitute 21.3% of participants, a lower figure possibly due to the demanding nature of their courses, and often scheduled post-work hours to accommodate working students.

In terms of institutional representation, students from ISEP (40.9%), ISCAP (37%), and ESS (9.6%) were the most enrolled, despite uniform communication across all schools. Notably, students from ESMAE, the School of Music and Arts Performance, participated less, likely due to their studies' specific aims not aligning with this type of project.

Regarding student status, most participants (91.7%) were regular students, while 8.3% held a worker-student status, reflecting the project's inclusivity but also potential challenges for working students in balancing their commitments. The descriptive analysis of students' perceived skills showed high average values, indicating improvements in various skills. Scores ranged from 4.70 in "Creation Capacity" to 5.96 in "Teamwork," with medians between "Partially agree" and "Agree very much," suggesting a generally positive perception of skill development. The relevance of the project's innovative pedagogical methods and support tools also received high ratings, with scores between 4.84 for "Atlas Platform Relevance" and 6.03 for "Teamworking Relevance," indicating their perceived importance and effectiveness.

Concerning the time spent on autonomous work, 60% of the students only spent up to 10 hours. Additionally, the vast majority (91.3%) were first-time participants, with only 8.7% having participated more than once, likely due to regulations limiting grant eligibility to one successful project completion per student. Overall, the average perceived satisfaction with the Link Me Up project was 5.79 (SD= ± 1.222), with all dimensions above the midpoint of the scale.

An inferential analysis revealed differences in skills and methods and tools perceptions across six editions of the project. Significant differences in skills perceptions involved "Critical Thinking," "Creativity," "Research Gathering," "Management Tools," and "Creation Capacitation." For methods and tools, significant differences were found across editions, except for tools themselves. Analyzing data by P.PORTO schools, course type, gender, and age group also revealed significant differences. By schools, differences were observed in skills such as "Critical Thinking," "Leadership," and "Digital Competencies," and in the relevance of methodologies and facilitator collaboration. By course type, no significant differences were found in perceptions of skills or methods and tools. By gender, significant differences were noted in most skills and methods/tools perceptions, except for "Teamwork" and "Creation Capacitation" in skills, and "Atlas Platform Relevance" and "Organization Collaboration Relevance" in methods/tools. By age, significant differences were found in skills like "Communication" and "Teamwork," and in the relevance of teamwork and organizational collaboration.

The data analysis reveals the success of the Link Me Up project in promoting co-creation skills and teamwork among students from different schools, academic backgrounds, study cycles, and knowledge areas. As observed by Ramalho et al. (2022), the results from the Link Me Up project demonstrate its significant role in promoting co-creation and entrepreneurship by providing students with the knowledge, skills, and attitudes required to become successful entrepreneurs. The analysis of the Link Me Up project at P.PORTO reveals significant insights into student demographics and participation patterns, contributing to the development of skills. Also, it is aligned with ENTRECOMP skills to be developed by HEIs. The project results also is aligned with the findings of Dias et al. (2020), Chigbu et al. (2023), and AlMalki and Durugbo (2023) on digital tools in HEIs to foster knowledge transfer, as well as Audretsch et al. (2023) on collaboration strategies for open innovation transfer.

In summary, the Link Me Up project at P.PORTO demonstrates a generally high level of satisfaction and perceived skill improvement among students, with significant variations based on demographic and institutional factors. The results obtained from data analysis align with the main goal of P.PORTO's mission, particularly its strategic axis related to entrepreneurship and innovation. These insights can inform future project adjustments to better cater to the diverse needs of its participants.

CONCLUSIONS

The primary objective of this study was to analyze the perceptions of P.PORTO students regarding the Link Me Up project, an innovative pedagogical initiative. The study aimed to understand the overall perception and the main differences in perceptions across six project editions, categorized by schools, degree types, course years, gender, and age. The average perceived satisfaction with the Link Me Up project was 5.79 (SD= ± 1.222), indicating a positive impact and providing valuable insights for future adjustments and new project designs.

The influence that the schools, the course type, course year, gender, and age group have on the students' evaluation did not invalidate the project's positive impact among the P.PORTO's students, who participated in the project. A key highlight is the use of a digital collaborative platform that facilitates teamwork across various educational contexts and their specific needs. Overall, the program led to improvements in all skill dimensions, considered in the ENTRECOMP framework. Notably, "Critical thinking" was the most perceived differently across the analyzed dimensions, followed by "Communication" and "Teamwork". Concerning the dimensions "Method and Tools" are "Team working Relevance" and "Organization Collaboration Relevance".

The results obtained demonstrate an alignment with the main goal of the P.PORTO's mission, namely with the strategic axis related to entrepreneurship and innovation. However, this study has limitations, as it did not include a qualitative analysis of student feedback. Future research should compare data across all Portuguese HEIs involved, taking into account location and academic offerings. Additionally, a qualitative analysis should be conducted to better understand the effects of similar projects on skill improvement, particularly in relation to collaboration and cooperation between HEIs and industry

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UNVEILING RELATIONAL DYNAMICS IN HR STAKEHOLDER ENGAGEMENT: THAILAND'S PERSPECTIVE

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ABSTRACT

This study explores the intricate interplay between Human Resource (HR) stakeholder engagement and the cultural nuances of Thailand, offering a profound exploration of how these elements collectively influence HR processes on implementation. Through thematic analysis of interviews with HR executives from both multinational corporations and local Thai businesses, the study unveils the pivotal role of relational dynamics and social capital within Thailand's distinct cultural context, characterized by high-context communication, collectivism, and a pronounced power distance. Specifically, the study reveals crucial insights into leveraging social capital for strategic HR stakeholder engagement, the significance of reciprocal relationships in engaging line managers, and the importance of cultural sensitivity in the formulation and implementation of HR policies. These themes underscore the necessity for HR managers to adeptly navigate the complex web of social relations and trust-building processes inherent in Thai culture to secure stakeholder buy-in and enhance HR's strategic value within organizations.

The study bridges a critical gap in existing HR scholarship by highlighting the underexplored area of HR stakeholder engagement within diverse cultural contexts. It articulates how the nuanced understanding of social capital—encompassing relational, structural, and cognitive dimensions—can fortify the strategic positioning of HR functions, thereby facilitating superior HR-performance relations on the implementation. Moreover, the findings enrich strategic HRM theory by emphasizing the indispensability of cultural context in shaping HR policies, advocating for a more nuanced and culturally informed approach to HR processes management.

The research not only advances academic discourse on strategic HRM but also equips HR managers with actionable strategies for cultivating and leveraging social capital in culturally complex settings like Thailand. It highlights the need for cultural intelligence, the adaptation of global HR strategies to local contexts for multinational corporation, and the strategic utilization of professional networking to navigate the cultural intricacies that influence HR stakeholder engagement. Despite its focus on Thailand, the study's insights encourage further exploration into the cultural contingencies of HR processes management across different geographical settings.

Keywords: relational view of HRM, strategic HRM, HR stakeholders, HR processes, culture, Thailand.

INTRODUCTION

The pivotal role of human resource (HR) management in achieving a competitive edge in this era of strategic HR transformation is imperative for driving organizational success. The significance of this alignment is particularly pronounced within unique cultural contexts, where social relations and networking intricacies are deeply interwoven with business practices. Thailand's high-context culture, characterized by nuanced social interactions and a collective ethos, presents a distinctive setting for exploring HR stakeholder engagement. This study seeks to unveil the relational dynamics in HR processes in Thailand and examine their implications for achieving a business competitive advantage within this specific setting.

HR scholarship has long emphasized the importance of social relations in linking HR practices with performance outcomes, advocating for a strategic engagement of HR stakeholders to enhance organizational results (Adler & Kwon, 2002; Bannya Bainbridge & Chan-Serafin, 2023; Hollenbeck & Jamieson, 2015; Lengnick-Hall et al., 2021). The integration of a relational approach to HRM in scholarly discourse underscores the evolution of HR from administrative function to strategic partner. However, there exists a notable gap in HR scholarship, particularly in the exploration of relational coordination between HR and their stakeholders within different cultural settings, a gap this study aims to address (Horak & Paik, 2023; Wang, Tian, & Li, 2019).

Thailand's societal values emphasize reciprocal support and trust within close network ties (Hofstede, 2001) and yet World Values Survey result in 2014 show that Thailand exhibits moderate level of interpersonal trust (Inglehart et al., 2014). HR professionals are challenged to establish trust and engage stakeholders for effective information exchange. This challenge is amplified in the face of Thailand's transition towards a strategic HR partnership (Popaitoon, 2023), necessitating HR professionals to harmoniously blend the global business focus with traditional Thai ways of working. Given the culturally-embedded HR processes, there is a need to delve into how societal factors and social actors interact to foster HR relational coordination with different stakeholders (Horak & Paik, 2023). This inquiry is pivotal as it reflects upon the broader strategic HRM research, proposing that the social capital derived from social interactions can uncover the so-called "HR black box" in HR-performance processes (Lengnick-Hall et al., 2021). However, research that explicates the nuanced relational dynamics, particularly in Thailand, remains scant. This study endeavors to fill this gap by adopting a relational perspective on HRM to explore HR stakeholder engagement in Thailand, taking into account the societal nuances that shape these interactions.

The aim of this research is twofold: to demonstrate how HR professionals in Thailand engage with internal stakeholders in the implementation of HR strategies and to uncover how the Thai cultural context influences this engagement process. In pursuing these aims, the study addresses a notable void in the existing literature by revealing the relational dimensions of HR stakeholder engagement within a high-context, power distance and collectivistic cultural framework (Horak & Paik, 2023; Hollenbeck & Jamieson, 2015). It is through this lens that the study interrogates the roles of HR managers and the social capital that pervades their interactions with stakeholders. Thus, the exploration of this unique interplay between HR stakeholder engagement and societal norms not only contributes to the theoretical understanding of HR processes on implementation but also offers practical insights for HR professionals operating within and outside of Thailand.

LITERATURE REVIEW

HR Processes

Researchers have observed that the HR practices experienced by employees can significantly differ from their original, intended quality (Boxall & Purcell, 2008; Nishii & Wright, 2008). These authors explain that this discrepancy occurs due to the implementation chain, spanning from intended practices, to actual practices, and finally to perceived practices. Intended HR practices are those HR systems aligned with business objectives, shaped by the organization's articulated values. They aim to evoke the necessary attitudinal and behavioral responses from employees for the organization's success. Typically, these practices are designed by senior management to align with business strategies and direction.

Turning to actual HR practices, line managers often bear the responsibility for interpreting and implementing these practices (Purcell & Kinnie, 2007; Nishii & Wright, 2008). Their individual decisions on implementation can result in variations in how employees perceive HR practices, even within the same workspace (Bartel, 2004; Purcell & Hutchinson, 2007). Thus, perceived practices may differ from the intended ones due to variations introduced at each implementation stage, with line managers' discretion being a key source of this variation. Employees react to their perceived practices by adjusting their effort and performance according to the quality of practices they receive, which, in turn, impacts business outcomes.

In summary, the implementation of HR processes involves three key stakeholders within an organization. The design of HR policies is a collaborative effort between HR managers and senior management. Line managers, who implement these policies on a daily basis, are responsible for the actual practices, which may vary based on their discretion during implementation. Employees, at the receiving end of HR practices, are influenced by HR

communications and line managers' actions. Becker and Huselid (2006) argue that the variation in HR policy implementation is considered the "black box" within HR systems. The interaction between HR managers and stakeholders in the HR implementation process will be discussed further.

The Role of HR Managers and HR Stakeholders Engagement

The strategic role of HR managers has evolved significantly with the advent of the knowledge economy, where leveraging human capital becomes crucial. HR managers are now seen as pivotal architects who craft the policies and practices to support business strategies and performance. Central to their role is the ability to engage internal stakeholders in the HR processes for effect outcomes (Hollenbeck & Jamieson, 2015). This utilization aligns with Burt's (1992) theory of structural holes, which posits that people who bridge gaps in a social network have an advantage in accessing diverse information and resources. By acting as network bridges, HR managers connect disparate groups within an organization, facilitating the flow of information and creating value.

Consistently, Jo, Chadwick and Han (2023) have emphasized the relational approach to HR value creation providing advisory role of HR towards various stakeholders within the organization such as senior management, line managers, and employees, assisting them in achieving their goals and meeting their needs. The interaction among these stakeholders significantly impacts the formulation and execution of HR strategies, necessitating a collaborative approach to ensure alignment and integration across different levels of the organization (Purcell & Hutchinson, 2007; Truss, 2001; Shani, 2014). For example, employees, as the primary recipients of HR initiatives, directly influence the effectiveness of these strategies through their engagement and performance. Managers, particularly line managers, act as intermediaries, implementing HR policies and advocating for the needs and concerns of employees. Executive leadership, on the other hand, sets the strategic direction for HR, aligning it with the organization's overarching goals.

Social Capital and HR Stakeholders Engagement

Globalization has augmented the complexity of HRM, necessitating a more nuanced approach that recognizes the importance of relationships and networks within and outside the organization. As firms navigate diverse cultural landscapes, the ability to harness and cultivate social capital becomes a significant determinant of competitive advantage (Burt, 1992; Nahapiet & Ghoshal, 1998). Originally a sociological concept, social capital pertains to the potential of individuals to secure benefits by virtue of membership in social networks or other social structures (Portes, 1998). Within the domain of HRM, social capital has been recognized as an invaluable asset, not just for individuals but for organizations at large (Adler & Kwon, 2002). It posits that the collective value of social networks and the inclinations that arise from these networks to do things for each other (i.e., norms of reciprocity) contribute to effective organizational functioning.

Social capital in HRM manifests in various forms, from formal professional networks to informal social interactions among employees. It encompasses the relational, structural, and cognitive dimensions (Nahapiet & Ghoshal, 1998). The relational dimension refers to the personal relationships people have developed with each other through a history of interactions. The structural dimension denotes the overall pattern of connections between actors — the who knows whom, and who collaborates with whom. The cognitive dimension involves shared representations, interpretations, and systems of meaning among parties. Studies have shown that these dimensions of social capital have profound implications for HR processes. The relational dimension facilitates better communication and trust, the structural dimension enhances the dissemination of best practices and knowledge transfer, while the cognitive dimension contributes to a shared understanding and alignment of organizational goals (Tsai & Ghoshal, 1998).

Empirical studies underscore the value of social capital in enhancing the strategic involvement of HR managers in business planning and execution. For example, a study by Pfeffer (1994) highlights that firms with strong internal networks and collaborative HR practices perform better in terms of innovation and financial returns. Similarly, Collings and Mellahi (2009) find that multinational corporations that invest in developing social capital among their HR personnel achieve greater success in implementing global strategies locally. Moreover, the relational aspect of social capital is considered an integral to the HR function because HR managers can build relationships that are grounded in trust and mutual understanding, which are essential for effective communication, conflict resolution, and negotiation (Wright & McMahan, 2011). Additionally, the cognitive dimension, resonates with the need for a shared language and understanding in diverse work environments, which is fundamental to the success of global HR

initiatives A shared understanding of organizational goals and values is vital for aligning the workforce with the company's strategic objectives. These findings indicate that HR managers who aim to elevate the strategic partnership with their stakeholders should establish, utilize and maintain their internal networks to enhance the benefits of social capital for effective results.

Cultural Context of Thailand and HR Processes Management

Thailand's cultural context, characterized by collectivism, high power distance, and high-context communication, presents unique challenges and opportunities for HR managers to engage their stakeholders for effective results (Hofstede, 2001; Hall, 1976). Power distance describes how a society handles inequalities among people, which is particularly salient in Thailand. Thai business culture tends to respect hierarchical relationships, which can influence how HR interact with different stakeholders within the organization. Also, this could influence how social capital is accessed and used within organizations. For example, HR may involve leveraging senior leaders as champions for HR initiatives or engaging in more indirect forms of communication to navigate the hierarchical landscape effectively.

Moreover, as a collectivistic society, Thailand emphasize on group cohesion and social harmony and this influences how HR-stakeholder networks are built and maintained. This suggests networking is deeply intertwined with the development of long-term reciprocal support and trust-based relationships, especially among the closed network ties. Those with lower power status are expecting some safety and support associated with that power in the relationships.

High-context communication requires HR managers to be proficient in reading between the lines and understanding unspoken cues (Hall, 1976). This communication style impacts how network is built and leveraged, with a greater emphasis on non-verbal cues and the subtleties of social interaction (Wang et al., 2019). Empathy, patience, and the ability to interpret implicit messages on interactions are key to the relationships. This makes it even harder for HR managers to establish trust and engage stakeholders for rich information exchange particularly in a society with a moderate propensity to interpersonal trust, like Thailand (Inglehart et al., 2014). Taking Thailand cultural context and recent demand for HR strategic partnership, we can observe the interplay of networking in the backdrop of Thai cultural context that can facilitate and hinder HR processes for effective results.

METHODOLOGY

Our study focuses on answering two key questions: 1) How do HR professionals engage with internal stakeholders on the implementation? and 2) How does Thai cultural context influence HR stakeholder engagement in the HR processes? Given the study's exploratory nature, a qualitative approach is deemed most appropriate for delving into the complex social interactions and cultural nuances that underpin HR processes in Thailand. This design facilitates a nuanced understanding of the lived experiences of HR professionals, allowing for the discovery of emergent themes and insights that quantitative methods might overlook. Participants were selected using a purposive sampling strategy to ensure a diverse representation of HR managers with substantial experience in managing HR functions. The sample includes eight HR executives, with five from multinational corporations (MNCs) and three from local Thai businesses, providing a balanced perspective on HR processes on implementation from both global and local organizations. Future phases of the study aim to expand the participant base to include a broader range of industries and organizational sizes for a more comprehensive analysis.

Data were collected through in-depth interviews, each lasting approximately 60 to 90 minutes. The interview guide was developed based on the literature review and preliminary research questions, focusing on HR processes, HR stakeholder engagement, networking approaches, and the influence of Thai cultural context on these processes. Interviews were recorded with participants' consent for accuracy and transparency. The interviews were transcribed verbatim and subjected to thematic analysis to identify patterns and themes related to HR stakeholder engagement in Thailand. This involved a rigorous process of coding the data inductively, allowing themes to emerge organically from the participants' narratives rather than imposing preconceived categories. The analysis was iterative, involving multiple rounds of coding to refine the themes and ensure they accurately represented the data.

THEMATIC ANALYSIS AND FINDINGS

The thematic analysis of the interview data yielded several prominent themes that shed light on the relational dynamics of HR stakeholder engagement in Thailand. These themes highlight the intricate interplay between social capital, professional networking, and cultural nuances, and how they collectively influence HR processes and outcomes.

Theme 1: Leveraging Social Capital for Strategic HR Initiatives

The data revealed that HR managers actively leverage their social capital to facilitate the implementation of strategic HR initiatives. We found that the relational bonding between HR and key stakeholders encompasses the three dimensions of social capital, each varying in emphasis. This often involves utilizing existing relationships to secure buy-in from key stakeholders. The structural dimension is predominantly observed in interactions with senior management regarding high-level HR strategic design. A local Thai business HR manager shared, "My relationships with senior leaders are crucial. I rely on these to advocate for new HR policies that align with our strategic goals." The relational dimension is evident at the tactical level of HR, in interactions with line managers concerning the operational design of HR policies and their implementation. The cognitive dimension is more commonly observed among employees, creating a shared understanding of HR services at the operational level. One HR manager noted, "I have observed differences in team cohesion between business managers who maintain a strong partnership with HR and those who prioritize business over people management." Another HR manager mentioned that she had to prepare a communication tool for business managers to facilitate the implementation of new performance appraisals. Sometimes, she was invited to join communication sessions at the business units to help answer questions employees might have.

Theme 2: Challenges in Engaging Line Managers and the Importance of Reciprocal Relationship

Engaging line managers in HR processes and initiatives was highlighted as a significant challenge. Participants noted that line managers are critical to the successful implementation of HR practices but often require additional support to understand and buy into HR's strategic value. "Getting line managers on board is key, but it's also one of our biggest challenges. They're busy with their day-to-day and may not see the immediate benefit of some HR initiatives," an HR executive observed. Besides, a recurring theme across our interviews was the significance of reciprocal relationships in engaging line managers in HR processes. According to one interviewee, "Line managers often view HR initiatives with skepticism and resistance. However, the situation improves significantly if we have a good relationship with the business managers." Another participant noted, "Building trust with line managers is crucial for successful collaboration, especially on change initiatives." To address this issue, a third-party or internal brokerage network could be vital for gaining entry into the managers' inner circle. Trust is crucial in a collectivist society, and this may involve accommodating the requests of line managers in ambiguous situations or revising certain practices to address their needs. However, maintaining integrity and fairness with other stakeholders must remain a priority. One HR manager from a multinational corporation noted, "In Thailand, relationships are everything. You can't just push through policies or initiatives from the headquarters; you need to build trust and show respect for the other person's perspective." Continuous dialogue, as mentioned by an interviewee, will help foster strong relational ties and encourage active engagement from line managers in long-term HR initiatives.

Theme 3: Cultural Sensitivity in HR Processes

Thai cultural influence on HR processes was apparent, as participants emphasized the importance of considering culture when designing and implementing HR policies. HR managers from multinational corporations mentioned the need to adapt global policies to local practices in line with Thai cultural norms. For example, while one-on-one coaching is more common in Western cultures and has been extended to subsidiaries in Thailand, its implementation presents unexpected challenges. In this context, line managers tend to provide indirect feedback for poor performance and future improvement, relying on employees' interpretation rather than direct communication. As a result, despite complying with the process, HR managers find it ineffective and have had to supplement it with additional tools that offer collective evidence for managers to coach staff members without relying solely on their personal opinions.

Moreover, the high-context communication style inherent in Thai culture requires a nuanced approach to HR communications and stakeholder engagement due to its emphasis on understanding unspoken cues instead of directness. However, data also suggests that adopting uniform global HR policies from headquarters can help mitigate the impact of cultural influences within MNCs by providing deadlines, comprehensive manuals, and detailed communication guides which aid in minimizing individual interpretation during policy implementation such as cascading organization values across different levels within specified timelines. Furthermore, it is noted that using English as the language of organizational communication within MNCs seems to diminish status differences among employees at various levels as English reflects a more egalitarian nature compared to the hierarchy reflected in the Thai language.

In summary, thematic analysis of interviews with HR executives in Thailand offers valuable insights into the relational dynamics of HR stakeholder engagement (Hollenbeck & Jamieson, 2015; Lengnick-Hall et al., 2021). The themes underscore the critical roles of reciprocal relationships, social capital, and professional networking within the Thai cultural context. These findings shed light on the nuanced HR processes on implementation to enhance HR-performance effectiveness.

DISCUSSION

Based on these findings, we propose the following for HR stakeholder engagement on the implementation.

Proposition 1: In the Thai cultural context, the effectiveness of HR stakeholder engagement is significantly enhanced by the HR manager's ability to cultivate and leverage reciprocal relationships, underscoring the importance of the relational dimension of social capital.

Proposition 2: The adaptation of global HR strategies to fit the Thai cultural context, with a particular emphasis on high-context communication and harmony, is essential for the successful execution of HR initiatives, reflecting the cognitive dimension of social capital.

Implications for Practice and Theory

Our findings have significant implications for strategic HRM theory by demonstrating the critical role of cultural context in HR processes on implementation, suggesting a need for a more nuanced understanding of how social capital and professional networking are operationalized across different cultural settings (Bannya et al., 2021; Horak & Paik, 2023). We delineate the utility of the three dimensions of social capital to engage stakeholders in the HR-performance process and shed light on the need for a cultural contextualization of HR processes.

Additionally, the study offers a nuanced perspective on the challenges and strategies for bridging global HR policy with local execution. It underscores the importance of cultural intelligence and strategic networking in navigating these challenges, contributing to a more dynamic and adaptable framework for strategic HRM. Moreover, by examining how HR managers in Thailand leverage social capital and professional networking, this research operationalizes the concept of social capital in a specific cultural context, offering a template for future research in other cultural settings.

Practically, this study offers actionable insights for HR professionals, particularly those operating in Thailand or similar cultural contexts. Understanding the intricate balance between global HR policies and local cultural dynamics is essential for effective HR management. First, HR managers should prioritize developing cultural intelligence to navigate the complex landscape of Thai business culture effectively. This involves deepening their understanding of local norms, values, and communication styles, enabling them to tailor their engagement strategies to resonate with local stakeholders. Second, organizations could benefit from hosting cultural adaptation workshops aimed at both HR professionals and line managers. These workshops would focus on developing skills for effective cross-cultural communication, enhancing the collective cultural competence of the organization. Third, HR managers should be trained to identify and leverage existing social capital within the organization to facilitate change initiatives. This involves recognizing key influencers and building coalitions to support the implementation of strategic HR practices. Fourth and last, tailoring onboarding programs to include cultural sensitivity training can help new

employees, especially in multinational settings, to integrate more effectively into the organizational culture, fostering a more inclusive and cohesive work environment.

In summary, this research not only fills an existing gap in the literature by providing insight into the culturally contingent nature of HR practices but also offers a theoretical framework for understanding the role of social capital and networking in HR implementation processes. It challenges and extends traditional models of HRM, advocating for a more culturally nuanced approach to designing and implementing HR policies, particularly in settings characterized by significant cultural complexities.

Study Limitation and Future Research

While this study provides valuable insights into the relational dynamics of HR stakeholder engagement in Thailand, it is not without limitations. Firstly, the sample size, comprising eight HR executives, though purposive and reflective of both multinational corporations (MNCs) and local Thai businesses, limits the generalizability of the findings. The perspectives captured may not fully represent the diverse nature of different industries and organizational sizes in Thailand. Secondly, the qualitative nature of the study, while offering depth and nuance, restricts the ability to quantify the impact of social capital and professional networking on HR outcomes. Finally, the study's focus on the Thai cultural context, while its strength, also means that the findings may not be directly applicable to other cultural settings without adaptation and further research.

Future studies should aim to include a larger and more diverse sample of HR professionals, encompassing a wider range of industries and organizational sizes. This would enhance the representativeness and generalizability of the findings. Next, there is a need for quantitative research that can measure the impact of social capital and professional networking on specific HR outcomes, such as employee engagement, retention rates, and organizational performance. Surveys and social network analysis could be employed to quantify the relationships between these variables. Future research could consider longitudinal research to investigate insights into how the role of social capital and professional networking in HRM evolves over time, especially in response to organizational changes and external challenges. Also, investigating HR processes in other high-context cultures, or comparing them with low-context cultures, would enrich our understanding of the cultural contingencies of effective HR-performance processes. This could help in developing more universal theories of HRM that are sensitive to cultural variations. Finally, there is an opportunity to design and test interventions aimed at enhancing social capital and networking skills among HR professionals. Such studies could provide practical guidance on effective strategies for building and leveraging social capital in HRM.

CONCLUSION

This research offers compelling insights into the relational dynamics of HR stakeholder engagement within Thailand's unique cultural context, underscoring the crucial interplay between social capital, professional networking, and cultural sensitivity. It reveals that successful HR stakeholder management on the implementation of HR processes in such a high-context culture requires a nuanced understanding of local social relations and an ability to navigate the intricacies of trust-building and reciprocal relationships. By leveraging the three dimensions of social capital—relational, structural, and cognitive—HR managers can significantly enhance the strategic value of HR partnership for business success. This study not only fills a notable gap in HR scholarship by shedding light on the culturally contingent nature of HR stakeholder management on the HR-performance processes but also provides a theoretical and practical framework for HR managers operating within and beyond Thailand's borders. The findings advocate for a more culturally nuanced approach to HR stakeholder management, emphasizing the importance of cultural intelligence and adaptation of global HR strategies to local dynamics. As businesses continue to navigate the complexities of globalization, this research serves as a valuable resource for HR managers seeking to leverage cultural diversity for competitive advantage, highlighting the need for further exploration into the cultural variations of HR practices across different global settings.

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DIGITALIZATION AND BUSINESS WOMEN 50+: CHALLENGES AND OPPORTUNITIES - THE CASE STUDY FROM THE CZECH REPUBLIC

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Women's entrepreneurship is a rather hot topic. Realizing its importance, the developed countries know how to harness its potential to stimulate their economic growth. Another European phenomenon that has recently risen to prominence is population ageing. The attention of both the governments and private companies is being focused on improving the new IT skills of people over 50 years to help this generation make a full use of their capacity and potential.

The Czech Republic is a country where one third of the entrepreneurs are women. This rather high percentage can also be seen in the women 50+ age cohort. Women in business mostly focus on service-oriented or micro-firms. In this particular business sector, they usually have no employees running their business on their own. The last decade and the Covid pandemic have accentuated the demand for digital skills in business. Home Office could be fully exploited by companies with good technological facilities, prepared employees, and, above all, progressive and technically competent management. After the Covid period, many companies, mostly the large ones, started to pay more attention to digitalizing their agendas.

Employee training in large companies and corporations is now often focused on AI and IT competencies. Small entrepreneurs, especially women, do not have sufficient opportunities and resources (especially time and information) available to make a full use of the new technologies in running their businesses. Although the education offered by the state administration, municipalities, and non-profit organisations in the Czech Republic is of high quality, it is poorly promoted and little used.

The present paper aims to find out to what extent the digital environment affects the businesses run by women entrepreneurs, in the specific age cohort of 50+. Based on the data obtained, to propose a model to help make such businesses more efficient through education.

The methods used:

1. Comparing the businesses run by women entrepreneurs in the Czech Republic with those in selected EU countries in the 50+ age cohort using the Eurostat data
2. Questionnaire survey. The set of questions consisted of 80 percent closed and 20 percent open ones.
3. Face-to-face interviews in order to carry out a subsequent in-depth analysis of the data collected.

The situation in this age group shows that digital technologies have influenced their business. 40% of the female entrepreneurs surveyed said that they have influenced their business significantly and generally see digitalisation as a support and potential for their business growth. They realise that this is a process that will mean a qualitative change not only in business, but also in the labour market and in society as a whole. 48% of respondents are regularly trained in digital competences. The analysed group expressed concerns about being overwhelmed by the amount of information, loss of privacy, inability to respond to rapid developments and also about losing clients who will not be ready for new technologies.

The findings are used to design a solution for the specific age group of 50+ women entrepreneurs to help facilitate their education and awareness of digital competencies. This age cohort of women entrepreneurs will be economically active for 10 to 15 years and it is very important to support this group.

The case study may serve as an example of good practice.

THE EFFECTS OF COMPETITIVENESS AND GOVERNANCE QUALITY ON ECONOMIC GROWTH OF SOUTH AFRICA

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ABSTRACT

Developed and developing countries prioritizes growth as essential key concerning country economic success to facilitates and entices the desired quality and change. This study aims on investigating the effects of competitiveness and governance quality on economic growth of South Africa from 1994 to 2022, annual data, autoregressive distributed lag (ARDL) technique. The study's findings reveal positive and statistically significance relationship between economic growth and the level of competitiveness, while the governance quality variables exhibited a negative influence. The study novelty lies in observing both attractiveness and governance quality dynamics towards economic growth domain of South Africa by suggesting policy developments.

Keywords: competitiveness, governance quality, economic growth, global equity indices, South Africa.

INTRODUCTION

Developed and developing countries prioritizes growth estimates as essential keys concerning amassed country economic success and developments as alluded by Petrakis (2020). Porter's (1998); WEF (2014); Korez-Vide, and Tominc (2016) defined competitiveness as an economic factor of a country that is utilised to determine the level of productivity and economic growth, (which includes both the macro and micro economic position) respectively. Maintaining and enhancing national competitiveness and good/ quality governance is crucial to sustain smooth economic growth (Setyawati, et al., 2024). According to Khuluvhe, and Ganyaupfu (2023), South Africa was ranked on the 60th position based on the 2021 and 2022 overall survey and factor competitiveness rankings out of 63 countries. Furthermore, there was a decline in economic performance position from 61 in 2021 to 59 in 2022. In this study competitiveness refers to the entire economic activities or national economy unlike other studies that measures competitiveness within individual firms, groups of firms, and regional economic sectors as defined by Peneder et al. (2018). Competitiveness has been used to drive durable economic development including productivity, wages, export of goods and services, innovation and development index, and other economic factors to meet the required national needs as itemised by Sánchez, and Röhn (2016), and (Virjan, et al., 2023). It is worth noting that the current study competitiveness was measured by global equity indices, index of economic freedom, and market capitalization of listed domestic companies.

Apart from competitiveness, the study also used governance quality as the second independent variable. According to Meyer (2022), South Africa is ranked on position 77th and is counted among the leading African countries in relation to governance within the continent. Although there are six worldwide governance indicators, the study opted for the way the structure is being run by selecting reminiscent variables which includes the government effectiveness, political stability and absence of violence/terrorism, regulatory quality and voice and accountability to form governance proxies by adopting the classification of variables established by Baccianti, and Lehtimäki (2022).

The South African economic growth has been crowded with numerous dilemma and shocking waves because of the significant increase such as slow productivity and declining of GDP per capita, income inequality, and continuous increase of unemployment, underemployment, and political change obstacles. The lack of better economic growth, upgrades in level of productivity, and job creation universally, has been the concern of numerous studies in the speculative literature (Gates & Adetunji, 2020; Levy, et al., 2021; Habiyaremye, et al., 2021; Ouamba, 2022;

Gumede, et al., 2024). Meanwhile, developing countries such as South Africa are confronted with reduced assistance in order to attract desired level of competitiveness and governance quality to address the issues facing economic growth. For those reasons, the current study intends to investigate the benefits of South Africa's economic growth from the degree of competitiveness and governance quality.

Several studies that have been conducted in OECD, Sub-Saharan African countries, BRICS, African countries, China, and Indonesia to list some few countries, focused on the relationship between competitiveness, governance quality, infrastructure governance, and education concerning economic growth (see Liu, et al., 2018; Odhiambo, 2021 & 2024; Ochi, 2023; Alexandro & Basrowi, 2024; Setyawati, et al., 2024). The majority of those studies have focused on the listed individual variables towards economic growth unlike the current study that focused on both South African level of competitiveness and governance quality on economic growth. Furthermore, those studies utilised panel data which makes the current study methodology exceptional, since the study executed time series data. Data availability was also a crucial factor for all variables executed in the current study. Moreover, this study, also show improvements from previous studies by selecting only three competitiveness variables, and four governance quality index proxies and real interest rate as a control variable to explain economic growth of South Africa.

The current study supports the 8th and the 16th sustainable economic growth indicators (SDG), which are targeted to achieve annual growth rate of real GDP per capita, high productivity, good governance, peace, security, and justice for all (SDG, 2020). The current study has extended the neoclassical theory by including competitiveness, and governance as measurements of economic growth. Lastly, the study has provided valuable insights into how attracting competitiveness, and governance quality can assist, develop, reward, and retain improvements towards economic growth within South African context. It is in contradiction of this background that the current study is being embarked on, to investigate the benefits of South Africa's economic growth using the degree of competitiveness and governance quality as engines, to boost and revive the economy.

LITERATURE REVIEW

Theoretical Literature

Research and policy discussions has heightened the importance of economic growth, although limitations on theories and empirical work may also exists, which allows for new streams to emerge. According to Silver (1983); Krugman (1996); and Lee, and Karpova (2018), competitiveness is used regularly, and interchangeable by scholars to display current economic performance, and routine of various numerous entities. Furthermore, it identifies and construct some concepts into theory building from national prospects relationships to the globalised economy. Porter (1990), and Krugman (1994), stipulated that sometimes for competitiveness to happen it costs economic growth efforts. However, Porter's established the competitive advantage of nations in the 1990s, aiming to achieve country's prosperity through competitiveness to boost productivity. Although, competitiveness gains are measured specifically for the short term, unlike economic growth which requires long term investments on innovation, education, research and development, and infrastructure to list some few. In this regard, countries that experience higher level of competitiveness, may fail to attract relevant foreign investment which deteriorate economic growth. The study also employs the Neoclassical and governance theory (new public governance theory) to address economic growth and governance relationship. Neoclassical was opted for to attract economic freedom while following the economic growth roots as revealed by Torfing, Peters, Pierre and Sørensen (2012). The neoclassical theory expands economic savings in order to gain the required capital, while boosting country level of sustainable growth. Since the neoclassical covers the economic growth part, its drawback has led to new public governance theory to be sourced to ascertain governance quality issues. The theory was advantageous since it increases market-oriented and managerial ability in order to deliver relevant services to the public (Hood, 1991; Kickler, 1997). Lastly, the study critic the new growth, and new institutional economics theories since they emphasize much on technology as a driver of development and underrate governance quality as highlighted by North, and Thomas (1976), and Romer (2001).

Empirical Literature

The empirical literature summarizes studies which have direct impact on level of competitiveness, and governance quality on economic growth. Competitiveness and economic growth are presented as thus: According to Gama et al. (2020); (WEF, 2020), and Terzic (2021), competitiveness positively influences country's economic growth in a different way. On the other hand, Korez-Vide, and Tominc (2016), and Simionescu (2016), found that competitiveness does not influence economic growth.

Governance quality and economic growth outcomes revealed that; According to Meyer (2019), Meyer (2022), there is a positive relationship between good governance, and political stability which influences economic development. Furthermore, a long-run and positive relationship between GDP per capita, and good governance indicators such as control of corruption, political stability and the rule of law was established between 1996 and 2021 in South Africa. Even though, the impact of corruption has revealed negative effects towards the success of government, and economic growth (Meyer & Meyer, 2016; Meyer, Meyer & Molefe, 2016).

It is worth noting that, from the literature reviewed, it can be concluded that the competitiveness, and governance quality relationship with economic growth and the other variables included are inconclusive. Furthermore, numerous variables were used to measure the level of competitiveness, governance quality, and found various outcomes. After identifying this gap, the researcher saw a necessity to investigate the effects of competitiveness and governance quality towards economic growth of South Africa in a single study, in order to minimise this gap. In contrast to previous studies that followed panel data regression analysis, the current study employs ARDL estimator, which made the novelty of this study to be clear from application of annual time series data. Various econometric techniques such as generalised method of movements, principal component analysis, contagion model, and content analysis were applied by previous research studies, however, their verdict has not settled economic growth concerns using the competitiveness and governance quality indicators as the main drivers, particularly in the South African context. Moreover, some positive competitiveness and governance quality relationship to economic growth was obtained through other variables such as education, innovation, entrepreneurship, and research and development which makes the current study contribution very crucial for the development of the country and to sensitize South African policy makers, without limiting this approach to the rest of the world.

METHODOLOGY

Data and Model Specification

The study utilised annual time series data from 1994 to 2022. Annual data from World Bank, Economic Outlook and Master index data was opted for to cover variables, since some of the main independent variables are updated or available annually. Furthermore, according to Sánchez, and Röhn (2016), annual data provides more appropriate frequency compared to quarterly data.

The ideal of selecting variables was suggested by previous researchers such as Vinayagathan and Ramesh (2019); Meyer (2022); Ochi et al. (2022) and Misi Lopes et al. (2023) for economic growth which is measured by gross domestic product per capita (GDP per capita). Competitiveness adopted the global equity indices, index of economic freedom, and market capitalization of listed domestic companies in the footprint of Peneder, and Rammer (2018); Hassan et al. (2020); Francis (2023). For governance quality, which is represented by world governance index (WGI), this paper approach was considered in line with Huang and Ho (2021) and by Baccianti, and Lehtimäki (2022) approach which observed the footprint or workhorse of Helliwell, and Huang (2008). Moreover, the study selected the percentile rank over the standard normal units to maintain and improve the study outcome as also opined by Kaufmann, Kraay, and Mastruzzi (2009). Although, this study utilized only the technical governance quality (TGQ), made by the average of four indicators such as control of corruption, governance effectiveness, regulatory quality, and the rule of law. The current study utilised this grouping of the indicators to detect the variables changes due to the state of economic fluctuations.

The functional form of this model is as follows:

$$\text{Economic Growth} = f(\text{global equity indices, index of economic freedom, market capitalization, technical governance quality, Real Interest Rate}) \quad (1)$$

The estimated logged model is presented below as:

$$\text{LGDP}^{\text{CON}}_t = \alpha_0 + \alpha_1 \text{SPGET}_t + \alpha_2 \text{IEF}_t + \alpha_3 \text{MCLDC}_t + \alpha_4 \text{LTGQ}_t + \alpha_5 \text{RIR}_t + \varepsilon_t \quad (2)$$

where, L – demonstrates the logged variables after conversion and aligned for standardization. α_0 symbolise the constant term. α_1 to α_5 represent the parameters or gradients of the model, and ε_t is the error term. Based on the adopted theories, competitiveness is anticipated to be optimistic, technical governance quality is expected to be positive, while real interest rate may either be positive or negative toward economic growth.

Estimation Techniques

The aim was achieved through the descriptive statistics, and correlation matrix, unit root, ARDL, diagnostics and stability execution.

Descriptive statistics and correlation matrix test

According to Huang et al. (2021), and Ochi et al. (2022), descriptive statistics is presented as a foundation for inferential statistics in order to quantify and describe the basic features of the given variables in the data set. Furthermore, it provides accurate conclusion based on the data distribution to detect errors and outliers by describing the grouped sample to form a model. The degree of correlation between variables is shown within certain boundaries to justify zero level of multicollinearity as emitted by Kervin (1992), and Ochi et al. (2022).

Unit root test

The study executed this test to influence how the model can be analysed and to determine whether a time series is stationary or non-stationary at 0.05 (5%) significance level as also alluded by Dickey and Fuller (1979) and Pamba (2022).

ARDL bounds cointegration test

Pesaran et al. (2001) established the ADRL test to determine the aptitude of the distributed lag and autoregressive lags in the study. Furthermore, Sanusi et al. (2019), and Ratombo (2019), discovered that the ARDL econometric techniques is vital to observe the existence of a long run cointegrating relationship by comparing the F-statistic value with both order zero $I(0)$ and order one $I(1)$ variables. Lastly, the ARDL utilises the short-run relationship to regulate the long-run speed of adjustment through the estimated negative (-) ECT without neglecting information.

Diagnostics and stability test

The diagnostic and stability tests were performed to check the efficiency, consistency and stability of the model as alluded by Gujarati, and Porter (2009); Emir, and Bekun (2019). This study used these tests to detect serial correlation, distribution of the residuals and recursive residuals.

RESULTS AND DISCUSSION

This section presents the results as displayed in the previous section.

Table 1 and Table 2 presents the descriptive statistics and correlation matrix findings. The study variables display the positive minimum values for some variables, except for the global economic index. The global economic index, and the index of economic freedom deviates far away from the LGDP^{CON}, which raises concern towards economic growth sustainability. Economic growth, index of economic freedom, and governance quality variables are negatively skewed. Only index of economic freedom variable is distributed in an abnormal manner, followed by the real interest rates with equivalent distribution to the specified level of significant. The study correlation analysis was focused on the LGDP^{CON} variable and the relationships with the independent variables. Based on all the independent variables, there is a positive and statistically significant relationship with economic growth to support the findings by Huang et al. (2021), and Ochi et al. (2022).

Descriptive statistics and Correlation matrix outcomes

Table 1: Descriptive statistics and correlation matrix results 1996 – 2022

	LGDPCCON	SPGETI	IEF	MCLDC	LTGQ	RIR
Minimum	3.654	-41.708	58.300	108.89	5.414	2.509
Mean	3.742	7.776	63.170	204.50	5.804	5.586
Maximum	3.796	56.100	67.100	322.71	6.059	12.691
Std. Dev.	0.054	29.515	1.596	63.088	0.165	2.876
Skewness	-0.518	0.086	-0.303	0.194	- 0.478	1.199
Kurtosis	1.619	1.777	6.337	2.009	2.283	3.273
Jarque-Bera	2.980	1.523	11.504	1.133	1.182	5.833
Probability	0.225	0.466	0.003	0.567	0.553	0.054
Observations	24	24	24	24	24	24

Source: Computed by author based on World Bank, Economic Outlook, and Master index data, 2024

Table 2: Correlation matrix results 1996 – 2022

	LGDPCCON	SPGEI	IEF	MCLDC	LTGQ	RIR
LGDPCCON	1.000					
SPGEI	0.389	1.000				
IEF	0.479	0.360	1.000			
MCLDC	0.258	0.078	0.178	1.000		
LTGQ	0.048	0.009	0.168	0.593	1.000	
RIR	0.336	0.131	0.220	0.267	0.080	1.000

Source: Computed by author based on World Bank, Economic Outlook, and Master index data, 2024.

Unit root outcomes

Table 3: Unit root results 1996 – 2022

Variable	ADF		PP		
	Level	first-difference	Level	first-difference order	
LGDPCCON	-2.991 (0.0354)	-2.998*** (0.019)	-2.991 (0.411)	2.998*** (0.020)	(1)
SPGEI	-2.981*** (0.000)	-	-2.981*** (0.000)	-	(0)
IEF	-2.998 (0.503)	-3.012*** (0.002)	-2.998 (0.600)	-3.004*** (0.006)	(1)
MCLDC	-2.991 (0.476)	-3.004*** (0.000)	-2.991 (0.632)	-2.998*** (0.000)	(1)
LTGQ	-3.004 (0.999)	-2.986*** (0.000)	-2.981 (0.945)	-2.986*** (0.000)	(1)
RIR	-2.981 (0.106)	-2.986*** (0.000)	-2.981 (0.128)	-2.986*** (0.000)	(1)

Note: *** denote level of significant @ 1%, ** and denote level of significant @ 5%. Probability values are displayed inside the brackets, while statistics values were shadowed with asterisk to display level of significant and lastly as I(0) and I(1) denoting the order of integration.

Source: Authors' own computation.

This study considers the level test statistics, p-value, and 5% critical values to report the unit root process. Based on the ADF, and PP unit root outcome presented on table 3 above, the governance economic indicator was stationary at I(0), whereas all other variables were stationary after first difference or I(1). Henceforth, the current study has subsequently selected the ARDL model due to mixture of variables as also recommended by Sanusi et al. (2019); Ratombo (2029), and Meyer (2022).

Bounds-testing approach and ARDL long-run and short-run test results

Table 4 below presents the bounds test results using the Akaike Information Criterion (AIC) to accommodate the variables in question.

Table 4: ARDL cointegration bounds results, 1996 – 2022

Test statistic	Value	Significant level	Critical value bound	
			Lower bound I(0)	Upper bound I(1)
F-statistics	8.24	10%	2.08	3.00
K	5	5%	2.39	3.38
		1%	3.06	4.15

Source: Authors' own computation.

According to the ARDL bounds test method presented on table 4 above, the estimated F-statistic was compared with the lower, and upper bound values at the significance level (5%). In this situation, the F-statistic of 8.24, is above both the I(0) value of 2.39, and I(1) value of 3.38 respectively. For this result, it could be concluded that the null hypothesis is rejected, because the long-run relationship exists between the selected variables in this model as also emphasized by Sanusi et al. (2019).

Table 4: ARDL long-run and short-run test results, 1996 – 2022

Long-run				
Variable	Coefficient	Standard Error	T-Statistic	Probability
SPGEI	0.000	5.85E	2.822	0.015***
IEF	0.244	0.100	2.427	0.026**
MCLDC	5.038	1.420	3.548	0.004**
LTGQ	-1.175	0.150	-7.829	0.001***
RIR	-1.175	0.150	-7.829	0.021**
Short-run				
DSPGEI	-	-	-	-
DIEF	-0.004	0.000	-5.906	0.000***
DMCLDC	1.56E	2.53E	0.618	0.548
DLTGQ	-0.027	0.020	-1.349	0.202
DRIR	-0.000	0.000	-1.600	0.135
ECT	-0.075	0.008	-9.304	0.000***

*Note: **denotes rejection of the hypothesis at the 5% level of significant*

Source: Authors' computation.

The LGDPPCON as a standardised endogenous variable of the regression with the associated coefficients represents the long-run equilibrium relationship as thus:

$$\text{LGDPPCON} = 0.000\text{SPGEI} + 0.244\text{IEF} + 5.038\text{MCLDC} - 1.175\text{LTGQ} - 1.175\text{RIR} \quad (5)$$

The calculation, estimated in the model, is that there is a positive and statistically significant relationship between competitiveness variables and economic growth. About 1% increase in global economic index, index of economic freedom, and market capitalization of listed domestic companies could lead to a 0.00%, 0.24% and 5.03% development in LGDPPCON. Moreover, according to theory competitiveness existence is limited to the short-term. However, governance quality and real interest rates spur negative influence on South Africa's economic growth from 1996 to 2022. 1% decrease in governance quality variables and real interest rate lead to a -1.17%, and -1.17% decline in economic growth. This result is essential, especially within the South African environment. The competitiveness variable supports the study prior expectation and WEF (2020), and Terzic (2021) outcomes, while the governance quality variables contradict the study prior expectations and Meyer (2019 & 2022) findings. Since the country has experienced low levels of economic growth as well as economic development over the last two decades. It is worth noting that although there is positive response of competitiveness to economic growth but, they may be muted based on their lowest contribution as also suggested by theory, that the more the country competitiveness improves,

sometimes it costs economic growth to deteriorate. Table 4 shows that the estimated lagged error correction term ECM (-1) is -0.075 and is highly significant at 5% with the probability value of 0.000. These outcomes support the short-run relationship/cointegration among the variables and suggests that approximately 7.5% disequilibrium from the previous year's shocks in equation (4) converge back to the long run equilibrium, although it is corrected slow.

Diagnostics and stability test results

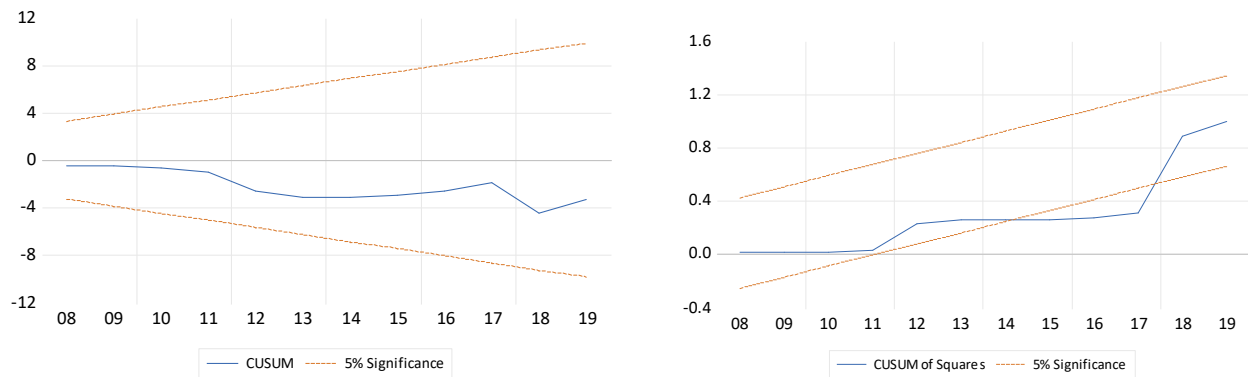
Table 5: Diagnostics test results, 1996 – 2022

Test	Null hypothesis (H_0)	Probability	Results
Serial Correlation LM test: Breusch-Godfrey	Normally distributed	0.109 > 0.05	The series display normal distribution with no serial correlation. Hence, the study accepts H_0 .
Heteroskedasticity test: ARCH	No heteroskedasticity	0.971 > 0.05	H_0 is accepted since the model is free from heteroscedasticity.
Heteroskedasticity test: Harvey	No serial correlation	0.120 > 0.05	There is no heteroskedasticity in the model. H_0 is accepted.

Source: Authors own computations.

The accepts H_0 since it is normally distributed based on the Breusch-Godfrey Serial Correlation LM test (0.109), and free from heteroskedasticity as confirmed by the ARCH and Harvey probability value of 0.971 and 0.120 which are greater than 0.05. The stated model in equation (5) does not suffer from serial correlation and heteroskedasticity problems and support the Gujarati, and Porter (2009) diagnostic test interpretation.

Figure 1: Cumulative Sum (CUSUM) and CUSUM of Squares test results, 1996 - 2022



Source: Authors' computation.

The CUSUM figure shows uninterrupted stability, whereas the CUSUMSQ figure was affected by structural breaks at some point in time during the study period but quickly converges within the 95% confident interval lines to confirm stability. These results confirm that some instability in the economic growth may be hidden under technical governance quality indicators. However, the study agrees with Emir, and Bekun (2019).

CONCLUSION AND RECOMMENDATIONS

The current study has investigated investigate the benefits of South Africa's economic growth from the degree of competitiveness and governance quality. To expand the research results, the current study suggests and recommend that there is practical application that revealed a positive relationship between competitiveness and economic growth that can be used to motivate the country level of development. Apart from that, governance quality and real interest rate were noted as risky variables that can scar investors. Furthermore, the study contributes by filling the gap in the literature on competitiveness and governance quality, through additional theories to the neoclassical theory, and by highlighting that at this stage, only competitiveness influences economic growth, and competitiveness was linked to short-term benefits under theory as alluded by Porter (1990). However, the study limitations can be addressed by including more or fewer variables as measurements of competitiveness and all six governance quality indicators.

Furthermore, economic growth can be expanded further by adopting high-tech, individual firm and regional competitiveness, and all six world governance indicators, and innovative sectors to stimulate economic growth.

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BRIDGING THE GAP: ADDRESSING SERVICE FAILURES AND RECOVERY IN PAKISTAN'S PUBLIC SECTOR

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ABSTRACT

The study is based on a critical analysis of service recovery process of public service organizations, specifically focusing on e-Government public service portals in Pakistan. Public services exist within political environments and as such the political context significantly affects how service failures are understood by citizens. The public sector bears not only the costs of the failure of a service, since it is subject to political and socio-political expectations. Given the high failure and the political complexity of the online public service sector, there is an urgent need to develop a custom-made service recovery model with respect to the Pakistani context.

BACKGROUND AND CONTEXT

This study is motivated by the unique characteristics of public service failures – that they are not only about things that “go wrong” operationally, but also about political and bureaucratic forces at play with which they can be perceived (Andrews 2007; Pidd 2012; Ozuem et al 2017). Service recovery, on the other hand, presents a much different spectrum of problems in the case of public services since private services are not threatened by shutting down because of an individual service failure (Harviainen et al., 2018). These research findings have an important benefit in potentially increasing public trust and satisfaction via better recovery strategies for dealing with not only specific service failure impacts but the wider sociopolitical consequences of these failures.

The research need identified is the absence of tailored model for the recovery of online public services in Pakistan context keeping in view the socio-political background which generates public perceptions and response. Past studies in service failure simply tend to be generic and not sector-specific enough lack of attention to digital context (Chen et al., 2018; Harrison-Walker, 2019, Ozuem and Willis 2022) Moreover, limited research has examined the customer emotions in the service recovery process especially in the public sector yet fails to articulate how these emotions are associated with the political context of service delivery (Weitzl & Hutzinger, 2017; Hazée et al. 2017).

This research intends to bridge the gaps through developing online public service failures context-specific service recovery process model in Pakistan. Utilising qualitative methods involving thematic analysis of service user reviews and focus group interviews with public service managers and customers, this study will generate a richer understanding of what service users think and feel when service failures impact on them. This study not only allows us to understand what the problems were, but also to reflect on and analyse what are the politically and socially sensitive governance strategies that can be used to improve the ability of public service recovery efforts to work. The significance of this study is far-reaching and contributes to the understanding of how the main cogs can be integrated more effectively at one of the crucial junctures of public service delivery, such as operational efficiency, customer satisfaction, and political accountability in the landscape of service delivery in Pakistan. In engaging empirically with the complexity of bureaucratic realities and the needs of the public it serves, the models include a strong contribution to the theoretical and practical literature on public administration and public service management. It seeks to increase public confidence and satisfaction, as well as fostering a public service framework that is even more open and responsive.

METHODOLOGY

The study utilizes a constructivist philosophy where social phenomena — here perceptions and experiences of service failure and recovery in public sector — is seen as a social construct of knowledge (Creswell & Poth, 2018). The reason the qualitative approach has been used is that qualitative approaches are appropriate when you want to engage with complex phenomena in some sort of depth, and you want to understand the perspectives or experiences of your participants (Merriam & Tisdell, 2016).

The sample of this study is the public service managers and the customers in Pakistan towards the online public services to design the model for the recovery service which is very specific in their context. The following purposive sampling method will be used to select a small but illustrative sample of five to six interviews. We considered this method appropriate as it allows for purposive sampling (the selection of cases thought to be information rich, such as individuals with high-level knowledge or experience of the phenomenon of interest) and ensures the maximum insight was obtained from a limited number of encounters (Patton, 2015; Ozuem et al 2021a). As the research is inductive, the aim is to obtain qualitative data through semi structured interviews that are flexible enough to explore what the interviewees think and feel and meanwhile, the data like that from any other interview is going to be comparable (Bryman, 2012).

The first strategy is particularly useful to investigating the contours of public service experiences and recovery beliefs, central to the research questions. The final population that was chosen for this user research involved those included users who have used online public services and those who manage online public services. This dual focus will facilitate the gathering of a very wide diversity of viewpoints on services that fail and strategies for recovery, making the analysis more robust and the findings more applicable in the realm of public service management (Creswell & Poth, 2018; Ozuem et al 2021b). This is a pilot study which aimed at having an in-depth insight into the service recovery processes in public sector organizations in Pakistan, the research approach adopted is qualitative and constructivist. The intention here is to capture as much depth and detail as we can through a small purposively selected sample, using semi-structured interviews; this in turn helps to inform a rich, contextually nuanced analysis.

ANALYSIS AND FINDINGS

Two themes were revealed in the thematic analysis of in the study, the service failure and recovery strategies of online government portal services in Pakistan: publicly service failure, service expectation and actual experiences.

Theme 1: Public Service Failure

Code 1: Customer Perceptions

Public perception has a huge influence on a service failure. Frustration is a common sentiment among users who are unhappy with their digital government services despite or because of backend system inefficiencies. For example, one participant commented, "whenever the app has some fault then I am scared... they can be cheating people" (PSU 1, interview). To me this really embodies the frustrations of using flaky services: they degrade the user experience by reducing trust, thus fueling bad experiences.

Code 2: Service Standards and Regulatory Issues

Service standards and regulatory lacunae were also a very critical aspect of service failure. Service users criticize public service delivery for lack of transparency and accountability in the words of a PSU 6 participant "The government is chosen by digitalization of all the services... but creating an account to get DG service as these the apps multiple time fail" (PSU 6, interview).

Theme 2: Expectations and Actual Experiences

Code 1: Gap Between Expectations and Reality

Users have certain expectations based on what governments have promised and there is a clear gap between them and what the experiences of these public good services. These gaps are particularly clear in essential services responsible for protecting the rights and wellbeing of the people. One user wrote, for instance, "I do not know the kind of pricks

that are monitoring the performances of these online services...very swift system and even my oversee ID card I can get it within a month. It is only the government and delivery mechanism changed but the system performance is same" (PSU 3, interview). That mirrored the frustration over the lack of productivity gains in services.

Code 2: Ineffective Service Recovery

Poorly resolving service failures simply continues this cycle of discontent and erodes trust in government. Some believe the problems they report is disregarded while others find a resolution to their issue unsatisfying, worsening the disillusionment with public services. The related department either accepted the issue and mitigated the complaint without resolving the issue or responded, 'the relief cannot be given'. That's it. I have like 20 complaints of Police, Nadra, Local Govt, etc. All ended with 'relief granted' or 'relief can't be granted'" (PSU 2, interview); reflects many participants' experiences with a lack of response to service complaints.

These themes and codes illustrate a nuanced relationship between user expectations, lived experiences, and perceptions of government digital service effectiveness. The results imply that the promises of better transparency and an efficient manner of the service delivery made by the government are far from what is being experienced by the users. While these problems are not all an issue that can be solved by new technology, they are an issue about how we think about services, how we make the mechanisms and how we believe services should be delivered and concludes a constant vigil on what one is supposed to get from the services workers of the government.

CONTRIBUTIONS

The research of service Failure and recovery strategies among online government portal service providers in Pakistan definitely contribute in domain of public administration and service management in theoretical and practical manner. The study makes a theoretical contribution by situating service recovery theories in a public sector and digital contexts. Traditional service recovery models mainly come from the for-profit industry, where customer retention essentially equals profit (Ozuem et al 2024). This paper serves to extend these models to more closely approximate practice by including in the model the publicness of delivered services, where the consequences are economic, social and political. This research offers new insights by examining the distinct characteristics of public sector service failures and recoveries that enrich theoretical explanations of how service recovery theories operate in the bureaucratic and politically driven environment of public services. This approach represents a more nuanced lens of service failure and recovery which incorporates political and social expectations. However, current theories usually do not pay enough attention to how these processes and outcomes are shaped by political pressure and public accountability. The research provides a more nuanced theoretical understanding of how service management strategies interact with their socio-political environment by investigating the political contexts and bureaucratic mechanisms that shape customer perceptions and responses, thereby augmenting theories of governance and public accountability. One additional theoretical contribution of our study is its investigation of exited service recovery emotions unexpectedly in public services.

Service recovery literature also benefits from a litany of research on how emotions in service recovery affect the private sector, this study contributes to our understanding about the critical role emotions play in the public sector (due to the fact that they are highly politicized and heavily laden with social expectations). This extension to the theory highlights the importance of the emotional dimension in the shaping of service recovery strategies that are both effective and empathetic, taking into account of the emotional involvement of citizens in public service. In terms of theory, it contributes to the theoretical understanding on the development of context-specific models, by formulation of the customized service recovery model, which inevitably lay down to such a perspective of studying a unique set of service recovery challenges facing to online public services in Pakistan. This model accounts for the unique socio-political, bureaucratic and cultural factors that inform bandwidth associated with service delivery and recovery — in a developing country context. Consequently, this contribution is important for theory in as much it gives a blueprint for other researchers to construct models from a contextually appropriate setting therefore extending the applicability and resilience of service recovery theories to similar or different environments.

This research has the practical implications for public managers and policy analysts in identifying key areas of improvement for future design and development of the on-line public service portals. Through pinpointing particular failures and where expectations of service differ from actual delivery, the research offers ways forward to improve service protocols, enhance training for service agents and expedite the complaint resolution process. Such

improvements are anticipated to improve body confidence in public companies and are necessary for the latter to be strong and reputable. The research proposes operational policy solutions on how to achieve higher quality digital public services in governments. The study highlights the struggles of digital platforms, which often lose and frustrate users, and argues that policymakers need to secure resilient digital infrastructures, set quality guidelines for services, and transparent processes that all citizens can access. As they continue toward digital governance models, it is essential that governments heed these recommendations.

However, from a practical perspective, the research results shed light on the importance of improved accountability and communication in managing service failures. The study proposes a model which introduces periodic audits, methods of obtaining feedback and channels of redress, as a template for public agencies to institution, to ultimately reduce mistrust by the public and their perception on an amount of corruption or ineffectiveness within public services. Lastly, the research illuminates the significant of culture upholding service systems. It provides benchmarks on how to entrench cultural etiquette in service recovery strategies taking a case study of the most culturally diverse societies, including Pakistan. This encompasses cultural competency in training of service personnel, the use of local languages and symbols in digital platforms and culturally sensitive communication strategies in handling service failures. In doing so, we serve to make both theoretical and practical contributions to service recovery that, when taken together, offer a comprehensive framework with which to analyze and enhance the process in the public sector, especially within the emerging background of digital governance of Pakistan.

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SOCIAL MEDIA MARKETING AND LUXURY FASHION PURCHASE INTENTIONS THROUGH THE MEDIATING ROLE OF BRAND AWARENESS ON INSTAGRAM

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ABSTRACT

The luxury fashion industry in South Africa is growing, driven by young millennials, increased middle-class wealth, and rising smartphone use. Female millennials are a key consumer group. This study examines how social media marketing on Instagram affects their purchase intentions towards luxury fashion brands. The research targeted female millennials aged 23-38 in Gauteng using Instagram. A quantitative approach with quota and convenience sampling was used to select 300 participants. Descriptive analysis, exploratory factor analysis, confirmatory factor analysis, and structural equation modelling were employed. Results show social media marketing significantly influences purchase intentions, with brand awareness mediating this effect. Both research hypotheses were accepted, and a model was developed to help retailers enhance brand awareness and purchase intentions via Instagram.

Keywords: social media marketing, brand awareness, purchase intentions, South Africa, Instagram.

INTRODUCTION

Despite slow global economic growth, the rapid rise of wealth in emerging markets like China, Russia, India, and Brazil has made the luxury fashion sector one of the world's fastest-growing industries (Mundel et al., 2021). In line with this, Hung and Tse (2020) stated that 70% of emerging economy consumers, compared to 53% of mature market consumers, had increased their spending on luxury goods between 2015 and 2021. According to New World Wealth, the South African luxury market generates roughly \$2 billion in revenue annually, making it Africa's largest luxury sector (Rajgopaul, 2021). The number of international luxury fashion brand entrants to South Africa has also increased over the past 20 years and is expected to continue to grow. The competitive environment in South Africa is highly fragmented, with the most successful luxury brands in the country, such as Louis Vuitton, Chanel, Gucci, and Hermès, having their own stores where they sell their products exclusively (Luxity, 2020). In addition, Western lifestyles are increasingly being portrayed in South African media, further creating demand in this market for high-quality luxury fashion goods (Sestino et al., 2022). Furthermore, the penetration of new technologies and smartphone use has also contributed towards such growth, as luxury shoppers utilise mobile devices to research and purchase luxury fashion products (Lawry, 2022). The COVID-19 pandemic accelerated the shift to online shopping, as 34% of global customers appear to be shopping online, while 16% of South Africans are shopping more online (Dagada, 2020). Therefore, South Africans are becoming increasingly connected, as smartphone penetration nearly doubled from 2017 to 2019 and is now over 80% (Gilbert, 2019). Moreover, the consumer market for these luxury fashion goods is changing, with female millennials becoming progressively important within this industry (Bridglall, 2018). A Deloitte (2018) study forecast that South African female millennials will comprise more than 40% of the total market for luxury brands by 2025, compared to 30% in 2016. Sorgdrager (2021) argued that part of this overall growth in the South African luxury brands market is driven by tech-savvy millennials who use social media to engage with luxury fashion brands and communicate their personal identities to others. Social media marketing, namely marketing communications via digital applications and social media platforms (Vinerean & Opreana, 2019), presents luxury fashion brands with online platforms of possibilities to build brand awareness (Seo & Park, 2018).

A notable proportion of research on female millennials' purchase intentions, focusing on factors that influence luxury fashion brand consumption, emanates from developed markets like Europe and the United States (Bilgihan, 2016; Dharmesti et al., 2021; Moreno et al., 2017; Youn & Cho, 2022). Research on this topic has also been conducted in emerging economies, such as China (Cui et al., 2015), India (Jain, 2019), South Korea (Burnasheva et al., 2019), and Taiwan (Pasricha et al., 2020). Nevertheless, there is a scarcity of emerging African market research (specifically in a country like South Africa) on luxury fashion brands. From the available South African research involving luxury fashion brands, a clear gap exists concerning the purchase intentions of female millennials. As such, this study addresses four gaps in the literature. First, there is limited research examining the relationships between social media marketing, brand awareness, and its influence on female millennials' purchase intentions within the South African luxury fashion market. Second, no existing South African studies appear to determine the mediating role of brand awareness on the relationship between social media marketing and purchase intentions of luxury fashion consumption. Some studies have investigated Facebook as a social media platform and its influence on South African millennial customers' purchase intentions (Duffett, 2015; Funde, 2017; Scarth, 2017). However, Instagram appears to not have received scholarly attention in the South African context of luxury fashion brands – the third gap in literature addressed by this study. Lastly, this study aims to focus on the influence of social media marketing (as a unidimensional construct) via Instagram on South African female millennials' luxury fashion purchase intentions.

The relationship between social media marketing, with specific reference to Instagram, brand awareness, and purchase intentions of South African female millennial customers of luxury fashion brands remains underexplored. This study focuses specifically on Instagram as a social media platform, used in the social media marketing of luxury fashion brands, as various studies have focused on other social media marketing platforms, such as Facebook and Twitter (Algharabat, 2017; Liu et al., 2021). In addition, the mediating role of brand awareness towards the purchase intentions of luxury fashion brands is inconclusive. Lastly, this study aims to explore the influence of social media marketing as a unidimensional construct on South African female millennials' purchase intentions towards luxury fashion.

LITERATURE REVIEW

Theories Grounding the Study

Two theories form the foundational argument for the study, namely social media engagement theory and symbolic interaction theory. The foundation of SME theory is that higher levels of user engagement result in the enhanced use of social media platforms. Therefore, greater online usage is correlated with higher levels of value derived from the social media platform for the brand and users, resulting in value co-creation (Chapman & Dilmperi, 2022). Accordingly, millennial luxury shoppers reflect the tendency (approximately three times more compared to previous generations) to engage with social media to view their opinions online, become more informed about luxury fashion products or share images of products they might be interested in purchasing (Yamawaki & Sarfati, 2019). Furthermore, Yamawaki and Sarfati (2019) stated that millennials are highly influenced by social media and tend to have a higher level of interaction and engagement with luxury fashion brands.

Solomon (1983) explained that symbolic interaction theory has three components: how customers perceive themselves based on others' responses, how this directly influences customers' behaviour, and how their self-image is based on others' responses or actions. This theory further elucidates how customers observe and perceive their own and others' physical appearance. Zhang and Kim (2013) asserted that symbolic interaction theory is the most suitable theory when examining customers' purchase intentions and attitudes towards luxury fashion brands, as it considers three important factors, namely brand consciousness, fashion innovativeness, and social comparisons. Moreover, young women, particularly millennials, use online sources like the internet and social media platforms to conduct research on the latest fashion trends and styles, enabling them to become more self-assured in terms of their buying decision-making (Burkolter & Kluge, 2011; Seock & Bailey, 2008).

Overview of the Key Constructs in the Study

Social media marketing refers to marketing communications via digital applications and social media platforms (Vinerean & Opreana, 2019) that facilitate five main activities (entertainment, customisation, interaction, word of mouth, and trends) among female millennials on Instagram who have a desire or intent to purchase a luxury fashion brand. In addition, social media is a form of entertainment, and users are pleasure seekers who feel entertained when using Instagram as a social media platform, resulting in experiencing enjoyment (Mathieu et al., 2013). Luxury fashion brands use social media to promote their products, services, and companies through imagery, videos, and Instagram Stories, showcasing their newest designs in the latest customer trends to inspire online users (Roggeveen et al., 2021). Brand awareness concerns how individuals are aware of or familiar with a brand (Bergkvist & Taylor, 2022). Helal (2019) stated that strong visibility can be attributed to Instagram, which boasts a 98% penetration rate by luxury fashion brands. Consequently, these luxury fashion brands are taking advantage of such conspicuous social platforms to boost awareness and online presence among customers. Sjöberg (2017) explained that social media platforms, such as Instagram, offer great potential for brand awareness, as they enable affordable and repeated exposure among users who follow a brand. Furthermore, scholars (e.g., Alnsour et al., 2018) define purchase intentions as customers' possibility of purchasing a product or service in the future. Ünal et al. (2019) showed that measuring purchase intentions strongly relates to customers' future behaviour based on their attitude or preference towards a brand or product. Millennials are not only buying more online but are also using social media to search for more information before making purchase decisions (Dharmesti et al., 2021). According to Rozario-Ospino (2020), 75% of millennials' buying decisions are impacted by a brand's social media presence.

Theoretical Model Development

The interrelationship between social media marketing and purchase intentions

As a mass media platform, social media facilitates the interaction and sharing of ideas to raise awareness and an understanding of a brand and visualises post-purchase behaviour without purchasing (Akaileh et al., 2023). Scholars (e.g., Botha & Reyneke, 2016) have proved that social media marketing is positively correlated with South African millennials' luxury purchase intentions. Therefore, the following hypothesis is formulated:

H1: A significant and positive relationship exists between social media marketing (consisting of entertainment, customisation, interaction, word of mouth, and trends as social media marketing activities) and the purchase intentions of female millennial customers of luxury fashion brands.

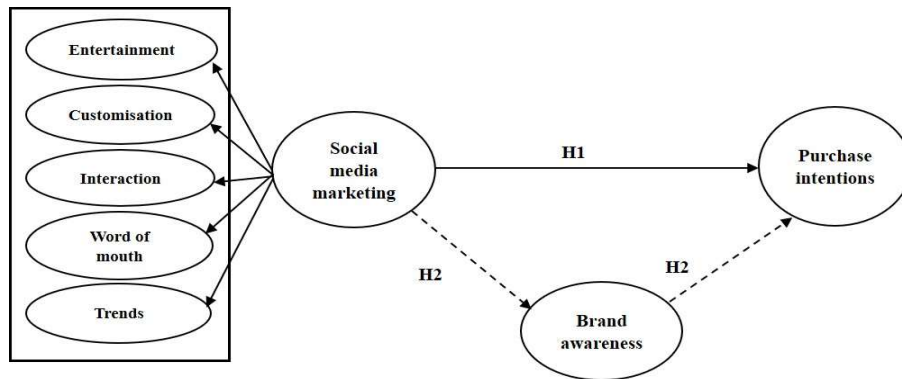
Brand awareness mediates the relationship between social media marketing and purchase intentions

According to Ardiansyah and Sarwoko (2020), social media marketing influences customers' brand awareness, purchase intentions, and brand loyalty. Furthermore, marketing scholars (e.g., Khurram et al., 2018; Jamil et al., 2021; Chafidon, et al., 2022) have confirmed that brand awareness created through a social media advert positively impacts customers' decision-making processes, ultimately resulting in purchases. Likewise, Susilowati and Sari (2020) explained that heightened brand awareness can lead to strengthened customer purchase patterns. Hence, the following hypothesis is formulated:

H2: The relationship between social media marketing and purchase intentions is mediated by the brand awareness of female millennial customers of luxury fashion brands.

Considering the discussion above, the model in Figure 1 is proposed.

Figure 1: Proposed model for the study



Source: Researchers' construct.

METHODOLOGY

The study was quantitative and descriptive in nature. This study's target population consisted of female millennials born between 1981 and 1996 (aged 23–38 in 2019), who use social media – specifically Instagram – and reside within the Gauteng province of South Africa. A two-pronged sampling process was applied using non-probability techniques because a sampling frame containing the elements of concern for this study was not available (Saunders et al., 2012). The sampling units were selected in the first sampling phase via quota sampling in Gauteng, South Africa. In the second sampling phase, convenience sampling was used, where members of the identified quotas were selected according to criteria, such as willingness to participate, availability, and ease of access within a geographical area (Etikan et al., 2016). The sample size was 304 female millennials who are actively engaged with and follow luxury fashion brands on Instagram and intend to purchase such luxury fashion brands, which falls within the 200–450 minimum sample range recommended by Hair et al. (2010) and Nunan et al. (2020). The study employed self-administered surveys, which are questionnaires intended to be completed by respondents without the assistance of an interviewer (Jong, 2016). A structured seven-point Likert scale (ranging from 7 = “strongly agree” to 1 = “strongly disagree”) was used. These self-administered questionnaires were utilised to collect data concerning social media marketing, brand awareness, and purchase intentions. The collected data was entered into SPSS 25.0 for analysis. Descriptive statistics were computed, and confirmatory factor analysis and structural equation modelling were used to test the different hypotheses formulated for the study.

RESULTS

Scholars (e.g., Hair, Black et al., 2019) state that the structural model reflects the proposed relationships between the different constructs in a model (Hair, Risher et al., 2019). In terms of the confirmatory factor analysis, the goodness of fit (GoF) in the structural model was first assessed to establish to what extent the structural model fitted the data prior to the presentation of the outcome of the proposed hypotheses in the study. In the context of this study, it was important to establish the extent to which the structural model fitted the data using the GoF statistics, prior to assessing the relationships between the different constructs applied to the study. Indices of model fit reflect on the extent to which the proposed model can reasonably account for the observed data (Gana & Broc, 2019). The Absolute fit indices (AFIs) and incremental fit indices (IFIs) were used for the test.

Table 1 indicates the GoF test statistics and provides the results of the various fit indices. From an AFI perspective, Table 1 shows that the test statistic for the chi-square was statistically significant and permissible: $X^2 = 4.162$, $p < 0.0005$ (Awang, 2015). The root mean square error of approximation (RMSEA) achieved a fit of 0.071, which is above the < 0.06 requirement set for the study, but was considered acceptable and permissible. From an IFI perspective, the comparative fit index (CFI) achieved was 0.912, which is slightly above the required value of ≥ 0.90 , but was considered acceptable (Cangur & Ercan, 2015). The Tucker-Lewis index (TLI) achieved for the model was 0.895, which is extremely close to the 0.9 cut-off and so was acceptable to indicate model fit (Cangur & Ercan,

2015; Hair et al., 2010). The normed fit index (NFI) achieved a fit of 0.888, which was also considered acceptable (Forza & Filippini, 1998).

Table 1: Structural model – GoF assessment

Category of model of GoF	Selected indices	Acceptable fit	Model fit outcomes
AFI	Chi-square (X^2)/CMIN	A value of $X^2 < 3$ indicates good fit (Awang, 2015; Hair, Risher et al., 2019, p. 636)	4.162
	Df		128
	<i>p</i> -value		0.000
	RMSEA	A value < 0.06 indicates good fit (Cangur & Ercan, 2015, p. 157)	0.071
IFI	CFI	A value ≥ 0.90 indicates good fit (Hair et al., 2010, pp. 665–669)	0.912
	NFI	A value > 0.80 (Forza & Filippini, 1998, p. 14) or ≥ 0.90 indicates good fit (Hair et al., 2010, pp. 665–669; Hooper et al., 2008, p. 195)	0.888
	Non-normed fit index (TLI)	A value ≥ 0.90 indicates good fit (Cangur & Ercan, 2015, p. 158)	0.895

Based on the information presented in Table 1, the structural model was deemed to have an acceptable model fit. A mediation analysis was conducted for the relationships where brand awareness is a mediator between social media marketing and purchase intentions. As part of the mediation analysis, a bootstrapping estimation with 5,000 resamples was performed, and 95% bias-corrected confidence intervals (BCCIs) were generated. Table 2 presents the mediation analysis results, which clearly demonstrate that zero was not contained between the lower-level confidence intervals (LLCIs) and upper-level confidence intervals (ULCIs) of the BCCIs for the direct and indirect effects. Evidently, it proved the mediating effect of brand awareness on the direct relationship between social media marketing and purchase intentions ($B = 0.050$, 95% BCCI [0.021; 0.084]).

Table 2: Regression analysis summary of the mediation of brand awareness in the relationship between social media marketing and purchase intentions

Construct $X \rightarrow M \rightarrow Y$	Direct effect [LLCI; ULCI]	Indirect effect [LLCI; ULCI]	Hypothesis result
Social media marketing \rightarrow brand awareness \rightarrow purchase intentions	0.356 (95% BCCI) (0.279; 0.433)	0.050 (95% BCCI) (0.021; 0.084)	Partial mediation supported

Notes: X = exogenous variable; M = mediating variable; Y = endogenous variable.

The results in Table 2 confirm that brand awareness was partially mediated in the relationship between social media marketing and purchase intentions.

MANAGERIAL IMPLICATIONS

Female millennials search for luxury fashion brands on Instagram they would consider purchasing, with 31.9% of these individuals having used Instagram to browse for luxury fashion brands the week prior to filling in the questionnaire. This indicates that the millennial cohort is the most active on Instagram when discovering the latest fashion. The application of social media platforms (e.g., Instagram) is more relevant in attracting interest, creating a willingness to further browse and explore luxury fashion brands, and thus affecting their purchase intentions. The following recommendations are proposed to better understand how to effectively use Instagram features to influence female millennials' purchase intentions.

Recommendation 1: Luxury fashion retailers should use shoppable Instagram features to drive more sales. The development of new features on Instagram poses a great opportunity to improve millennials' online shopping experience by making it easier to shop through the platform. Some of these include Instagram Shopping posts, where brands can tag their products in their posts and followers can click to view these items and add them to a shopping cart, without having to leave the platform, known as "Checkout on Instagram", which is currently available in the United States (Warren, 2021). By setting up an Instagram Shop, followers can browse products and explore new collections, which are easily customised into themes, such as new arrivals, gifts, and seasonal trends (McLachlan, 2022). Each product page provides all the relevant information on any item within a product catalogue, such as pricing and descriptions.

Other features include "Shopping from Creators", where influencers can develop shoppable Instagram posts highlighting brands' products and their followers can then purchase them (Warren, 2020). To sum it up, with these new Instagram shopping features, millennials' shopping experience is streamlined – that is, *see it, like it, buy it, in a few clicks* (McLachlan, 2022). With this in mind, luxury fashion brands are able to educate their online audience about their story and highlight products seamlessly so that their audience can easily shop in the moment of discovery.

Recommendation 2: Luxury fashion retailers can use Instagram ads to reach and target female millennials interested in purchasing luxury fashion products. Research has shown that more than half of millennials (58%) make a purchase after seeing an online or social media advert (Herhold, 2017). Consequently, the desire for a luxury fashion brand is formed at various touchpoints, such as online advertising and other online promotions, through social media. For this reason, luxury fashion retailers should ensure the ads they run on social media are relevant and have a clear call to action, such as a "Shop Now" button, followed by a short description of the product and a high-quality image showcasing the product details.

Other forms of ads could include Instagram Stories, which are a great option when wanting to engage with millennials on a more frequent and personal basis, as they capture products in video format, promote special offers, or showcase new items. Promoting exclusive Instagram promotions (i.e., a special discount code exclusive to those who follow the brand on Instagram) encourages future customers to follow a brand's Instagram account to ensure they do not miss out on the latest brand news and upcoming promotions. The above-mentioned tactics would allow luxury fashion retailers to optimise their social presence, effectively build brand awareness, and drive purchase intention by guaranteeing the brand is top of mind throughout the purchase journey.

Recommendation 3: Luxury fashion retailers must understand millennials' perceptions and emotions about the products they purchase and how they perceive and value luxury fashion brands online through social media. An important factor to consider is that brand awareness is only the first step towards customer perception when it comes to brands that customers are exposed to online (Su, 2016). Once a brand is recognised by customers, factors like the creation of brand associations, perception of quality, and loyalty can further increase their willingness to purchase the brand's products (Foroudi et al., 2018; Pappu & Quester, 2016). Given the symbolic nature of luxury fashion brands as well as the social and cultural meaning involved when purchasing these brands (Shephard et al., 2016), luxury fashion retailers need to ensure that they provide exciting and functional content that influences the perception of their brands' quality and encourages interaction between users via these brands' social pages. This can be done by providing information about new products, events, and promotional offers on brands' social pages. Consequently, it is crucial that luxury fashion retailers enhance their brand image through their social media pages to improve the experiences they have to offer millennials, thus developing the connection and perception of the brand in this young generation's minds to further influence their purchasing behaviour.

LIMITATIONS AND FUTURE RESEARCH

This study is characterised by limitations. First, the study primarily focused on millennial respondents (born between 1981 and 1996). Even though millennials are the most active social media users, leaving out individuals reflective of other age brackets does not illustrate the most accurate reflection of the entire industry, but only a portion of the South African luxury fashion industry. Second, the study centred on female millennials. As per Statista (2022), women (55.3%) are the biggest customers of luxury fashion goods, compared to men (44.7%) in South Africa. As such, by not considering males in the study, the results reflect the views of approximately 50% of luxury fashion consumers in South Africa. Future research in the domain of luxury fashion could be more inclusive of other age groups. For

example, including Generation X and baby boomers could reflect interesting results. Third, future research could focus on males to secure a more inclusive perspective on all genders within the luxury fashion industry in South Africa. Finally, in future research, social media marketing should be measured as a multi-dimensional construct, and not unidimensional, as was the case in this study.

CONCLUSIONS

This study offers a new perspective in the field of social media marketing and purchase intentions in the luxury fashion industry. The primary focus of this study was to investigate the influence of social media marketing via Instagram on South African female millennials' luxury fashion purchase intentions. Luxury fashion retailers need to better understand female millennials' purchase intentions, what makes them brand-conscious, and how they can be managed more successfully through the social media platform Instagram. The study concludes that social media marketing and brand awareness significantly influence female millennials' purchase intentions within the South African luxury fashion market. In addition, brand awareness has a mediating effect on the relationship between social media marketing and female millennials' purchase intentions towards luxury fashion brands. It is hoped that the findings in this study will elucidate the marketing strategies that luxury fashion retailers can implement to achieve a stronger intention from customers to purchase luxury fashion brands through Instagram.

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THE NEW FITTING ROOM: HOW AUGMENTED REALITY REDEFINES SHOPPING IN THE DIGITAL AGE

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ABSTRACT

The fashion industry is undergoing a transformative shift driven by the integration of augmented reality (AR) technology. This study explores the innovative applications of AR that are revolutionizing the customer experience. We examine how AR allows potential consumers to virtually try on clothing and accessories, visualize garment drape and fit, and experiment with outfit combinations. This paper discusses augmented reality (AR) applications in the fashion industry and offers significant contributions, both theoretical and practical, as it endeavors to enhance our understanding and application of AR technology in a commercial setting. These contributions are expected to provide foundational insights for academics, industry practitioners, and technology developers alike.

INTRODUCTION

The Augmented Reality (AR) Apps are making their way in different sectors, mainly in the fashion industry. Their success story and failure rates to date. Other studies by Jigyasu (2018) and Blair (2018) were even gloomier with failure rates as high as 30% within a window of between 12 to 18 months of innovation development - reflecting challenges in aligning with consumer expectations and demand. This is consistent with Olsson (2014) and Kujala et al. (2017) showed that usability and consumer experience are important factors in the failure of many participatory sensing projects. It does show that knowledge of how these technologies match with user expectations and value was low and the field needs more understanding to facilitate successful application in real-life scenarios. With an anticipated market size of over US \$215 billion by 2021, according to Emtinan (2019), and interest from major corporations such as Facebook, Apple and Google, these usability issues must be addressed. Early AR devices like Google Glass have made consumer acceptance and satisfaction even more complicated — and have left consumers and privacy advocates wary.

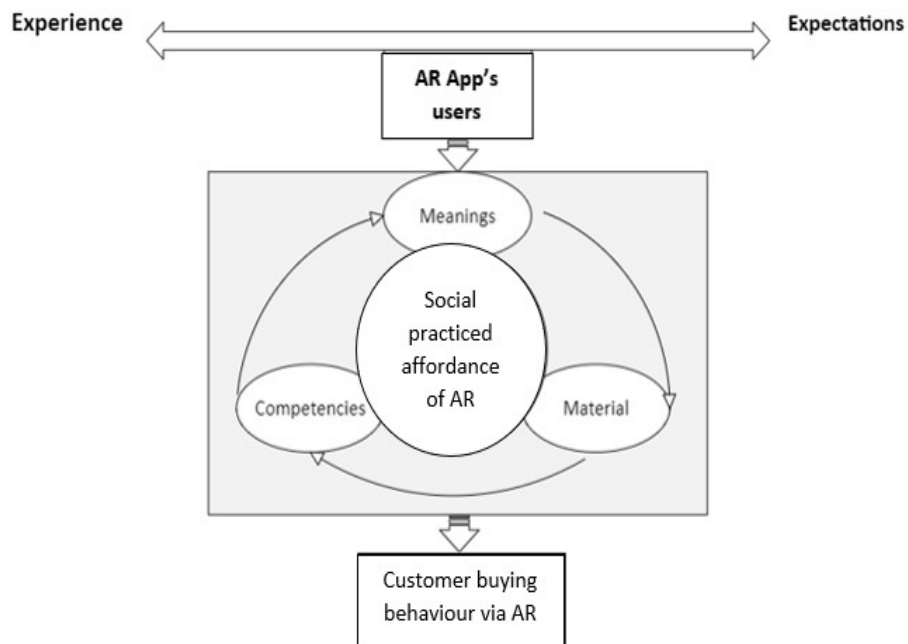
This paper will focus on understanding what aspects that could provide benefits, in terms of usability, to fashion domains and attract more consumers, in and out of physical stores, where AR is very likely to redefine the consumer's experience such as the use of a virtual mirror, among others. This study is important as it brings a view on how AR technology aptitudes may be coupled with user satisfaction to better inform the novel implementations of AR within the commercial setting. This research, specifically emphasizing the fashion industry on account of the personalized experience and consumer interaction, informs the puck design for more engaging AR solutions with online shopping. In addition, a context-specific social practice affordance framework focusing on knowledge-in-action, extended practice affordances, and latent affordances (Markus & Silver, 2008), could offer a solid methodology for aligning these promising AR technologies with actual consumer behaviors and expectations in society.

In order to tackle these challenges and opportunities, this study aims at exploring the effectiveness of AR applications to improve the online purchase process for fashion. More specifically, this research is set to conceptualize the shopping process by investigating consumer experiences on AR app shopping for fashion products in the online shopping context. The plan is to start identifying key dimensions of AR that drive adoption, explore several usability dimensions which can be supported through user reviews and to map these dimensions to consumer experience to stimulate online shopping behavior through AR applications. The research that will lead to this knowledge is to come as an important contribution to the respective theoretical grounds and in due practice relevance of AR-Applications.

THEORETICAL CONTEXT

Theoretically, this research will build on a foundation of affordance and social practice theories to gain insights into the complex interplay of users and AR applications in the context of fashion. Affordance theory, introduced by Gibson (1979), underpins this research, as its mighty conceptual framework attempts to account for all the possible ways in which Augmented Reality (also known henceforth as AR) has to offer users actions that are in a way mediated by the subject's physical and perceptual abilities. This has been further developed by focusing in on perceived and real affordances (Norman, 1988; Ozuem and Willis, 2022) illuminating the experiential way of how users identify and utilise affordances. For the design and functionality of AR applications to give an experience reweights with the expectations and requirements of the user, this part is critical. At a more general level, social practice theory, as outlined in Reckwitz (2002) and grounded in Giddens's Structuration Theory (1984), provides a lens to look at the more or less established behaviors and practices defining the social context in which AR use takes place.

Figure 1: Theoretical Model



This theory highlights how social structures can be crucial when explaining how consumers incorporate AR technology into their ordinary lives and shopping behaviour. This analysis focuses on the interaction of competence (consumer knowledge and skills which they bring to their interactions with AR), material features of the technology, and the meanings that consumers associate with AR. The research aims at combining both theories to give a more in-depth picture of AR technologies within the fashion retailing. Through this integrated view, we provide a comprehensive examination of how the technological affordances of AR applications and the social practices encompassing AR applications affect consumer behavior, consumer expectations, and what pushes consumers to seek interactivity.

Markus and Silver (2008) provide a more appropriate view of affordance within information systems, understanding the perception of the user around a technology and the intended outcomes of interaction with it are key to achieving these outcomes (plane). This is highly relevant in the case of AR applications where the disparity between potential actions and behaviors (affordance vs. actualization) can have a significant effect on user centered design, satisfaction, and adoption of the application. This research will test certain components of these theoretical frameworks related to the use of AR in the fashion industry, including interactivity, reviews and compatibility. This was emphasized as a quintessential characteristic of the immersive AR experience by Bucy (2004), due to the dynamic engagement between users and the AR applications.

Users reportedly need to feel safe while interacting with AR technology (Esmaeilzadeh, 2019) and this can be achieved through credibility, which occurs on 2 levels: Trust and Perceived Risk. In the end, compatibility, or how well AR applications match current user values and needs (Costa et al., 2017), is essential to the adoption of new technologies in the everyday life of consumers. The utilization of affordance and social practice theories to analyze AR in the fashion industry is the theoretical contribution of this research. This study not only contributes to a deeper comprehension of the technological sides of AR, but also depicts the structured user behavior inside an augmented environment and subsequently denotes a comprehensive context about the driving forces of customer intention of using and also the satisfaction in using the service. The combined approach of exploring technical capacities and social prerequisites of AR usage brings important insights to more user centered AR application development — thereby increasing the success chances, and consumer experiences, in fashion.

DATA COLLECTION METHODS

According to Myers & Avison (2002) qualitative research data collecting methods are researcher reactions and impressions, texts and documents, questionnaires, interviews, observation. Klein and Myers (1999) contend that data collected from multiple sources are more likely to result in multiple and rich interpretations of phenomena. This Information system-based study by McKenna & Chughtai (2020) collected primary and secondary data from participant observation, chat logs, screenshots, discussion forum posts, wow patch notes, and social movement websites. Studies conducted in the past utilized various primary data collection strategies (i.e., diaries, semi-structured interview methods) (Cai et al., 2019; Floros et al., 2019; Ozuem et al 2017). Information system studies have also considered secondary methods such as online reviews (McKenna et al., 2017).

Consequently, the research will make use of both secondary and primary sources of data. In the research gap has been mentioned that Gucci, ASOS and Zara are in the fast lane in fashion industry to provide AR for the (potential) customers to try fashion products before buying online. But not many online reviews can be found about their fashion [industry] apart from Gucci [&] ASOS. After fashion industry sphere, again Gucci have over 5000 online AR app reviews and AR of ASOS have more than 3500 reviews, but generally, any other fashion AR ad has fewer than 30 reviews because they are all as AR platform in the initial stages yet. This is why online reviews are being short-listed by Gucci and ASOS. However, more fashion AR app online reviews could qualify if the fashion AR app data had sufficient online reviews for a researcher to locate.

This study will start with phase one of data collection for an examination of online reviews from 8 apps. Through the Heedzy website, we will also harvest the online app reviews from the iTunes and Google play stores since Heedzy allows us to easily download data to use in their analysis-ready format in an Excel sheet (CSV). The article will pull reviews from two AR apps in the fashion industry. Aim: To gain deeper user insights on user reviews of two different fashion brands & their online AR app's via 2 fashion industry AR APs. In second phase, user of AR fashion App's will be provided to participant and choice of using any one of those App which they will be invited to use after that app experience reflective stage will take place for participants.

This study is focused on Gucci (On-line shopping app) 2. ASOS (On-line shopping app) as these AR apps are the coolest and famous among people (Ozuem et al 2021a). The insights about these apps will be developed through semi-structured interview guide and focus group discussions in order to explore relevant and untapped data with the researcher. Furthermore, a single focus group discussion will be conducted to obtain collective opinions of the users on the AR app for online shopping of fashion products. For thematic analysis of qualitative data. The data will be gathered through online reviews, reflections and semi structured interviews. Consistent with the advice of Saldana (2016), the data will be member checked (Birt et al., 2016; Ozuem et al 2024), and undergo two rounds of

coding to ensure trustworthiness. The first round will be about a single letter, a paragraph, a page or two and moving images (Saldana 2013; De Chesnay & De Chesnay 2014). As such, holistic coding will be adopted for the first round of coding. Holistic coding was originally conceptualized as identifying the emergent patterns from the data, “to try to encompass the basic themes or issues in the data by absorbing them in their entirety rather than by analyzing them line by line” (Dey, 1993, p. 104) In the second cycle of coding, the coding segments can be identical units and analytic memos, large pieces, or new iterations across the entire coding plan (Saldana, 2013). The elaborative coding will be used for constructing final concepts from the data. Elaborative coding = “the process of analyzing textual data in order to develop theory further” (Auerbach & Silverstein, 2003; Ozuem et al 2021b) Through a study of the qualitative patterns of the data, descriptions will be validated through the 5 R's (roles, relationships, rituals, roles, and routines) of human beings (Merriam, 2014) to investigate the roles of AP users. In addition, there are five stages that will be used for data analysis. All stages will include data familiarization; theme identification; indexing, charting, mapping and interpretation.

PROPOSED CONTRIBUTIONS

The proposed study on augmented reality (AR) applications in the fashion industry offers significant contributions, both theoretical and practical, as it endeavors to enhance our understanding and application of AR technology in a commercial setting. These contributions are expected to provide foundational insights for academics, industry practitioners, and technology developers alike. This study endeavors to fuse the theories of affordance and social practice into a synergistic research perspective on the interplay of AR technology and consumer behavior. By examining the ways AR technologies support specific interactions and how these interactions are situated and enacted in the social practices of fashion retail, this research will extend theoretical insights on technology adoption and usability in mediated retail environments. This study is a conceptual piece that applies integrated theories to develop the understanding of usability in the context of AR. This involves dimensions such as interactivity, credibility, compatibility - all of which are key to designing user-friendly AR applications that are in line with consumer expectations and can help in making shopping better for them.

This research will help to refine current models of how consumers interact with AR applications in the fashion space by investigating particular modes of interaction. More on this in part two, where I share how an empirical test of these paths affords _empirical_ refinement of existing theory about the adoption of new technologies in a socio-technical system. This study will deliver many applicable insights for AR developers and designers, specifically in fashion. This research will help in understanding what usability features important and the existing consumer expectations can play a key role in the development of AR apps which in turn will lead to their acceptance among the consumers, diminished failure and enhanced market penetration. These research results can be applied to create more engaging and effective AR shopping experiences. This consists of instructions to fashion virtual fitting rooms through 3D virtual try-ons along with innovative picking environments mimicking real world presence, irrespective of making stellar experience for the consumers and well can hike sales conversion for online merchants.

Understanding the unique affordances associated with why and when consumers adopt and find value in these systems should help fashion retailers position their AR for competitive advantage. This not only involves trying to acquire new customers but also having them stay with you by providing enhanced shopping experience powered by AR technology. The proposed study intends to close the gap between theoretical research and its practical implications in a manner that adds value to both the academic community and the industry stakeholders. The findings of this study, which process the merge of technology, consumer behavior and market requirement, could potentially influence the AR applications created for the fashion retail industry, an industry that is growing rapidly.

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FOOD SAFETY MANAGEMENT MONITORING SYSTEM CONSIDERING THE CHARACTERISTICS OF SHARED KITCHEN

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ABSTRACT

The study underscores food safety in shared kitchens and proposes a new system integrating a microorganism prediction model and monitoring system to address cross-contamination and inadequate management. This aids stakeholders in monitoring food safety, reducing accidents, and clarifying responsibilities. The system includes data collection, prediction model construction based on initial microorganism numbers and temperature/process data, and a monitoring system. The model forecasts microorganism numbers during cooking and storage in shared kitchens. Monitoring systems ensure food safety by sharing these predictions with stakeholders. This study offers a fresh perspective on food safety management and guides future research.

Keywords: shared kitchen business, food safety, monitoring system, predictive microbiology, environmental management.

INTRODUCTION

Shared kitchens can reduce start-up costs and make business operations convenient, so the demand is increasing (Lim, Byeon, Wang, Choi, & Hyun-Wook, 2021). Shared kitchens are operated by several companies sharing cooking facilities, food ingredient storage spaces, and cookware (Lim et al., 2021; Alazzaz et al., 2023). Not only does this form increase cost savings and operational efficiency for multiple companies, but it also provides new business opportunities internationally for kitchen companies (Lim et al., 2021; Alazzaz et al., 2023; Stinson, 2023; Pan, 2023).

However, at the same time, food safety management is required. Due to the nature of the shared kitchen, multiple companies use one space together, which can lead to cross-contamination or insufficient equipment manipulation by others (Na, Baek, Gwon, & Yoon, 2024). cross-contamination can transfer germs from other foods to their own food through shared cookware (Carrasco, Morales-Rueda, & García-Gimeno, 2012; Pérez-Rodríguez, Valero, Carrasco, García, & Zurera, 2008), and incorrect equipment manipulation by others can promote microbial growth by changing the temperature of the shared food storage space (Farrell & Rose, 1967; Zwietering, Jongenburger, Rombouts, & Van't Riet, 1990), causing a problem of food quality deterioration due to an increase in the number of microorganisms in the food (Organization, 1978; Pérez-Rodríguez et al., 2008). Shared kitchen users have shared kitchen managers and kitchen companies (Na et al., 2024), and the food is delivered to the consumer, and the stakeholders related to the shared kitchen are divided into three groups, and the problem of food quality degradation affects all stakeholders. Due to the deterioration of food quality, consumers may be exposed to food safety accidents such as food poisoning (Betts, 2000) and the shared kitchen managers and kitchen companies are held accountable in the event of a food safety accident (Na et al., 2024).

Risk factors can be avoided by measuring the number of microorganisms in the food by each timeline so that it does not use or sell food materials with a high number of microorganisms. However, it is difficult to measure the number of microorganisms in food every time due to problems such as cost, equipment, time, and professional manpower in the actual field (Grossi, Parolin, Vitali, & Riccò, 2019; Guo, McGoverin, Swift, & Vanholsbeeck, 2017). Monitoring food quality by predicting the number of microorganisms is a good idea to solve this problem. Shared kitchen managers and store companies can prevent food safety accidents by checking the food quality status in advance in line with the cooking timeline by predicting the initial number of microorganisms for the food materials used and

the products provided. Consumers can also become aware of the food quality before purchasing a product and move away from food safety accidents.

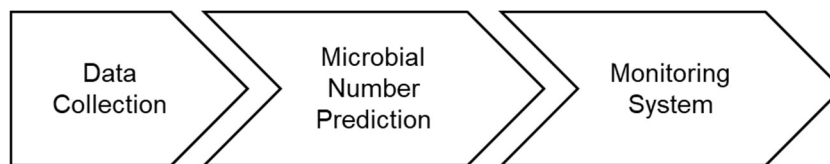
The food quality monitoring system proposed from the previous research perspective has been studied to predict and alert the number of microorganisms. But only by performing quality prediction considering the storage temperature of a single product was monitored (Kim; Yimenu, Kim, Koo, & Kim, 2017). In the study of the microorganism number prediction model, a model for predicting the number of microorganisms in food was developed, focusing on the single cooking stage and the storage stage (Kang & Kim, 2021; Lee, Kim, & Kim, 2014). However, since the two processes of storage and cooking are intertwined in the food manufacturing process, a prediction model suitable for the manufacturing process is required. In addition, research on the food quality prediction model considering cross-contamination, a characteristic of a shared kitchen, was insufficient. The overall system that can collect data necessary for food quality prediction, build a model for predicting the number of microorganisms appropriate for the cooking process, and monitor the prediction results is required for the food quality monitoring system. However, the results of previous studies were not connected in terms of data collection, prediction model, and monitoring system construction in consideration of the shared kitchen characteristics and cooking process.

Therefore, the goal of this study is to establish a food safety management monitoring system that predicts the exact number of microorganisms in the food considering the characteristics of the shared kitchen, displays and notifies them to maintain the food safety status. As a process for this, it is proposed by dividing it into 1) data collection, 2) microorganism number prediction, and 3) monitoring system.

METHODOLOGY

The methodology part introduces how to build a monitoring system that considers the characteristics of a shared kitchen as shown in the research goal. The method consists of three modules in total, followed by data collection, microbiological number prediction, and monitoring system. In order to achieve the final goal, it is necessary to check the kitchen situation, predict the number of microorganisms through this, and deliver it to the stakeholders of the shared kitchen (Figure 1). The Data collection step introduces the data necessary to check the kitchen environment and how to collect it. Microorganism prediction is performed using the collected data. The Microbiological Number Prediction step describes the method for predicting microorganisms for each cooking step including the modified Gompertz method. Then, in the Monitoring System step, an example of displaying the predicted result values for each stakeholder and a method for maintaining food quality are introduced.

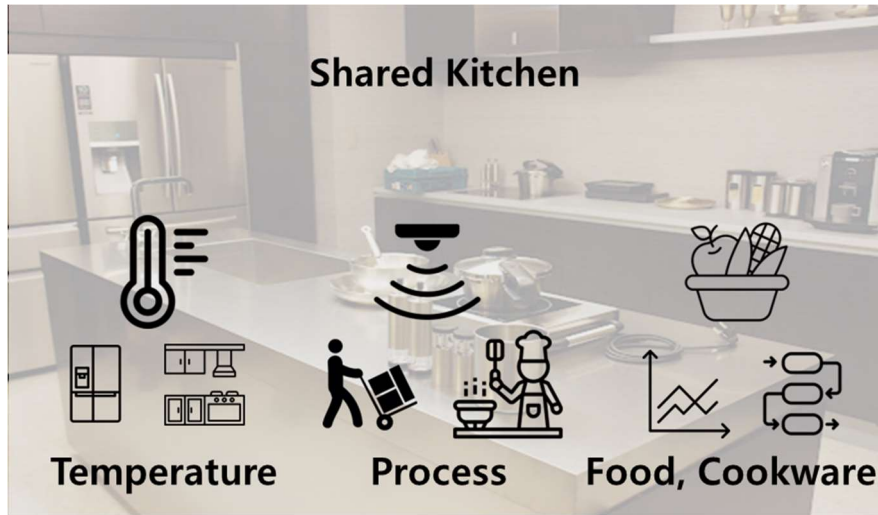
Figure 1: Methodology Framework



Data Collection

To predict the number of microorganisms, monitoring system needs food material data (the initial value of microorganism, the number of microorganisms over temperature-time), cookware data (the initial value of microorganism, the transfer rate), the mixing ratio of food materials, the temperature data (the temperature of the storage place by time), and the process progress data (the start and execution time of each cooking process)(Figure 2). For temperature and process progress data, which are data collected in real time, a temperature sensor is installed in each storage place in a shared kitchen to build a system that collects temperature data and data on a process using a camera sensor in the kitchen. Food ingredient data, cookware data, and food ingredient mixing ratio are static data, and data is constructed through direct experiments in advance.

Figure 2: Data Collection



Microbial Number Prediction

The cooking process proposed in this study consists of the steps of [storage after warehousing - washing and trimming - pre-cooking storage - cooking - storage before serving] (Table1). In the storage stage, the number of microorganisms is predicted by using the Modified Gompertz model used in the previous study to produce a growth curve for the number of microorganisms in each food ingredient and by considering the temperature change in the storage environment. The Modified Gompertz model is a model that performs microorganism prediction in consideration of the maximum number of microorganisms, lag time, and maximum microorganism growth rate (Zwietering et al., 1990). At this time, it is considered that the management of food materials by other companies is insufficient, and the number of microorganisms is predicted by continuously recording the temperature change of the storage place of food materials. Modified Gompertz's parameter coefficient is calculated through Graph Pad Prism. When the data on the change of the number of microorganisms over temperature-time are added, the optimal values of the maximum number of microorganism, delay time, and maximum microbial growth rate are derived. The variable description in Equation 1 is as follows. A: the log value of the initial number of microorganism, C: the difference between the log value of the initial number and the maximum number of microorganisms, B: the growth rate at time M, M: lag time, n: the time of measurement, N: number of microorganisms after n hours.

Equation 1: Modified Gompertz Equation

$$\log(N) = A + (C \times e^{-e^{-B \times (n - M)}}) \quad (1)$$

In the washing, trimming, and cooking stages, the number of microorganisms is predicted by multiplying the washing rate and microorganism transfer rate of the cookware (Equation 2, Equation 3). In the washing and trimming stage, the number of microorganisms after washing is predicted by multiplying the number of microorganisms after storage by the washing rate of each food ingredient, and when trimming and cooking, the number of microorganisms after trimming is predicted by multiplying the initial value of each cookware by the microorganism transfer rate of the cookware-food ingredient. At this time, the number of microorganisms in the previous work is accumulated and used to consider the cross-contamination, which is a characteristic of the shared kitchen. Finally, the number of microorganisms according to each cooking process and storage time is derived as a result for each timeline. The variable description in Equation 2 and 3 is as follows. FM: food ingredients' microorganisms, WR: washing rate, CM: cookware's number of microorganisms, CTR: cookware's transition rate of microorganisms, N: number of microorganisms.

Equation 2: The Number of Microorganisms Prediction Equation in Trimming

$$N = (Initial\ FM) * (WR) + \left(\sum_{i=1}^n Initial\ CM * CTR \right) \quad (2)$$

Equation 3: The Number of Microorganisms Prediction Equation in Cooking

$$N = (Initial\ FM) + \left(\sum_{i=1}^n Initial\ CM * CTR \right) \quad (3)$$

Table 1: Step of Cooking Process

Step	Detail	Equation
storage after warehousing	Step in which new ingredients are entered into the shared kitchen and stored in a refrigerated or frozen state. Temperature in the refrigerator affect changes in the number of microorganisms.	(Equation 1)
washing and trimming	Step of cleaning and cleaning before ingredients are used, and the rate of cleaning and the transfer of bacteria to cookware affect the change in the number of microorganisms.	(Equation 2)
pre-cooking storage	Pre-cooking storage step, and ingredients that have been trimmed are waiting. Kitchen temperature affects the change in the number of microorganisms.	(Equation 1)
cooking	Step of making one food using ingredients, and the transfer of microorganisms with cooking cookware affects the change in the number of microorganisms	(Equation 3)
storage before serving	The storage step after cooking until food is sold, and the temperature of the storage area affects the change in the number of microorganisms	(Equation 1)

Monitoring System

The derived results of predicting the number of microorganisms over time are provided to the stakeholders of the shared kitchen, including visual information. This monitoring system aims to maintain food safety by providing information appropriate for each role to all stakeholders. The manager page is designed to check all data of usage time, storage location, and temperature for each store company and food ingredient, and it is possible to track the responsibility of any abnormality in food quality through the predicted number of microorganisms (Figure 3). The kitchen company can check the predicted value of the number of microorganisms for the food materials and finished products used by the company, use fresh and safe food in the cooking stage, and provide safe products in the sales stage (Figure 4). For kitchen companies and shared kitchen managers, if the predicted number of microorganisms is within the risk range of food poisoning, they perform the function of giving an alarm. Consumers can check the number of microorganisms for products and can conduct safe consumption activities from food safety accidents such as food poisoning by checking the trend of the number of microorganisms according to the manufacturing process of the product (Figure 5).

The proposed monitoring system focuses on preemptively performing food safety management. Depending on the kitchen environment, an alarm is sent to the shared kitchen manager and kitchen company when the number of microorganisms is high in foods that follow each process. This standard violates the sales standards of each food product based on the food code. If the alarm is heard, the kitchen company must go through the process of discarding the food ingredient or food. In addition, the monitoring system can be used ex post. This applies in the event of a food safety accident and can be used as a basis for tracking responsibility for food safety accidents using the predicted number of microorganisms stored in the system, kitchen environment data, and user data.

Figure 3: Shared Kitchen Manager’s Monitoring Display

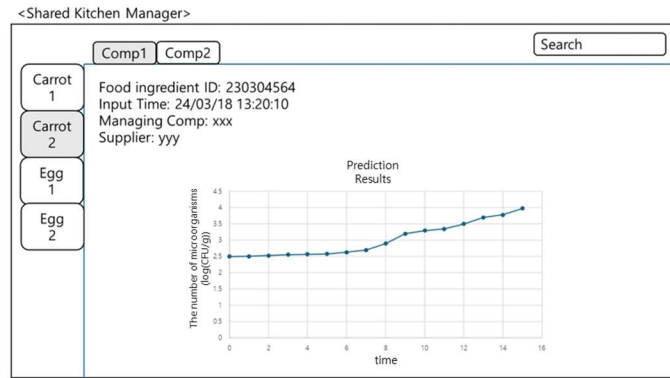


Figure 4: Kitchen Company’s Monitoring Display

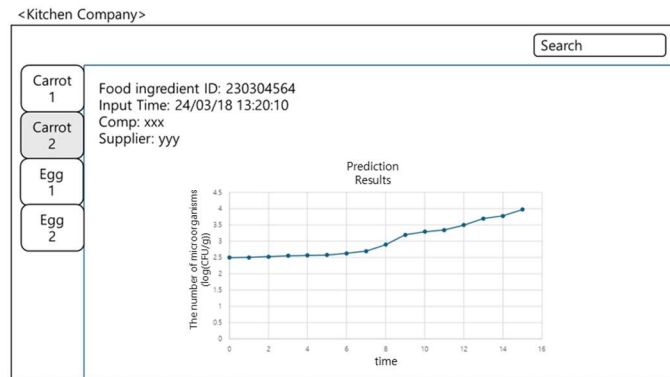
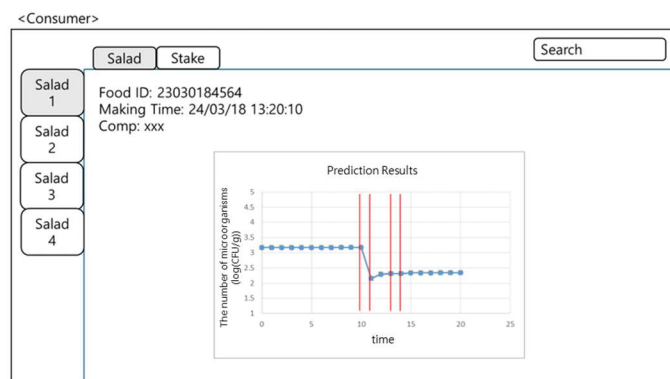


Figure 5: Consumer’s Monitoring Display

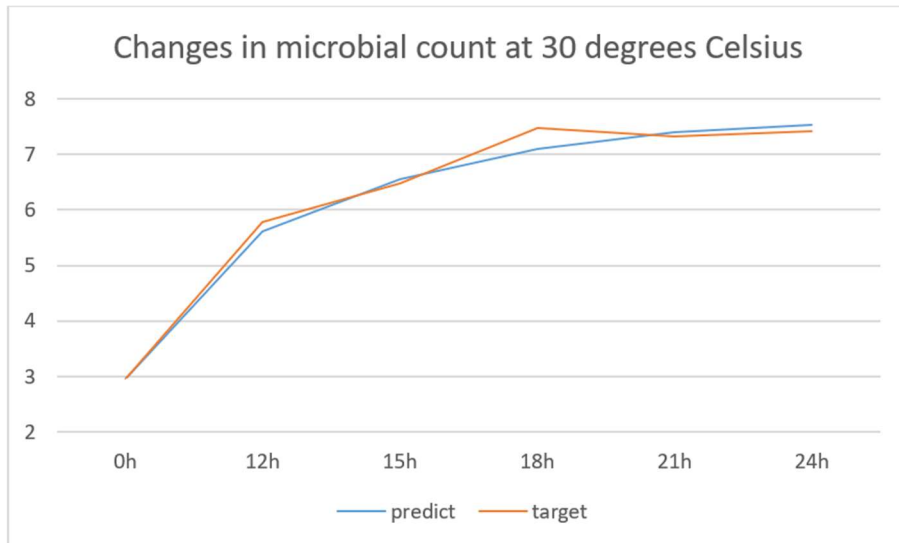


RESULTS

In this study, tests were performed on the proposed system. A salad of non-heated cooking consisting of lettuce and hard-boiled eggs was selected as the test subject. The target microorganism was conducted on *E. coli*, which causes food poisoning. In order to predict the number of microorganisms by temperature-hour of food materials, the number of microorganisms in lettuce and hard-boiled eggs was collected through experiments. After that, the parameters suitable for each food ingredient were calculated by using the Modified Gompertz equation, and the number of microorganisms was predicted according to each scenario and cooking process. The maximum number of lettuce microorganism was $0.3641+0.2909*\text{temp}-0.0048*\text{temp}^2$, the maximum growth rate was 0.0654-

$0.0108 \cdot \text{temp} + 0.0006 \cdot \text{temp}^2$, the delay time was $48.45 - 1.106 \cdot \text{temp} - 0.0061 \cdot \text{temp}^2$, the maximum number of microorganism in hard-boiled eggs was $-0.483 + 0.3869 \cdot \text{temp} - 0.0082 \cdot \text{temp}^2$, the maximum growth rate was $0.1312 - 0.0075 \cdot \text{temp} + 0.0002 \cdot \text{temp}^2$, and the delay time was $45.15 - 2.384 \cdot \text{temp} - 0.0440 \cdot \text{temp}^2$. The results derived through the Gompertz model were compared with actual results, and errors within 1 log were confirmed in all experiments (Figure 6). 78.6% of the predicted value was higher than the actual value, and the corresponding fitting value confirmed the ability to preemptively detect risks to food safety. Through this, it was shown that the proposed model can be used in a real environment. This showed that this model could give a contribution to taking preemptive action in food safety accidents.

Figure 6: Example of Changes in Microorganism Count



DISCUSSION

This study emphasized the importance of food safety management in shared kitchens and proposed a new system for this. The proposed system established a microorganism number prediction model and monitoring system in consideration of the characteristics of the shared kitchen. This allowed stakeholders to check the food safety status and clarify their responsibilities.

The microorganism number prediction model proposed in the study helps to improve the safety of the shared kitchen by considering various processes. It is possible to predict various risk factors that may occur in the actual shared kitchen environment by considering storage and various cooking processes, not just a single cooking process. Designed to be practical, this system can help to prevent and manage the occurrence of food safety accidents in advance through monitoring. Even after a food safety accident occurs, this system can be used to clarify who is responsible between the manager and the store company.

In this study, a system applicable to actual industries was proposed. Three processes are proposed, which lead to data collection, microorganism number prediction model, and monitoring system construction. Each step was designed by constructing the characteristics of the shared kitchen and the food manufacturing process. In the case of data collection and microorganism number prediction model, examples of the data collection process and the microorganism number prediction model were presented in consideration of the risk factors for cross-contamination and insufficient equipment manipulation that may occur in the shared kitchen. The monitoring system built related functions in consideration of the requirements of stakeholders in the shared kitchen. Since shared kitchens are not yet a widely used industry, factors and methods to consider for this safety management are proposed. The proposed model is expected to be the beginning of related studies because the situations and perspectives to consider in food safety are necessary in activating shared kitchens.

From a business point of view, it is possible to bring about time and economic effects by using initial values rather than direct microorganism number measurement. Existing quality confirmation methods were not carried out because many experiments and skilled personnel were required, but this could be confirmed through the presentation of a predictive model. Also, the proposed system is suitable for shared kitchens that are currently growing internationally. This system can set the system in each country's food quality regulations as criteria for maintaining food quality. These advantages show that the system can be applied universally internationally.

This study presented a new perspective on food safety management and suggested directions for future research. Food safety in shared kitchens is a very important issue, and the results of this study can be the basis for improving it.

CONCLUSION

In this study, a microorganism number prediction model was produced to consider cross-contamination, which is a risk that may occur in a shared kitchen, and a system to monitor it was developed. In the proposed system, a microorganism number prediction model was constructed that can take into account both the cooking and storage processes. In addition, an attempt was carried out considering the characteristics of a shared kitchen where several stakeholders are mixed, which differs from traditional quality prediction studies that assume a single cooking process. Through this system, in the event of a food safety accident, the shared kitchen manager and the kitchen company can check the responsibility of all the kitchen companies through the temperature abnormality of the time of use and storage place or the quality prediction value of the cookware. And consumers contribute to preventing food safety accidents. Furthermore, from a business perspective, it can have economic effects by predicting microbial growth using initial values rather than directly measuring the number of cost- and time-consuming microorganisms.

However, since the proposed model focuses only on specific cooking processes, it is vulnerable to cases involving various ingredients and complex cooking processes. For example, in the case of the salad cooking process, a scenario composed of non-heating is used, and it is necessary to increase the scalability of the model by constructing a scenario mixed with heating using another scenario and a microbial growth curve model. In addition, in the verification process of the model, the predicted value of the number of microorganisms over temperature and time was verified, but the predicted value considering the cross contamination of the cookware could not be verified because data were not secured. This process needs to be carried out as a future study.

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CORPORATE ENTREPRENEURSHIP AND ORGANISATIONAL PERFORMANCE IN THE EDUCATION SECTOR: AGE AND MANAGERIAL LEVEL PERCEPTUAL DIFFERENCES

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ABSTRACT

Firms benefit from entrepreneurial activities in both the public and private sectors. However, studies of corporate entrepreneurship (CE) in the education sector are limited. This could be explained by the nascency of CE as a field of enquiry especially as it pertains to the public sector. This study examines the relationship between CE and organizational performance (measured through university entrance examination pass) in the KwaZulu Natal Department of Education, South Africa. In addition, the study measures the expected differences in perception by age groups and managerial levels regarding the prevalence of CE in the department. The study employed both descriptive and explanatory design and data was collected from a total of 426 respondents from the Department of Education KwaZulu Natal province, South Africa. The study found that there was a statistically significant correlation between each of the CE elements and university entrance performance. It also found that there is no statistically significant difference of opinion between the mean scores of different managerial levels, and CE in the Department of Education. There is also no statistically significant difference between various age groups and how they perceive the levels of CE elements, save for work discretion. Therefore, the public education sector must practice CE to enhance university entrance performance. Limitations in implementing CE exist and these should be considered in contextualising the results of the study. The public education sector will benefit from adopting entrepreneurial activities.

Keywords: corporate, entrepreneurship, performance, educational sector.

INTRODUCTION

The pursuit of entrepreneurial enquiry is an exercise that has engaged scholars for decades (Ozdemirci, 2011). It is not surprising that firms benefit from adopting and practicing entrepreneurial activities in an effective way (Chebo et al., 2018). This entrepreneurial behaviour within mid and large organisations have come to be described as corporate entrepreneurship (CE). According to Corbett et al. (2013), CE includes, strategic renewal, domain redefinition, organisational rejuvenation, and business model reconstruction. This is the type of entrepreneurship expected to be employed in the education sector. Hamzah et al. (2009), notes that, CE has seldom been referred to in education. However, entrepreneurs in the education sector, as defined by Wiseman (2014), are individuals or groups who seek to lead the transformation of the education system by consistently turning ideas into initiatives that create value for their institutions and the customers they serve. According to Morris et al. (2011) and Corbett et al. (2013), the more organisations behave entrepreneurially the more they are likely to improve performance.

Hornsby et al. (2013) and Kuratko et al. (2014) singled out specific organisational antecedents that are key in achieving entrepreneurship within an organisation. These dimensions of CE include top management support; work discretion; rewards/reinforcement; discretionary time; and organisational boundaries. For the purposes of this study, a sixth antecedent, organisational tolerance for risk and failure is added. Despite the significant evidence for improved performance, Zahra and Covin (1995) state that CE may be risky and have an adverse effect on an organisation's short-term performance. Ireland et al., (2009) added that although CE is said to improve organisational performance, not all CE activities lead to improved performance. More important than the realisation of increased organisational performance is the understanding of the multiple facets of CE and how these interlink to result in improved performance. Hamzah et al., (2009) are of the opinion that the time has come for educational institutions to absorb entrepreneurship characteristics. As a result of globalisation and liberalisation challenges, choosing education institution managers and administrators has become aggressive and dynamic to handle the challenges faced by the Departments of Basic Education. The managers must have a set of comprehensive skills that include entrepreneurship characteristics.

Education institutions are the focus of great expectations but are habitually blamed for poor results and an inability to meet expectations. In response to these persistent issues, the Department of Basic Education (the national department) is under constant pressure to change and improve learner performance. Accordingly, education managers and executives are obliged to acquire and practice entrepreneurial leadership characteristics to improve the education institution's effectiveness and performance. The performance measured in this study is the minimum university entrance for high school students. This creates a basis for feedback to engender on-going improvements through continued planned strategies. This study assesses the relationship between CE and University Entrance Performance (UEP), as well as managers perceived difference on the levels of CE within the DOE. It is assumed that the difference in perception could result from age and the positional levels of the managers.

The study highlights the importance of entrepreneurship as a solution to resolve the challenges facing the education system. It will contribute to the general scholarship of CE in the education sector and the call to extend corporate entrepreneurship outside the private sector (Diefenbach, 2011). The study will also possibly contribute to improved public service delivery.

LITERATURE REVIEW

According to the Education Innovation (2016), the consistently poor learners' academic performance prompted government to conceptualise several initiatives to improve the quality of schooling. The organisational performance will be evaluated based on the number of learners who pass Grade 12 with a university entrance pass. The performance of learners in the Department of Basic Education in South Africa is very poor (Spaull, 2013). The need to find solutions and strategies to improve learner performance is particularly important in South Africa given the learners' poor academic performance. Therefore, there is a need to investigate the extent to which some form of CE elements exists within the Department of Basic Education in South Africa. Since the benefits of entrepreneurship have been widely documented and accepted (Hughes & Morgan, 2007), organisations can therefore benefit by inducing CE (Wekkee et al., 2010). The Department of Basic Education (2014) notes that although there have been some improvements in the education sector, there are still some areas of concern. Reddy et al., (2010) further note that issues of accountability and quality of education are inextricably linked to issues of education management.

The Global Competitive Report 2013-2014 (World Economic Forum, 2014) which assesses the competitiveness landscape of 148 economies, to provide insight into the drivers of their productivity and prosperity, ranks the South African education system at 146 out of the possible 148 countries. South African learners also perform badly in standardised global tests against South Africa's peers and other African countries. For example, although South Africa's level of expenditure on education is relatively high (similar to high-performing Scandinavian countries), its learning outcomes are much worse than any other comparable country, and even many poorer countries (including Morocco, Kenya, and Vietnam) (Schirmer & Visser 2023). Money is seldom a problem in the South African education system, but the problem lies with execution of current policies. On the government level, problems emanate from lack of teacher support and monitoring, all which has led to disenchantment among teachers and poor learner performance (Mouton et al., 2012). This situation has barely changed today. Without education managers who manage resources efficiently (as entrepreneurs), any policy intervention will achieve limited success (Thabethe,

Chebo, & Dhlwayo 2024). Reforming the system so that teachers are supported and better incentivised to do their best (through CE) can potentially deliver significant improvements even in circumstances where teachers have subpar subject content knowledge (Pritchett & Honig,2019). Research on the relationship between organisational performance and CE in the South African public sector in general and the Department of Basic Education in particular, is limited. With this background in mind, the study intends to address this gap in research by establishing the relationship between organisational performance and CE within the Department of Education (KZN), using the key organisational antecedents of CE and UEP. The Department of Education KZN, (provincial department) is used as a proxy to study the national department). The study hypothesises that:

H1: There is no statistically significant correlation between (a) management support for CE (MS) (b) organizational tolerance (OT) (c) work discretion (WD) (d) reward/reinforcement (RW) (e) discretionary time (DT) (f) organizational boundaries (OB) and university entrance performance (UEP).

H2: A statistically significant variance does not exist between the various age groups and how they perceive the levels of (a) MS for CE (b) OT (c) WD (d) RW (e) DT (f) OB (g) UEP.

H3: A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of (a) MS for CE (b) OT (c) WD (d) RW (e) DT (f) OB (g) UEP.

RESEARCH DESIGN

The study's research design is both descriptive and explanatory. There were 22865 managers targeted for this study in the Department of Education in KwaZulu-Natal. The sample size was determined by using a sample size calculator, with a confidence level of 99% and a margin of error of 5% which resulted in a sample size of 647 participants. Questionnaires were distributed to these potential participants by the researchers. A total of 426 questionnaires were collected and used in the study.

Data Collection and Instruments

The questionnaire was organized into three sections. Section A contained respondents' biographical information age and present job title, Section B and C measured CE and UEP, (respectively) on a 1 to 5 Likert scale, ranging from 1= strongly disagree to 5 = strongly agree. The CE instrument measured six key areas in accordance with the hypotheses: Management support for CE with 8 items; organisational tolerance with 8 items; work discretion with 5 items; rewards/reinforcement with 9 items; discretionary time with 6 items, and organisational boundaries with 9 items. The measurements of UEP, (Section C), were developed into a 5-point Likert scale ranging from 1 (decreased significantly); 2 (decreased); 3 (remained the same); 4 (increased); and 5 (increased significantly).

Validity and Reliability

A pilot test was carried out on 15 respondents, and these were not included in the analysis. The reliability of data was tested using Cronbach's Alpha and found scores of 0.837 for management support, 0.724 for organizational tolerance, 0.757 for work discretion, 0.856 for rewards/reinforcement, 0.870 for discretionary time, and 0.810 for organizational boundaries. The collected quantitative data was analysed using various statistical methods for measuring central tendencies, including mean as well as measurements of dispersion such as standard deviation. Information was sorted, coded and input into the statistical package for social sciences (SPSS) to produce tables, descriptive and inferential statistics. Correlation analysis was used to test the significant relationship between the CE elements and UEP. ANOVA was used for testing the hypothesis that the means of several populations are equal.

RESULTS AND DISCUSSION

Literature indicates that, before the organisation can implement corporate entrepreneurship, it must first determine the current level of entrepreneurship. The Corporate Entrepreneurial Assessment Instrument (CEAI), developed by Hornsby et al., (2002), assists in this regard. Accordingly, the mean of all the constructs, indicating the prevalence of elements of corporate entrepreneurship within the Department of Education are presented in Table 1.

Table 1: Entrepreneurial Climate Survey Results

Factor	N	Min	Max	Mean	Std Dev.
Management support for CE	426	1.00	5.00	3.3698	0.68521
Organisational tolerance	420	1.00	5.00	3.2675	0.66170
Work discretion	419	1.00	5.00	3.3178	0.79478
Rewards/Reinforcement	422	1.00	5.00	3.3277	0.78502
Discretionary time	424	1.00	5.00	3.1787	0.81245
Organisational boundaries	425	1.00	5.00	3.6353	0.68019

Results indicate that, the highest mean is for **management support for CE** (mean = 3.3698) and the lowest is **work discretion** (mean = 3.3173). This shows that these elements were perceived by participants to have a presence in the department. The elements for an entrepreneurial climate have a strong presence, but there is still room for improvement.

Correlation Analysis

The study aimed at testing and establishing the relationship between the elements of CE and organisational performance, which was measured in university entrance qualification pass. The Pearson product moment r correlation test was carried out on seven factors to assess the relationship. The results of the correlation test are shown in Table 2. All the p values are < 0.01 and therefore all hypotheses (H1a-H1f) are rejected. This means that there is a statistically significant correlation between CE elements and each of the elements with UEP. Tested at 0.01, the results of hypotheses H1c, H1e and H1f indicate that there is a positive and significant relationship between work discretion, discretionary time and organisational boundaries, and university entrance and output performance.

Table 2: Pearson’s Correlations between the Various Factors

No	Factors	1	2	3	4	5	6	7
1	MNG	1						
2	OGT	.567 ^{xx}	1					
3	WKD	.388 ^{xx}	.455 ^{xx}	1				
4	RWS	.491 ^{xx}	.426 ^{xx}	.455 ^{xx}	1			
5	DST	.467 ^{xx}	.467 ^{xx}	.426 ^{xx}	.630 ^{xx}	1		
6	OGB	.519 ^{xx}	.519 ^{xx}	.461 ^{xx}	.617 ^{xx}	.584 ^{xx}	1	
7	UEP	.332 ^{xx}	.519 ^{xx}	.280 ^{xx}	.236 ^{xx}	.280 ^{xx}	.332 ^{xx}	1

^{xx} Correlation is significant at $\alpha = 0.01$ level (2-tailed)

Prior empirical studies have shown that CE elements that define the role of entrepreneurship in an organisation have a significant and positive relationship with organisational performance (Bayarcelik & Ozsahin, 2014). The results of this study also show the positive relationship between CE elements and university entrance and output performance in the Department of Education in KZN. Studies indicate that CE activities are related to performance in established organisations (Morris et al., 2011; Corbett et al., 2013). This means that an organisation that has more management support for CE will then allow corporate entrepreneurs to be more innovative. Public sector organisations and education departments have been significantly influenced by practices in the private sector (Malatjie et al., 2017). However, in many respects performance management in the public sector is relatively more complicated because of the many over-riding goals, compared to the private sector organisations, whose main goal is profit maximisation and the provision of satisfactory financial returns for shareholders (Boland and Fowler, 2000).

Perceived Difference by Age Groups Regarding CE Elements and Performance

Hypotheses H2 stated that a statistically significant variance does not exist between the mean values of the various age groups and how they perceive the levels of CE factors; management support for CE (H2a); organisational tolerance (H2b); work discretion (H2c); rewards/reinforcement (H2d); discretionarytime-H2e organisational boundaries (H2f);

and university entrance performance (H2g) in the Department of Education, KZN. The results, as shown in Table 3, indicate the existence of statistically significance differences between the age groups on management support for CE and not on the other aspects. The p-values for organisational tolerance; work discretion; rewards/reinforcement; discretionary time; organisational boundaries; and university entrance performance were all bigger than 0.05 ($p > 0.05$). Applying the p-value acceptance rule that one should not reject the hypothesis if, and only if, the p-value is bigger than $\alpha = 0.05$ ($P > 0.05$); therefore, hypotheses H2a was rejected $\alpha = 0.042 < 0.05$ and H2b -H2g were all accepted.

Table 3: Age and CE Elements ANOVA Result

Factor	Source of Variation	Sum of Squares	Df	Mean Square	F-Value	P-Value
Management Support for CE	Between Groups	2.936	2	1.468	3.188	0.042 ^{xxx}
	Within Groups	193.398	420	0.460		
	Total	196.33	422			
Organisational Tolerance	Between Groups	0.428	2	0.214	0.493	0.611
	Within Groups	179.661	414	0.34		
	Total	180.089	416			
Work Discretion	Between Groups	2.943	2	1.472	2.351	0.097
	Within Groups	258.494	413	0.626		
	Total	261.437	415			
Rewards/ Reinforcement	Between Groups	3.250	2	1.625	2.667	0.071
	Within Groups	253.484	416	0.609		
	Total	256.734	418			
Time Availability	Between Groups	1.886	2	0.943	1.441	0.238
	Within Groups	273.533	418	0.654		
	Total	275.419	420			
Organisational Boundaries	Between Groups	2.071	2	1.035	2.290	0.103
	Within groups	189.485	419	0.452		
	Total	191.556	421			
Performance: University Entrance	Between Groups	0.537	2	0.269	0.505	0.604
	Within Groups	206.470	388	0.532		
	Total	207.008	390			

^{xxx} Indicates a statistical significance at $\alpha = 0.05$ level

According to Mabala (2012), there is no significant difference in how respondents of different ages perceive organisational tolerance; work discretion; rewards/reinforcement; discretionary time; and organisational boundaries in the Department of Correctional Services, another public sector organisation. Older workers do not find a stable and familiar workplace environment more appealing than their young counterparts (Moodely, 2014). The way they are being supported by management could also be another factor, since most top managers in the department are younger employees. As part of management support for CE, the Department of Education should provide resources (such as computers, laptops, and other technological tools of the trade) that the employees require to take entrepreneurial action.

Management Perception of CE Elements and Performance

The analysis of variance (ANOVA) was carried out to test for statistically significant variance between the factors. Hypothesis H3 stated that a statistically significant variance does not exist between the mean scores of various management levels of participants about how they perceive the levels of CE elements (management support for CE (H3a); organisational tolerance (H3b); work discretion (H3c); rewards/reinforcement (H3d); discretionary time (H3e); organisational boundaries (H3f); and university entrance performance (H3g) in the Department of Education in KZN. The managerial levels were: Chief Education Specialist/ Deputy Director, Deputy Chief Education Specialist/ Circuit Manager, Principal/Deputy Principal/Assistant Director, and Senior Education Specialist/ Departmental Head. The results are shown in Table 4. Applying the p-value acceptance rule that one should accept the hypothesis if, and only if, the p-value is larger than 0.05 ($p > 0.05$), hypotheses H3a-Hg were all accepted.

Table 4: Management Levels, CE, and Performance Elements

Factor	Source of Variation	Sum of Squares	Df	Mean Square	F-Value	P-Value
Management Support for CE	Between Groups	3.091	3	1.030	2.220	0.085
	Within Groups	194.480	419	0.464		
	Total	197.572	422			
Organisational Tolerance	Between Groups	2.309	3	0.770	1.759	0.154
	Within Groups	180.694	413	0.438		
	Total	183.003	416			
Work Discretion	Between Groups	1.252	3	0.417	0.657	0.579
	Within Groups	261.775	412	0.635		
	Total	263.027	415			
Rewards/Reinforcement	Between Groups	0.130	3	0.043	0.070	0.976
	Within Groups	259.095	415	0.624		
	Total	259.225	418			
Time Availability	Between Groups	0.429	3	0.143	0.216	0.885
	Within Groups	275.924	417	0.662		
	Total	276.354	420			
Organisational Boundaries	Between Groups	0.223	3	0.074	0.160	0.923
	Within Groups	194.761	418	0.466		
	Total	194.984	421			
Performance: University Entrance	Between Groups	1.365	3	0.455	0.851	0.467
	Within Groups	206.916	387	0.535		
	Total	208.280	390			

^{xxx} Indicates statistical significance at $\alpha = 0.05$

The ANOVA results revealed that there are no statistically significant differences in the perceptions of different respondent management groups on the research factors: management support for CE; organisational tolerance; work discretion; rewards/reinforcement; discretionary time; organisational boundaries; university entrance performance; and output performance in the Department of Education; with all p-values being larger than 0.05 ($p > 0.05$). This means the different managerial groups have similar opinions about these factors and there are no big differences in the means. This result shows that management level does not play a significant role in the perception of CE and UEP in the Department of Education, KZN.

Table 5: Summary of Results Relating to Tested Hypotheses

H	Statements	Decision
Correlations H1	a) There is no statistically significant correlation between Management Support for CE and University Entrance Performance	Rejected
	b) There is no statistically significant correlation between organizational tolerance and University Entrance Performance	Rejected
	c) There is no statistically significant correlation between WD and University Entrance Performance	Rejected
	d) There is no statistically significant correlation between reward/reinforcement and University Entrance Performance	Rejected
	e) There is no statistically significant correlation between discretionary time and University Entrance Performance	Rejected
	f) There is no statistically significant correlation between organizational boundaries and University Entrance Performance	Rejected
Age H2	a) A statistically significant variance does not exist between the various age groups and how they perceive the levels of MS.	Rejected
	b) A statistically significant variance does not exist between the various age groups and how they perceive the levels of OT.	Accepted

	c) A statistically significant variance does not exist between the various age groups and how they perceive the levels of WD.	Accepted
	d) A statistically significant variance does not exist between the various age groups and how they perceive the levels of RW.	Accepted
	e) A statistically significant variance does not exist between the various age groups and how they perceive the levels of DT.	Accepted
	f) A statistically significant variance does not exist between the various age groups and how they perceive the levels of OB.	Accepted
	g) A statistically significant variance does not exist between the various age groups and how they perceive the levels of UEP.	Accepted
Management level H3	a) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables MS for CE.	Accepted
	b) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables OT.	Accepted
	c) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables WD.	Accepted
	d) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables RW.	Accepted
	e) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables DT.	Accepted
	f) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables OB.	Accepted
	g) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables UEP.	Accepted

CONCLUSION AND RECOMMENDATIONS

The study focused on the practice of entrepreneurship to improve the performance of learners in the Department of Education in KZN, South Africa. The focus was on the poor performance of Grade 12 learners. The descriptive statistics show that management in the Department of Education in KZN supports CE. Overall, all the correlations were positive and significant, a sign that the department is moving towards improved performance. The Programme for Improvement of Learning Outcomes (PILO) is one of the programmes in the KZN Department of Education aimed at improving learner performance. However, it does not include entrepreneurship aspects. Therefore, it's recommended that CE is considered in the PILO program. The results of the various tests revealed that there is no difference of opinion in the levels of management regarding CE practices. A difference was recorded among the different age groups and one CE element, management support. According to Morris et al., (2011), management should be willing to facilitate and promote entrepreneurial behaviour in an organisation. It is therefore important for management, particularly top management, in the Department of Education, to provide and encourage employees to take entrepreneurial action. The results indicate that employees have autonomy in doing their jobs. It is therefore recommended that, if proper work discretion is to be used to promote corporate entrepreneurship, the correct people for the job are employed; and there should be trust between employees and management. Like any public sector organisation, the Department of Basic Education seldom recognises innovation, offering little in the form of incentives for public sector employees (Holbrook, 2010). South Africa's education bureaucracy fails to function at an acceptable level due to factors such as corruption, cadre deployment and conflicts of interests, thereby keeping the education administration in a low-capability trap (Schirmer & Visser 2023). Reforming the system so that teachers are supported and better incentivised to do their best (through CE) can potentially deliver significant improvements even in circumstances where teachers have subpar subject content knowledge (Pritchett & Honig, 2019).

It is therefore important that employees are rewarded for their entrepreneurial behaviour. It is recommended that better reward/reinforcement should be put in place to reinforce and encourage entrepreneurial behaviour in the department. It is also recommended that discretionary time, in consultation with employees, should be made available to promote corporate entrepreneurship. It is further proposed that a more flexible and differentiated approach be considered for time allocation to teachers. It is important that communication channels become flexible to promote CE. As much as results indicate that organisational boundaries are positively related to corporate entrepreneurship

elements, the Department of Education, as a public sector organisation, is known for standard operating procedures, narrow job descriptions and inflexible performance standards (Kuratko & Audretsch, 2013).

The study results indicate that the young respondents did not agree with the statement that there is management support for CE in the Department of Education in KZN. Scheepers et al., (2008) states that management support for CE plays a key role in encouraging employees to believe that innovation is expected from all organisation members. According to the younger participants in this study, this is not the case with the Department of Education in KZN. According to Konya et al., (2016), the age of respondents is one of the most important characteristics in understanding a particular problem. Age enables employees to better understand and adapt to the values of the organisation, as well as to harmonise those values and goals with their own (Jackalas, et al., 2016). Younger employees often have expectations which are too high, and are holding onto their personal ideas that, in some situations, prevent them from realistically perceiving and evaluating the values and goals of the organisation (Konya et al., 2016).

In conclusion, these recommendations are made taking into cognisance the widely acknowledged challenges (Schindehutte, et al., 2018; Kuratko & Neubert 2019) of implementing CE in an organisation, more so in a public sector entity (Dhliwayo 2017). These findings are limited to the department that was studied and may not be applied to other departments of education without taking environmental contexts into account. This is because, though university entrance pass was used as a performance measure, the study was perceptual in nature. Perceptions are context specific. An integrative study of the national Department of Basic Education (all nine provinces) is recommended as a future study. Findings might help improve the quality of education in the country.

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PROMINENT FEATURES IN THE DEVELOPMENT OF SCHOOL ACCOUNTING TEACHING TO BE COMPLIANT WITH THE FOURTH INDUSTRIAL REVOLUTION: A CONCEPTUAL FRAMEWORK

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ABSTRACT

Currently, the Fourth Industrial Revolution (IR4.0) is transforming the way businesses operate, communicate and interact with customers. However, there is no accepted framework for the development of school accounting teaching compliant with the IR4.0. Therefore, in this paper, studies between 2014 and 2024 are reviewed with a focus on the prominent features in the development of school accounting teaching to be compliant with the IR4.0. Six prominent features are identified and displayed in a single conceptual framework: critical resources, cognitive flexibility, unified acceptance of technology, culturally responsive teaching, professional learning communities, and instructional coaching. On this basis, a conceptual framework that displays a bigger picture of the prominent features needed to be considered in the development of school accounting teaching to be compliant with the Fourth Industrial Revolution is proposed. This provides governments, policy-makers, school governing bodies, school management and school accounting teachers with a clear insight and overview of the prominent features they need to consider in the development of school accounting teaching. Furthermore, an opportunity is provided to extensively test the framework to further generate more knowledge.

Keywords: professional learning, teaching development, accounting, IR4.0.

INTRODUCTION

The Fourth Industrial Revolution (IR4.0) is transforming the way businesses operate, communicate and interact with customers. It is reshaping industries by enabling automation, connectivity and data-driven decision-making. Furthermore, it is driving innovation, efficiency and productivity across sectors such as manufacturing, retail, healthcare and finance (Kasza 2019:118-147). Hence, it is no wonder that IR4.0 has also affected education, shifting the focus to student-centered learning, where students actively engage with technology-based tools and resources to develop critical thinking skills and problem-solving abilities. With respect to accounting, IR4.0 has changed the traditional education system by introducing digital intelligence technology, which raises the awareness of emerging technologies affecting organisations (Salleh, et al., 2023:80-94). Thus, by embracing technology in school accounting teaching, educators may create a dynamic and interactive learning environment that caters to the needs of 21st-century learners (Abitoye, et al., 2023:892-906). Furthermore, this incorporation of advanced technology into school accounting teaching methods may allow educators to enhance students' understanding of complex accounting concepts and provide these future accountants (i.e. school accounting students) with practical skills applicable in the digital age (Gabriel, et al., 2022:85-106). The introduction of technology in school accounting may not only prepare the school accounting students for the changing demands of the future accounting profession but may also foster their technological literacy and adaptability. Likewise, technological advancements brought by the IR4.0, necessitate the introspection into the prominent features in the development of school accounting teaching (PFDSAT) that is compliant with the digital age (Lawrence & Tar 2018:79-105). These prominent features may include

- the integration of digital technology in school accounting education,
- the need for teachers to possess updated technological knowledge and skills, and

- the importance of adapting innovative teaching methods to cater for the changing needs of the accounting profession, accommodating different cultures of the school accounting learners (Al Ghatrifi, et al., 2023:100144).

Furthermore, they may emphasise the importance of

- fostering a collaborative and interactive learning environment to encourage critical thinking and
- problem-solving skills among accounting students (Alsaleh 2020:21-39).

In essence, knowing the PFDSAT is imperative, particularly in attempting to obtain a comprehensive understanding of the impact of IR4.0 in school accounting. Correspondingly, most researchers have written extensively on the PFDSAT. However, currently, there is no proposed optimum framework for PFDSAT. Therefore, this study tries to conceptualise the PFDSAT to be compliant with the IR4.0 into a single framework that clearly displays the prominent influence of all relevant contributing features in the development of school accounting teaching and consolidates their different aspects and dimensions. These features (as depicted in Table 1 below) include instructional coaching (Wang 2017:03), professional learning communities (Affandi, et al., 2019:315-320), culturally responsive teaching (Tharapos, et al., 2019:111-129), unified acceptance and use of technology (Momani 2020:79-98), cognitive flexibility (Andrade & Coutinho 2016:1115-1125), and critical resources (Owings, et al., 2022:324-338).

Table 1: Researchers’ focus: Prominent features in the development of school accounting teaching

AUTHOR	INSTRUCTIONAL COACHING	PROFESSIONAL LEARNING COMMUNITIES	CULTURAL RESPONSIVE TEACHING	ACCEPTANCE AND USE OF TECHNOLOGY	COGNITIVE FLEXIBILITY	CRITICAL RESOURCES
Sonia Wang, 2017	✓					
Affandi, et al, 2019		✓				
Tharapos, et al, 2019			✓			
Momani, 2020				✓		
Andrade & Coutinho, 2016					✓	
Owings, et al, 2022						✓

On this basis, a literature review was carried out to integrate the prominent features affecting the development of school accounting teaching in the 21st century. Therefore, the discussion is structured as follows. Firstly, it provides a background discussion about the development of school accounting teaching to be compliant with the IR4.0, followed by a section describing the methodology applied. Then, we discuss the literature review on the prominent features in the development of school accounting teaching, which leads to a suggestion for a conceptual framework for the development of school accounting teaching to be compliant with the IR4.0. Finally, conclusions are drawn stating the research implications and leading to recommendations for future research discussed.

DEVELOPMENT OF SCHOOL ACCOUNTING TEACHING TO BE COMPLIANT WITH THE IR4.0

The history of the development of school accounting teaching worldwide is complex and varied (Molise 2020:447-458). Numerous factors have contributed to the evolution of school accounting teachers, including changes in educational systems, advancements in accounting practices and shifts in pedagogical approaches (Apostolou, et al., 2017:1-31). The historical context of different countries or regions has also played a significant role in shaping the development of school accounting teaching (Bebbington & Unerman 2018:2-24). For example, in the United States, the development of school accounting teaching can be traced back to the early 20th century when formal accounting education programs were first established. During this time, the focus of accounting education was primarily on technical skills and knowledge, with little emphasis on critical thinking or contextual understanding (Cohen & Kisker 2009:180). In China, the development of school accounting teaching has been influenced by cultural, economic and political factors (Zhou & Zheng 2023:507-515) while in Turkey, the use of films in teaching history has been advocated as a valuable tool for engaging primary school students and enhancing their understanding of historical events (Neyzi 2019:380-400). Overall, the history of the development of school accounting teaching worldwide is a

complex and multifaceted subject that requires consideration of various factors such as educational systems, cultural influences and pedagogical approaches (Strom & Viesca 2021:209-224).

In South Africa, the development of school accounting teaching has been a complex process with varying challenges and reforms. Prior to South Africa becoming a democratic state the accounting industry was dominated by racial tensions with black accountants alleging to be ill-treated by their white counterparts (Hammond, et al., 2012:332-350). The South African accounting education system during this time played a significant role in perpetuating racial inequality and exclusion, and segregation and discrimination were deeply embedded in the pre-apartheid South African accounting education system, limiting access and opportunities for non-white individuals (Davids & Waghid, 2015:155-168). However, since the dawn of the democratic government in 1994, there have been numerous curriculum-related reforms aimed at democratising education and addressing inequalities in the post-apartheid education system (Silander, 2022:141-155). Furthermore, the implementation of these reforms has not been without difficulties. One of the challenges faced in the development of school accounting teaching in South Africa is the lack of coordination between theoretical and practical aspects of education (Rajoo, 2022:33). This has resulted in a gap between the knowledge and skills acquired by accounting teachers during their training and what they are able to effectively impart to students and the application thereof in industry. As a result, there is a need for reforms in the curriculum to align school accounting education with professional requirements and bridge the gap between theory and practice (Gunarathne, et al., 2021:1-16). This lack of coordination has been highlighted in empirical studies, where training officers for chartered accountants have expressed dissatisfaction with the initial practice of accounting teachers due to this lack of coordination (Terre Blanche, 2019:57). This problem is further compounded by the fact that some teachers in South Africa have a better grasp of content pedagogy in business management compared to financial accounting (Ngwenya, et al., 2020:1-9), hindering their ability to effectively teach financial accounting concepts to students. To address these challenges, it is crucial for South Africa to prioritise the training and development of school accounting teaching (Zindi & Sibanda, 2023:46-61). By staying up-to-date with the latest developments in the accounting profession, teachers can better equip their students with the necessary knowledge and skills to excel in their future careers (Al-Htaybat, et al., 2018:333-357). Such developments may require large amounts of investments, and while some may opt for school improvement grants from governments (Battersby & Verdi 2015:22-29), private funding may also be of great assistance.

RESEARCH METHODOLOGY

In conducting this literature study, a number of databases including Google Scholar, Science Direct, Emerald Insight, and Taylor & Francis online have been used to find publications in the development of school accounting teaching to be compliant with the Fourth Industrial Revolution (IR4.0) as depicted in Table 2 below.

Table 2: Databases Used

DATABASES USED			
Armypublishing.com	1	MDPI	1
Books.google.com	3	Northern Illinois University	1
Core.ac.uk	1	Pal Arch - Ethiopia	1
Darcy & Roy Press	1	ProQuest	3
Elsevier	9	Rowan University Press	1
Emerald	5	Sage	8
ERIC	3	Scientific Reports	1
Erudit.org	1	Springer	4
Fepbl.com	1	Taylor & Francis	19
Frontiers	2	Tensorgate	1
Hogrefe eContent	1	TQR	1
igi-global.com	1	UKZN Press	1
ijlter.myres.net	1	University of Chicago Charter Schools	1
Jagiellonian University Repository	1	University of Illinois Press	1
Kennesaw State University	1	Wiley	2
Learntechlib	1	Wiredspace.wits.ac.za	1

The study's intention was to outline the knowledge gap, highlighting the disruptions of IR4.0 in the accounting fraternity and its impact on school accounting teachers. It focused on articles published in reliable journals that related to IR4.0 in general, acceptance and use of technology, accounting pedagogy, cognitive flexibility, critical resource theory, culturally responsive teaching, instructional coaching, as well as professional development. The list of keywords searched and the resulting quantity of articles for this study is displayed in Table 3 below.

Table 3: Keywords and Resulting Quantity of Articles Searched

Acceptance and use of technology	7
Accounting Pedagogy	21
Cognitive Flexibility	4
Critical Resource Theory	3
Cultural Responsive Teaching	10
Fourth Industrial Revolution	6
Instructional coaching	9
Professional Development	19

The development of accounting over the years was analysed employing titles and abstracts of the articles to ensure their relevance and confirm reliability. Impact of the IR4.0 on business operations and industries, production, innovation, accounting profession, critical thinking skills, problem solving was analysed with a specific focus on its overall effect on the school accounting teachers. This led to the generation of a list with total 79 papers.

PROMINENT FEATURES

Overview

School accounting pedagogical funding, support and development are crucial factors in ensuring the success and effectiveness of school accounting education programs (Apostolou, et al., 2022:100781). These prominent features play a significant role in promoting professional growth and improving the quality of accounting instruction (Compen, et al., 2019:16-31). A well-funded school accounting program provides the resources necessary to offer comprehensive and up-to-date curricula, access to relevant technology and a supportive learning environment for students (Sadler & Wessels 2019:448-471). In addition, adequate support and development opportunities for accounting teachers are essential. They can include financial support for professional development activities such as attending conferences, workshops, or training programs (Van der Klink, et al., 2017:163-178). Other supportive measures can include mentorship programs, peer collaboration and ongoing professional learning communities. These initiatives help the teachers to stay current with industry trends, enhance their instructional strategies and improve their overall effectiveness in the classroom (Admiraal, et al., 2021:684-698). Furthermore, funding, support and development opportunities help to attract and retain qualified professionals in the field (Pincus, et al., 2017:1-18). This, in turn, contributes to the stability, quality, effectiveness and continuity of school accounting education programs and ensures that students receive high-quality instruction that prepares them for success in their future careers (Teng & Yuan, 2023:2957-9465). On the other hand, schools with limited funding face challenges in providing resources and support, resulting in a lack of professional development opportunities for school accounting teachers (El-Tawy & Abdel-Kader, 2022:279-296). This can hinder their ability to stay updated with the latest accounting practices and educational trends, so that students may not receive the highest quality of education in accounting (Boyle, et al., 2015:245-264). To address these challenges, several theories and models have been proposed that can guide school accounting teacher funding, support and development efforts: *Critical Resource Theory*, *Cognitive Flexibility Theory*, *The Unified Theory of Acceptance and Use of Technology*, *Culturally Responsive Teaching Model*, *Professional Learning Communities Model* and *Instructional Coaching Model*. They shall be discussed in the following.

Critical Resource Theory in Schools

Critical Resource Theory in schools posits that access to essential resources, such as quality education, academic support and adequate funding, is crucial for student success and academic achievement (Owings, et al., 2022:324-338): These resources are not uniformly distributed. Since marginalised and disadvantaged students are often denied equitable access to them, they face significant barriers and are at a disadvantage when it comes to their educational outcomes (Gorski 2017:87). In this context “disadvantaged students” refers to learners who experience limitations in their academic achievements due to several contributing factors like poverty, refugee/asylum seeking, etc. (Banerjee 2016:1178441).

- In *developed countries* resources in schools are unequally distributed among different groups of students based on various socioeconomic factors, including race, class and gender (Kaplan & Owings 2022:01) which perpetuates existing social inequalities.
- In *developing countries* resources: like funding, infrastructure, and qualified teachers are limited, which causing a significant challenge for educational institutions (Almanthari, et al., 2020).

In this context, Critical Resource Theory offers valuable insights into understanding the impact of resource allocation on educational outcomes. It enables policymakers and educators to make informed decisions to maximise the impact of available resources and address the inequalities present within the system. However, in schools, it only focuses on external resources such as funding and technology, while it neglects the importance of internal ones such as teacher quality, their cognitive flexibility and student motivation, as well as the influence of socio-cultural factors on student outcomes (Cheng 2022:14; Hernandez 2019:99-122).

Cognitive Flexibility Theory in Schools

Cognitive Flexibility Theory (CFT), proposed by Spiro, et al., (2012:85-107), posits that successful learning and problem-solving require individuals to be able to adaptively switch between different cognitive strategies and approaches (Al-Sarry & Ghadban, 2020:134-154). Individuals who possess this ability are better able to select the most appropriate strategies for a given task or problem. CFT is a valuable framework for understanding and enhancing learning in schools, especially *in developed countries*, as educators can design curriculum and instructional strategies that promote students’ ability to adapt, think critically and solve problems in various domains (Siegler, 2015:31-75; Bean & Melzer 2021:05). *In developing states*, educators can create learning environments that promote adaptive thinking and problem-solving skills. This pedagogical approach allows students to restructure their knowledge in different ways and respond effectively to changing situational demands (Singh, et al., 2022:301-326). Conversely, CFT assumes that all teachers and students have the same level of cognitive flexibility, which may not be the case. It neither provides clear guidelines on how to assess and develop cognitive flexibility in students, nor may it fully account for individual differences in learning styles and preferences. Moreover, it overlooks the role of cultural and contextual factors in shaping students’ cognitive flexibility (Harel, et al., 2023:5241). Nevertheless, despite these weaknesses, cognitive flexibility of teachers is imperative to allow them to be able to change and adapt to accepting and using technology in schools.

Unified Theory of Acceptance and Use of Technology in Schools

The Unified Theory of Acceptance and Use of Technology (UTAUT) plays a crucial role in understanding individuals’ perspectives towards adopting and utilising various technological innovations. It has been widely used in research to examine the factors influencing technology adoption and integration in schools *in developed countries* (Williams, et al., 2015:443-488). *In developing states*, the adoption and use of technology in schools is crucial for educational development and progress. However, the lack of infrastructure and technological devices, limited access to reliable internet connectivity, insufficient teacher training and support, as well as incompatible government policies and curricula pose serious challenges. These challenges often result in a significant digital divide, where students in developing countries are disadvantaged compared to their counterparts in developed countries (Kamat & Nasnodkar 2019:32-51). Furthermore, the theory in schools primarily focuses on individual factors influencing technology adoption, such as perceived usefulness and ease of use. While these factors are undoubtedly important, they do not consider the broader context in which technology is implemented in schools (Tamilmani, et al., 2021:102269). For example, the model may not adequately consider institutional-level factors, such as support from administrators, availability of resources and infrastructure. Additionally, UTAUT may not adequately address the unique challenges

and needs of different educational settings. This means that the model may not be applicable or effective in all types of schools, such as those in low-resource areas or with marginalised student populations (Yun 2018:04).

Finally, UTAUT may oversimplify the complex nature of teacher decision-making. Teachers' decisions to adopt and use technology in classrooms are influenced by a wide range of factors, including their pedagogical beliefs, professional development opportunities and classroom dynamics (Tondeur, et al., 2017:555-575). Therefore, relying solely on this theory may not provide a comprehensive understanding of technology adoption in education. As a result, UTAUT must be supplemented with other theories and models to provide a more holistic understanding of technology adoption and use in schools (Scherer, et al., 2020:103656). Due to its different effect on schools in poor and rich communities, accounting teachers need to apply culturally responsive teaching strategies.

Culturally Responsive Teaching Model in Schools

Culturally responsive teaching (CRT) models in *developed countries* play a critical role in promoting equity and social justice within educational systems (Bonner, et al., 2018:697-726). They emphasise the importance of incorporating students' cultural backgrounds into the curriculum, instructional materials and teaching strategies. This helps students feel valued and represented, positively impacting their engagement, motivation and academic achievement. Additionally, the model also fosters a sense of cultural competence and respect among students. It encourages open dialogue, promotes understanding and empathy, and prepares students to thrive in a diverse and interconnected world (Barrett, 2018:93-104). Therefore, professional development opportunities for school accounting teachers, focusing on areas such as intercultural competence, understanding cultural diversity, and creating inclusive classroom space is possible (Block, 2023:05). This may provide knowledge and skills to effectively implement CRT strategies (Septor, 2019:01).

In order to achieve this goal, collaboration between schools, districts and communities is essential (Rincón-Gallardo & Fullan, 2016:5-22). These partnerships can provide resources, support and guidance to ensure that CRT is implemented effectively and consistently across educational settings. It is important for teachers to acknowledge their own biases and assumptions and actively work towards eliminating them in order to create a truly inclusive learning environment (Meyer & Leonardi, 2020:129-143). Furthermore, policymakers and educational institutions must recognise the importance of investing in resources and support systems that promote cultural responsiveness.

However, this model places a heavy burden on teachers to integrate and incorporate various cultural perspectives into their instruction, in particular if they do not have sufficient cultural knowledge or training, or struggle to find culturally relevant resources and materials (Khalifa, et al., 2016:1272-1311). Another weakness is that cultural responsiveness often focuses on surface-level aspects of culture, such as food, clothing and celebrations, rather than critically examining deeper structures of power, privilege and oppression (Parkhouse, et al., 2023:383-397). This may result in a superficial understanding of cultural diversity and may not address the systemic inequalities that impact students from marginalised backgrounds. It may, furthermore, unintentionally reinforce stereotypes and perpetuate cultural essentialism. For instance, the assumption that all students from a particular cultural background share the same experiences or characteristics can limit students' individuality and reinforce narrow notions of identity (Ejma, 2023:11). Additionally, the cultural responsive teaching model may not adequately address intersectionality, i.e. the complex ways in which individuals experience overlapping systems of privilege and oppression based on their multiple identities (such as race, gender, class and sexuality) (Miller & Colantonio-Yurko 2019:49). Thus, professional learning communities may play a crucial role in assisting teachers in the development of culturally responsive teachings strategies.

Professional Learning Communities Model in Schools

According to the Professional Learning Communities (PLC) Model, school accounting teachers should engage in collaborative professional learning communities as a supportive environment where they can share knowledge and best practices with their colleagues, ultimately improving their teaching practices and leading to enhanced student learning outcomes (Hudson, 2023:649-659; Antinluoma, et al., 2021:89; Olivier & Huffman 2018:109-125; Lakkala, et al., 2021:2804). Through ongoing collaboration and shared learning, educators can adapt their teaching methods to meet the diverse needs of students. Partnerships with external organisations and stakeholders including relevant professional bodies can support the implementation of PLCs by providing additional resources and expertise

(Goodyear, et al., 2019:421-433). PLCs have gained significant recognition as an effective approach to promote collaboration and improving teaching practices. However, like any model or approach, it also has its weaknesses:

- Limited time and resources: Implementing and sustaining a PLC model requires significant time and resources. Educators and school administrators may struggle to find enough time in their already busy schedules to fully engage in collaborative discussions and activities (Boone 2014:85-99).
- Limited diversity: PLCs often consist of teachers and administrators from the same school or district. This may hinder exposure to different perspectives and innovative ideas, leading to a lack of fresh insights and potentially narrowing the scope of professional growth (Battersby & Verdi 2015:22-29).
- Lack of supportive school culture: The success of a PCL relies heavily on the support and commitment of school leadership and administration. However, school leaders may not prioritize or actively support the development and implementation of such communities (Harris, et al., 2017:500-509).
- Lack of focus on individual needs: PLCs often prioritize collective learning and improvement, which can sometimes neglect the individual needs and professional development goals of teachers and educators. This can result in a one-size-fits-all approach that may not fully address the unique needs and strengths of each teacher (Townsend 2016:29).
- Lack of accountability: Without clear systems for accountability, professional learning communities may become mere social gatherings or spaces for venting frustrations without tangible outcomes or measurable impact on student learning and school improvement (Matjeni 2022:40).

Therefore, schools and districts should dedicate time and resources to professional development activities within the PLC initiatives. Then, these communities and professional bodies together can play a pivotal role in developing school accounting teachers by partaking in instructional coaching and other engagements.

Instructional Coaching Model in Schools

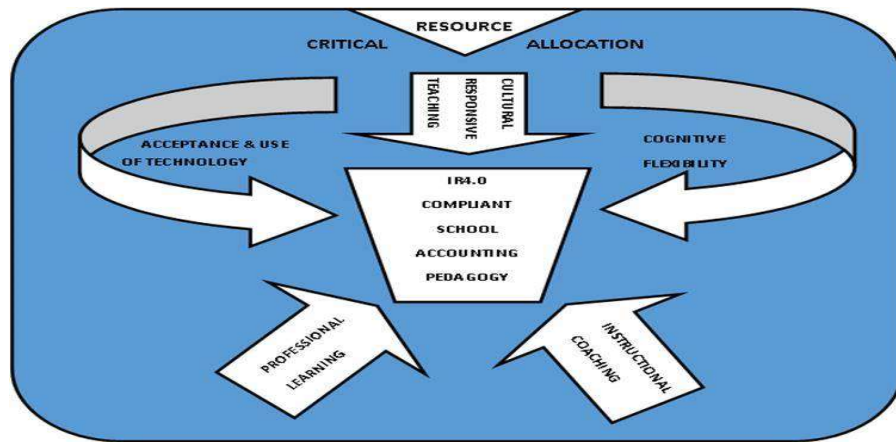
The Instructional Coaching (IC) model focuses on providing ongoing support and guidance to school accounting teachers using instructional coaches. These coaches work closely with the teachers to observe their instructional practices, provide feedback and offer targeted professional development opportunities (Fairman, et al., 2023:197-209). In *developed states*, IC has emerged as a crucial model for supporting teachers' professional development by personalised support and guidance (Kraft, et al., 2018:547-588). It is aligned with the district's reform agenda and focuses on meeting the specific instructional learning needs of schools (Woulfin & Rigby 2017:323-328) and involves providing ongoing guidance, feedback and resources to improve the teachers' instructional practices. The instructional coaches together with teachers identify areas for growth, set goals and develop strategies to enhance teaching and student learning. In *developing countries* where educational resources and support may be limited this model has also gained prominence (Bezuidenhout 2018:263-281) and it empowers teachers to become leaders in their educational communities, driving positive change and promoting student success.

However, despite these advantages, the IC model has the potential to lack consistency and cohesion among coaches, arising from differences in coaching styles, priorities and approaches (Tung, et al., 2004:04). In addition, coaches may have a limited understanding of the specific needs and challenges faced by individual teachers and may not be able to effectively tailor their support to meet those needs (Hui, et al., 2020:1790-1816). Furthermore, the reliance on instructional coaches may inadvertently create dependency on external support rather than fostering self-sufficiency and teacher autonomy (Hays & Reinders 2020:29-52). Moreover, the IC model may face challenges in terms of scalability and sustainability (Teemant 2014:574-604): as schools expand their coaching programs, it may become more difficult to provide consistent and high-quality coaching to all teachers. For this reason, the long-term funding and sustainability of coaching programs may pose another unavoidable challenge (Eiraldi, et al., 2015:124-140).

PROPOSED MODEL

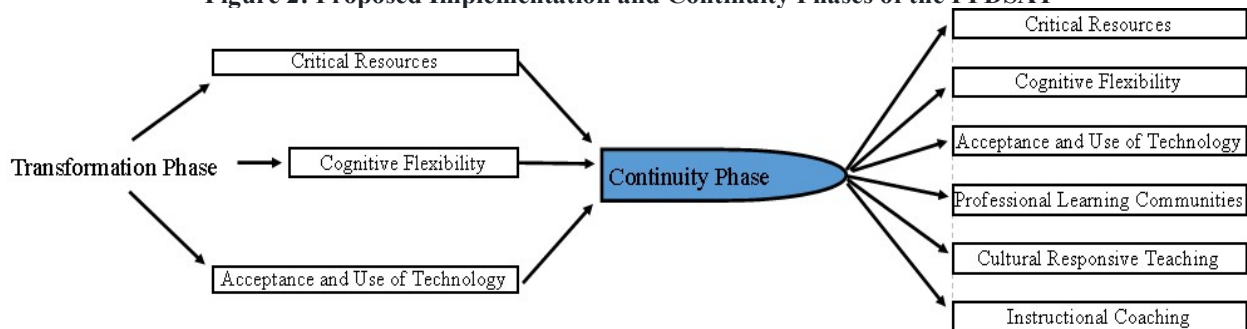
Based on the literature, the PFDSAT and the discussed models shall be integrated into a conceptual framework as shown in Figure 1:

Figure 1: Proposed Conceptual Framework



The implementation of this model can be done in two steps, i.e. transformation and continuity phases, as highlighted in Figure 2 below. The transformation phase refers to the initial stage of implementing the PFDSAT and changing the status quo, while the continuity phase focuses on a PFDSAT after the first implementation:

Figure 2: Proposed Implementation and Continuity Phases of the PFDSAT



Critical resources that include quality education, digital classrooms, academic training and support, as well as adequate funding are needed to transform the status quo and provide continuous support to most South African schools. Strategies need to be developed to promote equitable access to resources by policymakers, the private sector and educators, thereby fostering an inclusive educational system that embraces social justice for all students, irrespective of whether they reside in rural, township, or urban areas. Focus should be on both internal and external critical resources as they play a crucial role in supporting the functioning and success of schools. *Internal* critical resources may include qualified and dedicated staff, facilities, funding generation mechanisms and robust curriculum materials. *External* ones refer to partnerships with the government, parents and the community, access to technology and infrastructure, funding and support from government agencies and other organisations, and experts' consultation and training opportunities. Moreover, schools should be able to use their allocated resources to develop their teachers to adaptively switch between different cognitive strategies and approaches, both in the transformation phase as well as on a continuous basis. This imperative requires the teachers to be cognitively flexible, allowing them to adapt to changing curriculum requirements, incorporating new teaching methods and technologies, as well as to effectively address the diverse learning needs of their students. Strategies should be implemented to measure the teachers' cognitive flexibilities at schools. Some methods may include cognitive tests and assessments that measure the ability to switch between tasks, solve problems with multiple solutions, or think creatively. This Cognitive Flexibility Model would enable teachers to think critically and creatively, finding innovative solutions to complex accounting problems and effectively analysing financial data by integrating technology in educational settings.

On the other hand, the equitable distribution of technology to schools is currently and continuously needed for most South African schools to ensure that all students (in rural, township and urban areas) have access to the same educational opportunities. This can be achieved through partnerships with technology companies, government

initiatives to provide funding and resources, as well as developing comprehensive plans for implementation and maintenance. Furthermore, it is important to address issues of digital literacy and provide training and support for teachers and students to effectively utilise the technology in the classroom. By implementing these strategies, schools can bridge the digital divide and create a level playing field for all school accounting teachers to thrive in the digital age. Moreover, school accounting teachers need to know and appreciate that students have diverse cultural experiences and backgrounds, which impacts their studies drastically. For example, teaching methods applied in urban and township areas may be complicated or too advanced for learners in rural areas. Learners in urban areas and townships may have access to technology and gadgets while rural areas learners lack. Thus, culturally responsive teaching needs to be invoked on a continuous basis. Partnerships that include rural, urban and township communities, government national, provincial, local and district departments, and schools should be formed to support and provide guidance in respect to cultural aspects of schools. This approach assists in incorporating culturally relevant content and instructional strategies that reflect the students' cultural identities and promote understanding and respect among all learners. The culturally relevant teaching strategies and curriculums may form part of the discussions during professional learning communities' conventions when teachers meet in forums to exchange teaching ideas, resources and strategies related to teaching accounting concepts effectively. Through these platforms, accounting teachers can stay updated on the latest trends and developments in the field, enhance their instructional practices, and improve student learning. It is therefore imperative that these teachers' conventions be well structured with specific targets set and achieved to avoid meeting in vain, wasting government and schools' resources, and turning professional learning communities' meetings into unproductive and directionless social gatherings. Additionally, professional learning communities can facilitate the integration of technology into accounting instruction through the sharing of teacher experiences and learning from one another about effective ways to incorporate digital tools and resources in their lessons.

In these discussions, the contributions of relevant professional bodies can be embraced: collaboration with professional bodies is important in shaping and influencing the education and training of school accounting teachers. They can be involved in providing training specifically designed for accounting teachers to enhance their knowledge, skills and competencies in accounting education including the latest developments in accounting standards, emerging trends in the industry, teaching methodologies and ethical considerations in the accounting practice. Furthermore, school accounting teachers may need instructional coaches on a continuous basis. Hence, these coaches should be placed equally in all schools, ensuring effective teacher growth and improvement. Instructional coaches should possess personal qualities such as patience, self-reflection as well as the ability to identify and build upon a teacher's strengths. This collaboration between instructional coaches and accounting teachers should ultimately lead to an increase in teachers' knowledge, personal skills, and motivation. In summary, the critical resources allocated to schools to develop accounting teachers' cognitive flexibilities should empower them to become culturally competent, providing them with the knowledge and skills to effectively engage with their culturally diverse students and create supportive classroom environments. Professional bodies should be engaged through professional communities and other platforms to train and update the teachers on the new digital age accounting curriculum developments including the use of technology as provided by sponsoring stakeholders. Training can also include instructional coaching where subject coaches spend more time with accounting teachers and address individual development issues.

CONCLUSION

This study outlined prominent features in the development of school accounting teaching to be compliant with the IR4.0. A literature investigation suggested that a new conceptual framework be developed that describes and links the PFDSAT. This research adds to the accounting fraternity's branch of knowledge by summarising the prominent features in the development of school accounting teaching into a single framework. The current scholarly literature discusses the PFDSAT respectively without embracing a single conceptual framework that discusses and combines all prominent features for the development of school accounting teaching to be compliant with the IR4.0. However, none of the scholars proposed a specific model that is considered the best and most suitable in this regard. They only researched the different features separately without providing any link or incorporating other features in their research. Since they neither provided reasons for not including, a need arose to develop a conceptual framework that addresses and links all these prominent features combined in a single model for the development of the school accounting teachers' teaching expertise. Thus, this paper outlined and suggested a conceptual framework that combines the PFDSAT underpinned by the work already published. It provides a comprehensive picture of the prominent features in the development of school accounting teaching to be compliant with the IR4.0, clearly displaying the respective

contributions of the individual features. The framework is built on the premise of the importance of the contribution made by school accounting teachers in assisting the future accountants in achieving their career goals, updating their knowledge and making positive contribution in the accounting fraternity despite the changing accounting landscape.

Policy-makers, school governing bodies and managers as well as other executive authorities may consider these prominent features in making policy decisions that are relevant to school accounting teachers' development. In this sense, this study provides a direction for future research: to test the model empirically and make further contributions in the school accounting teachers' development research,

- addressing all the prominent features in the development of school accounting teaching to be compliant with the IR4.0,
- using the proposed interpretivism theory and
- bearing in mind the study's limitation of being based mainly on scholarly work, but other sources which may suggest otherwise.

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WORK-LIFE BALANCE CHALLENGES AMONGST SOCIAL WORKERS IN A NON-GOVERNMENTAL ORGANISATION: LESSONS FROM COVID-19 PANDEMIC

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ABSTRACT

During the COVID-19 pandemic, social workers were essential in ensuring the provision of social justice by addressing the heightened challenges faced by vulnerable and marginalised populations. However, social workers often receive help that is different from what they provide to clients. The question then is, who helps the helper? The study examines the challenges faced by social workers in balancing work and personal life during the pandemic, using an interpretivism paradigm, explorative design, and a qualitative research method. Eight registered social workers working in a Child Welfare NGO were selected using a purposive sampling. Data was gathered using semi-structured interviews. Clarke et al. (2015)'s Inductive Thematic Analysis were used to analyse data. Results indicate that social workers do not experience work-life balance similarly. The subject experiences were influenced by how social workers appraised the contextual and personal demands. The study found that social workers in NGOs struggle with work-life integration, despite positive experiences. It underscores the need for future pandemic preparation and improved employee and organisational wellbeing.

Keywords: social workers, work-life balance, NGO, South Africa, COVID-19.

INTRODUCTION

Social workers are often exposed to events, conditions and traumatic experiences that critically affect their mental, social and physical wellbeing. They provide critical services with working conditions such as long working hours, non-standard schedules, dangerous tasks, staff shortages, poor remuneration, and an emotionally and physically demanding environment (Meadows et al., 2011). These conditions were exacerbated by the COVID-19 pandemic, where social workers had to provide essential services to those affected, while putting their own lives at risk (Gur et al., 2024).

During the COVID-19 pandemic, social workers worldwide were hesitant to conduct home visits due to concerns about contracting the virus themselves (Banks et al., 2020). In South Africa, there was a great need for social work supervisor support to help social workers with COVID-19 emotional exhaustion, complex caseloads, and

managing work and personal lives (Smith, 2020). NGOs were faced with limited resources to handle the pandemic's demands, (Smith, 2020), resulting to social workers being overburdened with overwhelming workloads.

Research shows that social workers face challenges in balancing work, home life, and personal life due to their demanding profession (Bae et al., 2019; Kalliathet al., 2012; Wilson, 2021). They provide essential social services to disadvantaged individuals, but often work extra hours and weekends, compromising their health, family time, and social life. High caseloads and under-resourcing in NGOs contribute to high attrition rates. This raises a question: who helps the helper? Considering the context of South Africa, this study aims to offer recommendations for social workers in NGOs on how to effectively manage work-life balance.

Numerous studies on social workers' work-life balance have been conducted (Banks et al., 2020; Gragnano et al., 2020), but limited information exists in NGOs, where they face unique situations such as insufficient funds and excessive workloads, The National Institute for Occupational Safety and Health (2008) states that insufficient funds and excessive workloads for social workers in NGOs, particularly in developing communities like South Africa, lead to job dissatisfaction and imbalance (Joseph, 2017). Complex duties, poverty, disease, poor conditions, and pandemics such as the COVID-19 compromise work, health, and personal satisfaction.

Studies on work-life balance among social workers in non-governmental organisations are inconclusive. Some studies suggest they develop coping strategies and are satisfied with their work and lives (Bischoff et al., 2019). However, some studies (Wilberforce et al., 2014) show that social workers struggle with work-life balance due to personal and contextual demands exceeding resources, necessitating investigation into their work-life balance experiences within a chosen Non-Governmental Organisation.

METHODOLOGY

Research Design

An explorative research design was used to explore how social workers in NGOs experience work-life balance resources needed to integrate work and personal life.

Research Method

A qualitative research method was used. According to Hammersley (2012), qualitative research seeks to explore and discover issues currently occurring due to the little exposure that the issue is getting; hence, this research focused on how social workers construct their own understanding and experiences of work-life balance.

Research Participants

The sample consisted of 8 social workers working in a selected NGO. A purposive sampling method was used to select the participants. The purposive sampling technique involves selecting specific participants with needed information to address the research questions (Bryman, 2016). The selection is based on the researcher's knowledge of the participants with pockets of information relevant to the study (Etikan et al., 2016). Using the purposive sampling method, a sample of eight (8) employed qualified social workers (2) at entry level and 6 were senior social workers was used. All the social workers had more than two years of working experience.

Data Collection Method

A semi-structured interview was used to collect data. This study sought to investigate the subjective work-life balance experiences amongst social workers working in a selected NGO. The philosophical thinking of interpretivism (Saunders & Lewis, 2012), which maintains that reality can be explored and constructed through human interactions and significant actions, justified the use of in-depth interviews.

Administering of the Interviews

Several ethical considerations were considered to ensure that the research was conducted ethically. An email seeking permission to recruit participants was sent to the director of the chosen organisation. The researcher had a personal meeting with the director to present the research proposal and negotiate expectations. This was a face-to-face meeting. Permission was granted, and the director called for a short meeting and introduced the researcher to the social workers. The researcher briefly presented the purpose of the study to them. The researcher left flyers containing the research details and the researcher's contact details. Interested participants were asked to send the researcher a "please call back" (free of charge). Fortunately, all the social workers (8 participants) were happy to be part of the study, and they all volunteered for an online interview via Zoom. The receptionist drafted an interview timetable. Interview meetings were set based on the convenient times of the participants. The organisation's director volunteered to provide Wifi (for data) and set aside interview time.

Data Analysis

The researcher used Clarke, Braun, and Hayfield's Inductive Thematic Analysis to extract data-driven themes. The six steps of the analysis involved transcription, open coding, recording examples, generating initial codes, collating potential themes, developing a thematic map, defining and naming themes, and producing a report. However, the study remained objective and not influenced by the researcher's own theoretical assumptions.

Ethical Considerations

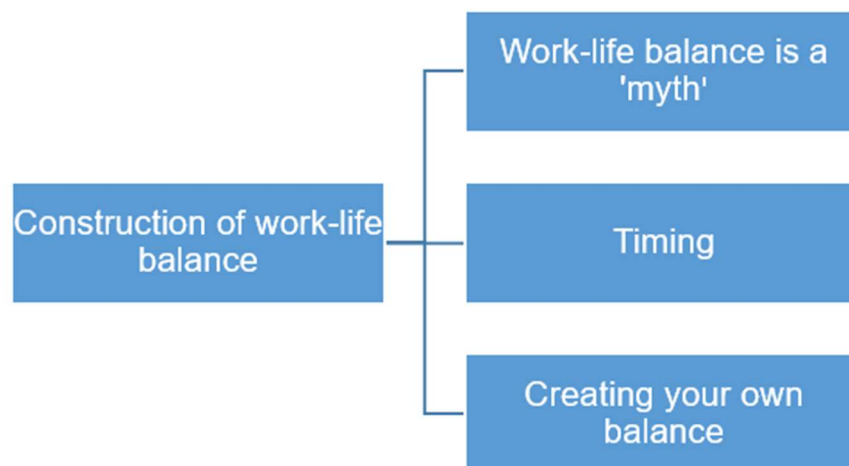
Permission was sought and granted by the organisation's authority. Voluntary informed consent was sought from the participants. In addition, confidentiality was maintained at all times, and participants were informed through a letter sent via email by the director communicating essential information about the research.

RESULTS AND DISCUSSION

Question 1: How do social workers in child welfare contexts define work-life balance?

The first objective of the study was to get an in-depth understanding of how social workers in a selected Non-Governmental Organisation construct the meaning of work-life balance. Figure 6.2 summarises how social workers construct the meaning of work-life balance.

Figure 1: Construction of Work-Life Balance



Source: The Author.

Baron-Epel and Ivancovsky (2015)'s study highlights the need for social workers to balance work and personal life, as providing child welfare services demands more time, energy, and resources. Leduc et al. (2016)'s Spillover theory supports this, stating that the boundary between work and home is permeable. Social workers struggle to separate their work's psychological and emotional elements, influenced by their interactions with their environment. Understanding these experiences is crucial for social workers to effectively manage their personal lives. Truter et al. (2018) emphasise the significance of psychological capital, skills, knowledge, and experience in achieving work-life balance in social workers, with less experienced workers navigating emotional demands. The COVID-19 pandemic has further disrupted social workers' work-life balance, causing increased workloads and a perceived lack of support, highlighting the need for interventions to improve work-life integration.

Question 2: What are the demands faced by social workers at work and the available resources to address these demands.

The study reveals that social workers face contextual demands challenges, including high caseloads, unrealistic deadlines, lack of stakeholder cooperation, emotionally stressful cases, and limited resources. Figure 6.3 illustrates the challenges faced by social workers in their workplace and the resources available within their organisation.

Figure 2: Work Domain



Source: The Author.

According to Dima et al. (2021) social workers face high caseloads and work-related stress due to the COVID-19 pandemic, resulting in contextual demands such as quantitative, emotional, physical, and cognitive demands. They also face emotional demands in providing child welfare services, such as providing care to neglected children, older people, people suffering from abuse, disability, neglect, rape survivors, HIV, and people living with AIDS. The study aims to understand how the availability of resources in an NGO affects the work-life balance of social workers, focusing on contextual resources like social support, autonomy, and performance feedback. Bakker and Demerouti (2017) research highlight the importance of job resources in motivating employees to meet work demands and fulfil basic human needs. Social workers in child welfare utilise resources like colleagues, supervisors, directors, and stakeholders to provide preventive services. Supervisor support includes realistic caseload allocations, brainstorming, emotional support, proactive behaviour, coaching, mentoring, and training.

Question 3: What are the demands faced by social workers at home and the available resources at work to meet these demands?

The researcher explored the demands of social workers at home, utilising Spillover theory to understand the interface between home and work domains.

Figure 3: Home Domain



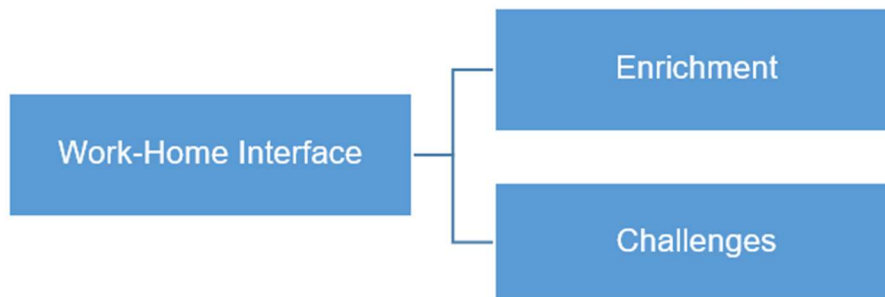
Source: The Author.

The study highlights the multifaceted responsibilities of social workers, including work, nurturing responsibilities at home, and caring for children, husbands, and partners. Working from home can lead to compromised family time and relationships (Cooke & Hastings, 2024). The imbalance between work and personal life contributes to exhaustion and reduced time for family and friends. The researcher found that social workers rely on various personal resources, including children, husbands, partners, extended family members, and colleagues, to manage personal life demands. Personal resources like faith, resilience, and work skills also contribute to their success. The study also found that family and husband support was unsustainable, leading social workers to seek helpers to manage home demands. However, their salaries cannot cover this. Employees who can afford helpers find time for relaxation and emotional recharge, while those without can worsen. More resources are needed for helpers.

Question 4: How do social workers experience and manage the spillover from work to home or from home to the work domain?

The study aimed to understand social workers' experiences and management of spillover from home to work, highlighting the complex relationship between resources, roles, and expectations, often leading to conflicts and transferring emotions and skills between domains.

Figure 4: Work-Home Interface



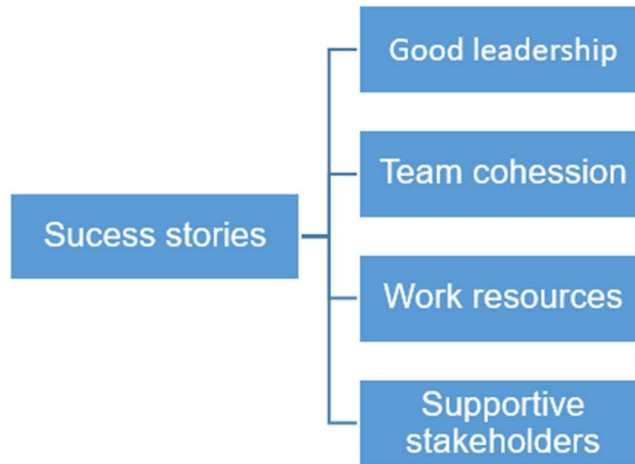
Source: The Author.

The study found that social workers experience work enrichment, which leads to quality service delivery, interpersonal interactions, team cohesion, job satisfaction, and employee engagement. They derive intrinsic satisfaction from transferring skills learned at work to their home environment, resulting in positive emotions and experiences that can be applied at home. Most importantly, training in conflict management, diversity management, and child protection equips social workers with essential capabilities for managing interpersonal relationships, raising children, and understanding community differences. Positive spillover from home supports can enrich both domains, allowing social workers to handle challenges at home and in the community, transferring positive energy to work. Social workers face challenges in managing work-life balance, as their work is physically and emotionally draining. Without proper support, they often go home drained, affecting their time and relationships. They sometimes take work home, compromising quality time with families. These challenges significantly contribute to mental and emotional exhaustion at home.

Question 5: What are the success stories shared by the social workers?

The study sought to understand positive initiatives that the organisation is pursuing to help social workers in their jobs. The researcher referred to these positive programmes as success stories. Figure 5 below summarises the success stories.

Figure 5: Success Stories



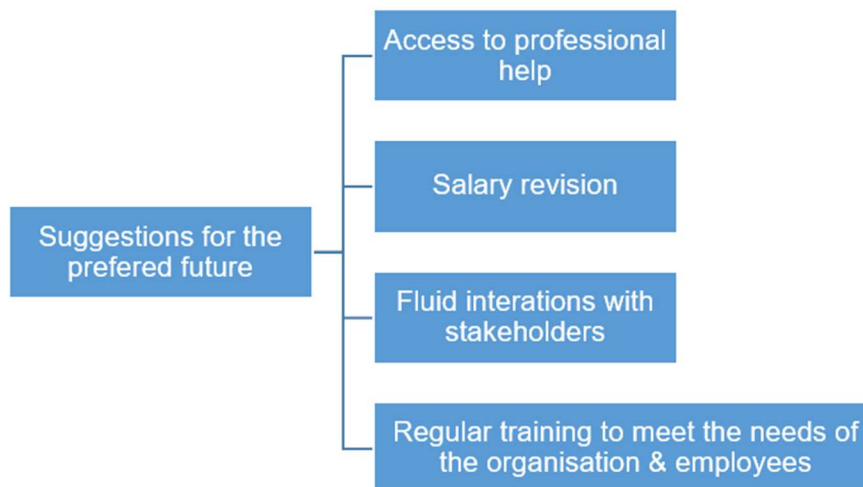
Source: The Author.

The study highlights the importance of good leadership, teamwork, and supportive stakeholders in an organisation. It suggests that without these factors, employees may leave or suffer from burnout. The research supports the idea that a supportive organisational culture, caring leaders, empowerment workshops, and supportive stakeholders contribute to work enrichment, which can be transferred to the home environment through social interactions and conflict management.

Question 6: What are the suggestions raised by social workers to improve their health and wellbeing on one hand and service delivery on the other hand?

The final objective of the study was to obtain suggestions from social workers on recommendations that might be used to address work-life balance in the organisation. Figure 6 highlights the main suggestions provided by the social workers.

Figure 6: Suggestions



Source: The Author.

Social workers prefer their organisations to provide them with counselling psychologists to help them cope with the emotional burden of their job. They express concern over the financial constraints of NGOs and suggest monthly or need-based access to counselling services. The organisation can refer social workers to a full-time counselling psychologist for necessary support. Social workers requested training from experts to address work challenges, focusing on inner resources like work-life integration and emotional intelligence. Regular, individualised training should address specific developmental areas. Psychological assessment services from a registered Industrial Psychologist can help develop careers, self-awareness, and environmental awareness, establishing a person-job-fit, improving service delivery, and employee wellness. Social workers suggested that the organisation review their salaries to ensure they align with the country's inflation rate. They believe that a revised salary will help them cover their basic needs. In support of this suggestion, Jackson and Fransman (2018) found that financial wellbeing and work-life balance correlate positively. This means that employees who have financial resources are most likely to afford extra help that is essential for managing their work and personal life. Social workers face challenges from stakeholders like the Department of Home Affairs, parents, and caregivers in child welfare services. They advocate for fluid interactions and partnerships to improve child welfare.

RECOMMENDATIONS FROM THE STUDY

Child Welfare Organisation

The organisation should adopt a personal, individual-based approach to people management, considering individual and contextual differences. This includes considering salary revisions and providing basic needs to motivate employees. Directors and supervisors should be attentive to social workers' situations and personal relationships, fostering support through relationship-building interventions. Training supervisors to manage work schedules is crucial, minimising conflict. Work responsibilities should be redesigned to support new demands, and policies on work-life integration should be developed, implemented, and continually evaluated. The researcher suggests that social workers require counselling and training to cope with work and personal demands. They recommend outsourcing services to professional counsellors and clinical psychologists, who can help with debriefing sessions and post-traumatic effects. The organisation should also offer training to upskill staff, with the developmental needs of employees being informed by the training required. Funding may be a barrier.

Child Welfare Social Workers

Social workers should seek professional help, set realistic goals, negotiate deadlines, and manage caseloads with supervisors and colleagues. High caseloads can compromise family time, so supervisors should revisit allocations and deadlines. With support, they can provide quality services, generating a sense of meaning, fulfillment, and belonging.

Future Researchers

Future researchers are encouraged to use a mixed-research method and a more representative sample size. Quantitative data can serve as the primary source of data collection, and qualitative data will supplement and validate the results. Using a mixed-research method will yield more comprehensive findings on how social workers in a child welfare context experience work-life balance.

Practitioners

Practitioners are recommended to approach the issue of work-life balance with an open mind. The study found that the work context has changed, and the notion of balance is now unattainable. Going forward, practitioners should find interventions that allow employees to integrate work into their personal spaces. They should ensure that employers and employees are assisted in finding a structure and a work approach that benefits them. Such collaborative restructuring will be vital in managing the work and life demands from both sides. Practitioners are kindly asked to provide their pro bono resources to help NGOs. NGOs contribute immensely to social justice.

Government

The government should consider providing financial and non-financial support to child welfare NGOs. Financial resources could cover operational costs for NGOs.

CONCLUSIONS DRAWN FROM THE STUDY

The study explored the experiences of social workers in achieving work-life balance. It found that social workers face different challenges, including high workloads, unrealistic deadlines, emotional support, and uncooperative stakeholders. However, they have good leadership, social support, and learned skills to overcome these challenges. The study also found that social workers' perception of their resources also impacts their work-life balance experience. The study reveals that balancing work and personal life for social workers in NGOs providing child welfare services is unrealistic due to the overwhelming workload. Social workers advocate for work-life integration, despite the negative experiences of work-home interfaces. The study found that in the selected NGO, positive experiences were found due to strong support systems and personal resources. The study suggests that NGOs need to improve their leadership, resource utilisation, social support, job security, and staff shortages, but also address emotional support services.

LIMITATIONS OF THE STUDY

The study utilised a qualitative research methodology to understand the work-life balance of social workers in child welfare. However, due to limited resources and time constraints, a non-probability purposive sampling method was used, which was not representative of South African social workers.

The study only included female social workers, resulting in a lack of balanced gender representation and work-life balance experiences. The sample size of eight participants was insufficient, suggesting a need for a larger sample size and a mixed-research method for more comprehensive results.

The study used semi-structured interviews, but its limitations suggest a need for more objectivity and a larger sample size for a comprehensive understanding of social workers' work-life balance and suggests several recommendations.

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MISCONDUCT/CORRUPTION WITHIN THE SCOPE OF EMPLOYMENT: IS THE EMPLOYER OBLIGED TO FINANCE ACCUSED EMPLOYEE'S LEGAL REPRESENTATION? A CASE STUDY OF MAPISA NQAKULA (FORMER SPEAKER OF NATIONAL ASSEMBLY, SOUTH AFRICA)

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ABSTRACT

No legal duty for the state fund legal bills for employees who commit misconduct/corrupt activities in the workplace. The former speaker of National Assembly of South Africa has been charged with several charges of corruption, some of those allegations occurred whilst she was still a Minister of Defence. The South African government has approved finance to her legal team but later on changed that decision after a public uproar. The question that needs to be answered is whether there is any legal basis for government (State Attorneys) to foot the bill of a private person. This study shall conduct further research in a form of a comparative study with other government officials (Former President Zuma, Former Public Protector Adv Busisiwe Mkhwebane etc) who faced criminal proceedings and their legal teams were funded by government.

Keywords: corruption, workplace, funding, state, legal representation.

INTRODUCTION

In South Africa, the provision of funding legal services to a private person is provided for in terms of section 3 (1) or 3 (3) of State Attorneys Act 56 of 1957 or Legal Aid of South Africa Act 39 of 2014. An officer in the office of the State Attorneys Pretoria (South Africa) approved an application for funding of a private person's legal costs made by former Speaker of National Assembly, Mrs Mapisa Nqakula. Later on, after a public uproar, such decision was overturned by the senior officials, alleging that there was no legal basis for such approval. This study shall conduct research to investigate whether it was just and equitable to approve such application in the first place. The study shall also pay its focus on the case of the former Public Protector, Adv Busisiwe Mkhwebane whose legal costs were paid for by the state. A judicial precedent set by the Supreme Court of Appeal in the case of Zuma v Democratic Alliance and another shall also be examined.

PROVISION OF LEGAL FUNDING TO PRIVATE PERSONS

In South Africa, Section 35 (3) (f) and (g) of the Constitution, guarantees to every accused person a right to a fair trial, which includes the right to choose and be represented by a legal practitioner of his own choosing and to be informed of this right accordingly. Should such accused person be in a position where he/she cannot afford a legal practitioner, he/she must be provided with same at the state's expense. Obviously after a means test has been conducted where a determination shall be made in terms of his income.

The test is obviously different when it comes to employment issues or where a person is accused of committing misconduct whilst on duty. Traditionally, workers do not have a right to demand any form of funding for

their legal representation should they be summoned to appear before a criminal court or a disciplinary enquiry. However, in South Africa, things are at times done differently, depending on who is making the application.

On or around 2008, state attorneys approved an application for funding of Mr Zuma's corruption trial when he was facing allegations of receiving bribes from a French company which supplied South Africa with arms (commonly known as the arms deal). In essence, Mr Zuma is alleged to have received bribes amounting to around R500 000 a month for several months in exchange of political protection. Whilst in court, challenging a decision to declare the funding of his legal team unlawful, Mr Zuma argued that the State Attorney was authorised by either section 3 (1) or section 3 (3), of the State Attorneys Act to appoint and pay private attorneys to represent him. However, a proper reading of the Act shows that neither section authorises the State to cover private legal costs. They provide only for the provision of services by the State Attorney. Section 3(1) of the Act reads:

'The functions of the office of the State Attorney and of its branches shall be the performance in any court or in any part of the Republic of such work on behalf of the Government of the Republic as is by law, practise or custom performed by attorneys...'

On the other hand, s 3(3) of the Act, provides:

'Unless the Minister of Justice and Constitutional Development otherwise directs, there may also be performed at the State Attorney's office or at any of its branches like functions in or in connection with any matter in which the Government or such an administration as aforesaid, though not a party, is interested or concerned in, or in connection with any matter where, in the opinion of the State Attorney or of any person acting under his authority, it is in the public interest that such functions be performed at the said office or at one of its branches.'

It is clear from the reading of the above section that, section 3(3) permits the State Attorney to perform the same functions: (i) in or in connection with any matter in which the Government though not a party 'is interested or concerned in' or (ii) in connection with any matter where, in the opinion of the State Attorney or of any person acting under his authority, it is 'in the public interest' that such functions be performed. To fall within the scope and ambit of s 3(3), it must be evident that the performance of functions by the State Attorney, in matters where the Government is not a party, is justified by the Government's interest or concern in the matter or that it is in the public interest that the State Attorney assume the functions.

In paragraph [38] of the above judgment, the SCA, held that the test for a government or public interest under s 3(3) cannot be reduced to whether the person requesting legal assistance currently holds, or held, high office in the Government. Indeed, at the time of some of the payments Mr Zuma was not even in the Government. The fact that 'there was a possibility of the Deputy President being implicated' or that 'the allegations were related to Mr Zuma holding office either as an MEC in the Province of KwaZulu-Natal or Deputy President', could never be determinative of whether there is a legitimate Government or public interest in extending the State Attorney's services to him.

Another case in point is that of *Adv Busisiwe Mkhwebane v Speaker of National Assembly* who was facing charges which amongst others, poor performance. The former Public Protector was appearing before a parliamentary committee in terms of section 194 of the Constitution in order to determine her fitness to hold office. Surprisingly, her legal team was funded by the office of the Public Protector South Africa. This is after she took the Speaker of the National Assembly to court, ironically, the Speaker was Mrs Mapisa Nqakula, so that she could be given a right to legal representation.

The Constitutional Court granted her the right to be represented by a legal practitioner of her choice. However, the court never made any pronouncement on who should foot such bill. At the end of the day the office of Public Protector South Africa spent more than R30 million in her legal fees which is not supposed to have been spent. Such spending amounted to irregular spending or fruitless and wasteful expenditure in violation of section 217 of the Constitution and section 1 as well as section 38 of the PFMA.

CONCLUSION

Over the years, the South African government spent millions of rands in legal fees to private individuals. In the case of the former Speaker of National Parliament, Mrs Nqakula, it would have been a very serious irregular expenditure, had the Minister of Defence, Mrs Thandi Modise decided not to overrule such approval. The office of State Attorney South Africa seems to have deliberately ignored the principles of the Zuma Judgment in the SCA. They relied on the same section that was found wanting by the SCA in the Zuma judgment, which is a very serious misconduct. That section authorises the State Attorney to act on behalf of Government and to perform the work ordinarily performed by attorneys and other legal representatives. The purpose of the section is to give the State Attorney a legal mandate to act as the Government's legal representative. Just like Mrs Nqakula, Mr Zuma's legal team was to perform and procure services not 'on behalf of the Government of the Republic', but on behalf of Mr Zuma in his personal capacity. In all of the litigation, Mr Zuma was cited in his personal capacity; the orders sought would have been enforced against him personally, not against any government office or department. The fact that Mr Zuma held high office in the executive does not mean that in representing him the State Attorney was acting 'on behalf of the Government'.

The above position is similar to that of Adv Mkhwebane whose legal team was funded by the state and same ought not to have been paid. As it stands, the state attorney should be directed to recover all those monies spent on Adv Mkhwebane's legal team as there was no legal basis to be paid. There is no way that an employer may charge an employee for misconduct and be expected to foot the bill for the employee's defence. All the officials who approved the above funding (Nqakula and Mkhwebane) should be charged with gross misconduct or dereliction of duties where if found guilty they may be dismissed.

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UNION MEMBERSHIP DWINDLING IN SOUTH AFRICA: IS IT TIME FOR THE ADOPTION OF CANADIAN, NEW ZEALAND, UNITED STATES AND THE UNITED KINGDOM'S POSITIONS ON OTHER FORMS OF NON-UNION EMPLOYEES' REPRESENTATION?

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ABSTRACT

There are several trade union security arrangements in the workplace accorded to a majority union which some permits all workers to join the majority union or face dismissal. In South Africa, trade union membership is at less than 25% of the entire workforce meaning that workers who are not members of a trade union are in majority by more than 75%. This study intends to conduct research on whether employers may be compelled to enter into a collective bargaining with workers who do not belong to any union. Countries such as Canada, US, UK and New Zealand recognise both rights and workers are permitted not to join a majority trade union despite the presence of trade union security arrangements.

Keywords: trade union, right to join, employees, non-union members.

INTRODUCTION

The democratisation of the Republic of South Africa in 1994, led to the promulgation of the Labour Relations Act (LRA) and its main purpose amongst others is to promote labour peace and social justice. The LRA gave effect to section 23 of the Constitution which includes employees' rights to join a trade union. Just like in any other country in the world, workers in South Africa have over the years used the services of trade unions as their voice in the workplace. World-wide trade union membership has been declining over the years due to many factors, with workers opting for other forms of non-union employees' representation or no union representation at all while others are not represented at all. However, where there are trade union security arrangements, employees would be compelled to become union members through closed shop agreement or pay agency fee because they cannot ride for free.

As stated above, the issue of trade union membership is a worldwide challenge as it is at its lowest level and in South Africa only 25% workers are unionised. It is a well-known fact that a traditional vanguard of workers' rights in the workplace is a trade union. A question that needs to be asked is whether trade unions are still relevant just like in the past and/or whether trade union security arrangements violate employees' freedom of association? This study, through its research questions, attempts to address the above question.

This study intends to further examine other ways in which employees may be allowed to exercise their right to freedom of association without any literal coercion or be allowed to form and/or become members of non-union employee representation or non-statutory employee representation (company union/ NER). Employees who find themselves in the workplace which has trade union security arrangements in place do not have a choice not to join a union (especially if he is not a conscientious objector), it's either they join the union or face dismissal. In 1996, the Republic of South Africa ratified convention no: 87 of 1948 and no: 98 of 1949 of the International Labour Organization (ILO), these conventions are regarded as the cornerstone of the right to workers' freedom of association. This study most importantly, considers position of countries such as Canada, United States, United Kingdom, New

Zealand on trade union security agreements and freedom of association. The reason behind research on the above-mentioned countries is because the said countries permit what is commonly known as ‘company union’, or forms of non-union employee representation and same has been working very well in their respective countries wherein employees are not compelled to join a trade union despite trade union security arrangements in place. In addition to the afore-mentioned countries, Germany also recognises the right not to associate and employees are also allowed to form and or join non-union employee representation, non-statutory employee representation or company union.

In addition to international case laws, this study shall also deal international instruments regulating workers freedom of association as well as trade union security arrangements and some of the selected relevant ILO instruments, Freedom of Association, and protection of right to organise convention, 1948 (No.87), Right to organise and collective bargaining convention, 1949 (No.98), Workers’ representative Convention, 1971 (No.135), Rural Workers Convention, 1975 (No.141), Labour Relations (Public Service) Convention, 1978 (No. 151). Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) and the Right to Organise and Collective Bargaining Convention, 1949 (No. 98).

OTHER FORMS OF NON-UNION EMPLOYEE REPRESENTATION IN CANADA, UNITED KINGDOM, UNITED STATES AND NEW ZEALAND

In comparison with other countries, union security arrangements are highly regulated by law and court decisions in the United States and to a lesser degree in the United Kingdom. In Canada, the legal status of the union security agreement varies from province to province and at federal level, with a few provinces permitting, but not requiring it, but the majority of provinces (and the federal government) requiring it if the union requests it. Canada's forms of non-union employee representation plans exist outside the purview of collective bargaining laws. Forms of non-union forms of employee representation are lawful in the country, provided they are not deliberately designed to thwart trade union organising. In New Zealand, just like in Canada, employees are allowed to form and join company union or forms non-union employee’s representation association.

In the UK, the choice of belonging to a union has parallel protection in English law to the right not to join. In most Western European countries, the closed shop (one form of the union security agreement) is banned, while other forms go unregulated in labour law. But this is not a uniform conclusion, and law may vary widely. For example, in Germany both the right to join a union and the right not to join a union are equally protected by law and the courts, and all forms of union security agreements are banned. The law in Belgium has similar provisions. Still, since participation in the unemployment insurance system is compulsory and only unions have the right to administer this system, union membership in Belgium remains high. Outside North America and Western Europe, the legal status of union security agreements varies even more widely. In New Zealand, as of 1988, the closed shop was compulsory where a union organised the workplace. In the Philippines, various types of union security agreements are permitted under labour law. In Mexico, the closed shop was mandatory until the early 1990s, when a change in federal law permitted the union shop, agency shop, or no agreement at all. But because of the political ties between unions and the governing party in Mexico and other ways in which Mexican law favors established unions, the closed shop is essentially still the norm.

Many countries, however, have not addressed the issue of union security agreements. Neither Indonesian nor Thai labour law addresses the issue, and in both countries collective bargaining, union administrative procedures, and dues collection are so weak that the union security issues rarely arise. In Australia, the legal status of union security agreements has varied widely across each state and the national government over time. Australian labour law does not explicitly regulate union security agreements. However, various forms of union security agreement have been favoured at one time or another by each state, territory, or the national government, effectively regulating the favoured type of union security agreement and disadvantaging its other forms.

The Republic of South Africa can adopt position of countries such as Canada, US, UK and/or New Zealand of dealing with union security arrangement in a manner that does not force employees to join the union but may join or be permitted to be part of forms of non-union employees’ representation or company union. It is only then that the gap in law that regulate freedom of association shall be achieved because everyone will be truly free. As it stands,

there is no law that permits forms of non-union employees' representation or company union whereas some employers such as the University of Venda and South African Airways permits employees who are not members of any trade union to form an association of non-union employees' representation for purposes of employer employee engagement. In the US, due to the 2018 Judgement of *Januz*, the Supreme Court held that if an employee is a non-union employee but a member of the public sector, that person does not need to pay union fees. Many public sector unions required non-union members to pay dues, or at least some amount, because the union often negotiates for their benefit. However, a private sector employee may have to pay union fees if they live in a "Right to Work" state. On the other hand, if a person works for a railroad or airline, that person does not have to join a union but may have to pay union fees.

In order to implement forms of non-union employee representation, this study shall focus on factors which may be employed in order to have the right to freedom of association which will not be limited by union security arrangements. If the above proposed amendment into our labour laws is done successfully, it might strengthen employer/employee relationship in the workplace and no employee will be forced to join a union but will also have an option of joining forms of non-union employee representation association and whatever that employees choose will be on their free will. It is important to state that as indicated above it is only a fraction of the workforce that is unionised in South Africa and minority are compelling majority to join them through trade union security arrangement. This is a clear indication that workers do not have hope in trade unions and as a result trade unions are becoming irrelevant. In countries stated above where they permit forms of non-union employee representation association, trade unions were never weakened or compromised.

Should the above questions be answered in the affirmative, then employees will exercise their right to freedom of association without any violation or limit due to trade union security arrangements in place because they will join a union or association voluntarily and out of their free will. It is obvious that collective bargaining may only take place between an employer and a registered trade union and in order to have group of employees (non-union members) taking part in the 'collective bargaining the law to that effect will have to be amended. The question will be whether workers' power to bargain will not be compromised? It should be borne in mind that it is the prerogative of the employer to recognize a union or group of employees in the workplace, whether registered or not. It should be noted that a recognition agreement is a written statement of an employer's intention to recognize a trade union as a collective bargaining representative of its members. If this system of allowing employees who are not willing to join a union (or being excluded from agency shop agreement and closed shop agreement) succeed, it should mean that our legislation should also be amended to the extent that those employees are not allowed to benefit from the efforts of the union and employer's negotiations. They should therefore be allowed to enter the negotiation table through their own structure, which will be recognized by the employer for collective bargaining purposes only.

These will pave way for the right to freedom of association which will include the right not to associate because in South Africa this right is not exercisable where there is trade union security arrangement in place. If this right is granted, employees are now going to weigh either to lose the benefits or to join a union of their choice. On the other hand, an employer can allow employees to group themselves for collective bargaining purposes and negotiate with him. Employees will not be forced by anyone/law to join the union but by the circumstances around them at the workplace and therefore will have the freedom of association which includes the right not to join. Trade union monopoly will be reduced, and small unions will flourish. Trade union security arrangements laws in South Africa will then be amended and be structured in a manner that strengthen freedom of association rather than violate human rights, a move which is supported by the ILO.

CONCLUSION OR RECOMMENDED SOLUTION

The research has pointed out several issues which shows that South African labour laws and trade union security arrangements have a gap in its current state as more protection is given to trade unions than workers. Therefore, there are recommendations that need to be implored and may be considered by the legislature to improve the conditions of workers in the workplace. Those recommendations are as follows:

Establishment of Non-union/non-statutory Employee Representation

The research recommends that the LRA be amended to give way for non-union/non-statutory employee representation so that employees can have freedom of choosing whether to join a union even where a registered trade union in the workplace exists. This is going to be easy in this country as employees have both the right to join and not to join and it is unfortunate that they cannot exercise their right not to join where there are trade union security arrangements in place.

Abolishing/scrapping out Section 26 of the LRA (Closed Shop Agreement)

That the LRA be amended in a way that section 26 be scrapped out completely. It is not as lenient as an agency shop agreement in that the latter does not require members to become union members of the majority union but just requires a payment of agency fee to avoid free riding. Agency shop agreement may be retained at the expense of closed shop agreement because is more lenient towards workers' rights to freedom of association. The abolishing of the above provision will leave employees free in the workplace and they will not be compelled by any trade union security arrangements to become union members.

Amendment of Section 27, 29, 40, 41 and 56 of the LRA

As it currently stands, it is only registered trade unions and registered employers' organisations that may establish a bargaining council. Should the legislature decide to pass laws that legalises forms of non-union employee representation in the workplace, section 27 of the LRA should therefore amended wherein it also permits forms of non-union employee representation to establish a bargaining council. Section 29 of the LRA should equally be amended to permit forms of non-union employee representation to register a bargaining council.

Amendment of Section 39 (2) which Deals with the Establishment of a Statutory Council

In terms of the above section, it is only a registered trade union that may make an application for the establishment of a statutory council. In order to pave way for forms of non-union employee representation, this section needs to be amended.

Amendment of Section 40, 41 and 56 or Any Other Provision of the LRA that Only Recognises a Registered Trade Union as Workers' Representatives

In order to pave way for other forms of non-union employee representation, the legislature should amend section 40 of the LRA which only permit a registered trade union to establish and register a statutory council. Other forms of non-union employee representation should also be permitted to establish and register a statutory council as well as being admitted to any particular council.

Adoption of UK, US, New Zealand and Canadian System on Trade Union Security Arrangements Regulations

South Africa can still also adopt the system which is used in UK and US where non-union employees are not compelled to join the union through trade union security arrangements. Most importantly, in New Zealand non-union employees are allowed to negotiate with the employer individually. The legislature may opt to permit deduction of agency fee in case of non-union employees, but they must not be compelled to join the union through any trade union security arrangements. This happens in New Zealand and in Canada where non-union employees remain contributing agency fee to the majority union as a carrot to majority union. It will therefore be a bit easier to convince unions in the workplace, most importantly when they are retaining agency fees. Given the current statistics on trade union membership in the workplace in general, less than 25% of workers belong to the union and it is therefore proper to give those who do not wish to belong to any union their freedom.

The South African Constitution has been modelled around the Canadian Constitution. It is therefore trite that adopting Canadian or any of the afore-mentioned countries will be much easier for South Africa because of the constitutional similarities.

Amendment of Provisions that Regulate Collective Bargaining

The LRA should be amended to allow collective bargaining by employees who are not members of any registered trade union. The LRA should be amended to provide protection to employees who choose to enter the negotiation table through their own non-union structure, which will be recognised by the employer for collective bargaining purposes only, this is because currently collective bargaining may only take place between the employer or registered employer's organisation and one or more registered trade union. Permitting non-union on the collective bargaining table will be similar to a position in Canada which also permits collective bargaining between non-union employees and the employer.

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FROM THE RETAILERS TO OUR BODIES, AND THEN? THE LEGAL IMPACT OF THE TEXTILE AND CLOTHING INDUSTRY ON THE ENVIRONMENT IN SOUTH AFRICA

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ABSTRACT

The volume of clothing purchased in South Africa has significantly increased due to the expansion of the middle-income group; yet, only 12% of textiles are recycled and less than 1% are repurposed. Although no statistics are available, it is estimated that the textile sector contributed R70 billion to the gross domestic product in South Africa for the year 2016, and a total of 210 000 people were employed in this industry in 2020. However, these figures do not account for the environmental impact of this industry. This paper presents an overview of the foundation and an evaluation of the clothing and textile industry regarding the environment and carbon emissions. The textile industry is a contributor to climate change. Different environmental impacts such as resource depletion, air and water pollutants, energy consumption and chemical use will be screened through the lens of the South African constitutional mandate to ensure an environment for current and future generations that are not harmful and will be screened through the lens of the South African constitutional mandate and evolving legislation. Legislation and case law must be understood within the context of the textile industry and how government can achieve the objectives set out in section 24 of the Constitution of the Republic of South Africa, 1996 and the National Environmental Management Act 107 of 1998. Clothing waste is regulated by the National Environmental Management: Waste Act 59 of 2008, while the users of clothing are protected by the Consumer Protection Act 68 of 2008 and The Extended Producer Responsibility Regulations of 2020. This paper presents a discussion on the environmental impact of the textile industry and how this industry is regulated in South Africa.

Keywords: climate change, clothing, constitutional mandate, environment, environmental impacts, recycling, textiles.

INTRODUCTION

The United Nations Environment Programme (UNEP) states that the fashion industry is one of the most powerful marketing engines in the world. This includes the brands, designers, image-makers, as well the media influencing the identities, values and actions of humans. This further impacts on consumption patterns, contributing to climate change around the world (UNEP, 2023, p. 1). Globally, the textile industry contributes to foreign exchange revenue, produces products that are essential to human welfare, and provides employment, with an estimated 300 million workers being women (UNEP 2023, p. 1). In 2021, the global textile market was valued at US\$ 655 billion (Research and Markets 2022, p. 1), with an estimated annual growth rate of 6% up to 2025 (Teodoro & Rodriguez, 2020, p. 1).

The volume of clothing purchased in South Africa has increased substantially as a result of the expansion of the middle-income group, with only 12% of textiles being recycled and less than 1% repurposed into clothing. Although no definitive figures are available, it is estimated that the textile sector contributed approximately R70 billion to the gross domestic product in South Africa in 2016, and that 210 000 people were employed in the textile industry in 2020. However, these estimations do not extend to include the environmental cost factor associated with this industry (TIPS 2022, p. 1).

While South Africa is a major importer of textiles, clothing and footwear, it is also a producer and an exporter of high-quality wool, mohair and cotton (Jenkin & Hattingh, 2022, p. 5). This manufacturing base of South Africa

has, however, experienced a decline since the 1990s due to the influx of cheap clothing from Asia (Statista 2021, p. 1). Due to this decline and the influx of imported textiles, clothing and footwear, the South African government has launched the *South African Retail-Clothing, Textile, Footwear and Leather Value Chain Master Plan to 2030* (the master plan), to promote the transition to financially, sustainable and dynamic products, and a growth in local procurement, capabilities and employment (DTIC 2020a, p. 1). The master plan's objective is to ensure that the South African retail, clothing, textile, footwear and leather (R-CTFL) industry is ethical and environmentally responsible; it does, however, not refer or acknowledge climate change or environmental sustainability in any of its commitments (DTIC, 2021, p. 1). The following section will address and analyse the regulation of the textile and clothing industry internationally.

INTERNATIONAL REGULATIONS

As indicated above, the fashion industry stands out as one of the largest contributors to environmental degradation, encompassing the climate and ecological crisis facing the world, and more specifically, South Africa. It is estimated that the fashion industry is responsible for 2–8% of global carbon emissions, with more recent authoritative reports placing the industry at 4%. The fashion industry also has an impact on the following Sustainable Development Goals (SDGs) (UNEP, 2022, p. 1):

- SDG 1: No poverty
- SDG 5: Gender Equality
- SDG 6: Clean water and sanitation
- SDG 8: Decent work and economic growth
- SDG 12: Responsible consumption and production
- SDG 13: Climate Action
- SDG 14: Life below water.

Considering that great emphasis is placed on sustainability within the fashion, textile and clothing industry, reference should be made to what is meant by 'sustainability'. The United Nations Brundtland Commission, 1987, defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs". (Brundtland Report: Our Common Future, 1987). Hethorn and Ulasewicz (2015:1) defined sustainability in the fashion industry as a process that "[a]voids harm to the people; avoids harm to the planet; enhances the well-being of people who interact with it; and enhances the well-being of the environment in which it is developed and used".

This definition must further be understood as indicating that for the processes in the fashion industry to be sustainable, it should be "environmentally sound, socially just and equitable, culturally respectful, humane and economically viable". *The Mckinsley Report – Fashion on Climate* (2020) indicated that "[i]f abatement effort continues to expand at the current rate, the industry can maintain GHG emissions at 2.1 billion tonnes in 2030. In net terms, this represents an abatement potential of around 636 million tonnes." The question is whether the fashion, textile and clothing industries can integrate sustainability into the supply chain. The answer is yes.

Possible strategies to integrate sustainability into the supply chain is to partner with suppliers who are already incorporating sustainable practices, or to assist suppliers to become more sustainable. Both approaches present positives and negatives when implemented. If a specific brand, for example, chooses a sustainable supplier, there is the possibility of an increased price and a longer lead time. The other challenge is that if a brand assists a supplier to be more sustainable, the supplier might not have the knowledge, nor the ability to drive such change (Forest Valley, 2022, p.1).

Consumers also play an important role in the pursuit of sustainability within the fashion, textile and clothing industry. They can promote sustainability by changing their own consumption habits when buying and discarding clothing items. Consumers should also not be influenced by the term 'greenwashing', used as a marketing tactic by brands to deceive the consumer by including the words "green", "sustainable", "eco-friendly" etc. Research should be conducted to determine what is "sustainable", and to assess whether a company is truly transparent and honest in their marketing and product claims (St. Catherine University, 2022, p.1). Other sustainability factors to consider are:

- to only buy what you need, when you need it;

- to choose natural fibres and single fibre garments;
- to wear clothing for longer, if possible;
- to take care of clothing (as a consumer, try to wash your clothing less, and repair items to extend their lifespan);
- to, if possible, upcycle clothing item(s); and
- to buy second-hand or vintage clothing items, and sell old clothes. If you are discarding your items, pass them to someone who will wear it, or donate it to a thrift shop (Cho, 2021, p. 1).

It is evident from the discussion above, that both the manufacturer and the consumer are important role-players in the regulation of the clothing, textile and fashion industry. The subsequent paragraphs will focus on sustainable development and recycling programmes as established internationally, as well as in South Africa.

SUSTAINABLE DEVELOPMENT AND RECYCLING

Sustainable development is a phrase associated with economic, social and environmental factors in developed and developing countries. The United Nations Environment Programme (UNEP) is exploring the role of sustainable fashion communication, which will in essence change consumer education and challenge the lifestyle of these consumers, resulting in systemic change in the fashion, textile and clothing industry. The UNEP aims to achieve the transition towards a sustainable and circular textile value chain (UNEP, 2023, p.1),

The Sustainable Apparel Coalition (the SAC) was established in 2010, and the Higg Index, in 2011, as a tool for the standardised measurement of value chain sustainability. This measurement tool is regarded as a universal language and platform to track and measure the social and environmental impact of businesses within the fashion, clothing and textile industry. The Higg Index comprises five (5) tools to assess the social and environmental performance of the value chain and the environmental impacts of products. The Higg Product Module assesses five (5) environmental impacts – global warming potential, nutrient pollution in water, water scarcity, fossil fuel depletion and chemistry (Sustainable Apparel Coalition: 2023, p. 1). The assessment tools include:

- Higg Facility Environmental Module (FEM);
- Higg Facility Social and Labour Module (FSLM);
- Higg Brand and Retail Module (BRM);
- Higg Materials Sustainability Index (MSI); and
- Higg Product Module (PM) (Sustainable Apparel Coalition: 2023, p. 1).

In 2011, Greenpeace released the *Dirty Laundry Report*, which addressed the problem of toxic water pollution as a result of the release of hazardous chemicals by the textile industry in China. The results of the investigation showed that hazardous and persistent chemicals with hormone-disrupting properties were dumped. Greenpeace is of the opinion that brands and suppliers identified in the report should be encouraged to “become champions for a toxic-free future”. This can be achieved by eliminating the release of hazardous chemicals from their supply chain and products (Greenpeace, 2011, p. 1).

The 2018 Fashion Industry Charter for Climate Action also addresses the sustainability of the textile and fashion industry. *The Special Report* on Global Warming, published by the Intergovernmental Panel on Climate Change, highlighted the urgency to address climate change and to align itself with the Paris Climate Change Agreement. The Fashion Industry Charter for Climate Action is an action work programme that encourages fashion stakeholders to develop a coherent, unified position regarding the earth's climate. The aim is “to drive the fashion industry to net-zero Greenhouse Gas emissions by no later than 2050 in line with keeping global warming below 1,5 degrees” (United Nations Climate Change, 2023, p.1).

South Africa also addresses sustainability in the textile and clothing manufacturing industry. An example is the Better Cotton Programme. Cotton South Africa has funded the activities offered by the programme; however, currently, insufficient funds do not allow continued support to this programme in South Africa. The Better Cotton Programme aims to enhance sustainability practices in the cotton sector in South Africa (Better Cotton, 2023, p. 1).

In South Africa, sustainability initiatives are also investigated by the National Cleaner Production Centre South Africa (NCPC-SA), funded by the United Nation InTex Project, the Council for Scientific and Industrial

Research (CSIR) and the GreenCape/City of Cape Town. The Centre is the drive for concrete transition towards a green economy through efficient resources and cleaner production interventions. Its focus is on the industrial and elected commercial and public section in order to enhance efficiency, sustainability and competitiveness (NCPC, 2023, p. 1).

The discussion above provides an analysis of sustainable global and local initiatives. It should, however, be understood within the context of South African legislation and the interpretation thereof. The discussion that follows will shed light on the textile, clothing and fashion industry's environmental impact within South Africa.

THE IMPACT ON THE ENVIRONMENT

The clothing, textile and fashion industry in South Africa is seen as a major contributor to environmental degradation and climate change. It depletes the resources, pollutes the air and water, and it uses energy and hazardous chemicals (Jenkin & Hattingh 2022:14).

Climate Change

The fashion industry is one of the largest contributors to environmental degradation, which includes the climate and ecological crisis facing the world and more specifically South Africa. It is predicted that the fashion industry is responsible for 2–8% of global carbon emissions, with more recent authoritative reports placing the industry at 4% (ClimateSeed, 2022, p. 1). The clothing, textile and fashion industry is considered to be one of the largest greenhouse-gas (GHG) emitters in the world, surpassing the combined submission of international flights and maritime shipping (Jenkin & Hattingh, 2022, p. 14). The demand for clothing is increasing with unprecedented speed. In 2015, the demand for clothing reached 62 million tonnes; however, it is estimated that it will increase to 102 million tonnes in 2030 (ClimateSeed, 2022, p. 1).

GHG emissions are also associated with the use of energy during the washing of the textiles. In fact, 15% to 20% of the energy used is associated with the production process (Munasinghe, Druckman & Dissanayake, 2021, p. 320).

Climate change is regulated by various pieces of legislation. This includes the Climate Change Bill, which was passed by the South African National Assembly in October 2023, and the Bill will now be sent to the National Council of Provinces (NCOP) for consideration. The Climate Change Bill addresses specific offences, financial mechanisms to support the response to climate change, and specific definitions, which improve the coherence of the Bill and the powers and function of the Presidential Climate Commission (PCC) (Alt.advisory, 2023, p. 1). The National Climate Change Response White Paper (NCCRWP) addresses an intended decrease in GHG emissions for South Africa and is in the process of developing the National Development Plan 2030 for South Africa. The National Environmental Management: Air Quality Act 34 of 2004 and the National Greenhouse Gas Emission Reporting Regulations (NGERs) are seen as other measures to address climate change. The Carbon Tax Act 15 of 2019, specifically dealing with climate change, further provides for the imposition of sustainable and cost-effect taxation on GHG emissions (Van Wyk 2022, p. 1).

Resource Depletion

Water is necessary for the production of textiles, and land is used to grow cotton and other fibres. It is estimated that in 2015 the global textile and clothing industry used 79 billion cubic metres of water. It is further submitted that 2 700 litres of fresh water are needed to produce a single cotton t-shirt (enough to meet one person's drinking needs for almost 2,5 years) (European Parliament, 2020, p. 1).

Air Pollutants

The estimation is that the fashion industry is responsible for 2-8% of global carbon emissions, which is more than the combined emissions of international flights and maritime shipping (European Parliament, 2020, p. 1).

Waste to Landfill

The South African landfill capacity is under stress due to (amongst other contributors) the textile industry. It is estimated that a total of 6% of the total landfill is due to textile waste. The global estimation is that approximately 92 million tonne of textile waste is generated per annum, and this will most probably increase to 134 million tonnes per annum by the year 2023. It is significant to note that, considering the volume of waste that is generated, less than 1% is recycled back into clothing (May, 2022, p. 1). Silvestri (2021, p. 1) estimates that 21 billion tonnes of textiles are landfilled annually.

Water Pollution

The clothing, textile and fashion industry is also water intensive, and it is estimated that the industry consumes between 79 and 93 billion cubic metres of water per annum (Helps, 2021, p. 1). During the manufacturing process, the stages such as dyeing; chemical bathing, used to design, source and bleach; and mercerising, the industry relies on water-intensive systems, and also contributes to water pollution during the disposal process (Jenkin & Hattingh, 2022, p. 15).

It is submitted that textile production is responsible for approximately 20% of water pollution, globally, due to the dyeing and finishing of products. The laundering of synthetic clothes accounts for 35% of primary microplastics that are released into the environment, ultimately ending up in our food chain. During the first few washes, microplastics from textiles are released into the water system. The washing of synthetic products contributes to more than 14 million tonnes of the microplastics that have accumulated on the bottom of the ocean (European Parliament, 2020, p. 1).

Water use and pollution are regulated by environmental law on national, provincial and local levels. The most prominent statutes governing water management in South Africa are the National Water Act 36 of 1998 (NWA) and the Water Services Act 108 of 1998 (WSA). The NWA is designed to protect South Africa's water resources, to promote sustainable and equitable use, development, conservation, management and control for the benefit of current and future generations. In terms of liability and accountability regarding water pollution, the NWA is focused on the "polluter pays" and the "cradle to the grave" principles. This supposes that the person associated with the pollution of the water resource may be held liable and convicted of pollution if no reasonable steps were taken to prevent or minimise the pollution (sections 1 and 19 of the NWA).

The remainder of the paper will outline the analysis of the legislative framework applicable to the clothing, textile and fashion industry in South Africa. The above discussion, regarding the environmental impacts, serves as basis for the discussion that follows. The section will then be followed by the recommendations made to the textile, clothing and fashion industry.

REGULATION IN SOUTH AFRICA

A new report – *Designing Climate Compatible Industrial Strategies for South Africa: The Textiles Value Chain which explores the impact of the textile manufacturing section on the environment* – was commissioned by government (May, 2022, p. 1). Labelling requirements for clothing, footwear and textiles are regulated in terms of the Consumer Protection Act 68 of 2008. According to the Consumer Protection Act, all footwear, clothing and textiles imported into South African must have a label that is permanently affixed, indicating the country of origin, care instructions, as well as the fibre content.

Section 24 of the Consumer Protection Act, read in conjunction with Government Gazette No 9515 (published the 1st of April 2011), stipulates that no textiles, clothing, shoes and leather goods may be imported if it does not adhere to the following specification: It should permanently and conspicuously display in a legible manner the country in which the textile, clothing, shoes or leather goods were manufactured or produced, and if it is locally produced or manufactured, but with imported material, it must indicate that the product is made in South Africa from imported materials.

The National Regulator for Compulsory Specifications (NRCS) requires that certain textiles and clothing articles must meet certain standards. This means that certain clothing manufacturing businesses require a letter of authority before being able to import or sell clothing or textile articles. It further entails that the clothing or textile articles should undergo mandatory testing and certification. In terms of the fibre content and care labelling of all textiles and leather products, the following standards should apply: SANS 10235 – 2007, Edition 2.1, “Fibre-content labelling of textiles and textile products” and SANS 10011 – 2007, Edition 4.1, “Care labelling of textile piece-goods, textile articles and clothing”. The supplier should adhere to the following regulations:

- That the supplied textile or leather products are appropriately labelled or marked;
- that the textile or textile article can – during its life cycle – be satisfactorily cleaned by means or procedures indicated on the article through symbols;
- that the textile and trims have been appropriately tested to ensure that the fabric and garment trims are correctly indicated on the care labels;
- that the appropriate test report of the fabric and trims for each item is accompanied by the “Approval samples/PP samples” and that the samples are submitted to the relevant garment technologist for approval; and
- that the appropriate test reports for the fabric and trims are available at the auditing stage.

To comprehend the role of the media in product and textile advertising, the Consumer Protection Act and the Advertising Standards Authority’s Code of Advertising Practice (ASA) provide clarity in this regard. The standards pertaining to advertising is to ensure that the public is not misled in any way. Section 41 of the Consumer Protection Act states that all advertising must be fair and reasonable. Advertising may not suggest a false or misleading representation of the textile or clothing article. The ASA requires that the advertisement be truthful and honest.

In terms of section 20 of the Consumer Protection Act, the consumer has the right to return clothing or textiles if the particular clothing article or textile product is deemed to be unsafe or defective. The consumer may then also receive a refund.

Extended Producer Responsibility (EPR) places the responsibility for the disposal of manufactured goods on the manufacturer. EPR aims to incentivise manufacturers to extend the life of the products and to shift some of the environmental cost, possibly associated with the disposal, from the consumers and the environment to the producers. This process is regulated by the National Environmental Management: Waste Act 59 of 2008 (NEM:WA), read in conjunction with Extended Producer Responsibility Regulations of 2020 (Davies & Mchunu, 2023, p. 1). The Extended Producer Responsibility Regulations of 2020 seek to hold producers, importers, brand owners, and in certain instances, retailers, responsible for the life cycle of the product. This is also known as the “cradle-to-cradle” approach (Davies & Mchunu, 2023, p. 1).

In terms of environmental regulation, one must consider that common practices within the clothing, textile and fashion industry leave behind a trail of environmental degradation. The National Environmental Management Act 107 of 1998 (NEMA) conforms to the idea of sustainable development. As seen above, the textile, clothing and fashion industry strives for sustainable development. NEMA, in section 1, defines sustainable development as “the integration of social, economic and environmental factors into planning, implementation and decision making so as to ensure that development serves present and future generations”. The concept of sustainable development goes to the fundamental criteria of environmental, economic and social support in the clothing, textile and fashion industry. In order for the clothing, textile and fashion industry to be sustainable, the following should be considered:

Environmental

- The impact on local environmental quality:
 - Impact of the clothing, textile and fashion industry on air quality
 - Impact of the clothing, textile and fashion industry on water pollution
 - Impact of the clothing, textile and fashion industry on the generation or disposal of solid waste
 - Any other positive or negative environmental impacts of the clothing, textile and fashion industry (such as the impact on noise, safety, traffic, or visual impacts).
- The impact of the clothing, textile and fashion industry on natural resources:

- Impact of the clothing, textile and fashion industry on community access to natural resources
- Impact of the clothing, textile and fashion industry on water consumption, and the sustainability of minerals or other non-renewable natural resources
- Impact of the clothing, textile and fashion industry on the efficiency of resource utilisation.
- The impact of the clothing, textile and fashion industry on biodiversity and ecosystems:
 - Changes in local or regional biodiversity arising from the clothing, textile and fashion industry.

Economic

- Economic impact:
 - Impact of the clothing, textile and fashion industry on foreign exchange requirements
 - Impact of the clothing, textile and fashion industry on existing economic activity in the area
 - Impact of the clothing, textile and fashion industry on the cost of energy
 - Impact of the clothing, textile and fashion industry on foreign direct investment.
- Appropriate technology transfer:
 - Positive or negative implications for the transfer of technology to South Africa arising from the clothing, textile and fashion industry
 - Impact of the clothing, textile and fashion industry on local skills development.
- Demonstration and replication potential of the clothing, textile and fashion industry.

Social

- Alignment with national provincial and local development priorities:
 - How the clothing, textile and fashion industry is aligned with provincial and national government objectives
 - How the clothing, textile and fashion industry is aligned with local developmental objectives
 - Impact of the clothing, textile and fashion industry on the provision of, or access to, basic services to the area
 - Impact of the clothing, textile and fashion industry on the relocation of communities, if applicable
 - Contribution of the clothing, textile and fashion industry to any specific sectoral objectives (for example, renewable energy targets).
- Social equity and poverty alleviation:
 - Impact of the clothing, textile and fashion industry on levels of employment (specify the number of jobs created/lost; the duration of time employed, distribution of employment opportunities, types of employment, categories of employment changes in terms of skill levels and gender and racial equity)
 - Impact of the clothing, textile and fashion industry on community social structures
 - Impact of the clothing, textile and fashion industry on social heritage
 - Impact of the clothing, textile and fashion industry on the provision of social amenities to the community in which the project is situated
 - Contribution of the clothing, textile and fashion industry to the development of previously underdeveloped areas or specially designated development nodes.

When products are manufactured by the clothing, textile and fashion industry, the core criteria listed above should be considered in order to achieve a balance between industry needs and the need for sustainable development. Section 28(1) of NEMA is important when considering the negative effects of the clothing, textile and fashion industry on the environment. It stipulates “that every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law, or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment”. Under section 28, clothing and textile manufacturing companies, or companies elsewhere involved in the fashion industry, who pollute the environment, can be directed to cease such activities, and other directives can be placed on the

manufacturing processes of clothing, textiles or fashion. Section 49A(1)(e) of the NEMA further states that it is an offence to unlawfully and intentionally or negligently commit an act or omission which causes or is likely to cause significant pollution and/or degradation to the environment. Section 49A(2)(f) also states that it is an offence to unlawfully and intentionally or negligently commit an act or omission that is detrimental or may be detrimental to the environment.

The industry should also adhere to and measured against all import and export regulations regarding clothing and textile items. Permits must be obtained from the Department of Trade and Industry that will indicate the duties and taxes to be paid to import or export clothing and textile items, in accordance with The Customs Act 91 of 1964. Considering that duties and taxes are levied when importing or exporting clothing or textile articles, it is also essential to ensure that these items adhere to the regulations set by the South African Revenue Service (SARS), and that the required documentation be completed and submitted (MyCourses, 2023, p. 1). Custom duties vary based on the type of commodities being imported; however, for items such as handbags, shoes and wallets, a consumer can expect to pay approximately 30% in custom duties. Clothing, on the other hand, may incur custom duties ranging from 40% to 45% (International Trade Administration 2023, p. 1).

Regulation regarding the clothing, textile and fashion industry is not only applicable to the manufacturing of clothing and textiles, but also addresses the rights of the workers. The Basic Conditions of Employment Act 75 of 1997 (as amended) regulates the working hours, overtime pay, leave entitlement and working conditions of these employees. The Employment Equity Act 55 of 1998 governs the fair employment practices of companies, and the Unemployment Insurance Fund (UIF) regulates the contributions of employers in case of unemployment of their employees. This legislation is significant as employees play an important part in the manufacturing of clothing and textiles.

RECOMMENDATION

Jenkin and Hattingh (2022, p. 6) recommend that the fashion, textile and clothing industry in South African and globally should focus on:

- reducing pollution, as well as chemical, water and energy use;
- adopting a model of circular reuse and recycling of economic needs;
- a distinct shift towards local production, which will in turn create local jobs and build a supply-chain resilience;
- a distinct shift toward using more natural fibres;
- improving water management and reducing the use of hazardous chemical in the manufacturing process;
- optimising energy efficiency and consumption;
- fibre-to-fibre recycling;
- reducing single-use sanitary wear;
- adopting clothing and footwear leasing models, and
- increasing and improving the market for legal, domestically-traded and second-hand clothing.

CONCLUSION

Clothing, textile and fashion production has a significant impact on the environment. Traditional production methods include water, energy and chemical intensive and are detrimental to the environment. The degradation of the environment includes soil, water and air pollution. The clothing, textile and fashion industry has a significant social impact since it provides employment to many people, including women, worldwide. However, there are challenges pertaining to working conditions, remuneration and the rights of employees. When considering the social impact of the clothing, textile and fashion industry, human rights and fair working conditions should be prioritised.

According to the above-mentioned discussion it is clear that measures must be implemented to target the entire life cycle of all products, including textile products. These measures should focus on textile information and a digital product passport, strict controls on greenwashing, and in essence, consumer protection, including minimum recycled fibres in the composition of fabrics, in order to make them more resistant and easier to repair and recycle.

A changed mindset is needed to be willing to re-use, recycle or donate clothing. The same way that social media and the fashion industry introduce trends to consumers, it should also drive transformation within the textile industry, with a focus on recycling and re-use of clothing.

Clearly outlined in this paper, are the benefits of recycling clothing to all the aspects of sustainability – economic, social and environmental. However, the paper discusses positives in the fashion industry, such as the benefits of recycling, but it also highlights some negative aspects in the fashion industry, such as the importation of textiles by poor developing countries. It should further be noted that collaboration among the government, consumers and businesses are crucial in the success of recycling initiatives and processes.

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THE ROLE OF LOCAL GOVERNMENTS IN DISASTER RISK MANAGEMENT IN SOUTH AFRICA: A FOCUS ON CLIMATE CHANGE

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ABSTRACT

South Africa is facing an increased level of disaster risks due to exposure to a range of diverse evolving weather hazards, including droughts, wildfires, severe storms and cyclones, causing devastation to humans and the environment. These occurrences can be attributed to climate change, which altered the face of disaster risks. Extreme weather patterns, due to climate change, contribute to the rise in sea-levels and temperatures, leading to societal vulnerabilities. This paper explores and presents an overview of government's role and responsibility as stipulated in the Constitution of the Republic of South Africa, 1996 (the Constitution) within the framework of disaster risk management (DRM) in South Africa, which must be examined together with the legislative measures postulated by the recently passed Climate Change Bill. In accordance with section 24 of the Constitution, local government (as a sphere of Government) has the obligation to provide an environment that is not harmful for present and future generations. Schedule 4B, read with section 156(1) of the Constitution, states that local governments have executive and legislative powers, which, arguably, can be interpreted as the mandate to regulate disaster on local level caused by climate change. This entrenched right of section 24 of the Constitution is further coordinated by the Disaster Management Act 57 of 2002 (the DMA) and the National Disaster Management Framework, 2005 (the NDMF). Section 9 of the DMA states that a National Centre should be established to integrate and co-ordinate disaster risk management with a focus on prevention, mitigation and adaptation by local governments. The National Centre must be established in every district and metropolitan municipality to coordinate disaster risk management in its sphere of responsibility. Legislation, case law and case studies must be understood within the context of DRM on local level, while addressing the phenomena that is brought by climate change disasters.

Keywords: climate change, disasters, environment, local governments, disaster risk management.

INTRODUCTION

The Constitution of the Republic of South Africa, 1996 (the Constitution) contains several provisions affording protection to the citizens of South Africa. Section 24 of the Constitution, for example, determines that everyone has the right to an environment that does not harm the health or well-being of present and future generations. This objective is achieved through reasonable legislative measures, which will be explored throughout this paper. Prior to such exploration, the term, 'environment', should first be understood. 'Environment', as defined by the National Environmental Management Act 107 of 1998 in section 1, refers to the environment that consists of the surroundings in which humans exist and the land, water and atmosphere on the earth; all micro-organisms, plant and animal life on earth; the combination and interrelations among and between the parts listed; and the physical, chemical aesthetic and cultural properties and conditions of the parts and the influence it has on human health and well-being. The definition should further be read in context with section 24 of the Constitution to determine what is meant by 'environment' and everybody's 'right to an environment'. Moreover, this right to an environment should also be viewed within the framework of sustainability, emphasising that everyone must strive to achieve this right. Environmental sustainability refers "to the ability of the biophysical environment to maintain its functioning within natural parameters and cycles

over time, in order to supply environmental goods and services to the economic and social spheres” (EnvironmentalOutlook, 2020, p. 20). These goods and services, also referred to as ecosystem services, include benefits that humans derive from the environment and its natural processes. These services encompass a range of natural environmental services that are essential for human life, such as air, food and water (EnvironmentalOutlook 2020, p. 20). Natural resources, such as air, is, however, affected by emissions of pollutants, resulting in changes to the climate. These pollutants, such as greenhouse gasses (GHGs), also referred to as climate agents, penetrate the ozone layer in the atmosphere, resulting in global warming (United States Environmental Protection Agency 2023, p.1).

It is submitted by the World Bank (2022, p.1) that although air pollution and climate change are seen as two sides of the same coin and are addressed separately, these concepts should rather be addressed jointly. The rationale for advocating joint dissemination is that air pollutants and GHGs emanate from the same sources, such as coal-fired power plants and diesel-fuelled vehicles. Air pollutants, as a contributor to climate change, are seen as the world’s leading environmental cause of illness and premature deaths (World Bank, 2022, p.1). Not only is air pollution linked to health problems, but also to biodiversity and ecosystem loss, which has an impact on human capital. As climate change continues and intensifies, the probability of more frequent and severe natural hazards increases. Heatwaves, torrential downpours, smoky skies and toxic water, which are seen as natural disasters, are becoming increasingly dangerous and frequent as a result of the effects of climate change (National Wildlife Federation 2022:1). As seen above, climate change is regarded as a natural disaster; however, the question to be answered is: what is a ‘disaster’ or what constitutes a disaster?

South Africa is divided into three spheres of government to address and implement the constitutionally entrenched rights. These three spheres are the national, provincial and local government; each sphere being distinctive, interdependent and interconnected with each other (section 40 of the Constitution). Local government as a sphere of government, has the responsibility in terms of section 24 of the Constitution to protect the environment. This also means that local government is responsible for the causes of climate change, as well as the disasters caused by climate change within their area of jurisdiction.

The next section of this paper consists of the constitutional framework for the management of climate change by governments within the context of a disaster. The constitutional, environmental, and local government frameworks, as well as international perspectives will be analysed in terms of the management of climate change in South Africa. This paper consists of a literature review focusing on relevant textbooks, articles, case law and legislation. Both primary and secondary sources were subjected to an analysis; ultimately, giving rise to the conclusion.

CONSTITUTIONAL PERSPECTIVE

Section 7(2) of the Constitution states that the state must respect, protect, promote and fulfil the rights contained in Chapter 2 of the Constitution. Section 7 should be understood as stated that the three spheres of government constitute the state, the provincial government and municipalities, and that local government should respect, protect, promote and fulfil the environmental right contained in section 24 of the Constitution. The right to an environment as contained in section 24, binds the legislature, the judiciary and all organs of state (section 8(1) of the Constitution). Section 8(1) deals with direct, vertical application; allowing an applicant to challenge legislation and the conduct of the state. It further implies that duties are placed on certain role-players (e.g. on local government in terms of section 24, as seen above), and failure in fulfilling these duties constitutes a breach and a violation of a right – i.e., breaching section 24 of the Constitution and a violation of the environmental right. When interpreting section 24(a) of the Constitution, the perception is that it applies horizontally. However, section 24(b) includes the application of legislative measures that can only be secured by the state; this means that section 24 of the Constitution applies in a vertical way (Kidd, 1996, p. 4). The horizontal application of Chapter 2 of the Constitution confers benefits on a private party and imposes corresponding duties on another party. Although the majority of rights included in Chapter 2 apply vertically, as duties are only imposed on the state, one should still consider the horizontal application of the Constitution (*Certification of the Constitution of the Republic of South Africa, 1996* (CCT 23/96) [1996] ZACC 26; 1996 (4) SA 744 (CC); 1996 (10) BCLR 1253 (CC)).

It brings us to the question – what constitutes direct or indirect application of Chapter 2 constitutional rights? Direct application is when the court determines whether the challenged law or conduct is inconsistent with the

constitutional right – in this context, section 24 of the Constitution. Indirect application is when the court interprets the legislation or when it develops a common or customary law rule that will promote the spirit, purport and object of the Chapter 2 constitutional rights (Allsop, n.d., p. 1). The courts must interpret the constitutional right in order to determine the activities it protects or prohibits – in the context of this paper - in terms of the section 24 right to an environment. Section 39(1)(a), also known as the interpretation clause, requires that when the court interprets all constitutional rights, it should promote values that underlie an open and democratic society that is based on human dignity, equality and freedom. Further, according to section 39(1)(b), the court must also consider international law when it interprets a constitutional right, such as contained in section 24. It should be noted that this includes binding and non-binding sources of international law – for example, international treaties and decisions of international human rights bodies (discussed hereafter). The court is also afforded discretion or a choice to consider any foreign law when interpreting a constitutional right, as found in section 24 (section 39(1)(c)) This includes decisions and judgments of foreign courts, legislation or even the Constitution of a foreign country (Allsop, n.d., 1).

South African international law and municipal laws are regulated by the Constitution, as seen above. In terms of section 231, read with section 232, international law and municipal law can be viewed as a single system of law, rather than two distinct legal systems existing alongside each other. According to section 231(2), an international agreement binds South Africa when it is approved by resolution of both the National Assembly and the National Council of Provinces (NCOP). Section 231(3) provides an exception, by stating that some international agreements, such as those of technical, administrative or executive nature, or agreements that do not require ratification or accession, bind South Africa without approval from the National Assembly and the NCOP. Section 231(4) stipulates that an international agreement becomes law in South Africa when it is enacted into SA national legislation; however, it may not be inconsistent with the Constitution or an act of Parliament. In terms of section 232 of the Constitution, customary international law is regarded as law in South Africa, but should also not be inconsistent with the Constitution or an act of Parliament. Therefore, it can be concluded that customary international law is enforceable in South African courts, while treaty law must be incorporated into South African legislation before it becomes enforceable in municipal law (Ferreira & Ferreira-Snyman, 2014, p. 1473).

In interpreting any legislation, section 233 of the Constitution requires that a court must prefer a reasonable interpretation of legislation that is consistent with international law, over any other interpretations that are inconsistent with international law. The question to follow is whether South African courts are obligated to apply and interpret the rules that are laid down by international law? To address this question, it is essential to differentiate between the interpretation of international rules and a situation where domestic legislation interprets the implementation of international law. Therefore, when domestic legislation incorporates international rules, the legislation retains its domestic nature, and the applicable rules are subject to domestic interpretation (Tladi, 2016, p. 314).

As mentioned above, South African courts have an obligation to apply and interpret the constitutional rights and international perspectives. According to section 40 of the Constitution, government constitutes national, provincial and local spheres of government. Each of these spheres are distinctive, interdependent and interconnected, and must observe and adhere to the constitutional rights contained in Chapter 2. The Constitution, in Schedules 4A and 5A, determines the functional areas of concurrent and exclusive national and provincial legislative competence, while Schedule 4B and 5B, read with section 155(6)(a) and (7) of the Constitution, determine the local government matters. It should also be remembered that within the new constitutional dispensation all three spheres of government are regarded as equal in the governance of constitutional matters, as seen in *Fedsure Life Assurance Ltd and Others v Greater Johannesburg Transitional Metropolitan Council and Others* 1998 (12) BCLR 1458 (CC).

Air pollution falls within the ambit of Schedule 4B, which must be regulated by local governments. Municipalities have executive authority to manage air pollution, and as seen above, the World Bank indicated that air pollution and climate change should be addressed jointly. Therefore, in essence, local government has exclusive authority to administer climate change in South Africa, including the governance of legislation, regulation and other measures as determined by the Constitution. National and provincial government may assign functional Schedule 4A and 5A matters to local government when local government is able to effectively perform these functions. This includes functions (specifically applicable to this paper) such as disaster management (regarding disasters caused by climate change), and environment and pollution control. Section 238 also allows the delegation of functions and powers:

An executive organ of state in any sphere of government may - (a) delegate any power or function that is to be exercised or performed in terms of legislation to any other executive organ of state, provided the delegation is consistent with the legislation in terms of which the power is exercised or the function is performed; or (b) exercise any power or perform any function for any other executive organ of state on an agency or delegation basis.

Local government will be bound by the delegated power or function of the national or provincial government. This further entails that the local government may act as an agent in the fulfilment of a responsibility of either the national or provincial sphere of government. Whether local government will be afforded delegated powers and functions, or be regarded as agents, will be annually determined by agreement between the spheres of government (Community Law Centre, 2001, p. 1). Arguably, disasters and climate change will be best managed by local government since it occurs within their areas of jurisdiction. Local government are thus able to have a hands-on approach in dealing with the effects of climate change and disasters. The following section of this paper discusses the international perspective in addressing climate change and examines whether South Africa is bound by these international conventions and treaties.

INTERNATIONAL PERSPECTIVE

Internationally, efforts are made to address the issue of climate change and its effects – e.g. natural disasters. The United Nations Framework Convention on Climate Change (UNFCCC) was finalised in 1992 at the Earth Summit, held in Rio de Janeiro, and came into force in 1994. The aim of the UNFCCC is to curb and stabilise the emission of greenhouse gases (GHGs) into the atmosphere (Association for Diplomatic Studies and Training 2015:1). The Paris Agreement, which is a legally binding international treaty, was adopted by 196 parties at the United Nations Climate Change Conference (COP21), held in Paris, France in 2015, and came into force in 2016. It should further be noted that South Africa ratified the Paris Agreement in 2016. The aim of the Paris Agreement is to ensure that the increase of global average temperatures remain below 2°C above pre-industrial levels and it advocates for limiting the increase in temperature to 1.5°C above pre-industrial levels. The Paris Agreement is a landmark agreement since all participating nations are bound and committed to combatting climate change and to adapt to its effects. The United Nations Intergovernmental Panel on Climate Change emphasised the necessity of restricting global warming to 1.5°C. This is crucial, because exceeding this limit would result in more severe and frequent consequences such as droughts, heatwaves and rainfall (United Nations Climate Change, 2023, p. 1).

What is the Paris Agreement's focus? The Paris Agreement requires economic and social transformation on a five-year cycle by increasing climate-preventative action by different countries. This was already initiated in 2020, by countries who submitted their national climate action plans, also known as national determined contribution (NDCs). In these NDCs, countries communicate the action they will take to reduce GHG emissions in order to reach the objectives set out in the Paris Agreement (United Nations Climate Change, 2023, p. 1).

It should be noted that climate change related disasters are interconnected and on the rise worldwide. The *2023 Interconnected Disaster Risk Report* identified increasing risks across the globe. These risks include the acceleration of extinctions, groundwater depletion, mountain glaciers melting, space debris, unbearable heat and an uninsurable future (United Nations University-Institute for Environment and Human Security, 2023, p. 1). The recent *Assessment Report* of the United Nations Intergovernmental Panel on Climate Change indicates that the frequency of extreme events such as droughts, fires and floods are on the rise, most probably due to human interference. The underlying factors that affect the disaster occurrences include human-induced GHGs, insufficient disaster risk management and undervaluing environmental costs and benefits in the decision-making process (United Nations Climate Change, 2023, p. 1).

The question arises as to whether the Kyoto Protocol is applicable to South Africa? The objective of the Protocol is to put into operation the UNFCCC through the commitment of industrialised countries and economies in the transition to reduce and limit the GHG emissions in accordance with the set targets. In terms of the Protocol, countries are only required to adopt policies and measures regarding the mitigation of climate change. It should also be noted that the Kyoto Protocol only binds developed countries. South Africa, although not a developed country, has accepted the Kyoto Protocol in 2002 (United Nations Climate Change, 2023, p. 1). South Africa is mandated under section 25 of NEMA to establish a Designated National Authority (DNA), which has a legal mandate to oversee the Clean Development Mechanism (CDM) in South Africa. The CDM was created by the Third Conference of Parties to

the UNFCCC and allows developed countries with GHG emission reduction commitments to meet these targets by undertaking projects in developing countries (Department of Energy, 2023, p. 1).

Sustainable development forms the foundation of South Africa's NDCs and the CDM. Sustainable development was conceptualised in 1987 by the World Commission on Environment and Development (also known as the *Brundtland Report: Our Common future*) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainable development promotes both a drive for economic growth, and the building of an inclusive, sustainable and resilient future where humans and nature coincide. This is also seen in the pillars of sustainable development which are, economic growth, social inclusion and environmental protection. This concept is also prevalent in the 2030 Agenda for Sustainable Development — a plan of action for people, planet and prosperity; adopted and signed by members of the United Nations in 2015. The 2030 Agenda stipulates 17 Sustainable Development Goals (SDGs), which must be pursued by the global community in order to improve equality, human prosperity and well-being and to maintain and restore the health of the planet's vital natural systems (Western Cape Governance, 2023, p. 1).

It should be noted that the 2030 Agenda for Sustainable Development and the SDGs are not legally binding on member countries. Climate change and the resulting disasters, as causes of environmental degradation, are driven through the mechanisms governing the operations and structure of economic systems (Western Cape Governance, 2023, p. 1).

LEGISLATIVE ANALYSIS

South Africa's local government consists of 257 municipalities that are categorised and regulated as either a metropolitan, district or local municipality. The criteria for determining these categories are regulated by the Local Government: Municipal Structures Act of 1998 (Structures Act). South African metropolitan municipalities have exclusive municipal executive and legislative authority within its jurisdiction, whereas local municipalities share municipal executive and legislative authority with a district municipality within the area it falls, and a district municipality has exclusive and legislative authority in the area of jurisdiction that includes more than one municipality (Section 155 of the Constitution). Most of the operational activities relating to disaster risk management is regulated by the Structures Act (objectives of the Structures Act).

As seen above, local government plays an important role in addressing the constitutionally entrenched rights within all spheres of government. Disaster Risk Management (DRM) forms part of all spheres of government and it relates to an integrated, multisectoral, multidisciplinary approach aimed at reducing the risks that are associated with the hazards and vulnerability of the humans (African Centre for Disaster Studies, 2011, p. 14).

DRM plans form part of the Integrated Development Plans (IDP) of each municipality, and municipalities are responsible for the functional strategies, policies, programmes and projects at community level for addressing climate change and climate change disasters. The IDP is a functional plan of a municipality to operationalise the services and public goods, and it serves as the operational plan for disaster risk reduction (African Centre for Disaster Studies 2011:24). Section 23(1)(c) of the Local Government: Municipal Systems Act 32 of 2000 states that a municipality must concurrently with other organs of state contribute to progressive recognition of the constitutional fundamental rights, as found, *inter alia*, in sections 24, 25, 26, 27 and 29 of the Constitution. Section 23(1)(c) of the Local Government: Municipal Systems Act, 2000 is aligned with the preamble of the Local Government: Municipal Structures Act 117 of 1998, which reads:

Whereas there is fundamental agreement in our country on a vision of democratic and developmental local government, in which municipalities fulfil their constitutional obligations to ensure sustainable, effective and efficient municipal services, promote social and economic development, encourage a safe and healthy environment by working with communities in creating environments and human settlements in which all our people can lead uplifted and dignified lives.

Section 24 of the Constitution should be read together with the National Environmental Management Act 107 of 1998 (NEMA) as the legal framework for the enforcement thereof. NEMA specifies that cooperative

governance and intergovernmental relations should be facilitated and promoted. The prelude of both NEMA and the National Environmental Management: Air Quality Act 39 of 2004 (NEM: AQA) states that, *inter alia*:

[e]veryone has the right to have the environment protected, for the benefit of present and future generations. through reasonable legislative and other measures that— prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Chapter 3 of NEMA stipulates various requirements for national departments – some compulsory and others not – with regard to the preparation of both environmental implementation and management plans. Section 12 of NEMA details the importance of environmental implementation and management plans with the aim of promoting and protecting a sustainable environment in the provincial and local spheres of government, while also enhancing consistency in the execution of duties that may affect the environment and giving effect to the principle of cooperative government as stipulated in Chapter 3 of the Constitution to secure protection of the environment throughout the country.

Both NEMA and NEM:AQA stress the importance of cooperative governance amongst all spheres of government. The DMA and the National Disaster Management Framework (NDMF) are interlinked, as the DMA stipulates that provincial and local spheres of government should maintain the same format as the NDMF and utilise the same key performance areas (KPA) and enablers. This ensures uniformity within the national framework (Paundi, 2012, p. 69).

The DMA is the principal legislative framework, guiding and managing disasters. Together with the above-mentioned ancillary pieces of legislation, the DMA aims to create safety awareness (Paundi, 2012, p. 68). The legislation, as discussed, corresponds in terms of the intergovernmental roles and responsibilities, which provincial and local spheres of government have to fulfil. It is, however, not the sole responsibility of provincial and local spheres of government to prevent, mitigate and reduce disaster risks. The NDMF distinguishes between four key performance areas (KPA) and three enablers that specifically address the reduction and prevention of disaster impacts. The KPA and enablers aim to inspire a culture of risk avoidance via public awareness in prevention and mitigation (Paundi, 2012, p. 70).

Key Performance Area 1 focuses on an integrated institutional capacity for disaster risk management within the national, provincial and municipal spheres of government (NDMF, Introduction, p. 1) with the aim of engaging with different institutions and disaster risk role-players to enhance the capacity of the community to deal with disaster-related issues. The need for the enhancement of institutional capacity is also emphasised in forums such as the Municipal Disaster Management Advisory Forum (MDMAF). During the quarterly meetings of the MDMAF, different stakeholders, disaster risk role-players, community-based organisations (CBO), community leaders and non-government organisations (NGOs) come together and discuss relevant disaster-related issues. Discussions relate to challenges at hand and strategies to manage risks. The MDMAF offers an opportunity for local participation and cooperative governance (Paundi, 2012, p. 70).

The DMA recognises the important role of the public in disaster management by presenting individuals with the opportunity to enrol as disaster management volunteers (section 58 of the DMA). Key Performance Area 2 emphasises the need for disaster risk assessment and monitoring to set priorities, guide disaster risk reduction and to determine whether those efforts are effective (UNDRR, 2018, p. 25). Key Performance Area 3 introduces disaster risk reduction (Department: Cooperative Governance and Traditional Affairs, 2005, p. 159). Disaster risk reduction involves *inter alia* disaster risk management planning and implementation to inform developmentally oriented approaches, plans, programmes and projects that reduce disaster risks (UNDRR, 2018, p. 39). The participation of different stakeholders in both the private and public sectors assists in strengthening the capacities of the local community for upcoming disasters (Paundi, 2012, p. 72).

Key Performance Area 4 places an obligation on local authorities to develop strategic measures for disaster response and recovery (Department: Cooperative Governance and Traditional Affairs, 2005, p. 177); it is followed by three enabler requirements as support, aiming to achieve the goals as set out in the KPA. Enabler 1 prescribes a comprehensive information management and communication system with the integration of communication links between all relevant disaster risk role-players.

Enabler 2 promotes a culture of disaster risk avoidance amongst different stakeholders through integrated education, training and public awareness, supported through scientific research (Erasmus & Van Zyl, 2009, p. 8). Proper disaster education, training and public awareness campaigns create knowledge and skills and enable the community to protect themselves, others and their property, while bearing in mind that government resource scarcity complicates the response and recovery process. This can be overcome by effectively educating communities on the importance of adopting a culture of risk avoidance. Effective education involves the training of communities on appropriate responses to disasters and raising awareness of potential risks, which can be accomplished through public awareness campaigns, as mentioned above (Paundi, 2012, p. 75). To implement a comprehensive information management and communication system, together with integrated education, training and public awareness programmes, requires funding. Enabler 3 provides mechanisms for the funding of disaster risk management in South Africa (Erasmus & Van Zyl, 2009, p. 23).

The Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters (hereafter the Hyogo Framework) was adopted by 168 countries, including South Africa, at the 2005 World Conference on Disaster Reduction in Kobe, Hyogo, Japan (IISD, 2005, p. 1). The Hyogo Framework highlights three strategic goals and five priorities for action. Most of the concepts and strategic goals as determined by the Hyogo Framework are included in the DMA. The five key priority areas of the Hyogo Framework are echoed in the objectives of the four key performance areas and Enabler 2 of the NDMF (Erasmus & Van Zyl, 2009, p. 3). The Sendai Framework for Disaster Risk Reduction, 2015:2030, entered into post-2015, is the successor agreement to the Hyogo Framework.

During one national and several provincial workshops (nine) in 2009 (February to April), the National Education, Training and Research Needs and Resources Analysis (NETARNRA) Project was introduced. These workshops were attended by representatives of 199 stakeholder groups in South Africa. The participants of the workshops were engaged in *inter alia* a process to create awareness of their disaster risk management roles and responsibilities according to the NDMF (Erasmus & Van Zyl, 2009, p. 9). The participants were requested to postulate their institution's responsibility in identifying hazards and progress made regarding the implementation of the four KPAs and the three enablers of the NDMF.

These workshops focused on accepting and assigning responsibility and involvement in disaster risk management to all organs of state across national, provincial and municipal spheres of government, as explicitly prescribed by the DMA. During these workshops it became clear that participants were lacking, in that:

- less than half of the representatives of national organs of state and district municipalities accepted responsibility for specific hazards;
- more than half of the representatives from provincial, local and metropolitan municipalities accepted responsibility for specific hazards; and
- representatives agreed that national departments are not responsible for disaster risk management, but there was no clarity on which national department should take the lead regarding specific hazard (Erasmus & Van Zyl, 2009, p. 14).

Furthermore, with regards to coordination, implementation, or involvement during the stages of the disaster management cycle – prevention, mitigation, preparedness, response, recovery and rehabilitation in relation to these hazards – municipalities were unsure about their role in the cycle. The national organs of state, for example, seem to focus more on the response phase in the disaster management cycle (around 70%) than on the disaster risk reduction measures (Erasmus & Van Zyl, 2009, p. 15).

In South Africa, a broad network of legislation regulates disaster risk management. It is evident from the above discussion that the spheres of government lack proper understanding of and execution in their roles and responsibilities regarding disaster risk management on national, provincial and municipal level. Statistics indicate that, from 2015 to 2020, floods, storms and droughts were the most common hazards resulting in natural disasters in South Africa (World Bank, 2021, p. 1). South Africa is considered a “low” to “medium low” risk country, and this may contribute to government's lack of urgency towards disaster risk reduction (Erasmus & Van Zyl, 2009, p.16).

COORDINATION OF DISASTER MANAGEMENT

It is important to understand the term ‘disaster’ and its relevance to this paper. The term ‘disaster’ is derived from the French word, *desastre*. It is a combination of two words – *des*, meaning bad, and *astre*, referring to a star. Therefore, a ‘bad star’, which can be associated with bad luck, a bad accident or a bad occurrence, causing severe damage and loss (TNAU, 2023, p. 1). The International Federation of Red Cross and Red Crescent Societies (IFRC) describes disasters as serious disruption to the functioning of a community, which exceeds its capacity to cope using its own resources (IFRC, 2023, p. 1).

The DMA gives a clear definition to the term, and defines a disaster as a progressive or sudden, widespread or localised, natural or human-caused occurrence which (a) causes or threatens to cause: (i) death, injury or disease; (ii) damage to property, infrastructure or the environment; or (iii) significant disruption of the life of a community; and (b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources (section 1 of the DMA). The definition, as stated in the DMA, differentiates the causes of a disaster, attributing it to either natural or human-produced occurrences.

The IFRC expands causes of disasters, stating that disasters can be caused by natural, man-made and technological hazards, as well as numerous factors influencing the exposure and vulnerability of a community (IFRC, 2023, p. 1). Climate change has since increased the occurrence of disasters and decreased the resilience of communities (UNDRR, 2023, p. 1). The increase in natural disasters is contributed to widespread human interventions in the climatic systems and the equilibrium of fragile ecosystems, such as soil erosion and deforestation (GTZ, 2002, p. 12).

As populations and communities continue to grow, the severity of disasters is likely to escalate in future, primarily due to climate change (GTZ, 2002, p. 12). The IFRC projects more challenging times for the next fifty (50) years, with the western parts of South Africa becoming drier and the eastern parts wetter (Humby, 2012). Climate change leads to changed weather patterns, which includes unreliable rainfall patterns (Paundi, 2012, p. 29). Unreliable rainfall patterns will adversely affect agricultural dependent markets, which will result in acute food shortages (Kiprutto, Rotich & Riungu. 2015, p. 2). With certain parts of the country grappling with severe droughts, resulting in food shortages, and other parts experiencing more rainfall, resulting in floods, the country is at risk of not being able to provide essential, basic services. Added to that economic insecurity due to a crippling economy, and crippling economy, making people more vulnerable to disaster risks (FAO, 2017, p. 4).

The reality of disasters as a consequence of climate change cannot be ignored as it negatively impacts on sustainable development in South Africa. The poor, residing in informal settlements, suffer the most as they are more vulnerable to the risks of disasters. Local municipalities in South Africa are faced with more challenges due to increased disasters (Atkinson 202, p. 3). It is important to analyse the role of local government in disaster management in South Africa, as it has an imminent responsibility towards the community. Local government has a crucial role to play in effectively managing risks so that communities can become disaster-resilient, environmentally friendly, and economically sustainable to ensure an inter-generation equity. Local government is thus required to implement the fundamental disaster-management principles, in risk reduction, prevention and mitigation and post-disaster strategies for preparedness, rehabilitation, recovery and response (Atkinson 2021, p. 4).

CONCLUSION AND RECOMMENDATIONS

To effectively achieve sustainable development and drive the fight against climate change and disasters as a consequence thereof, requires that our economy and economic systems should be ‘greened’. Humans should also move away from their current thinking patterns and behaviour to ensure a green economy. In order to be more sustainable or in striving to embrace a green lifestyle, humans acknowledge that sustainable economic growth and development are possible if they commit to the efficient and responsible use and the protection of natural ecosystems. In doing this, the natural environment will continue to provide the resources, services and a climate that both humans and the environment can rely on for health and well-being.

Government, especially local government, plays a critical role in the drive to address disasters, and specifically, disasters that are brought about by climate change. Local government should take disaster risk reduction seriously. The inability or willingness to take disasters seriously could be due to the lack of skills, competencies,

equipment, funding allocation and political will. However, disaster-risk management measures should be incorporated to mitigate climate change and climate change disasters.

Members of the community should become active participants in any community development adopting a culture of risk-avoidance. Public participation encourages people to understand that risk-avoidance is the responsibility of communities and not government's alone, and that local safety entails more than just disaster-relief hand-outs (GTZ, 2002, p. 32). A further advantage of participation is that local governments are held accountable. Significant participation results in what can be termed as 'good governance'. Under the term 'good governance', participation is regarded as one of the principles of cooperative governance (Paundi, 2012, p. 90). Although community participation has the potential to contribute to disaster risk reduction, it should not be the sole responsibility of the community. As discussed above, South Africa has of a broad network of legislation, which has to be enforced on all levels of government.

The DMA must establish mechanisms for the proper implementation of disaster risk reduction within local municipalities. Van Niekerk (2014) recommends that the DMA must be amended to specify the roles and duties of local municipalities. He further states that this recommendation is in line with international findings on the need for and importance of decentralised disaster risk reduction with an emphasis on local ownership (Van Niekerk, 2014, p. 872). This will ensure that the DMA and NDMF implement disaster risk management where disaster risks occur. Uniform application must be maintained in the interpretation of both the DMA and NDMF, particularly in the wording in the DMA that relates to actions that 'may' and 'must' be executed. Van Niekerk opines that it would be wise to change the word 'may' in the Act to 'must', with specific reference to sections 37(1), 43(2)(b), 51(1), 54(2) and 58(1). The distinction between 'may' and 'must' has resulted in substantial uncertainties, leading to various interpretations of the DMA.

Van Niekerk recommends that the DMA should clearly stipulate the position of the NDMC and other disaster risk management centres at provincial and local government levels, with the NDMC placed within the highest administrative office. This will result in more efficient implementation and monitoring of the DMA and NDMF (Van Niekerk, 2014, p. 872). Schedule 4, Part A of the Constitution stipulates that government is responsible for disaster risk management, but that legislation, political commitment and institutional processes are not always adequate to achieve effective disaster risk management. A complete and effective disaster risk management strategy can only be achieved through participative decision making, which involves different role players. Legislation and policies are essential, but it is ultimately the commitment to provide the necessary resources to individuals at risk that will ensure success (UNDRR, 2005, p. 20).

Disaster risk management is thus a shared responsibility that must be fostered via different stakeholders and cooperation between the different levels of government and the private and public sector. In terms of the DMA and the NDMF, each sphere of government has been assigned specific roles and responsibilities and therefore disaster risk management can be regarded as an intergovernmental process, which requires collateral support to assist with the distribution of resources fundamental to disaster risk reduction and all levels of response and recovery. Interdependence between the specific spheres of government also means that incompetence or non-compliance in any specific sphere will result in the failure of the entire system. The emphasis should be on facilitating cooperation and coordination among organisations and institutions where possible, and harnessing existing abilities and expertise to create institutional arrangements for cooperative governance and coordination. These institutional arrangements must also promote inclusivity with the main focus of enhancing resilience in communities at risk (UNDRR, 2005, p. 21).

Therefore, disaster risk management must not be regarded as a line function. It is a management function with the aim of creating an environment conducive to the promotion and implementation of integrated disaster risk reduction measures and developing institutional capacity for improved preparedness, response, and recovery (UNDRR 2005:21). Through cooperative governance, a recommendation can be made – should one sphere of government fail and/or neglect to fulfil its responsibilities, these duties or responsibilities should be transferred to another sphere of government to fulfil in terms of a constitutional right, but ultimately, with the principle that all three spheres of government accept responsibility to promote a safe and healthy environment.

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DO RETAILERS SERVE THEIR COMMUNITIES? 5W1H EVIDENCE FROM SOUTH AFRICA

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ABSTRACT

This research explores South African retailers' community service and their legitimate standing in the communities they serve. Literature on community service is abundant, but the research is done outside South Africa. This paper aims to evaluate the effectiveness of South African retailers' community service. It offers a novel way of doing qualitative research, as both retailers and community members were interviewed face to face. Both streams had the same interview protocol using the 5W1H method, which comprises six interrogative elements: what, why, where, when, who, and how. The 5W1H method is an innovative and attractive clarification approach offering readers an effective understanding of the issue at hand. The results are triangulated for validation as a credibility method. Although this research is done with an inductive mindset wherein evaluations are made more from raw data than previous studies, this study loosely draws from legitimacy theory, which centres around the relationship of the community service donors and its perceived value from the benefactors. This research contributes to the South African landscape by providing academic insight into the topic. Findings indicate that community members agree with what retailers are doing and that there is legitimacy in this relationship.

Keywords: community service, retail, corporate social responsibility, legitimacy theory, 5W1H.

INTRODUCTION

If local retailers want to survive in a community, they have to implement community service (CS). CS activities vary and depend on what is needed by the community. CS has many explanations in literature and across various subject domains (Conrad & Hedin, 1989; Nagel et al., 2021; Zare et al., 2021). Retailers' CS activities include donating food parcels, clothes, and blankets; employment opportunities; and local charity support.

Retail CS falls under the umbrella of retail corporate social responsibility (CSR) (Jones et al., 2007). Literature abounds with retailers' CS (Lee et al., 2021; Razalan et al., 2017), but not in the South African context. Jones et al. (2007) cited the CSR work done by the Confederation of British Industry and Commission for the European Communities. However, this seems to be a neglected area for academics in South Africa. This research's contribution lies in the viewpoints of retailers and the community they service, as a validation of the findings. Furthermore, this research determines that retailers have legitimacy within their communities. As Musesengwa and Chimbari (2017, p. 29) stated, it is also important to get community members' perspectives of community engagement. To achieve this, this research used the 5W1H methodology, which asks what, why, where, when, who, and how. This method is used in several professions and situations to understand and explain almost every situation/problem. The 5W1H method helps researchers ask the right questions, expand their inquiry, and obtain the right information (Fauziah et al., 2021).

Although this research is done with an inductive mindset wherein evaluations are made more from raw data than previous studies (Thomas, 2006), it loosely draws from legitimacy theory (LT) (Dowling & Pfeffer, 1975). This theory centres around the relationship of the CS donors and its perceived value from the benefactors. This study aimed to evaluate, through interpretivist phenomenology, the effectiveness of South African retailers' CS. The research aim included:

- To unpack retailers' CS projects by utilising the 5Ws1H model;
- To gauge if synergy exists between retailers and community members by triangulating the findings of the above; and
- To determine if retailers have legitimacy in their community.

The significance of the research lies in the academic contribution to the South African domain as well as the practical contributions that may guide managers of retail outlets. The literature review provides context and insight into the 5W1H method of enquiry, which is followed by CS that also unpacks CSR and LT. An interpretivist research paradigm with a qualitative approach was employed as research methodology. Data collection was done via face-to-face interviews with retailers and community members. Thereafter, the findings, implications, limitations, further research, and conclusion are presented.

LITERATURE REVIEW

This section provides insight into the 5W1H analysis method and CS. Retailers’ perspective on CS is reviewed and CS literature expands into CSR and LT. In its basic form, LT is the relationship between social values and organisational behaviour. Organisations must utilise CSR activities to legitimise their operations.

5W1H Method

The 5W1H method is used frequently in varied subject domains (Awal et al., 2018), such as a marketing plan in Thailand (Kasemsarn, 2022), waste analysis in Indonesia (Perdana et al., 2020), and productivity measurements in the concrete industry (Muzaki & Nugroho, 2021). Similar to this study, Kim et al. (2022) used the 5W1H method to research operational issues, but their research was in the cyber industry. This method poses six questions that cover all aspects of a research topic: what (object), who (personnel), why (reason), when (time), where (location), and how (method) (Kasemsarn, 2022).

Table 1: 5W1H Analysis of the How Retailers Serve their Communities

<i>What?</i>	What is done? (What did retailers do to service the community?)
<i>Who?</i>	Who is doing it? (Who did the actual work by servicing the community?)
<i>Why?</i>	Why do it? (Why did the retailer choose to service the community?)
<i>When?</i>	When is it done? (When did the retailers service the community?)
<i>Where?</i>	Where is it done? (Where did the retailers service the community?)
<i>How?</i>	How is it done? (How did the retailers service the community?)

Source: Adapted from Kasemsarn (2022).

What is Community Service?

Oxford Learner’s Dictionaries (n.d.) defined CS as “work helping people in the local community that somebody does without being paid, either because they want to, or because they have been ordered to by a court as a punishment”. Moreover, community well-being is defined as “the combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfil their potential” (Lee et al., 2021, pp. 115–116). Lee et al. (2021) argued that by supporting livelihoods and local economies as providers of employment, organisations can influence education and training, community connections, and physical and mental health (and behaviours) by supplying goods and services. Many retailers have a recognisable face and/or have an “anchor positioning”, whereby local communities interact daily with these retailers. The “lynchpin” status of retailers within communities has been highlighted in the supply of basic necessities. Razalan et al. (2017) researched a very similar topic to this research, using a qualitative approach to explore the types of social responsibility actions that local retailers implement in their local communities. Their findings highlighted that local retailers are active in giving back to their communities using various means – from monetary donations to promotion of community events. Examples of retailers’ CS include store products donation and food vouchers for a community event, raffle/competition or a basic giveaway, funding the equipment costs of a local youth sports team, providing apparel donations for a charity auction, and sponsoring food or beverages for a community event. Such contributions to the local community are driven by retailers’ regard for the community and their motivation is to maintain a good reputation within the community. According to Campbell and Park (2016), social responsibility is a source of competitive advantage. Companies that successfully engage with social responsibility actions can create a distinctive, positive, and long-lasting competitive advantage with all stakeholders, including the local community.

In business terms, CS falls under the umbrella of CSR, which Stobierski (2021) defined as “the idea that a business has a responsibility to the society that exists around it”. CSR’s structure allows businesses to act in a socially responsible way that positively impacts the world. It is a form of self-regulation that can be expressed in initiatives or strategies, such as making the world a better place by donating to charities or worthy causes that may or may not relate to their core business. Olateju et al. (2021) added that societal expectations could be donations, charitable gifts, sponsorship, fixing or providing essential commodities like roads, water, electricity, and schools. Meeting these societal expectations will earn organisations legitimate status. When organisations have a legitimate status, their operational activities and behaviour will reflect the norms, values, expectations, and demands of their society with a view of being acceptable to the communities (Dowling & Pfeffer, 1975).

Legitimacy Theory

This theory assumes that an organisation has an implied social contract with the society it operates in. This social contract should motivate the organisation to comply with society’s values, norms, and boundaries by implementing suitable systems. In other words, the long-term success and survival of an organisation is subject to its ability to meet society’s expectations through these systems (Velte, 2022). LT views organisations as complex components that must interact with the environments to survive. LT states that for an organisation to gain legitimate status – namely the approval and support of the society/community and the elimination of the threat of survival – it should integrate its value system with that of the social system within which it operates (Dowling & Pfeffer, 1975) CSR is an excellent means for organisations to gain legitimate status. Ashrafi et al. (2020) argued that organisations are forced to use CSR to legitimise their business actions. The opposite is also true. LT will not accommodate any breach in the contract. Non-performance of CSR negatively affects organisations. For instance, community customers will stop patronising and may even become hostile to an organisation (Olateju et al., 2021).

RESEARCH METHODOLOGY

Research Paradigm and Approach

The research aim and areas lent themselves to an interpretivist research paradigm. Pervin and Mokhtar (2022) opined that the research paradigm must dictate the research questions and objectives to be explored. Using an interpretivist paradigm, researchers can use participants’ diverse viewpoints on a specific phenomenon to describe objects, people, or events, and to comprehend them in their sociocultural contexts. – that is, participants are social actors in their culture/environment (Alharahsheh & Pius, 2020). As this research wanted to generate in-depth and subjective findings (Crick, 2021), a qualitative approach was used. The qualitative method of inquiry examines the “how” and “why” of research and is best suited to explore, narrate, and explain a phenomenon and make sense of complex realities. Understanding the richness and complexity of human behaviour is the crux of qualitative research (Renjith et al., 2021).

Sampling Plan and Site Selection

Moser and Korstjens (2018, p. 10) stated that a sampling plan is a formal plan that includes a sampling method, a sample size, and the procedure for recruiting the study participants. The sampling plan must describe how many observations, interviews, focus group discussions or cases are needed to ensure that the findings contribute rich data. This study employed a purposive sampling technique, wherein judgement was used in the selection of the study participants. The participants had to have knowledge of the research phenomena. The sample and sample size in qualitative research are both very important, not as rigid as in quantitative research, and normally stop when data saturation is obtained. This is when information from the participants becomes repetitive. In this research, data saturation was obtained after the fifth interview in each stream of retailers and community members, but the interviews continued as invitations to participate had been send out at the begging of the research project. Seventeen participants were included in the research – 10 community members and seven retailers. The retailers varied from groceries, clothing, health, and beauty and were well-known national established brands with outlets in the Gauteng province of South Africa.

Data Collection and Analysis

Researchers can employ several data collection techniques, including case studies, checklists, interviews, observation, surveys, and questionnaires. In modern times, data collection techniques have increased to online interviews and questionnaires and all their various facets (Morgan & Harmon, 2001). This research employed face-to-face interviews and the content validity of the interview questions was obtained from the theoretical perspectives gained from the literature reviewed. Kyngäs et al. (2020) stated that the theoretical framework provides the information for the data collection process and what kind of participants will be included. Both streams – retailers and community members – had the same interview protocol. For the first two areas of exploration, the interview transcripts were analysed via inductive content analysis, which is helpful when the research topic is novel or when previous knowledge is fragmented. This was performed according to three phases: (1) data reduction via open coding; (2) data grouping; and (3) the formation of concepts/categories in line with the research question (Kyngäs et al., 2020). According to Saldaña (2013), In Vivo coding is an open coding method that honours participants' voices, which was used in this analysis. For the third area of exploration, the researcher only used the community members' interview transcripts and inductive content analysis, but utilised hypothesis coding, which is the application of research-generated predetermined codes to assess research-generated hypotheses. These codes are developed from a prediction about what will be found in the data. The analysis is a simple frequency count to determine which hypothesis is correct (Saldaña, 2013).

Data Trustworthiness

The study's qualitative inquiry adhered to the Lincoln and Guba (1985) model for trustworthiness, which has the following criteria:

- Truth value is confirmed by credibility;
- Applicability is confirmed by transferability;
- Consistency is confirmed by dependability; and
- Neutrality is confirmed by confirmability.

The trustworthiness of this study's inductive content analysis was checked and cross-checked with the sample selection phase, data collection, data analysis, and triangulation of the two streams' findings (Elo et al., 2014). Triangulation is a strategy to improve qualitative studies by involving different perspectives. This increases the research credibility by utilising two or more methods, theories, data sources, and researchers, but also to enable the understanding of the event from different levels (Santos et al., 2020). This research triangulated the data from two different sample streams, namely retailers and community members. Bans-Akutey and Tiimub (2021) stated that the advantages of triangulation are that it helps to confirm research findings and confirms that the work done is accurate.

FINDINGS AND DISCUSSION

This section follows a sequential format, presenting the retailers' and consumers' findings, triangulating these findings, pinning to literature, determining the LT within the context of this research, and pinning to literature. The participants are quoted using abbreviations, such as RP1 to represent retail participant 1 and CP1 for consumer participant 1.

The findings first unpacked the 5W1H of retailers' CS and the first element was *what*. The interviews started with "What did retailers do to service the community?" The retailers felt that as their surroundings are mainly underprivileged communities, there is quite a lot they can do. From their responses, it was evident that they serve the community by providing basic necessities like food and clothes. Another category that emerged was job creation, in that the retailers mainly employ from the surrounding community. The retailers believe that they have a duty to create jobs and opportunities for the community. Examples of the feedback from the interviews included: "We normally supply [the community] with surplus food, the food that we normally have that we remove from the floor that is still up to date" (RP4); and "So, that's what we do and creating more jobs and more opportunities for people in the community and also giving them a taste of what fashion is in parts of the community" (RP6).

The community members responded that retailers serve the community by providing basic necessities like food and school requirements. School requirements include school uniforms, school bags, and stationery. The issue of schoolchildren came up quite prominent during the community members interviews: "They deliver food parcels,

which included the basics needed and as well as school uniforms and school shoes that are needed by the school kids” (CP1); “It was beanies, school bags and food” CP5); and “Only thing that I know and also what they did was giving learners vouchers to buy stationery” (CP2).

Interestingly, no consumer participant mentioned employment as a CS activity provided by retailers. The community members answered more in practical/tangible terms, concerning what they can receive from retailers. Contrary to the community members’ answers, extant literature is abundant with evidence on community employment as part of retailers’ CS. Lee et al. (2021) conducted a Scopus review in Scopus, Web of Science, and grey literature to identify the extent of retail stores’ support of the community. Employment from the community as an activity of retailers’ CS was mentioned several times. In the same study, food and clothes donations were a popular activity in the retailers’ CS projects.

This *what* question’s finding of retailers providing basic necessities to the community was validated, as both streams were in agreement. The retailers supply food and clothes, and the community members acknowledged receipt of this. This finding was corroborated by literature. Employment as a CS activity under the *what* element could not be validated.

Next, the retailers were asked: “Who did the actual work by servicing the community?” Interestingly, only one retailer stated that it was their own in-store initiative. All other retailers stated that it was a top-down decision – in other words, they got the CS directive from head office. The retailers’ head offices have predetermined charities and community activities that the regional retailers must execute at store outlet level. The respondents shared the following: “We don’t go out and source... What actually happens is the head office gives us the names of the charities that we need to support” (RP4); and “It comes from head office and then it just went down, you know, filtered down to us and then we are the ones in store that put it into practicality and make sure it happens” (RP3).

From a community members’ perspective, a very interesting finding was that only one of the retailers that participated in the study was mentioned by name. A manager and individuals from two other (not part of this study) well-known national established retail brands were mentioned. Most CS is done by the staff of small owner-managed outlets like butcheries and fruit shops.

Although this finding seems to be contradictory, it is supported by literature. Lee et al., (2021) argued that retailers get directly involved in CS by tasking staff with responsibilities for making community links and getting involved with local groups and good causes. It is these retail representatives who are then “remembered”. Lee et al. (2021) found that if a retailer is within a corporate structure, CS is directed from above; if not, CS is a store/outlet activity.

This finding of *who* did the CS could not be validated, as the two streams had different opinions. The retailers answered from an internal and organisational hierarchy perspective and the community members from “an individual who did it” perspective. The community members were more aware of who and which outlet serves the community and the author argues that the community members had no insight into organisational policy. This incongruence in the findings was corroborated by literature.

When the participants were asked “Why did the retailer choose to service the community?”, a resounding category was giving back to the community. This relates to issues such as putting food on the table, uplifting the community, and assurance of their support. The respondents said: “Like, why are we here if we cannot really give back to our community?” (RP1); and “Because we are here and they are the ones who are supporting us, so we have to give back to them” (RP7). The community members’ main response concerned helping the community: “I think it’s a really good thing and it does help a lot” (CP6); and “They see the need that’s there’s a lot of people who have no work and also learners who don’t have enough money to buy stationery ... that’s why they help the community” (CP2).

Three of the community members brought up the issue of support. They believe that the retailers are supported by the community and if they support the community, the community will support them in return.

I think because they've been operating around that area for so long and all this [*sic*] people have been supporting them and helping them grow their business ... so, I believe it was something that they felt it was right to do, to go back and do something good or that is right for the community. (CP1)

There are many reasons why retailers do CS. Literature on social responsibility argues that organisations' efforts towards social responsibility will benefit them by providing a quality workforce, a healthy environment, and a thriving community. Social responsibility generates goodwill from stakeholders, such as customers, employees, and communities, and secures organisations' business success. Many organisations are compelled to act responsibly because they believe it is their moral duty. Social responsibility in this case is the right thing to do, regardless of its contribution to business success. Since intrinsic value is placed on the act of "doing good", it is considered to be separate from businesses' goals (Bezençon & Etemad-Sajadi, 2015; Lee et al., 2021). Razalan et al. (2017) agreed, asserting that a highly lucrative form of return on investment from social responsibility for local retailers is social capital. Social capital is defined as "the goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate actions". Although social capital may not directly benefit retailers financially, it allows local retailers to grow and become an integral, ingrained part of the community. Dong et al. (2021) lamented that community upliftment has been one of the most important global issues, especially in rural areas. The *why* question's finding was validated. General categories, such as upliftment, helping, and support, arose from both streams. The findings were also corroborated by literature.

Next, the research examined: "When did the retailers service the community?" Another resounding category was that the CS had been active for years. This finding varied timewise: "It's been happening since I got in. I think about 20 years in the business they've been supporting the charities" (PR4); and "It started when the store opened in 2006" (RP7).

It is noteworthy that the retailers also indicated that the CS is ongoing: "It depends because we slot them according to the days in the week. They probably collect twice a week, so every week they can be supported" (RP4). Moreover, the community members stated that CS has been going on for years and is still ongoing: "It started in 2009, it was around March and it has been ongoing now for all these years" (CP1). Extant literature concurs. Episodes of giving are triggered externally by the community, local organisations, and local events. These local events happen throughout the year and bring opportunities to engage in social responsibility (Lee et al., 2021). Giebel et al. (2022) affirmed that the environment communities operate in is constantly changing and needs some form of help at different times. This finding was validated, with both streams agreeing that the CS has been operational for many years and is still ongoing. This finding was corroborated by literature.

The last *W* was *where* and participants were asked: "Where did the retailers service the community?" The retailers did not have any CS activities at their stores and indicated that when there is a specific initiative, it is location-specific. These locations varied, with schools, youth parks, old age homes, and SOS homes being mentioned: "They are not far from where we are located because the charities are based around our business" (RP4); "They have got their own place" (RP7).

The community members opined that CS is not based at a store's location, but at various locations where the CS is taking place. The locations mentioned also varied: "It was at a school ... primary" (CP4); "Also, the other creche ... they also went there" (CP5); and "Community clinic, that's where the beneficiaries collect from" (CP9).

Oktaviani et al. (2021) asserted that CS should be performed where it is needed, even at different locations. De Graaf et al. (2021) agreed, stating that CS away from the needed location may prove suboptimal. This finding was validated, as both streams agreed that CS is done in different sites and is dictated by the relevant activity. Furthermore, the participants agreed that no CS is happening on site at the store location. This finding was corroborated by literature.

The last of the six elements was *how* and participants were asked "How did the retailers service the community?" There was a clear-cut category of employment, with RP6 sharing: "We employ people from the community". Other respondents answered by listing practical activities, such as creating jobs, giving out food, and keeping girls in school by providing sanitary products: "So definitely in terms of creating jobs, that's how we have given back to the community" (RP3); "Give out food, we become so happy that we come in and also help the

community according to our values” RP4); and “[We help by] keeping them in school ... providing sanitary towels” RP1).

When the community members were asked how retailers serve the community, a resounding category was employment. This job creation has two facets: where retailers employ community members to work in retail outlets and where they employ community members to work with the CS projects. Feedback included: “By job creation and also provide them with vouchers. I can say they created opportunities for like those people who are gonna [*sic*] manage the project” (CP2); and “The ... butchery is assisting through employment. They are ... locals” (CP9).

According to Lee et al. (2021), the world is in an austerity phase and unemployment can be addressed through CS. Providing employment to the community a retailer operates in ensures a connectedness to the community. This finding was validated. Retailers stated that they serve their communities by creating job opportunities and the community members agreed with that assertion. This finding was corroborated by literature. Table 2 summarises the study’s findings.

Table 2: Summary of Study’s Findings

<i>What?</i>	<i>What did retailers do to service the community?</i> The retailers provided basic necessities, such as food and clothes.
<i>Who?</i>	<i>Who did the actual work by servicing the community?</i> Corporates, retailers, and community shops. Staff of the various retailers are the frontline executors of CS.
<i>Why?</i>	<i>Why did the retailer choose to service the community?</i> To uplift, help, and support the community.
<i>When?</i>	<i>When did the retailers service the community?</i> The CS has been happening for many years and is an ongoing event.
<i>Where?</i>	<i>Where did the retailers service the community?</i> The CS is performed where it is needed, not at the retailers’ locations.
<i>How?</i>	<i>How did the retailers service the community?</i> Retailers service the community by providing employment opportunities.

Source: Author’s own

Local retailers that choose to incorporate social responsibility in their overall marketing strategy make a conscious decision to contribute to their communities (Fuentes & Fredriksson, 2016). Therefore, under the current situation, which threatens social stability and health, consumers may value retailers’ actions that support the community’s well-being in conferring legitimacy (Yang et al., 2021). CP1 stated under the *why* findings:

I think because they’ve been operating around that area for so long and all this people have been supporting them and helping them grow their business ... so I believe it was something that they felt it was right to do, to go back and do something good or that is right for the community.

This part of the finding can be read in conjunction with all the findings under the *why* section. This study proposes that retailers have legitimacy within the communities they serve.

LIMITATIONS AND FURTHER STUDIES

This research focused on a specific local area in one province of South Africa, meaning the results cannot be generalised. Future studies could increase insight into and understanding of retailers’ CS in a South African and developing economy context. To provide a more comprehensive picture of retailers’ CS in South Africa and contribute further to literature on the topic, future research could:

- Examine whether corporate retailers would engage in CS if it was not head office-mandated;
- Involve all CS providers, other than retailers in a specific location;
- Include comparative research studies of retailers’ CS in other similar localities and communities in South Africa;
- Include comparative research studies of retailers’ CS in more affluent communities in South Africa; and

- Include quantitative studies of those mentioned above with a more significant sample, which could provide measurable insight.

MANAGERIAL SUGGESTIONS

On a managerial level, the findings contribute to a better understanding of retailers' CS. Retail managers need to understand that basic necessities, such as food and clothes, are imperative to communities. These necessities may vary and can include items like school clothes, stationery, and blankets. These donations depend on the community's direct needs – for instance, physical needs (*what*) and the date of needs (*when*). Managers must keep on doing CS and keep in contact with their communities to determine their needs and frequency. The *what* and *when* suggestions are corroborated by Lee et al. (2021), who stated that CS is an ongoing activity. Concerning the *who* element, the retailers seem to be disconnected from the delivery of the community activity, indicating that it is a head office initiative. It is suggested that retail outlets personalise CS and give the activity an internal face within the retail outlet. This may result in better connectedness to the CS (Lee et al., 2021). To stay legitimate in their communities and keep their support, while avoiding any hostility, local retailers should continue their CS.

CONCLUSION

This study evaluated retailers' CS in the Gauteng province of South Africa. The significance of the research lies in the academic contribution to the South African domain and the practical contributions that may guide managers of retail outlets. The study proves that there is no gap between what retailers say they do and what communities state retailers do. That is, what retailers say they do is actually done. The findings indicate there is no difference to what is happening on an international level and South African retailers are active in their communities with various CS activities, very similar to international retailers. The *who* finding was the odd one out, as the retailers and community members answered from different perspective, albeit pinned in literature. All 5W1H elements corresponded with current international research.

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THE ACU VIRTUAL MOBILITY PROJECT DIGITAL INFORMATION SECURITY COURSE (DISC) VIRTUAL MOBILITY (VM) PROGRAMME TO IMPROVE STUDENTS' AWARENESS OF CYBER SECURITY SKILLS

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ABSTRACT

The study objective was to describe the effects of the ACU Virtual Mobility (VM) Project Digital Information Security Course (DISC) VM programme on improving students' awareness of cyber security skills, pre and post the intervention. A cross-sectional survey design was used, with data collected using online questionnaires. The research was conducted at the Durban University of Technology, South Africa and at Liverpool John Moores University, United Kingdom. Census sampling identified programme participants from DUT and LJMU, registered at the respective universities in 2024. Data were analysed statistically using descriptive statistics, Chi-square test of independence, One sample t-test and independent samples t-test. All ethical principles of beneficence, respect for human dignity and justice were observed. The major contribution was use of the ACU programme as an intervention to increase students' cyber security awareness.

Keywords: virtual mobility; digital information, cyber security, student awareness, intervention.

INTRODUCTION

The Association of Commonwealth Universities (ACU) Virtual Mobility (VM) Project, Digital Information Security Course (DISC) involved a VM programme between Liverpool John Moores University (LJMU) and Durban University of Technology (DUT), towards improving students' digital security skills. The focus was on skills in digital security for two reasons. First, according to the National Audit Office, fraud in the UK now accounts for 40% of all reported crime, where 54% is cyber-related. South Africa ranked sixth in the world with cybercrime density, rising from 11.8 cybercrime victims per 1 million internet users in 2016 to 14.1 victims per 1 million in 2019, and 50.8/1 million users in 2020. Second, digital literacy skills are critical to employees for the future workplace. According to the McKinsey Report of 2022, demand for technological skills will grow.

The project involved four weekly Master classes from employers and academic staff on cyber-security skills. Students worked in small groups on a campaign educating the public with regard to online security, meeting weekly. In the fifth and final session, the students presented their campaign (in digital format) and produced a group presentation. Employers, staff and students voted for the winning work and provided feedback to students.

Project DISC was conducted online via Microsoft Teams and Zoom. The project was made accessible to as many students as possible in several ways. First, the project crossed international boundaries and included one university from the Global South, namely DUT; a merged university, which included an historically disadvantaged university in the South African higher education landscape. Most students at this university are previously disadvantaged (Black) and first-time higher education students. The city of Liverpool is ranked fifth nationally, in the United Kingdom, in deprivation. LJMU recruits 43% of its students from the Liverpool City Region. Thus, a large percentage of students are from lower socio-economic backgrounds and first-generation university students.

Students who agreed to participate in the project had access to computers and Wi-Fi internet connection on campus. In addition, LJMU provided free laptops on loan to their students. Internet connection off campus in South Africa can be intermittent, therefore, the project was timetabled during the working day, where possible, to minimise internet disruption. Finally, the project was advertised and promoted through a range of methods such as email, social media platforms, and student societies, to reach as many students as possible.

The overall aim of the VM project was to devise and run an ACU VM Project to improve students' cyber-security awareness and employability skills, and to evaluate the success thereof.

BACKGROUND

INTERPOL's 2022 Africa Cyberthreat Assessment report found South Africa leads the African continent in the number of identified cybersecurity threats (Modise, 2023a). Furthermore, Modise (2023b) contends South Africa had 230 million threat detections in 2022 in total. Morocco was in second place, with 71 million threat detections. Moreover, according to Chetty (2022), the Defence web stated the cybersecurity company Surfshark reported South Africa ranked number six globally on a list of countries worst affected by cybercrime in 2022, with 56 000 of every million internet users being a victim. The five most common types of crimes are: phishing scams, internet fraud, online intellectual property infringements, and identity theft, as well as online harassment and cyberstalking (Redpoints.com 2024). Gondwe (2022) contends, as a result, South Africa needs a sustained national public awareness campaign to inform and mobilise the public against a growing pandemic of cybercrime.

There are three primary reasons South Africa is particularly susceptible to cybercrime, namely: poor investment in cyber security systems, lack of awareness, antiquated laws, and poor law enforcement training (Barlow 2023). Current crime statistics in South Africa identify underlying tensions, wealth inequality, organised crime and the government's response to police reform and crime intelligence in the country (Panchia, 2023). The Development Bank of Southern Africa was, for example, struck with a ransomware attack in May 2023, in which servers, log files and documents were encrypted by the Akira gang (Greig, 2023). Furthermore, Awan (2023) contends the most common type of phone hacks are Malware, Phishing, WIFI attacks, and physical access, along with social engineering. The author further avers the most common type of phones hacked are Samsung, iPhone, Xiaomi, Huawei and LG (Awan, 2023). It has been determined that established and well-known South African organisations are being subjected to increased cyber-attacks (Pieterse, 2021).

Kavanagh (2021) contends the 'gap' in law enforcement cyber capabilities within and across regions needs to be addressed, as this gap is a key enabler for criminal opportunities, networks and infrastructure. The author further asserts this enables cyber-criminals to exploit borderless playing fields in the digital world, particularly where the law enforcement structure is limited to its national borders (Kavanagh, 2021). Moreover, INTERPOL's 2021 report maintained prevention is key in the face of continuously growing cyber threats, as enforcement by itself is not a complete solution. INTERPOL'S 2023 African Cyberthreat assessment report maintained that law enforcement agencies in the African region need robust and well-structured cybercrime and cybersecurity mechanisms to effectively combat cybercrime. The 2023 INTERPOL report, nevertheless, contends having policies, legislation and agencies in place can provide an appropriate level of response to the broad range of cyber threats and incidents countries are faced with globally. However, as technology is advancing, cybercriminals are also adapting, making it difficult for the average user to keep up (Dipa, 2023).

Aliyu, Abdallah, Lasisi, Diyar and Zeki (2010) aver, due to their frequent use of technology, being careless and sometimes even reckless in their computer usage, students are considered the most vulnerable with regard to cyber-attacks. Lepan (2017) further contends South African youth, as a result of the many challenges they face in the

country, put themselves more at risk for online exploitation. Pramod and Ramon (2014) reported students in higher education are aware of security concerns where their smartphones are concerned; however, they are not fully aware of all the risks and the security practices. Consequently, Yamin, Katt and Gkioulus (2020) contend being informed and prepared is the first defence against cyber threats and cybercrimes through, for example, information security training.

AIM OF THE STUDY

The aim of this project was to describe the ACU DISC VM programme's influence in improving student awareness of cyber security skills.

RESEARCH METHODS

A quantitative cross-sectional survey design was used for this research (Polit & Beck, 2012). This design was appropriate for the variables under review; a VM programme educating students on cyber security, within a real-life, contemporary setting.

Research Setting: The research was conducted in Durban, KwaZulu Natal, South Africa and Liverpool, United Kingdom.

The Durban University of Technology (DUT) has approximately 33,000 registered students, of which 807 are registered in the Faculty of Management Sciences. KwaZulu Natal is one of nine provinces in South Africa and the second most populous, with a population of 11.10 million. This province comprises a multi-ethnic society, comprising Black Africans, predominantly Zulu speaking, Asians and both English and Afrikaans speaking Coloured and Caucasian people.

Ranked fifth nationally in poverty, Liverpool is where LJMU recruits 43% of its students from (Liverpool City Region). Thus, a large student percentage is from lower socio-economic backgrounds and first-generation university students. LJMU was founded in 1823 as the Liverpool Mechanics' School of Arts. It became a university in 1992 and has roughly 27,000 students from more than 100 countries world-wide, 2,400 staff and 250 degree courses.

Target population and recruitment: The target population for this study comprised DUT PhD, Masters, Postgraduate and Advanced Diploma Management Sciences, and Business Law students and LJMU Faculty of Business and Law students, registered at the respective universities in 2024. All students selected participated in the ACU VM Project DISC VM programme between LJMU and DUT, to improve students' digital security skills.

Potential participants were approached, informed regarding the study, and asked whether they would be interested in participating. Those who expressed an interest were provided a letter of information to read further.

Sampling: The census method for sampling was employed as the target population of 100 was considered small. The census method was considered appropriate, as it is reliable and accurate, results collected are less biased, diverse characteristics can be studied, and all items collected are examined, with the information gathered being thorough and widespread. The target population size of 100 (50 from DUT and 50 from LJMU) was sought for the questionnaire. A final sample realisation of 55% (55 respondents) was recruited for the pre-intervention survey, while only 30% (30 respondents) completed the post-intervention survey questionnaire.

Data collection: Data were collected pre- and post-intervention using questionnaires developed by one of the researchers following a literature review, and from her personal experience as a scholar in the field. Survey data were collected via Google Forms, having sent the participants a link to access the questionnaire.

The project was evaluated quantitatively using two questionnaires. The first questionnaire was completed by students prior to commencement of the VM project. The questionnaire asked straightforward questions on students awareness, knowledge and confidence of cyber security. Students' perceptions of their skills were measured using a Likert scale on declarative statements. In the final session, the students received a second questionnaire (Evaluation

Survey) to complete. This was similar to the first questionnaire but included additional questions regarding how, if in any way, the project had increased their knowledge and confidence on cyber security.

Analysis: Quantitative data were analysed statistically on IBM SPSS (v. 27) and the following tests applied:

- Descriptive statistics, including means and standard deviations, where applicable.
- Chi-square test of independence: used on cross-tabulations to determine whether a significant relationship existed between the two variables represented in the cross-tabulation. When conditions were not met, Fisher's exact test was used.
- One sample t-test: Tested whether the mean score was significantly different from the scalar value.
- Independent samples t-test: used to compare two independent groups of cases.

Rigor: The survey questionnaire was assessed for clarity, unambiguous language and ease of understanding the language, through piloting with 10 students (five from DUT and five from LJMU), following ethical approval from the respective universities. This data was not included in the final data set.

ETHICAL CONSIDERATIONS

Permission to conduct this study was granted by the Durban University of Technology University Research Ethics Committee (IREC 218/23). Gatekeeper permission to access students at DUT was received from the Deputy Vice Chancellor for Research, Innovation and Engagement at DUT. At LJMU, the Principal Investigator completed the University Research Ethics Committee (UREC) Minimal Risk Registration Form and obtained relevant ethical approval from the UREC.

The principle of autonomy was observed, with all participants provided information on the study and the freedom to choose to participate without fear or favour, while written informed consent was also sought. Participants experienced no harm through their participation. There were no foreseeable risks for the students. No sensitive questions were posed and those who participated were not in a vulnerable population group. All electronic data are held on a password protected computer, only accessible by the two principal investigators. All electronic data will be deleted from the computers after five years (end 2029).

The students benefited from the project, as it increased their awareness of cyber-security. This study will be of value to future students through the sustainability of the project, as evidenced by student recommendations to continue offering the project.

RESULTS

The questionnaires were administered to participants pre- and post-intervention. The results are reported in that order, with a comparative analysis at the end.

Pre-intervention Results

A sample realisation of 55% (N=55) was achieved, of which n= 30 were from LJMU and n = 25 from DUT. Those sampled were predominantly female (65%, n = 36), with males only constituting a little over a third of those sampled (35%, n = 19). DUT female respondents made up 76% (n = 19) of the DUT cohort. The respondents tended to be between the ages of 18 to 28 years (85%, n = 47).

Engagement and capability: Pre-intervention, the question "how much would you say you know about how best to protect yourself from harmful cyber activity?", indicated a significant relationship between knowledge on how to protect oneself from harmful cyber activity and the university students were registered at, Fisher's exact = 7.713, p=.025. A significant proportion of those from DUT (44.0%) indicated they know "*not very much*", while a significant proportion of student participants from LJMU (73.3%) indicated they know "*a fair amount*".

Respondents were asked to rate their agreement that "most information on how to be secure online is confusing". The scale used is 1=strongly disagree to 5 = strongly agree. Across both universities, the average

agreement score is 3.15, which is not significantly different from the neutral score of '3' ($p=.280$). Thus, neither significant agreement nor significant disagreement were found for this statement. Respondents from DUT agreed significantly more ($M=3.52$) than those from LJMU ($M = 2.83$) that most information on how to be secure online is confusing, $t(53) = -2.710$, $p=.009$.

When asked "How high or low a priority is cyber security to you?", respondents were found to rate cyber-security as a high priority ($M = 4.11$, $t(54) = 8.604$, $p = <.001$). DUT respondents ($M = 4.48$) gave this a significantly higher priority than LJMU ($M = 3.80$), $t(53) = 2.787$, $p=.007$. Compared to DUT respondents, a significant proportion of respondents from LJMU 'never' report phishing by hitting the spam or 'report phishing' buttons, Fisher's $= 9.513$, $p=.045$.

Risks and consequences: The question, "to what extent, if at all, do you think about protecting your own privacy?", elicited a response from 46.7% ($n = 14$) LJMU students that, "*I think about it sometimes*". However, the DUT students responded "*I think about it a lot*" $n= 25$ (100%), Fisher's $=20.582$, $p<.001$.

When asked "to what extent, if at all, do you think about avoiding losing photos ", 36.7% ($n = 11$) LJMU students, on the one hand, responded "*I think about it sometimes*". The DUT students, on the other hand, responded "*I think about it a lot*" $n= 19$ (76%), Fisher's $=6.978$, $p= .028$.

In response to the question, "to what extent, if at all, do you think about avoiding any potential wider impact on other people and organisations?", 26.7% ($n = 8$) LJMU students responded "*I never think about it*". The DUT students, however, responded "*I think about it a lot*" $n= 18$ (72%), Fisher's $=14.219$, $p= <.001$.

When asked "to what extent, if at all, do you think about avoiding being bullied online?", LJMU students responded "*I never think about it*", $n=8$, 29.6% and "*I think about it sometimes*" $n= 13$, 48.1% .The DUT students responded "*I think about it a lot*" $n= 20$ (80%), Fisher's $=17.724$, $p= <.001$.

Responsibility and reliance: The question, "How reliant, if at all, are you on other people for checking the security settings on your devices?" elicited a response from 45.8% ($n=11$) DUT students that stated they are "*partly reliant on others*" and 12.5%, $n=3$ responded they were "*fully reliant on others*". Furthermore, LJMU students reported "*not being reliant at all*" ($n=24$, 80%), Fisher's 9.176 , $p= .006$.

DUT students were more reliant on others to help create their online accounts. Seven (28%) students reported being "*partly reliant on others*" to help create their online accounts and 12%, $n=3$ responded they were "*fully reliant on others*", Fisher's 11.009 , $p=.002$.

Artificial intelligence and Cyber-Security: In response to the question, "how much would you say you know about facial recognition?", eight (26.7%) LJMU students admitted "*not very much*", while $n=14$ (56%) DUT students suggested "*a great deal*", Fisher's 6.819 , $p=.034$.

When asked whether they "would like to learn more about the role of artificial intelligence in cyber security?", DUT students agreed significantly more than those from LJMU ($n=25$, $M = 4.96$, $t(42.537) = 2.193$, $p=.034$).

Post-intervention Results

A post-intervention sample realisation of 30% ($N=30$) was achieved, of which $n= 12$ were from LJMU and $n = 18$ from DUT. Those sampled were predominantly female (80%, $n = 24$), with males only constituting a third of those sampled (20%, $n = 6$). A little more than half the respondents were between the ages of 18 to 28 years (53%, $n = 16$); six (20%) were between 29 and 39 years of age; four (13%) were aged 40 to 50 years and four (13%) from DUT were 51 plus years of age.

Engagement and capability: Post-intervention there was no significant relationship between students knowledge on how to protect themselves from harmful cyber activity and the university they were attending. There was disagreement between LJMU respondents ($M = 2.83$, $SD 1.193$) with the statement and DUT respondents ($M = 3.67$, $SD 1.029$), who tended to agree with the statement, despite the intervention.

When asked "How high or low a priority is cyber security to you?" respondents were found to rate cyber-security as a high priority ($M = 4.67$, $t(29) = 16.699$, $p < .001$). The mean indicates a marginal increase on the pre-intervention score. There was no significant difference in this across universities.

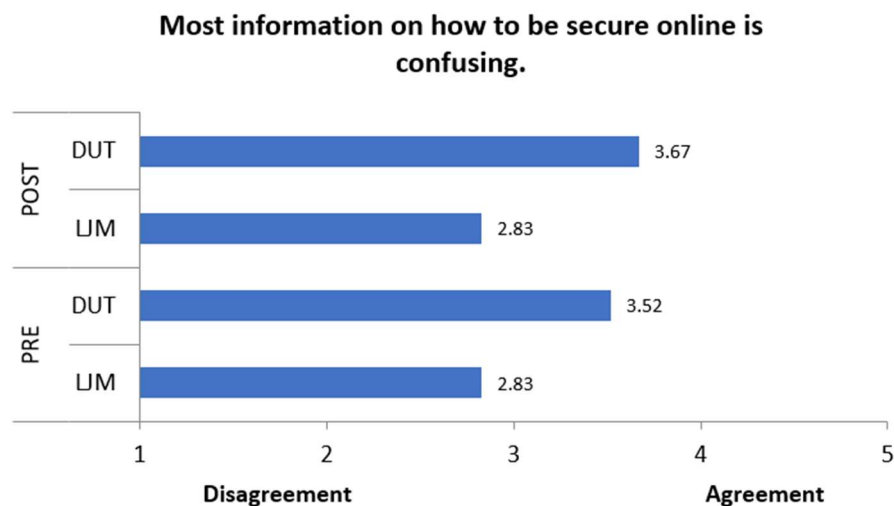
Artificial intelligence and cyber-security: To the question "how much would you say you know about deep fakes", slightly more than half ($n=7$; 58.3%) LJMU students sampled responded "*a great deal*", while 44.4% ($n=8$) DUT students responded "*not very much*", Fisher's 11.914 , $p=.004$.

Evaluation: DUT students showed significantly more agreement than LJMU respondents when asked "to what extent, if at all, do you agree or disagree with this statement? This project improved student's collaboration skills." ($M=4.84$, $t=(48.301) 2.478$, $p= .017$).

Comparative results

Engagement and capability: As illustrated, DUT respondents tended to agree information on how to be secure online was confusing.

Figure 1: Information on Online Security is Confusing



For both pre- and post-intervention, a significantly high priority was assigned to cyber security, $p < .001$ in each case.

Risks and consequences: There was significant agreement pre- and post-intervention that losing money or personal details over the internet these days has become unavoidable: Pre-intervention $t=(54) 2.548$, $p=.014$ and post-intervention $t=(29) 2.186$, $p=.037$. There was no significant difference across the two universities

Responsibility and reliance: Respondents indicated significant disagreement to the statement "I rely on friends and family for help on cyber security" both at pre-intervention testing ($n= 55$, $M = 2.62$, $SD 1.063$, $t= (54) -2.665$, $p=.010$) and post-intervention ($n=30$, $M=2.50$, $SD 1.137$, $t=(29) -2.408$, $p=.023$). There were no significant differences across the two universities.

Artificial intelligence and cyber-security: When asked to respond to the statements "I am aware of the role of artificial intelligence in cyber security" and "I would like to learn more about the role of artificial intelligence in cyber security", there was significant agreement both pre- and post-intervention. Analysis of the first statement responses indicated $N = 55$, $M = 3.56$, $t=(54) 4.886$, $p < .001$ to the statement "I would like to learn more ..." $N= 30$, $M = 4.47$, $t=(29) 9.337$, $p < .001$.

DISCUSSION

Access to the internet is fundamental to contemporary life; however, with this comes increased security risks. The results of this study support findings by Pramod and Ramon (2014), who reported students in higher education are aware of security concerns regarding their smartphones, nonetheless, they are not fully aware of all the risks and security practices. The current study found students reported cyber-security was a high priority, with DUT students according this a significantly higher priority than those from LJMU. This result was corroborated by Huraj, Lengyelalussy, Hurajová and Lajčín (2023), who showed students not only recognize but also care about the importance of cybersecurity.

Prior to the awareness project, a significant proportion DUT students indicated they did not know much regarding how to protect themselves from harmful cyber activity, whereas a significant proportion LJMU students indicated they knew a fair amount. A study of Nigerian university students reported they did not have basic knowledge of cyber security and there was a need to introduce cyber security awareness training (Garba, Sirat, Hajar, & Dauda, 2020). The DUT students agreed significantly more than LJMU students that most information on how to be secure online is confusing. A number of studies have narrated this theme of cyber security information being confusing (Kolouch, Tovarňák, Plesník, & Javorník, 2023; Reeves, Calic, & Delfabbro, 2021; Thompson, Herman, Scheponik, Oliva, Sherman, Golaszewski, Phatak, & Patsourakos, 2018). In addition, the DUT respondents rated cyber-security as a significantly higher priority than the LJMU respondents. This finding was consistent for both pre- and post-intervention, with a significantly high priority assigned to cyber security. This is supported by the finding that DUT students frequently thought about protecting their own privacy, in contrast to LJMU students, who only sometimes thought about it.

A noteworthy finding is the greater the level of concern from DUT students in avoiding any potential wider impact on other people and organisations, whereas the LJMU students never thought about it. This is further supported by the finding that a significant proportion of the LJMU respondents never reported phishing by hitting the spam or 'report phishing' buttons. Chandarman and van Niekerk (2017) determined shortcomings in the cyber-security awareness of many university students. In addition, a dissonance was found between knowledge of cyber-security and behaviour (Chandarman and van Niekerk, 2017), which might be evident in the LJMU students, who appear to know a fair amount on the subject of how to protect themselves but do not ever report phishing emails.

A further finding of interest, is that the DUT students were far more concerned with avoiding being bullied online, which they frequently thought of, whereas the LJMU students only sometimes thought about it. Cyberbullying is prevalent worldwide but students who are aware of cyberbullying have a greater ability to ensure their personal cybersecurity; students' reasons for using the internet reportedly impact their awareness of cyberbullying (Zorlu, 2023). Students who use the internet for educational purposes have significantly higher awareness of cyberbullying than those who use it for entertainment (Zorlu, 2023; Odacı and Çelik, 2018 as cited in Zorlu, 2023).

Pre-intervention it was found DUT students are reliant on others to check the security settings on their devices, whereas the LJMU students do not rely on others at all. It was further found DUT students were also more dependent on others to help create online accounts. However, pre- and post-intervention there was significant disagreement amongst respondents regarding their reliance on friends and family for cyber security assistance. Redmiles, Malone & Mazurek (2016) reported this as a common finding in their research. In addition they reported that this did not have anything to do with the family or friend being an expert in information technology but rather perceiving the family member or friend as being "a bit of a techie" (Redmiles, Malone & Mazurek, 2016).

Another interesting finding pre-intervention was the LJMU students' admittance to not knowing much regarding facial recognition, whereas the DUT students suggested they knew a great deal. This could account for why the DUT students were far more concerned about avoiding losing photos, which they thought a lot about, as opposed to the LJMU students who only thought about it sometimes. This supports findings by Huraj et al. (2023), with regard to Computer Science students' wariness in putting their personal information on social networks. Although it was interesting to note that post-intervention, the LJMU students knew a great deal regarding deep fakes, whereas the DUT students did not know much of deep fakes. There was also significant agreement pre- and post-intervention that losing money or personal details over the internet is unavoidable these days.

The results of this study further support Yamin et al. (2020), who contend being informed and prepared is the first defence against cyber threats and cybercrimes. The DUT students indicated significantly more agreement than the LJMU students that they would like to learn more regarding the role of AI in cyber security. There was significant agreement both pre- and post-intervention with student awareness of the AI role in cyber security and wanting to learn more regarding the role of AI in cyber security.

It was found DUT students agreed significantly more than LJMU students that the ACU project improved student's collaboration skills.

CONCLUSIONS

There was agreement that collaborative online international learning improved digital security and cyber security awareness and knowledge and that students recommend this pedagogy be offered in other modules.

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GLOBAL MARKETING STRATEGIES OF RUSSIAN COMPANIES AS COMPARED TO UK AND US COMPANIES

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ABSTRACT

The purpose of this paper is to provide information about the market's responsiveness regarding the marketing spending and helps the marketers in the marketing strategies formulation and responsiveness of the digital marketing in respective of the investment. For the research we collected data for analysis from the financial reports of companies, traffic data in public domain, using analytical tools and some website and marketing data calculation platforms. We are evaluating 63 companies from Russia, UK and US from all three sector of business operation. From the analysis we received the result that Russian market is sensitive towards the marketing spending for secondary and service sector; however, for the primary sector UK and US market responsiveness is more positive. Although, Market's level of response towards the digital marketing is quite high for the service sector in Russia and the US, but very low in the secondary sector in the Russian market. Furthermore, the data indicated that Russian customers are more conscious of the brand's worth, with a higher response rate in the secondary market but a lower response rate in the service and primary sectors when compared to the UK and US. In this research we found some results that can help marketers in selection of digital marketing tools and techniques, social media channels and device for the communication with the potential customers during the marketing campaign. Digital marketing tools and techniques comes with several challenges and opportunities the marketers, marketing agencies, and firms need to re-think their marketing strategies and this paper helps them to optimize their marketing activities for successful marketing campaigns.

Keywords: market sensitivity, digital marketing, return on marketing investment, bounce rates, marketing spending.

INTRODUCTION

Marketing can be defined as a critical aspect of any business, as it involves identifying and satisfying customer needs and wants through the creation, promotion, and distribution of products and services. According to the American Marketing Association (AMA), "Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large." Kotler and Armstrong (2022) define marketing as "the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return." This definition emphasizes the importance of building and maintaining. Marketing involves a range of activities, including market research, product development, advertising, sales, and customer service. The ultimate goal of marketing is to create value for customers and generate profits for the business. (American Marketing Association (2022). Definition of Marketing. Retrieved from <https://www.ama.org/ama-definition-marketing/> Kotler, P., & Armstrong, G. (2002). Principles of marketing (18th ed.) Pearson.)

In today's competitive global markets, firms are experiencing extreme pressure and competition with changing customer profiles and their customized demands. Therefore, current business strategies are mainly customer-oriented rather than only profit-oriented. Companies cater their products and business processes to satisfy the customers, as customers are the most valuable assets for any firm (Ghosh et al., 2006). Firms cannot grow in isolation; they need to access the international market for consistent growth. Similarly, the firms also enter into the global market for financial growth and they need robust marketing strategies to achieve this growth. Marketing is main activity that can help the brands to build their value and capture the existing and new potential market. The evolution of the definition of marketing and strategic marketing has a long history and have been redefined several times by different

organizations. There are several researchers and international organizations defining marketing in their words, some of them are “Marketing may be viewed as the product planning, pricing, promotion, distribution, and servicing of goods and services needed and desired by consumers (Udell & Laczniak, 1981). Marketing is an exchange process between producers and consumers, in which producer matches a marketing offering (the product or service plus its promotion, distribution, and price) to the wants and needs of the consumer (Mandell & Rosenberg, 1981), however, as noted above, the AMA approved the definition of marketing in 2017, ”Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large”.

The other crucial part of the marketing activities and strategies is the financial aspect, as the financial aspect is related to marketing in every stage. In terms of marketing financial performance is a significant area of evaluation for firms that can also be termed as “Marketing Productivity”. However, researchers are still not clear about the evaluation methods and parameters of measurement for the marketing productivity. The major three challenges that need to be overcome for the measurement of marketing productivity are:

- *Firstly, there are no parameters that can define the impact of marketing action for long- term effects.*
- *Secondly, it is not possible to separate the individual marketing activities from the other marketing activities and*
- *Thirdly, the purely financial method is not adequate for the measurement of marketing productivity (Rust et al., 2004; Clark et al., 1999).*

Research Questions

In this research paper, my major focus is on the market status of the major three countries for marketing environments, and as the allocation of the budget towards digital marketing is continuously increasing, it is very important for the marketers and academic researchers to understand which tools are more efficient and help in making the marketing campaign more successful in these three countries: the United Kingdom, the United States, and the Russian Federation. Therefore, we framed two major questions here that will help to understand the sensitivity of the market on increasing allocation of the budget by the marketers and firms.

1. Is the market of Russia, the United Kingdom and the United States sensitive towards marketing expenditure?
2. Is the budget allocation correct for the digital marketing comparative study and which digital marketing tools, social media channels and device should be preferred by marketers?

METHODOLOGY

Rationale for Research Data Selection

This research paper mainly focused on three countries: Russia, United Kingdom and the United State. However, the marketing is major concern for all the companies and digital marketing eliminating the geographical boundary, although, we selected these three countries to conduct the study due to some basic similar economical and resource structure such as:

- All three nations are major economic powers.
- Each is a key player in the oil market.
- These three nations, where original ideas are constantly encouraged and where there is a platform for entrepreneurship.
- All three are key players in the global technology sector.
- All three nations spend a lot of money on marketing and are transitioning dramatically to digital marketing.

Data Collection

For this research paper, we use primary and secondary both data from the research website, google analytics, marketing data calculating websites and use of some research websites alongwith the annual financial report of the companies in their financial performance every year on their websites. But, in the financial report the marketing costis also included with other operational costs and thus, we extract the data of marketing from it and use it for the calculation of return on marketing investment that will help us to understandthe sensitivity of market on investment.

We get the secondary data from different research and statistics-provider websites such as Statista and Similarweb.com and so forth. This website serves to deliver the survey data as well as real-time digital marketing statistics and traffic created on the ads published by different corporations and marketing agencies for the brands. Similarweb's public data sources are a compilation of web-based data that is accessible to the public. We used another similar research website for the collection of secondary data named Statista which is an online platform offering data. It extracts data from ACTA, AWA, the Euromonitor, Gfk, Outfit, Scarborough, Simmons, Target Group Index, VUMA, and others. We also collected digital marketing traffic data from the data calculation system like Semrush and Ahref, that helps in the calculation of traffic generation of particular website and firms with other digital marketing information, some of the companies allow to check their real time traffic through google analytics, Facebook and other analytical tools.

For the second phase of the study, we gathered the primary data from the top 63 businesses in each industry regarding the volume of traffic generated over the past three months, from January to March 2023, on their digital marketing platforms, for each of the three business sectors from the United Kingdom, United States, and Russian Federation. The data is collected by the share of first party analytics (google Analytics), digital signals captured across the websites, and public data source of websites of companies and with the help of some marketing data calculation websites.

Data Methodology

Our research is divided into two sections: the first will calculate the market's sensitivity to marketing spending, and the following section will be more informative than hypothetical testing, in which we will evaluate digital marketing and provide information about the best selection of digital marketing tools and most preferred social media for marketers and firms for marketing campaign strategies.

ROI/ROMI formulation

The ROMI used to measure market efficiency is based on the evolution of the ROI, the basic principle of which is not complicated, that is, the percentage of the company's interests and activity expenditure.

ROI = Net profit / Investment

However, ROMI has made changes based on ROI and added marketing factors. This indicator is mostly positive when it is reasonable. But because marketing is also a longer-term investment, as Suárez's research shows, it is possible that ROMI will be negative in the short term. Currently, the typical calculation method for ROMI is based on the following formula (Solcansky, 2010; Lenskold, 2003):

$$\text{ROMI} = (\text{Gross margin} - \text{Marketing investment}) / \text{Marketing investment} \quad \text{--- (i)}$$

This paper considers standardization, data uniformity, and relevant both short- and long-term impact variables when selecting the ROMI formula. The total revenue in terms of profit as well as operational costs in terms of marketing investment will be used in the financial indicators. The following is the formula:

$$\text{ROMI} = \text{Gross Profit} / \text{Selling Expenses} \quad \text{--- (ii)}$$

Qualitative Methods

In this section of the study, we gather the raw data on the traffic produced by various digital marketing technologies for a sample of businesses from the United Kingdom, the United States, and the Russian Federation, covering all three business operations divisions from the data published in the public domain, marketing data calculation platforms and from analytics tools.

In this method, the conversion rate calculation helps us to understand the performance of each digital marketing tool.

$$\text{Conversion rate} = \frac{\text{Total Traffic on particular digital marketing tools}}{\text{Total traffic generated on digital platform}} \quad \text{----- (iii)}$$

Calculator of bounce rate is very important for evaluating the overall quality of marketing campaign and the goal completion. Lower bounce rate is not the problem for the marketers and it is normal in any marketing campaign, however, higher bounce rate is an alarming situation for marketers and content makers, they need to improve or change to make the marketing campaign successful to achieve the objectives.

$$\text{Bounce Rate} = \frac{\text{Single Page Visits to the page}}{\text{Total visit to marketing page}} = \frac{\sum_{k=1} S}{\sum_{k=1} S, \sum_{k>1} S} \text{----- (iv)}$$

RESULTS AND DISCUSSION

ROMI and Market Responsiveness Towards Spending

The competitive and financial transparency of that range of the market, corporations frequently withhold their marketing reports. To assess the market's sensitivity to marketing spending, we take into account a number of factors, including bounce rate and return on marketing investment (ROMI), which we use to determine the market's sensitivity to marketing spending and digital marketing spending and techniques, respectively. We calculated the return on marketing investment for 63 companies from all three sectors of Russia, UK and USA, from the mining and oil industries in the primary sector, the pharmaceutical industry in the secondary sector, and the retail industry in the service sector. We will conclude the degree of responsiveness of markets on marketing spending over the period of time from 2017-2022. The data is collected from Russia, UK and US companies from primary (oils and mining industry), secondary (pharmaceutical industry) and service sector (retail industry).

Figure 1: Return on Marketing Investment in Primary Sector from 2017-2022

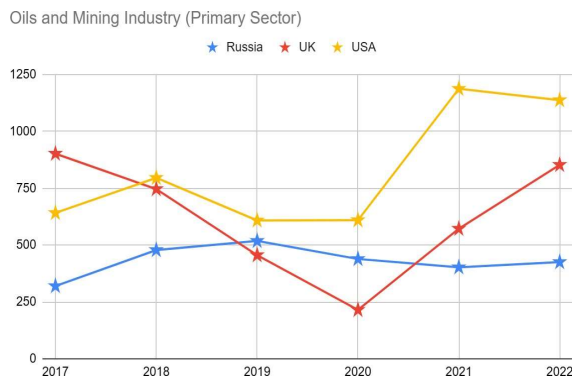


Figure 2: Return on Marketing Investment in Secondary Sector from 2017-2022

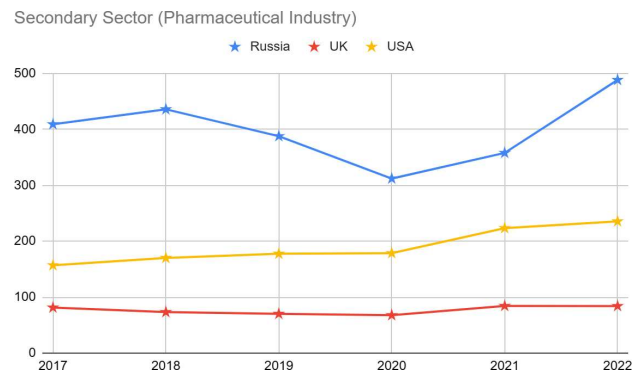
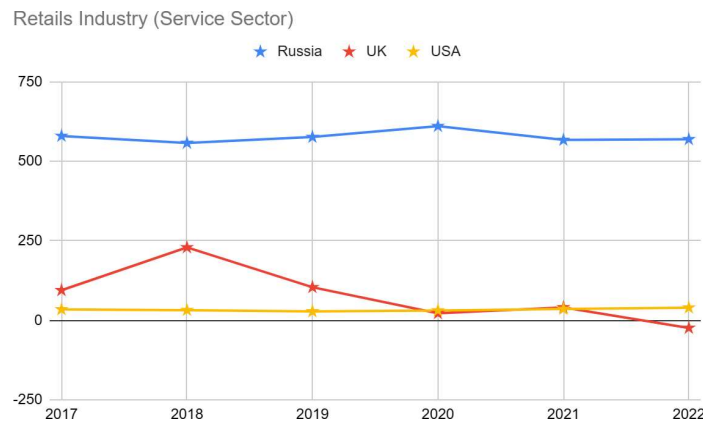


Figure 3: Return on Marketing Investment in Service Sector from 2017-2022



Efficiency of Digital Marketing Tools

In this section, the analysis conducted is based on the first outcome from the mathematical model shown in the methodology section, equation (iii) & (vi). The digital traffic data is collected from above mentioned top 63 companies from all the sectors(Oils and Mining, Pharmaceutical and retails industry) of mentioned three countries. To show the result, different graphs and HitMaps will be used in this research. Through the HitMaps we can analyse their competitive nature. In the recent research Figure 14, it has been shown that in Russian Federation retail and trade service contribute 20 percent of total digital spending during 2021, and similarly, in United States retail industry marketing spending is more than 1.1 billion US dollar in January, 2023 (Source: resources.mediadar.com).

Table 1: Conversion Rate of Digital Marketing Tools Traffic for Service Sector

	United States	United Kingdom	Russian Federation
Direct	47.03	35.45	38.04
Email Marketing	0.86	0.29	1.34
Referral Marketing	3.26	2.72	7.5
Social Media marketing	3.24	3.69	3.78
Organic Traffic	38.9	50.36	48.9
Paid Search	6.19	6.9	0.19
Display Ads Marketing	3.45	0.58	0.21

Note: In the report. conversion rate is in percent (%).

After the pandemic period, all the private and government sectors focused on it. Russia, UK and USA are three major players in Pharmaceutical in the European and American continent. With the industry growth the companies are also spending more on marketing operations. In the survey it has been found that in the United States the Pharmaceutical companies continuously raise their marketing spending especially in the digital marketing tools.

Table 2: Conversion Rate of Digital Marketing Tools Traffic for Secondary Sector

	Russian Federation	United Kingdom	United States
Direct	28.11	32.1	40.08
Email Marketing	0.46	1.04	2.54
Referral Marketing	6.92	7.84	11.14
Social Media marketing	7.28	11.98	7.66
Organic Traffic	50.6	45.79	36.98
Paid Search	6.88	1.15	1.47
Display Ads Marketing	1.67	0.55	0.81

Note: In the report. conversion rate is in percent (%)

Primary sector is a major pillar for the Russian economy, as Russia is a major exporter of oil and gas as well as wheat (Agro based product) to Asia, Europe and African countries. According to the IEA report (International Energy Agencies), in 2021 the total export value is more than US\$120 billion. In the United Kingdom, the mining and energy companies are raising their marketing spending by 25 percent and 15.6 percent (according to CMO survey), respectively, which makes this research more critical for marketers and firms to understand the budgetary resource allocation.

Table 3: Conversion Rate of Digital Marketing Tools Traffic for Primary Sector

	Russian Federation	United Kingdom	United States
Direct	47.42	30.09	37.23
Email Marketing	2.39	0.88	1.25
Referral Marketing	4.73	6.31	6.85
Social Media marketing	1.7	7.7	4.17
Organic Traffic	43	49	48.55
Paid Search	0.32	6.98	2.85
Display Ads Marketing	0.06	0.29	0.43

Note: In the report, conversion rate is in percent (%)

The bounce rate helps to understand the customers behavior and the quality of marketing campaigns. In the academic research, the researchers indicated the high bounce rate as less interest of consumers in the contents and the visual attributes of the contents. Thus, it can be a very optimal measurement tool for evaluating the responsive behavior of the customers towards the digital marketing in the particular geographical areas for particular industry. As the benchmark, academics estimate 40 percent bounce rate as the optimal and 26 percent to 40 percent as the normal bounce rate for digital marketing.

As a result, we may draw a conclusion regarding the primary sector as the bounce rate for Russia and the UK, respectively, ranges from 41.43 percent to 47.7 percent. It is quite close to the average bounce rate that has been optimized by several studies conducted by academic and professional researchers. However, compared to the UK and the US, Russia is more receptive to internet marketing.

Device Distribution

The advertising industry has faced several changes in the last few decades especially after the spread of the internet and availability of cheaper electronic devices like mobile, tablets, desktop, notebooks and so forth. The purpose of this portion of the study is to increase the likelihood that marketing efforts in three different company sectors will be successful by identifying which device is more commonly used in different geographic areas.

Figure 4: Analysis of Bounce Rate for Primary, Secondary, and Service Sector

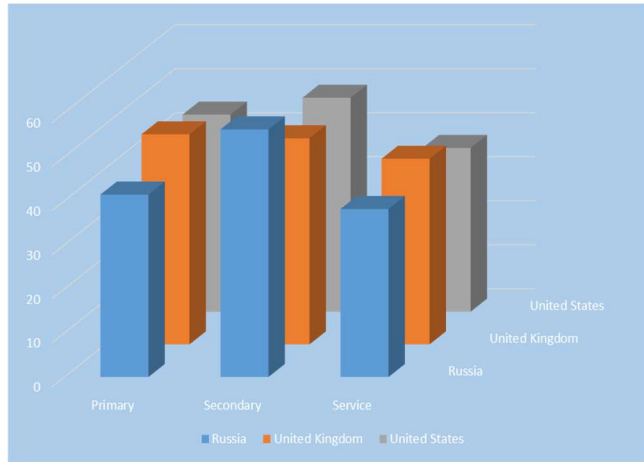
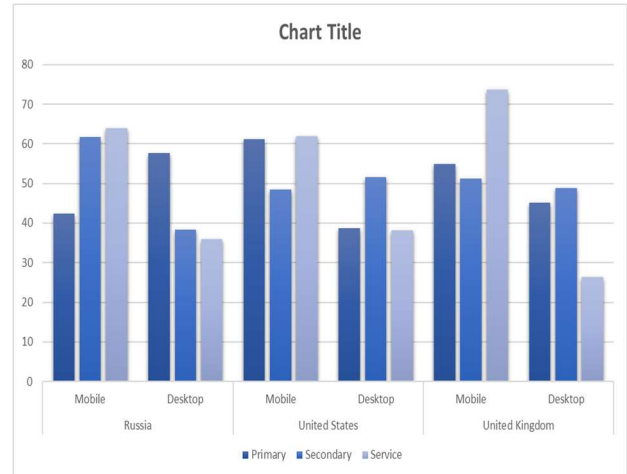


Figure 5: Device Distribution in Digital Marketing Traffic Generation



Social Media Distribution

With the change in the marketing tools, social media becomes one of the main marketing tools for all the marketers and marketing agencies. Now more and more companies are upcoming in the social media industry like Tik Tok, Angellist, Yelp and so forth. Although, it is very important for the marketers to understand the potential of social media to connect with the potential consumers. Moreover, according to different geographical regions, different social media is popular as the marketers need to reach the targeted customers. In this research, we collected data regarding the traffic generated by the most popular social media.

Figure 6: Top Social Media Distribution for Digital Marketing in Russia

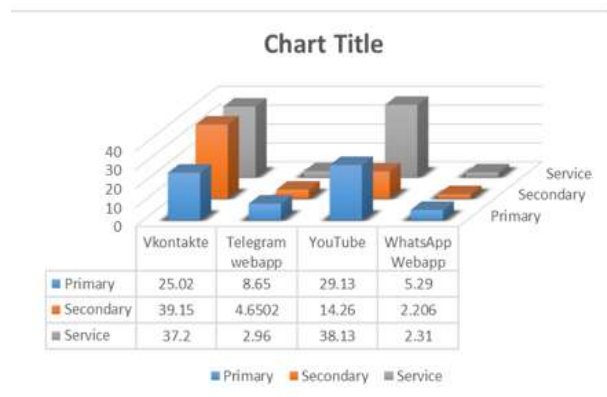


Figure 7: Top Social Media Distribution for Digital Marketing in the United Kingdom

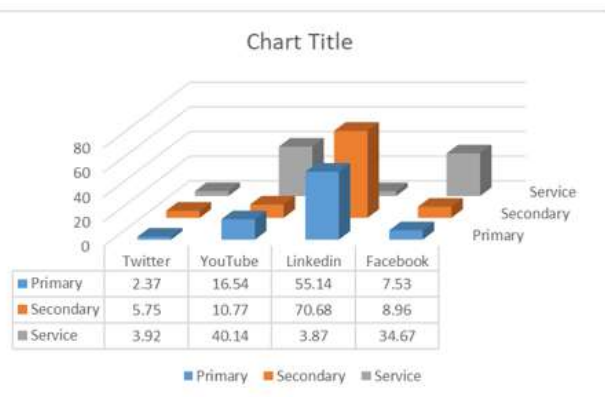
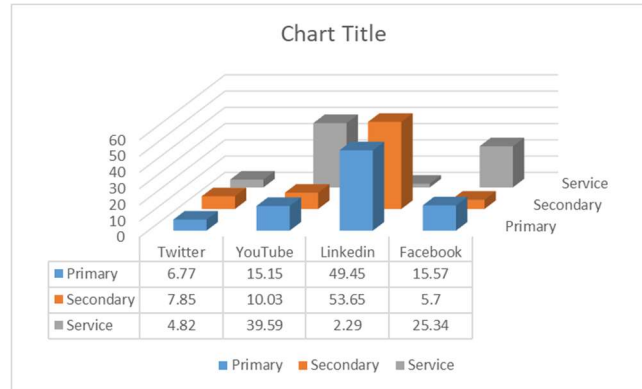


Figure 8: Top Social Media Distribution for Digital Marketing in United States



CONCLUSION

Sensitivity of Markets

In this research from the ROMI we are trying to estimate the sensitivity of the market towards the marketing spending, and thus, we need to scale down the result according to their degree of outcomes. According to the marketing specialists and other academicians, if the ROMI is 5:1 then considered to be very good and if the value is lower than 2:1 then it is considered not a successful marketing campaign and marketers and firms need to evaluate the cause of the failure. However, if the value is 10:1 then the marketing campaign is considered to be exceptional success, although it is an exception and the general rule is 5:1 of returns on investments. We will evaluate the sensitivity of the markets in 5-point Likert scale as mentioned here. Likert scale is bipolar and used for the measurement of positive and negative response both.

Less than 0 = Very Low	Between 0 to 2:1 = Low	Between 2:1 to 5:1 = Moderate	> 5:1 but < 10:1 = High	> 10:1 = Exceptional High
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Table 4: Degree of Marketer Sensitivity Towards Marketing Spending

	Russia		United Kingdom		United States	
	<i>Before Pandemic</i>	<i>After Pandemic</i>	<i>Before Pandemic</i>	<i>After Pandemic</i>	<i>Before Pandemic</i>	<i>After Pandemic</i>
Primary Sector	Moderate	Moderate	High	High	High	Exceptional High
Secondary Sector	Moderate	High	Low	Low	Low	Moderate
Service Sector	High	High	Low	Very Low	Low	Low

From the obtained result we can conclude that, for the primary sector (oils and mining industry) US market showed the highest return on marketing investment with exceptionally high value and that makes the US market most suitable for the marketing spending, moreover, the UK's market also reacted similarly to the US market, but the value is lower than the US market. The UK market is highly sensitive and before and after the pandemic in both periods. However, the different result has been obtained for the Russian market, as we can conclude from the result that the market is moderately responsive towards the marketing spending. Overall, we can conclude that the US market is most sensitive followed by the UK and Russia market.

For the pharmaceutical industry (secondary sector), the result is different, and Russia shown the moderate and high sensitivity of market towards the marketing investment, before and after the pandemic, respectively, however, the UK market is low sensitive in overall. Although, US market response towards the marketing investment is better after

the pandemic period and shown moderate sensitivity, however, before pandemic it was also low similar to UK. Thus, from the overall result we can concludes that Russia market is more sensitive towards the marketing spending followed by US and UK's market.

In the retails industry (service sector), Russia showed the high sensitivity towards the marketing spending in both the periods before and after the pandemic and showing continuous rise in the returns on marketing that attracts more marketing agencies to operate in the Russian markets and companies can invest more to promote their products and services. However, US shown low sensitivity with low return on the marketing spending, although, the result of UK market is worrying situation for the marketers operational in the retails industry. With the negative returns on marketing investment after the pandemic period, we can conclude that UK market is insensitive towards the marketing spending and need to consider the right marketingstrategies before investing on this market. Overall, we can conclude that Russia is most sensitive market followed by US and UK's market.

Table 5: The Market's Level of Response to Digital Marketing

	Primary Sector	Secondary Sector	Service Sector
Russian Federation	+	-	++
United Kingdom	+	+	+
United States	+	+	++

If less than 40 percent, then High (++). **If between 40 to 50 percent, then Medium (+)**. **If greater than 50 percent, then Low (-)**.

From the result we can conclude that Primary sector responsiveness towards the marketing spending is quite moderate in all three countries and it is a positive sign for the marketing agencies and firms to increase the spending towards the marketing activities and specially thedigital marketing. However, the responsiveness of the Russian market in the manufacturing sector for the pharmaceutical industry is not very high and marketers need to analyses their strategies carefully before increasing the digital marketing spending. From the result, we can conclude that there is an inverse relation observed between the marketing spending and marketresponsiveness, however, the other two countries showed moderate responsiveness with lowerbounce rates, as consumers are more confident and spend more time on the internet.

For the service sector from the results, we can conclude that Russia and the United States responsiveness rate is high and as result obtained from CMO survey, the marketing spending is continuously increasing, we can conclude the positive relation between marketing spendingand market responsiveness. However, the responsiveness of the United Kingdom's market towards the digital marketing activities are moderate. From the overall result, we can concludethat marketing spending in the service sector is a more optimistic decision by the firms as the market is responsive towards the marketing spending in all three countries.

Digital Marketing Tools

We discovered that direct marketing strategies, together with referral marketing and paid search, are effective in the mining and oil industries. The marketing methods for display ads and email are similarly unsuccessful and do not warrant allocating significant budgeted resources. Additionally, organic traffic is also produced, indicating that customers are aware of the brand value and thattraditional marketing must also be taken into account to a certain extent for the best possible success of marketing operations.

Along with direct digital marketing strategy, social media marketing and referral marketing aremore effective digital marketing methods in the pharmaceutical sector and have produced significant outcomes. However, since the results from paid search marketing and emailmarketing are below the level of importance, these instruments are not very effective and the marketers should reconsider spending money on them. Overall, in the pharmaceutical industry organic traffic is also significant, which means high return on investment of digital marketingas the ultimate goal of any agency and marketers to increase the organic traffic in the long term.

We can draw conclusions about the retail industry from the results that referral marketing and paid search are successful digital marketing tools along with direct marketing techniques. However, the Russian market is not very responsive on paid search but, other two countries showed positive responses to it. Overall, we concluded that paid search, social media marketing, and direct marketing appeared in each of the three countries in a particular industry, and marketers should concentrate on it when choosing the tools and strategies for digital marketing. There are some digital tactics that assist marketers in focusing and boosting the results of their work, particularly direct visitors like

- Optimization with the keywords and selection of long tailed keywords
- Innovative creation targeted landing pages
- Crafting high quality contents
- Building local search reputation
- Creating more backlinks from trusted and reliable sources and so forth

Device distribution

We can conclude from the result that mobile phones are portable electronic devices and the most common communication method for today's generation, however, there are other devices also that consumers prefer to use. In our research we focused on smartphone and desktop and we found in the result that, Digital marketing success in the oils and mining industry in the UK and US is largely driven by smartphones. Although, the situation in Russia is different and the desktop is a better channel for advertisement and promotion of products.

However, the desktop's contribution to traffic generation is also significant, so marketers and businesses cannot ignore the desktop as the device of choice by the customers. In the pharmaceutical and retail industries, smartphones drive the majority of traffic and make digital marketing successful in all three countries. Overall, the percentage of traffic generated through desktop across the three industries in the UK, US, and Russia ranged from 25 percent to 57 percent. Therefore, it is necessary to take into account both devices when allocating marketing budget and content.

Social media selection

In our research we found some results that can help marketers in selection of social media channels during the marketing campaign. The situation is different in Russia as compare to UK and US, as the country is facing sanctions due to Russia-Ukraine conflict and most of the European and American social media companies-imposed sanctions on Russia, thus, in this situation local social media companies played an important role and accrued the larger share of markets. In Russia VKontakte, and YouTube are the main preferred social media channels followed by WhatsApp and telegram web apps.

From the obtained result we can conclude that, LinkedIn and YouTube are the preferred channels of communication for the consumers for primary and secondary sectors followed by Facebook and Twitter, but in the service sector (retails industry) the consumers are looking for the information more on Facebook rather than LinkedIn. Hence, the marketers and the agencies should target Facebook as the major social media channel for the marketing their products and services for the retail industry. In this research paper we tested some hypothesis and the results are as

H1: United Kingdom and United States Market is more aggressive / responsive towards marketing expenditure as compared to Russian Market

Result: This hypothesis is not completely correct, for secondary (pharmaceutical industry) and service sector (retails industry) Russian market are more sensitive and responsive according to analysis result

H2: United Kingdom and United States's consumer are more reactive towards brand value as compared to Russian Market's consumers

Result: This hypothesis is not correct, Russian market consumers are more reactive towards brand value than US, however, brands perform better in the UK as compared to Russian market with higher organic traffic

H3: In Russia, global social media platform is more attractive platform than domestic social media platform

Result: This hypothesis is correct, in Russia, global social platform is still very attractive for the consumers even after

the sanction imposed by several social media platform, but local social media platform still one of the successful platforms for marketers and firms.

In overall, we can conclude that all market has their own challenges and opportunities in marketing sphere. Judicious decision based on the facts and data helps the marketers to make their campaigns successful. The main purpose of this research paper to publish some non-explored facts in the public domain that can helps the marketers and firms in their decisionmaking and marketing strategies formulations.

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