

# **2023 GBATA READINGS BOOK**

## **THEME**

### **EMBRACING THE POSITIVE IMPACT OF DISRUPTION IN THE FIELD OF FUTURISM**



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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 179 empirical, conceptual and methodological papers involving all functional areas of business education with a special focus on international aspects. Of the 132 papers accepted, 60 papers are published in this Readings Book.

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# **TALENT MANAGEMENT WITHIN SMEs: ATTRACTING, DEVELOPING, REWARDING, AND RETAINING WORKERS AS SOURCES OF ENHANCED SUSTAINABILITY**

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## **ABSTRACT**

*The aim purpose of this study is to explore talent management within SMEs in attracting, developing, rewarding, and retaining in enhancing sustainability. In so doing, we focused on the key talent management practices employed by SMEs to enhance and sustain talent management in talent acquisition, development, and retention. The researcher also explores how these practices are shaped by the South African context. In the approaches to this study, the researcher draws primarily upon semi-structured interviews with 15 SME owners/founders operating in Johannesburg, Gauteng, South Africa. An inductive thematic analysis identified patterns in the main theme that emerged from the interview data. The study found that talent management practice has a positive significant impact on employees' commitment and the sustainability of the businesses. It concluded that talent management is measured in terms of talent attraction, talent development, and talent retention, talent reward, and promotes employee commitment in sustaining SMEs in South Africa. In the context of reformed SMEs, the researcher reports on talent management practices in the South African context. The literature on talent management in SMEs by providing evidence of the conceptualization and management of global talent in the context of South Africa.*

**Keywords:** talent management, SMEs: attracting, developing, rewarding, retaining, and sustainability.

## **INTRODUCTION**

In the fast-paced modern business environment, competitive businesses must adjust to advance in a range of industries to survive and continue to grow. Talent may be found by using tactics like recruiting, developing, rewarding, retaining, and sustainability, which is what has become known as "Talent Management" in recent years. Businesses may profit from a significant, long-lasting competitive advantage that is advantageous to both their tactical and strategic operations (Collings, Mellahi, & Cascio, 2019:545, Vaiman, Collings, & Scullion, 2017:295). Chams, and García-Blandón, (2019:112) states that a person's ability to generate novel ideas, motivate others, and foster achievement despite time restraints. Over the twenty-first century, talent's strategic importance has increased along with its importance to enterprises. Organizations face major problems when talent is lost, regardless of the state of the economy (Ambrosius, 2018:60). This study thoroughly examines the concept of talent management within the framework of its processes and, based on an experimental application, discloses the effects of key elements of those processes on employee satisfaction. Effective talent management requires fundamental techniques for employing strategic people, including human resource applications, performance assessments, incentive structures, training and development, positioning, and initiatives to become change agents (Anbumathi & Sivasubramanian, 2016:280). Effective people



management provides opportunities to raise the added value that each individual contributes by enhancing worker productivity (Beamond, Farndale, & H'artel, 2016:500). To develop and become a respectable branch of human resource management, talent management needs to be studied in a variety of diverse fields. To add to the body of knowledge in this field of study, exploratory research should be done that focuses on talent management in public and nonprofit organizations, as well as in small and medium-sized businesses (Al-Hussaini, Turi, Altamimi, Khan, & Ahmad, 2019:120). However, talent management could be overseen by senior management in a way that is consistent with the entity's overall strategy when it develops them (Cerna & Chou, 2019:820).

## **PROBLEM INVESTIGATED**

It's no secret that South Africa's small businesses have a high failure rate because of the significant obstacles they confront. The lack of sustainability in small and medium-sized enterprises (SMEs) has been the subject of several studies in the academic literature (Crowley-Henry, & Al Ariss, 2018; Chams & García-Blandón, 2019:112). Meanwhile, sustainable talent management methods have yet to be looked at comprehensively in developing nations such as South Africa to address the issues facing small and medium-sized businesses. As a result, the current research intends to discover how South African SMEs might benefit from personnel management strategies that are both integrated and long-lasting. Defining the goals of a new talent management framework is a necessary first step in developing one. Talent management is not a goal in itself. Employee development and succession planning aren't the focus here. There are no precise goals to meet, such as having the best-educated personnel or a turnover rate of 5%. Overall, this research aims to fill the gap in the existing literature by examining the intersection of talent management and sustainability within SMEs. It will provide valuable insights into how attracting, developing, rewarding, and retaining workers can contribute to enhanced sustainability outcomes and create a framework for sustainable talent management practices within SMEs.

## **RESEARCH OBJECTIVES**

- To investigate how SMEs may best attract, develop, reward, and retain talent to promote the sustainability of their businesses.

## **RESEARCH QUESTIONS**

The following research question was formulated for the study:

- How best can SMEs attract, develop, reward, and retain talent for the increased sustainability of their businesses?

## **LITERATURE REVIEW**

The review of the literature examines what delegation is, why it is necessary, and why managers are hesitant to delegate.

### **Conceptualizations of Delegation**

Talent management has grown in popularity over the last 20 years, and both institutions and companies are starting to show interest in the concept (Chaudhuri, Hirudayaraj, & Ardichvili, 2018:465). Organizations must adapt to new advancements in a range of disciplines if they wish to survive and develop in the competitive and dynamic modern economy. A few of these include fresh viewpoints, environmental influences, and new ideas. The objective of some long-standing practices that have lately been given the name talent management, which was established by practitioners, is getting the right person in the right role at the right time (Collings & Isichei, 2018:170). Talent management's rising significance has recently gained more and more relevance. Employing exceptional employees, attracting new talent, and providing essential human resources opportunities like career planning, career development, and training may provide businesses a competitive edge and help them stand out on both an operational and strategic level (Ewerlin & Süß, 2016:145).

The term "talent" is frequently used in everyday conversation and has become crucial to business. It demonstrates people's capacity to devise creative solutions that are effective and motivate those around them (Festing, Kornau & Schäfer, 2015:708). Talent can be evaluated using the compositional traits of success, aptitude, leadership, practicability, creativity, and time. "Talent" is defined as cognitive, heuristic, illogical, behavioral, and emotional patterns that may increase human output in quality-based definitions of the term. Crane, and Hartwell, (2019:85) defined talent management as all activities and processes that involve systematic identification of key positions that in various ways contribute to a company's sustainable competitive advantage. It is the implementation of a diverse human resource architecture that makes it easier to fill these roles with qualified incumbents and ensure their continued success.

Additionally, it guides and supports the professional growth of personnel. Froese, Shen, Sekiguchi, and Davies, (2020:5) argued that talent management is the process of discovering employee strengths, successfully encouraging their development, and enhancing career prospects through support. An organization can either invest exclusively in those two groups, which are its greatest performers and prospects, from whom it can expect faster and greater returns. Exclusive talent management is being used by many small and medium-sized businesses (SMEs) to promote an inclusive culture that values collaboration and flexibility over exclusivity. Due to their belief that every employee can provide value to the firm as a whole, SMEs have adopted more inclusive approaches to talent management as a result (Krishnan & Scullion, 2017:435). For instance, Kravariti, Oruh, Dibia, Tasoulis, Scullion, and Mamman (2015) found that the majority of examined SMEs embraced talent management. Small and medium-sized enterprises (SMEs) can gain a much-needed competitive advantage by adopting methods that are informal, flexible, and personalized.

## **Attracting Talent**

Additionally, according to (Kravariti, et al., 2021), skilled individuals frequently seek out companies that offer a diverse workplace, an inspirational work environment, competitive pay, and opportunities for professional advancement. Mathew (2015:138) added that to address organizational difficulties, it is essential to build the HR status, organizational attractiveness, and a suitable talent pool. Generally speaking, an organization's talent management practices paint a clear image of its philosophy regarding employee management and growth.

Organizations that are not deliberate in this regard risk losing the loyalty of their staff, which could have a severe impact on the company's future operations. When a person has the necessary talents, specific activities are easier and less expensive to coach. It has been proposed that organizations should hire based on individual attributes and characteristics that are difficult to teach (Krishnan & Scullion, 2017).

## **SMEs Talent Development**

Employee training is crucial to the successful implementation of sustainability programs in SMEs (Golubovskaya, Solnet, & Robinson, 2019). Human resource managers can immediately affect any recommended changes in an SME by creating activities (Karunathilaka, 2020:145). Additionally, it is crucial to allow staff members to practice applying new work procedures for them to obtain knowledge and a commitment to long-term initiatives (Jia, Jiao, & Han, 2021). For development to be successful, it must continually concentrate on the improvement of interpersonal skills as well as on the requirements of a particular position (Kabwe & Okorie, 2019:857). Gallardo-Gallardo, Thunnissen, and Scullion (2020:467) assert that there is a progressive correlation between development and commitment to an organization and list several benefits of implementing training and development programs, including improved motivation, the promotion of best practices, encouraging integration and collaboration at all levels of an organization. Enhancing highly talented employees' learning and performance for a particular position is a major feature of talent management that plays a key role in having a substantial impact on high leadership development in a business. Through training, employees can achieve the objectives listed in their job descriptions that are linked to the overall performance of the company.

## **Rewarding Talent in SMEs**

According to Cohen, Taylor, and Muller-Camen, (2011), motivation has a combination of three common purposes that forms an individual's stimulus profile, the effort for achievement, the desire to continue friendly relationships with

others, and the effort for power. Reward systems encompass more than just financial compensation. The rewards can also be given as schedule flexibility (Kulkarni & Scullion, 2015), profit-sharing, benefits, and incentives (Khoreva, Vaiman, & Van Zalk, 2017:30), recognition (Egri & Hornal, 2002), paid time off and vacations favored parking and gift certificates. Motivation programs require a lot of attention. If the measurements of performance are set too high, then employees may view them as unattainable and not work towards reaching those goals. On the other hand, if the measurements linked to rewards are set too low, then employees may not take the process seriously.

## **Retaining Talent**

Many scholars contributed to talent management as the most essential issue in retaining talent (Ozel & Karacay, 2019:288; Podgorodnichenko, Edgar & McAndrew, 2020:3; Peltokorpi & Jintae Froese, 2016:425). Thus, there is a growing scarcity of talent and increasing competition for talent (Pagan-Castano, Ballester-Miquel, Sanchez-Garcia & Guijarro-Garcia, 2022:530). Knies, Boselie, Gould-Williams, and Vandenabeele, (2015:423) argued that the breakdown of traditional loyalty and psychological contracts and the increasing mobility of people, retaining talent in today's competitive business environment is becoming increasingly challenging. Mahmood and Mubarik, (2020) stated that it is not obvious how well firms are at keeping employees and building talent pipelines. A portion of the high cost of replacing expertise may be the loss of specialized knowledge and client relationships (Kravariti, et al., 2021). According to Marin-Garcia and Tomas (2016) and Kravariti, et al. (2016), the workers who are most in demand for their skills are also the ones who are most likely to be fired first.

## **Talent Management on Sustainability**

Global leaders, social networks, and businesses concur that hiring smart people can help solve the pressing problem of sustainability in the twenty-first century. Despite claims made by researchers and practitioners that TM is a source of sustainability (Liu, Vrontis, Visser, Stokes, Smith, Moore, Thrassou & Ashta, 2021:7; Shah & Syed, 2018:25; Lopes, Farinha, Ferreira & Silveira, 2018; Singh, Pradhan, Panigrahy & Jena 2019:6). In the opinion of Chams and Garca-Blandón (2019), stated that the workforce from their sustainability goals, and this is only achievable with the aid of individuals who can accomplish multiple goals. They also said that the link between competence and sustainability is only a "means to an end." The most successful businesses in the world of business have also admitted that talent management is crucial to their long-term success. The process of putting good talent management methods into practice to support organizations in achieving their long-term financial, social, and environmental goals is referred to as "sustainability" when used in the context of HR (Ehnert et al., 2016). Furthermore, research has shown a strong link between employing successful talent management techniques and achieving long-term success (Latukha, 2018). In conclusion, clever people significantly improve a company's performance, and their effective leadership directly affects sustainability (Behera and Mohapatra, 2020).

## **RESEARCH METHODOLOGY**

In this investigation, an interpretive paradigm was used. The interpretative paradigm recognizes that each participant will construct and interpret their world, so the researcher must constantly be open to other values and attitudes. This study tried to collect detailed information on talent management for sustainability in small and medium-sized firms in South Africa from the viewpoints of the researcher and those researched without taking an objective stance, hence using an interpretive paradigm was acceptable.

The interpretive school of thought also holds that research is value-bound, that the researcher is a part of the subject of the investigation, and that the study's findings will be based on subjective criteria (Creswell, 2007). The researcher was able to develop and interpret their understanding of talent management for sustainability in South African small and medium-sized businesses by combining earlier experiences from participants.

This study aims to answer fundamental questions such as "why" and "how," with a focus on talent management for sustainability in small and medium-sized businesses in South Africa. Interpretative techniques are best employed to address these inquiries since they enable the researcher to gain a more in-depth understanding of the situation (Patten & Newhart, 2017). The interpretive paradigm entails undertaking idiographic research to understand

a subject through an in-depth examination of a few situations (Etikan & Bala, 2017:6). The researcher will be able to discover more about ethical leadership and its efficacy in higher education by using "why" and "how" inquiries, guaranteeing that the research is pertinent and trustworthy. According to the interpretative paradigm, the researcher must first understand how people perceive and comprehend the world to fully explain why people act in specific ways or why certain institutions exist (Merriam & Tisdell, 2016). These inquiries generate detailed responses from participants that help the researcher understand how people perceive and comprehend their surroundings.

## **Sampling**

Connections between the participants' viewpoints emerge from the analysis of the data in qualitative investigations. The focus of quantitative research is on the relationships between variables. The qualitative study concentrates on the mechanisms and causes of a phenomenon (Seny Kan, et., al 2016). Investigative data were gathered and analyzed for the current qualitative investigation (Shaheen & Pradhan, 2019:27). The methodology made it easier to combine interactive and inductive analysis. The qualitative technique enabled a complete knowledge of the studied phenomenon of how talent management might be sustained in small and medium firms in South Africa rather than producing causative or predictive information. The foundation of the current investigation was perceptions derived from lived experiences, making the qualitative approach appropriate in light of the study's objectives. Convenience sampling will be used to sample the data, allowing the interview to take place in a setting that is comfortable for the participant.

## **Population**

The study's primary focus was on small business owners. Therefore, small to medium-sized firms in Johannesburg, South Africa made up the sample for this study. Small business owners from diverse areas of Johannesburg were chosen to deepen the data.

## **DATA COLLECTION METHOD**

Data for this study were collected through face-to-face interviews that were only semi-structured. Participants signed informed consent forms before taking part in the interviews. The time, date, and location of the interviews were all agreed upon amicably by both parties. Every interview took place in a public setting, and each location was chosen because it was convenient for the people being interviewed. The interview settings protected participants' safety and anonymity (Bloomberg and Volpe, 2008). Before the interviews, multiple meetings with the small business owners of each sample enterprise were held to make sure the selected interviewees had participated during these interviews on talent management. There were a total of 15 semi-structured interviews that met the required number of recommendations (Saunders & Townsend, 2016). To make sure that every participant understood the essential topics, the interviews were conducted in English. Additionally, a rigid interviewing approach that mirrored the study's objective was adopted (Bryman, 2012). Before discussing strategies for acquiring, developing, and retaining personnel, the interviewing process began with background questions about the businesses. Each interview lasted about an hour and was conducted in the South African metropolis of Johannesburg. They were then handed out.

## **Data Analysis**

The material was put together logically using the theme analysis method (Merriam & Tisdell, 2016). Qualitative analysis was used to locate, investigate, and report on themes found in various datasets (Rosenthal, 2016:507). So, the pattern was followed. Using first-order codes, the technique's first phase produced a tentative category. The creation of an open-coding data reduction technique came next. Textual content analysis was used to develop words and phrases that effectively represented the significant, summative, and crucial topics from interview excerpts (Thomas, 2017:25). Additionally, these terms specifically addressed the study's main question.

This segment performed the interview and used transcription, coding, and thematic analysis to analyze the results. This enhances the ability of SME owners and managers to perform talent management procedures, which primarily relate to the opinions, choices, and personal characteristics that can have an impact on sustainable growth in their companies. On the other hand, some data analysis was obtained along with other criteria that were equally

important in determining whether or not to include sustainable talent management in South Africa. Under the individual factors, the initial influences were identified.

The second factor, which is referred to as a need for sustainability in SMEs, is more concerned with relationships with employees, organizational culture, organizational structure, and the practice's involvement in values-based talent management, sustainability leadership & development, and sustainable growth, among other things. The talent management factors that could be related to the environment and sustainable talent management techniques were more recently acknowledged.

## RESULTS AND FINDINGS

This segment performed the interview and used transcription, coding, and thematic analysis to analyze the results. This enhances the ability of SME owners and managers to perform talent management procedures, which primarily relate to the opinions, choices, and personal characteristics that can have an impact on the sustainable growth of their companies. On the other hand, some data analysis was obtained along with other criteria that were equally important in determining whether or not to include sustainable talent management in South Africa. Under the individual factors, the initial influences were identified.

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### Factors Related to Sustainability in SMEs

The process of engaging in talent management, which was emphasized as a sustainability issue in SMEs, is another factor that has been acknowledged as being essential to decision-making. Interactions with employees, organizational culture, organizational structure, success, employee involvement (Value), and sustainability are all concepts that are evident in these areas. This category included leadership, sustainable development, and sustainable growth. These are also supported by the responses given by the participants in the debate that follows. The table below illustrates the foundation for the sustainability-related factors in SMEs.

### Knowledge

The majority of participants expressed a deeper awareness of how talent management practices may support their firms' long-term viability. Here are some of their diverse answers to the interview questions, "Are you familiar with the term Sustainability? And, in your opinion, could you please, just briefly clarify what the term Sustainability means? The majority of the participants share a comprehensive understanding of the necessity of sustainability factors in SMEs' operations. The participant responded to this question in the following manner:"

*Participant comment: "I am very familiar with the term Sustainability".*

But Participant 7 commented about management: "Uhmhhh, a bit. Ya I am familiar with it".

*"The concept of sustainability can be said to be inferred to as going concerns part of developing for long-term commitment to maintain equilibrium between social, environmental, and economic concerns rather than short-term profits practices."*

### Organizational Culture

The organizational culture question category came next. The first participant responded more fully to the query about how the firm should be conducted with a cultural attribute related to sustainable talent management. The sentences that follow were taken directly from the transcript.

*Participant 1: Yes, it will, and the HR department's task will be to develop a special mechanism to promote awareness among employees so that organizational culture might have an impact on the sustainability of the firm.*

*Participant 5: "Well, in my organization there is no organization culture since he started this company the only I do*

*is to retain, and maximize top talent for my business."*

## **Talent Management Strategy (Values)**

Most participants in these questions say that they believe talent management strategies are the greatest strategy to raise the bar for HR procedures in their organizations. They take this action to support the organization's development of its employees and their integration with its governing structure and experiences. These are their observations:

*Participant 5 make an in-depth of what ethical talent management should be done in an organization system, this was her comment: "Well, the value for implementing talent management in my organization, is to place a budget towards talent development. Company strategy should be linked to the utilization of employee talent. Organizational values refer to beliefs about the types of goals firm members should pursue, as well as ideas regarding standards of behavior, organizational members should use to achieve these goals. Values are the basis for the development of organizational norms and expectations that define appropriate behavior by employees in particular situations. Shared values can also provide a source of motivation and commitment among organizational members".*

*Participant 7: "ok, the value that I will like to implement is to in still employee discipline within the organization to ensure employees are aware of the code of conduct and adhere to it, and to ensure that employees respect each other as well as our clients".*

*Participant 9: "The ethic of talent management is to ensure that a firm has the right talent with the right skills at the right time. However, what may have been the right skills in the past may not be all that is required in the future. Many things change presenting new challenges and requiring new skills".*

## **Sustainable Growth**

The opinions of all the participants centered on how talent management might be a suitable plan of action for SMEs in South Africa to attain long-term growth. And these are their comments:

*Participant 6: "My kind advice for leaders who are working towards this journey of sustainable growth is to adopt sustainability as a way of discovering tremendous rewards for so doing. This is a new approach to managing growth and development of your business, enhanced brand and increased market share, risk reduction and improved risk management, competitive advantage in markets worldwide, re-energized employees, and greater support from and within local communities".*

*Participant 8: "Well, the advice is going to give other leaders that they should engage everyone in their domain to sustain growth, by creating and sustaining networks with customer relationships both within and outside their businesses. This, therefore, emphasizes the need by entrepreneurs/ owners managers to develop an entrepreneurial mindset since it is an important success factor for entrepreneurs to identify business opportunities, without which a business will fail".*

## **Sustainable Development**

Question 17 asked each participant how SMEs can be used as a tool leading to sustainable development. Each participant shares their thoughts and understanding of how SMEs can grow in their operational system, notably in the area of talent management techniques. Everyone present genuinely expressed their own opinions, which are as follows:

*Participant 1: "Yes, sustainability can lead through an organization's dedication to sustainability and the numerous advantages that result. Firstly, the level of employee engagement and commitment also can increase". "Secondly, the firm's reputation may also be enhanced, which makes the organization attractive to potential employees, as well as customers and investors". "Thirdly, a commitment to sustainability, reinforced by applying the components of the framework presented to create a culture of sustainability, can be rewarded by increases in brand equity, market share, and customer loyalty".*

*Participant 6: "Yes, leading sustainability can develop SMEs by helping all leaders at all levels to address their organization's strategic and tactical concerns by reconnecting them to the organizational mission and collective vision highly-principled environment".*

*Participant 7: "The structures of SMEs should be based on the vision and goals of the business, to serve as an example that is effective for some community-based organizations which can be adapted and modified for the business".*



## DISCUSSION

The findings of the study indicated that SMEs can attract talent by highlighting their unique selling points, such as a supportive work environment, growth opportunities, and a sense of purpose in contributing to sustainability. Building an attractive employer brand and effectively communicating the value proposition of working for an SME can help overcome challenges related to limited resources and brand recognition. Talent is attracted to SMEs that emphasize a culture of innovation, flexibility, and opportunities for autonomy and creativity. However, attracting top talent is crucial for SMEs to remain competitive and innovative. By developing a strong employer brand that highlights the unique opportunities and benefits offered by SMEs, they can position themselves as attractive employers. This can include showcasing their commitment to sustainability, flexible work arrangements, growth opportunities, and positive work culture.

The findings noted that SMEs face resource constraints in providing comprehensive training and development programs. Tailoring training programs to the specific needs of employees and aligning them with organizational goals and market demands is crucial for developing talent within SMEs. A culture of continuous learning, feedback, and skill enhancement fosters employee engagement, job satisfaction, and adaptability to industry changes. The findings of the study comment that non-monetary rewards and recognition are important for SMEs in attracting and retaining talent.

Building a culture of appreciation and recognition through regular feedback, employee appreciation programs, and involving employees in decision-making processes can significantly contribute to talent retention. SMEs can leverage their smaller size to create a close-knit community where employees feel valued and recognized for their contributions. Retention strategies for SMEs involve providing opportunities for career growth, clear pathways for advancement, and skill development aligned with employees' aspirations. The findings stated that offering work-life balance initiatives, such as flexible scheduling and remote work options, can contribute to employee satisfaction and retention.

SMEs can foster a sense of stability by ensuring transparent communication about the organization's vision, long-term plans, and commitment to sustainability. Finally, the findings noted that talent management practices directly contribute to the overall sustainability of SMEs. A skilled and motivated workforce drives productivity, innovation, and long-term growth. Effective talent management also aligns with the social, environmental, and economic dimensions of sustainability. By integrating sustainability values into recruitment, training, and employee engagement, SMEs can attract individuals who share their commitment to responsible and sustainable practices. In conclusion, talent management plays a significant role in enhancing sustainability within SMEs. By attracting, developing, rewarding, and retaining workers, SMEs can build a competitive advantage, adapt to changing market demands, foster innovation, and contribute to their long-term success.

## MANAGERIAL IMPLICATIONS

This study seeks to improve understanding and makes recommendations to all SME owners, managers, and practitioners to make every effort to implement all compensation plans required to retain talent in their organizations as this will increase their commitment and sustainability towards achieving organizational goals. Following a discussion of the key difficulties of defining, recruiting, retaining, and developing people, some actionable ideas are given. By implementing these managerial implications, SME managers can optimize talent management practices to attract, develop, reward, and retain workers as sources of enhanced sustainability. Effective talent management contributes to the long-term success of SMEs by fostering a skilled and engaged workforce, driving innovation, and positioning the organization as a responsible contributor to sustainable development. Managers should promote a culture of continuous learning and create opportunities for employees to collaborate with external stakeholders, such as industry experts and academic institutions, to stay updated with emerging trends and best practices.

## RECOMMENDATIONS

The following are suggested recommendations:

- Owners of SMEs should assess the methodologies used to identify high potential and high performers in their firms, as well as the variables that affect these individuals' decision-making.
- Open communication between management and employees is a good idea since it allows for better business planning by gaining knowledge of their goals and desires. This makes it easier for businesses to deal with workforce turnover.
- Employers who are aware of employee attitudes can build a compelling and competitive brand. This talent attraction technique works by projecting an image of being a "great place to work" toward the targeted candidate pool in order to attract talented people from the external labor market.
- SMEs should invest in developing a strong employer brand that highlights their unique selling points, company culture, growth opportunities, and commitment to sustainability.
- SMEs should encourage collaboration and create cross-functional teams to foster knowledge sharing and innovation.

## FURTHER RESEARCH

The study's findings have shed light on several ways that talent management can be improved with favorable effects at the organizational level, laying the groundwork for future studies that will focus on other topics like governmental policies and programs, national competitiveness, and business.

## CONCLUSION

The results of this study aided small business owners and leaders in strengthening the adaptability and resilience of their businesses to the challenging business climate. The research assisted small business owners and leaders in creating and implementing successful strategies, improving their entrepreneurial performance, adopting management techniques, and establishing sustainable business models. Business owners and leaders can improve their competencies to get a competitive edge, ensure sustainable operations and plans, and ensure corporate success. To develop the skills and competencies they need to be sustainable, SMEs can promote on-the-job training, develop training, find a way to keep the right people and identify the factors that affect talent attractiveness within SMEs. Effective talent management within small and medium-sized enterprises (SMEs) is crucial for their long-term sustainability and success. This research has explored the challenges and opportunities associated with attracting, developing, rewarding, and retaining workers within SMEs as sources of enhanced sustainability. Attracting talent poses unique challenges for SMEs, such as limited resources and brand recognition. However, by building an attractive employer brand, showcasing the unique opportunities offered by SMEs, and effectively communicating their value proposition, SMEs can attract talented individuals who align with their vision and values. Developing talent within SMEs requires overcoming limitations such as limited resources and time constraints. However, implementing comprehensive training and development programs tailored to the specific needs of employees can enhance their skills and competencies, enabling SMEs to adapt to changing market demands and foster innovation. Rewarding talent goes beyond monetary compensation for SMEs.

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# ENHANCING AGILE PRODUCTIVITY: RESEARCH OBJECTIVES FOR EXPLORING THE RELATIONSHIP BETWEEN TEAM MOTIVATION AND AGILE METHODOLOGIES IN NIGERIA-BASED SOFTWARE DEVELOPMENT PROJECTS

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## ABSTRACT

*This paper examines the relationship between Agile methodologies, team motivation, and productivity within Nigeria's software development industry, emphasizing unique contextual challenges. It conducts in-depth review of literature, tracing the evolution of motivation, productivity, and Agile methodologies, and scrutinizing their application within Nigerian software development. A proposed framework identifies pivotal motivational and productivity factors for Agile software development, suggesting working culture best practices for Nigerian companies. Implementation of these practices promises an environment fostering innovation, collaboration, and growth, subsequently boosting motivation, productivity, and global competitiveness. The paper concludes by proposing future research avenues, including cross-cultural comparisons, empirical studies, and further exploration of Agile methodologies' success factors.*

**Keywords:** team motivation, productivity, agile methodologies, Nigerian software development, working culture best practices.

## INTRODUCTION

Project management plays a critical role in solving organizational challenges and fostering the growth of proficient project managers (Jovanovic & Beric, 2018). Agile methodologies have emerged as a streamlined framework in software development that allows for greater adaptability to changing business environments (Rigby et al., 2016). As Agile becomes increasingly prevalent in software development projects (Sunner, 2017), including those in Nigeria, understanding the relationship between team motivation, Agile methodologies, and productivity becomes essential (Chukwuemeka, 2016).

Although research has explored team motivation as a critical component for productivity and quality (Hakanen et al., 2018), only a few studies have specifically addressed the challenges encountered by Nigerian businesses implementing Agile (Fatema & Sakib, 2018). Under different cultural norms, the correlation between certain factors and products may change, highlighting the need to investigate the factors that shape team motivation and productivity in Nigeria (Chukwuemeka, 2016). This paper explores the relationship between team motivation and Agile methodologies in Nigerian software development projects. The primary objectives are to synthesize existing

literature on factors affecting team motivation and agile methodologies (Moe et al., 2010; Standish Group, 2013), develop a framework outlining their relationships, and propose working culture best practices for enhancing team motivation and productivity in Nigeria-based Agile software development environments (Asuquo Ekanem & Asuquo Peter, 2020).

By focusing on the specific context of Nigerian software development businesses that practice Agile methodologies, this paper seeks to fill a gap in the existing literature (Oluwatoyin Mary & Gloria Nkiru, 2017) and provide valuable insights into the unique factors affecting team motivation and productivity in this particular setting (Chukwuemeka, 2016). Furthermore, the paper's findings may have implications for other companies and industries that are considering the adoption of Agile practices, both within Nigeria and in other regions with similar cultural and economic contexts (Matthews & Tanner, 2022). Ultimately, it will contribute to the development of a more comprehensive understanding of the complex interplay between motivation, productivity, and Agile practices in software development. By examining these relationships and proposing best practices, the study offers practical recommendations for enhancing team dynamics, such as collaboration, communication, and motivation (Oliveira & França, 2019), eventually fostering improved business outcomes and contributing to the broader conversation surrounding Agile practices (Moe et al., 2012).

## **LITERATURE REVIEW**

### **Motivation, Productivity, and Software Development in Agile Teams**

Team motivation refers to the level of enthusiasm, commitment, and engagement of the team members toward achieving the project goals. According to Fatema & Sakib, (2018), it is a significant determinant of productivity in software development, particularly in Agile environments. Similarly, productivity is the efficiency with which team members produce the desired output within a given timeframe (Arcos-Medina & Mauricio, 2020). Agile methodologies, such as Scrum, are characterized by iterative progress, flexibility, and customer collaboration, prioritizing people and interactions over processes (Al-Zewairi et al., 2017). This approach has been increasingly adopted in Nigeria's software development industry, contributing to its growth and competitiveness (Asuquo Ekanem & Asuquo Peter, 2020).

### **Agile Software Development in Nigeria**

Although Agile is relatively new in Nigeria's software development industry, it is gaining traction, and the benefits are notwithstanding. However, there are challenges owing to the role of cultural peculiarities in project methodology adoptions. For the Nigerian space, this includes the lack of engagement from upper management and the prevalent hierarchical culture (Asuquo Ekanem & Asuquo Peter, 2020; Oluwatoyin Mary & Gloria Nkiru, 2017). This among other factors can demotivate indigenous software developers who already face low patronage (Sowunmi & Misra, 2015) amidst the nation's overdependence on foreign software, contributing to Nigeria's low global innovation index (Asuquo Ekanem & Asuquo Peter, 2020).

### **Agile and Team Motivation**

Team motivation is crucial for the success of Agile projects, as it influences efficiency, productivity, and overall performance (Felipe Amorim et al., 2020). A high level of motivation fosters a positive working environment, enhances communication, and encourages ownership of tasks (Oliveira & França, 2019). Moreover, motivated team members are more likely to contribute innovative ideas and solutions (Moe et al., 2010). Inclusively, maintaining motivation in distributed Agile teams can be challenging but can be addressed through technology, communication tools, regular feedback, and a sense of camaraderie (Hossain et al., 2009). Generally, identifying key motivators can have an all-around benefit to project management.



## **Perceived Correlation between Motivation and Productivity in Agile**

The Agile approach's emphasis on flexibility, collaboration, and customer-centric processes creates a motivating environment for team members, positively impacting productivity (George et al., 2018; Graziotin et al., 2014). Research indicates that team members who feel a sense of autonomy and responsibility are more motivated and productive (Eilers et al., 2022; Faisal Shafique Butt et al., 2014; Richard M. Ryan & Edward L. Deci, 2017). Agile methodologies, such as Scrum and Kanban, promote an iterative and incremental process, allowing team members to see the results of their work more frequently, increasing motivation (Masood et al., 2017).

Feedback is another essential aspect of Agile development. Regular communication and feedback from customers and stakeholders help teams adapt and improve (Highsmith, 2010; Marques et al., 2020). This feedback can act as a motivational factor, helping team members understand the value of their work and adjust accordingly (Yilmaz et al., 2016). Agile methodologies also emphasize continuous learning and improvement (Srivastava et al., 2020). Encouraging the development of new skills and knowledge motivates team members to grow professionally and contribute more effectively to the project (Bogojević, 2017).

Agile approaches to software development can create a motivating environment for team members, positively impacting productivity and overall project success (Eilers et al., 2022; Holvitie et al., 2018). By prioritizing autonomy, responsibility, iterative progress, and continuous feedback, Agile methodologies foster an atmosphere that encourages team members to remain engaged and committed to their tasks (Graziotin et al., 2014). Additionally, the emphasis on continuous learning and improvement contributes to the personal and professional growth of developers, further enhancing their motivation and productivity (Rodríguez et al., 2017; Steve Denning, 2012). While there are challenges specific to the Nigerian context, such as those related to the traditional hierarchical cultures, overcoming these obstacles can lead to more motivated Agile teams and improved software development engagements and outcomes in the country (Asuquo Ekanem & Asuquo Peter, 2020; Oluwatoyin Mary & Gloria Nkiru, 2017). As Agile methodologies continue to gain traction globally (Abdelilah et al., 2021; Schilling Nguyen, 2016; Sunner, 2017), understanding and addressing the factors that influence team motivation will remain critical to ensuring the success of Agile projects.

## **WORKING CULTURE BEST PRACTISES**

### **Promoting Agile Methodologies**

To foster a working culture that supports team motivation and productivity, Nigerian software development companies should actively promote the adoption of Agile methodologies (Oluwatoyin Mary & Gloria Nkiru, 2017). Available evidence consistently points to the fact that Agile practices enhance team motivation and productivity by emphasizing flexibility, collaboration, and a customer-centric process (Al-Zewairi et al., 2017; Dingsøyr et al., 2012). By implementing Agile methodologies, Nigerian software development companies can create an environment that encourages autonomy, trust, and individual responsibility, which are key factors in driving motivation and productivity (Faisal Shafique Butt et al., 2014; Richard M. Ryan & Edward L. Deci, 2017; Stray et al., 2018).

### **Encouraging Open Communication and Feedback**

A healthy working culture should encourage open communication and feedback among team members, customers, and stakeholders (Highsmith, 2010). In an Agile environment, regular communication and feedback help teams adapt and improve, enhancing motivation and productivity (Dingsøyr et al., 2012). Companies should create channels for effective communication and promote a culture of transparency, where team members feel comfortable sharing ideas, challenges, and successes (Lindsjörn et al., 2016). By doing so, organizations can foster a sense of camaraderie and trust, which can further enhance motivation and productivity (Ahmad et al., 2018; Hossain et al., 2009).

### **Embracing a Flat Organizational Structure**

To overcome the challenges posed by traditional hierarchical culture, Nigerian software development companies should consider embracing a flatter organizational structure (Gregory et al., 2016; Oluwatoyin Mary & Gloria Nkiru,

2017). A flat structure allows for increased autonomy and empowers team members to take ownership of their tasks, which can have a positive impact on motivation and productivity (Gregory et al., 2016; Oluwatoyin Mary & Gloria Nkiru, 2017). By reducing bureaucratic barriers and fostering a sense of trust and collaboration among team members, companies can create an environment where Agile practices can thrive, ultimately leading to improved team performance (Asuquo Ekanem & Asuquo Peter, 2020).

## **Prioritizing Continuous Learning and Improvement**

A working culture that values continuous learning and improvement can have a positive impact on team motivation and productivity in Agile environments (Dingsøyr et al., 2012; Srivastava et al., 2020). Companies should invest in professional development programs and provide opportunities for team members to acquire new skills and knowledge (Stray et al., 2018). By doing so, organizations can cultivate a culture of growth and innovation, where team members are motivated to contribute more effectively to the project (Dingsøyr et al., 2012). Additionally, regular retrospectives and process improvement initiatives can help teams identify areas for improvement and implement changes to enhance productivity (Dingsøyr et al., 2012; Horold kerzner, 2017).

## **Supporting Work-Life Balance**

Given the demanding nature of Agile software development, it is essential for companies to support work-life balance among team members (Fagerholm et al., 2014). Overworking can lead to burnout, negatively impacting motivation and productivity (Fagerholm et al., 2014; Hoda et al., 2017). To address this challenge, organizations should implement strategies such as flexible working hours, remote work options, and regular breaks. By creating a working culture that prioritizes employee well-being, companies can help to maintain motivation and productivity in Agile environments (Fagerholm et al., 2014; Gren et al., 2017).

By implementing these best practices, companies can create an environment that encourages innovation, collaboration, and growth, ultimately leading to improved competitiveness in the global market (Oluwatoyin Mary & Gloria Nkiru, 2017).

# **RESEARCH OBJECTIVES**

The research objectives of this study are centered on understanding the relationship between Agile methodologies, team motivation, and productivity in the context of the Nigerian software development industry (Al-Zewairi et al., 2017; George et al., 2018). This framework draws upon existing literature to examine the key factors that influence team motivation and productivity in Agile environments and how these factors can be adapted and applied in the Nigerian context (De O. Melo et al., 2012).

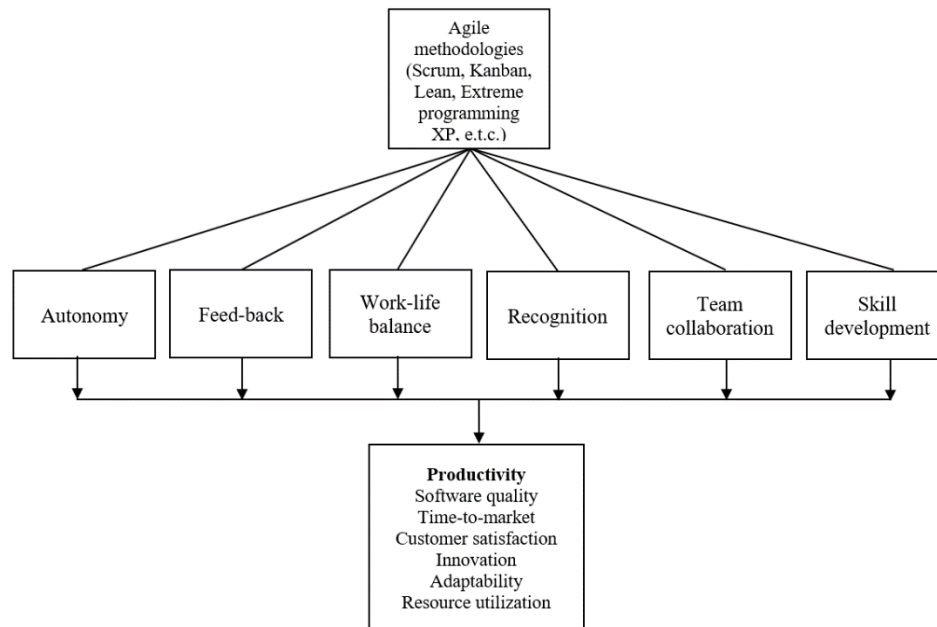
Agile methodologies, such as Scrum and Kanban, have emerged as an effective alternative to traditional Waterfall approaches, emphasizing flexibility, collaboration, iterative progress, and customer-centricity (Al-Zewairi et al., 2017). The Agile Manifesto and its 12 guiding principles provide a foundation for understanding the core values that underpin these methodologies (Highsmith, 2010). This study will focus on the impact of Agile methodologies on team motivation and productivity, as these factors are critical to the success of Agile projects (George et al., 2018; Srivastava et al., 2020).

One of the key aspects of Agile methodologies is the emphasis on team autonomy, trust, and individual responsibility (Stray et al., 2018). Research has shown that team members who feel a sense of autonomy and responsibility are more likely to be motivated, leading to higher productivity (Faisal Shafique Butt et al., 2014; Richard M. Ryan & Edward L. Deci, 2017). Furthermore, the iterative and incremental nature of Agile development allows team members to see the results of their work more frequently, which can serve as a motivating factor (Highsmith, 2010; Srivastava et al., 2020).

Another essential aspect of Agile methodologies is the focus on continuous feedback and communication between team members, customers, and stakeholders (Highsmith, 2010). This feedback can act as a motivational factor, as it helps team members understand the value of their work and make necessary adjustments. Moreover, Agile

methodologies encourage continuous learning and improvement, motivating team members to grow professionally and contribute more effectively to the project (Asuquo Ekanem & Asuquo Peter, 2020; Gregory et al., 2016; Srivastava et al., 2020).

**Figure 1: The Relationship between Agile Practices, Team Motivation, and Productivity in Nigerian Software Development**



Despite the potential benefits of Agile methodologies in fostering a motivating environment for team members, there are specific challenges in the Nigerian context that need to be addressed (Gregory et al., 2016). For example, the traditional hierarchical culture prevalent among Nigerian companies can pose a barrier to the adoption of Agile practices, which emphasize collaboration and shared decision-making (Asuquo Ekanem & Asuquo Peter, 2020; Gregory et al., 2016). Additionally, a lack of engagement from upper management can contribute to a low drive among software developers skilled in Agile methodologies (Asuquo Ekanem & Asuquo Peter, 2020; Hossain et al., 2009).

To address these challenges, this study will explore strategies for adapting Agile methodologies to the Nigerian software development industry, considering the unique cultural and organizational factors that may influence team motivation and productivity (Hossain et al., 2009; Oluwatoyin Mary & Gloria Nkiru, 2017). These strategies may include promoting a culture of collaboration and shared decision-making, improving communication and feedback mechanisms, and encouraging the professional development of software developers (Hossain et al., 2009).

Furthermore, this study will consider the role of technology and communication tools in facilitating collaboration among distributed Agile teams, as well as the importance of maintaining a sense of camaraderie among team members (Hossain et al., 2009; Oluwatoyin Mary & Gloria Nkiru, 2017). By examining these factors, the study aims to contribute to a better understanding of how Agile methodologies can be effectively implemented in the Nigerian context to promote team motivation and productivity.

The inquiry on exploring the relationship between Agile methodologies, team motivation, and productivity within the Nigerian software development industry is the main focus. By examining the factors that influence team motivation and productivity in Agile environments, the study aims to provide insights and recommendations for adapting and implementing Agile practices in a way that is culturally and organizationally relevant for Nigerian software development companies. By doing so, the study will contribute to the existing body of knowledge on Agile methodologies and their impact on team motivation and productivity, while also addressing the unique challenges and opportunities present in the Nigerian context.

### **Key areas to be investigated in this study include:**

- Identifying the most effective Agile methodologies for the Nigerian software development industry, taking into consideration the unique cultural, organizational, and technological factors that may influence their success (Al-Zewairi et al., 2017; Oluwatoyin Mary & Gloria Nkiru, 2017).
- Examining the relationship between team motivation and productivity in Agile environments, including the role of autonomy, trust, responsibility, feedback, and continuous learning (Faisal Shafique Butt et al., 2014; Richard M. Ryan & Edward L. Deci, 2017; Srivastava et al., 2020; Stray et al., 2018).
- Exploring strategies for overcoming barriers to the adoption of Agile practices in the Nigerian context, such as the traditional hierarchical culture and lack of engagement from upper management (Asuquo Ekanem & Asuquo Peter, 2020; Gregory et al., 2016; Oluwatoyin Mary & Gloria Nkiru, 2017).
- Investigating the role of technology and communication tools in supporting collaboration among distributed Agile teams and maintaining a sense of camaraderie among team members (Hossain et al., 2009).

By addressing these key areas, the study aims to provide a comprehensive understanding of the factors that influence team motivation and productivity in Agile environments (Faisal Shafique Butt et al., 2014; Richard M. Ryan & Edward L. Deci, 2017; Srivastava et al., 2020; Stray et al., 2018) and offer practical recommendations for implementing Agile methodologies in the Nigerian software development industry (Asuquo Ekanem & Asuquo Peter, 2020; Gregory et al., 2016; Hossain et al., 2009; Oluwatoyin Mary & Gloria Nkiru, 2017).

## **CONTRIBUTION TO LITERATURE**

The distinct elements encompassed in this research have been scrutinized independently in different scenarios; however, their interplay within this unique setting, delineated by specific socio-cultural and industry-specific factors, represents a novel contribution (Arcos-Medina & Mauricio, 2020; Asuquo Ekanem & Asuquo Peter, 2020). Also, the paper elucidates a comprehensive conceptual framework that encapsulates key motivational and productivity factors within Agile environments (De O. Melo et al., 2012). This framework stands as a valuable tool for future researchers, providing a consolidated view of the multifaceted dimensions of Agile software development teams (Al-Zewairi et al., 2017).

Ultimately, this research champions the need for localized and contextualized research within the realm of Agile methodologies. By foregrounding the specific challenges and opportunities within the Nigerian context (Chukwuemeka, 2016), the study extends beyond the one-size-fits-all approach often encountered in the literature (George et al., 2018). The future research directions proposed in this study mark out fresh trajectories for scholarly exploration. By identifying gaps such as the need for empirical research and cross-cultural studies, this paper serves as a roadmap for subsequent investigations into the field of Agile software development, team motivation, and productivity (Dikert et al., 2016; Hoda et al., 2017).

By encapsulating these elements, this paper offers a robust addition to the literature on Agile methodologies in software development, while also highlighting the interconnections between team motivation, productivity, and Agile practices within a unique cultural context (Matthews & Tanner, 2022).

## **LIMITATIONS**

The literature review primarily focuses on articles published within the last decade, which may exclude some older, foundational research, given that motivation as a concept dates back to Elton Mayo's research in 1930 (Asproni, 2004). While this approach ensures that the paper incorporates recent findings, it may overlook some essential contributions from earlier studies. In addition, the limited scope of this paper might not fully capture the complex dynamics of motivation and productivity in different software development approaches and cultural contexts (Noll et al., 2010).

Finally, the arguments and conclusions presented are based on existing literature and theory (Dingsøy et al., 2012). The absence of empirical data from a specific research project or case study limits the ability to generalize the findings to a broader population or context. While the conceptual framework presented in this paper can serve as a foundation for future empirical research, it should be considered as a starting point rather than a definitive conclusion.

## FUTURE RESEARCH

Based on the limitations discussed above, several avenues for future research can be suggested:

- **Expanding the literature review:** Conducting a more comprehensive literature review that includes foundational research from earlier years, as well as other software development methodologies, could provide a richer understanding of the relationship between team motivation, productivity, and software development approaches.
- **Cross-cultural comparisons:** Exploring the impact of Agile methodologies on team motivation and productivity in different cultural contexts could help to identify the factors that contribute to the success of Agile practices globally. This would enhance our understanding of how cultural factors influence the adoption and effectiveness of Agile methodologies.
- **Empirical research:** Designing and conducting empirical research projects, such as case studies, surveys, or experiments, could provide valuable insights into the practical application of the conceptual framework presented in this paper (Hoda et al., 2011; Mchugh et al., 2015). Empirical research could help to validate the proposed relationships between motivation, productivity, and Agile practices, and identify specific strategies for improving team performance in the software development context.
- **Investigating other factors:** In addition to team motivation and productivity, future research could explore other factors that contribute to the success of Agile methodologies, such as leadership styles, organizational culture, and the use of technology. Understanding the interplay of these factors could help organizations better implement Agile practices and optimize their software development processes.

By addressing these limitations and exploring future research directions, scholars can continue to build on the findings and discussions presented in this conceptual paper, ultimately contributing to a deeper understanding of the complex dynamics between team motivation, productivity, and Agile methodologies in software development.

## RECOMMENDATION AND MANAGERIAL IMPLICATIONS

Software development companies in Nigeria are encouraged to fully incorporate Agile methodologies, centering their practices around human-oriented values and principles. This requires establishing a collaborative workspace that invites open dialogue, continual feedback, and ongoing enhancement. A pivotal factor for the success of software projects is emphasizing team motivation and productivity.

Adopting a flat organizational structure could potentially foster a sense of self-governance and accountability among team members. Encouraging continuous learning and professional growth enables teams to keep abreast of evolving technology trends and best practices, which can lead to improved performance. Furthermore, ensuring a balanced work-life environment is vital for maintaining team motivation and mitigating the risk of burnout.

The managerial implications of this study are substantial. By integrating the suggested framework, leaders in the Nigerian software development industry can foster an efficient work culture, augment team motivation and productivity, and solidify their competitive position in an ever-globalizing market. By addressing unique challenges within Nigeria, these leaders can fine-tune the adoption and application of Agile methodologies, nurturing an innovative culture that fuels the industry's expansion.

In essence, Nigerian software development companies can harness the power of Agile methodologies to cultivate a motivating, productive workplace culture that takes into consideration the distinct challenges and

opportunities within their specific context. By adopting such strategies, they can enhance their global competitiveness and contribute meaningfully to the ongoing growth of Nigeria's software development industry.

## CONCLUSION

We've examined the multifaceted relationship between Agile methodologies, team motivation, and productivity within the Nigerian software development industry throughout this study. The implications of this research extend beyond the theoretical discourse and provide actionable insights for practitioners within the industry. Our framework unravels the complexities of team dynamics in an Agile environment, shedding light on the intricacies of work culture within Nigerian software development companies. Furthermore, it elucidates an integrated strategy for enhancing competitiveness on a global scale. However, this work recognizes that the terrain of Agile methodologies, team motivation, and productivity, particularly in culturally diverse contexts, is rich and complex. Therefore, future research as suggested above, should endeavour to expand on this study's scope.

In conclusion, this paper marks a significant stride in the discourse surrounding Agile methodologies, team motivation, and productivity. By bridging the gap between theory and practice, it offers critical insights for both the academic community and industry practitioners. As the software development industry evolves at a breakneck speed, Agile methodologies remain an indispensable tool for maintaining adaptability and efficiency. Understanding the synergetic effects of Agile practices on team motivation and productivity can unlock untapped potential for sustainable growth and success. This study is a significant stepping stone towards achieving that goal and is expected to prompt further exploration in both academia and the industry.

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# UNDERSTANDING THE USABILITY OF INTERACTIVE FINANCIAL CHATBOTS TECHNOLOGY

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## ABSTRACT

*The use of chatbots for customer service in the financial sector has increased significantly in recent years. However, customer satisfaction with chatbot interactions remains a concern for financial institutions. This study investigates how the interactive features associated with financial chatbots, such as personalized responses, visual aids, gamification, and sentiment analysis can enhance customer satisfaction. Adopting an interpretive qualitative research approach, semi-structured interviews were conducted with banking customers who had used chatbots as part of a customer service encounter. Thematic analysis was employed to analyze the data, and the findings suggest that personalization, natural language processing, empathy, and emotional intelligence are crucial factors which enhance customer satisfaction when it comes to chatbot interactions. The study also highlights the potential of advanced technologies such as sentiment analysis and voice recognition to enhance engagement and personalization as part of chatbot interactions. Overall, the study provides guidance for financial institutions seeking to implement or improve their chatbot customer service offerings, and it advances knowledge around the use of chatbots in the financial sector.*

**Keywords:** financial chatbots, interactive, customer engagement, personalization, privacy, security.

## INTRODUCTION AND THEORETICAL CONTEXT

In recent years, the use of chatbots as a means of providing customer service in the financial sector has increased significantly. However, despite their widespread adoption, there is still room for improvement in the level of customer satisfaction associated with chatbot interactions. Therefore, this study investigates how to improve customer satisfaction by offering a more interactive financial chatbot customer service experience. Several studies have explored the factors that contribute to customer satisfaction with chatbots in the financial sector. For example, Hu et al. (2019) found that the use of personalized responses significantly improved customer satisfaction with chatbot interactions. The use of visual aids and gamification improved the perceived usefulness and ease of use of chatbots (Kim et al. 2019; Ozuem et al 2021b). Moreover, a study by Ebling et al. (2020) highlighted the importance of empathy and emotional intelligence in chatbot interactions, particularly in sensitive financial situations. The authors emphasized that the use of interactive features such as voice recognition and sentiment analysis could enhance the level of empathy in chatbot interactions, leading to higher levels of customer satisfaction. To develop on these contributions, this study aims to explore the use of interactive features in financial chatbots to enhance customer satisfaction. Interactive features such as personalized responses, visual aids, gamification, and sentiment analysis can provide a more engaging and empathetic experience for customers, potentially leading to higher levels of satisfaction and loyalty. Chatbots are automated computer programs that use Artificial Intelligence (henceforth AI) to simulate conversation with human users through a messaging interface. In recent years, chatbots have gained popularity in the financial sector as a means of providing customer service. However, customer satisfaction with chatbot interactions remains a concern for financial institutions. Therefore, this study aims to investigate the current state and future directions of chatbot features in the banking industry, with a focus on personalization, interactivity, and responsiveness.

Personalization is instrumental when it comes to improving customer satisfaction as a following chatbot interactions in the banking industry (Kocbek and Šebestjan 2021; Ozuem et al 2021c). The authors emphasize the importance of using customer data to provide tailored responses and recommendations, which can improve the perceived value of chatbot interactions. In addition, Lee, Choi, and Choi (2019) highlight the importance of natural language processing and task-oriented interactions designed to improve user satisfaction and engagement with chatbots. Lee, Choi, and Choi (2019) suggest that chatbots should be designed to understand user intentions, and provide relevant information and assistance, which can enhance the usefulness of chatbot interactions. Moreover, Schwartz, Bleier, and Maas (2021) explored the role of empathy in chatbot-user interactions in the financial domain. The authors found that empathetic chatbot interactions can improve user satisfaction and trust, particularly in sensitive financial situations. Therefore, financial institutions should consider incorporating empathy and emotional intelligence into chatbot design to enhance the level of engagement and satisfaction in interactions. Finally, Wang and Chen (2020) provided a comprehensive literature review of chatbot design in the financial services industry and identified the importance of personalization, interactivity, and emotional intelligence in chatbot interactions. These, the authors suggest can improve user satisfaction and loyalty. They also suggested that future research should explore the use of advanced technologies such as sentiment analysis and voice recognition to enhance the level of engagement and personalization in chatbot interactions. This study will contribute to the development of best practice for chatbot design in the financial services industry. The findings will provide guidance for financial institutions seeking to implement or improve their chatbot customer service offerings. By incorporating the insights gained from this study into their chatbot design, financial institutions can enhance the level of engagement and satisfaction in chatbot interactions, potentially leading to higher levels of customer loyalty. The contribution of this study could advance the understanding of the use of chatbots in the financial sector and contribute to the development of best practice in chatbot design to enhance customer satisfaction.

## METHODOLOGY

Interpretivist epistemology is concerned with understanding human experience which requires in-depth interaction with the human being. It studies actions and changes in actions on the bases of the subjective realities behind human actions (Ozuem et al 2021a; Burrell & Morgan, 2017). The current research sets out to interpret the meaning people attach to the usage of Chatbot in customer services in the context of the situations they are in. Since the current research is exploratory in nature, a qualitative research method is considered suitable since it is subjective in nature and enables the researcher to dig deeper into the phenomenon to generate rich insights (Creswell & Creswell, 2018). Esterby-Smith et al. (2018) also observe that qualitative research enables the researcher to understand the underlying reasons and motivations behind phenomena, and this aligns well with interpretivism and subjectivism. This is why a qualitative research design was seen as appropriate for studying customer experiences and expectations about the affordance of technology. Semi-structured interviews were therefore undertaken with between 25 and 30 banking customers who had interfaced with a chatbot as part of a customer services exchange.

Qualitative research involves collecting data through transcripts of semi-structured interviews, stories, diaries, participation observations, and narratives (Braun & Clarke, 2021). Data were collected from customers who had used chatbots in the past, so that their experiences could be gathered and critiqued using thematic analysis (Ozuem & Willis, 2022; Guest et al., 2021). Thematic analysis is widely used in interpretive and qualitative research despite being criticized as a weaker analytical method (Braun & Clarke, 2021). Given the theoretical freedom afforded by thematic analysis, it is also regarded as a highly flexible approach which can be modified according to the needs of each researcher (Fereday & Muir-Cochrane, 2021). It is a useful method which involves a detailed analysis of data to generate rich insights (Vaughan, 2019). In instances involving thematic analysis, it is not necessary for the researcher to possess detailed knowledge about other qualitative analytical approaches because this method can be used independently as a separate and independent approach (Nowell et al., 2017). The researcher therefore explored the experience and expectations of participants using the purposive sampling technique. This generated rich insights about users' perspectives of the affordance of technology (Guest et al., 2021).

## FINDINGS AND DISCUSSION

### Major Theme: Customer Experiences Through Interactive Chatbots

Customer experiences through interactive chatbots refers to the interactions and engagements that customers have with chatbot technology provided by financial institutions. Chatbots are computer programmes designed to simulate conversation with human users, providing personalized responses and assisting customers to meet their financial needs. The use of chatbots in financial institutions is increasing rapidly, as such technology offers a more convenient and efficient customer service experience. Chatbots can provide personalized recommendations based on transaction histories and preferences, thus enhancing the overall customer experience (Luo et al., 2020). Chatbots can collect data on customer behavior, preferences, and feedback, allowing financial institutions to analyze and improve their services continually. Financial institutions can use this data to personalize marketing campaigns, identify trends, and improve customer retention (Wang et al., 2020). The sub-themes below can be used to analyze and understand the different aspects of customer experiences of interactive chatbots in financial institutional settings. They identify how such technologies can be improved to enhance overall customer satisfaction and loyalty.

#### Code 1: Chatbot usability

Keywords: ease of use, user-friendliness, convenience, efficiency, interactivity, compatibility, credibility.

Chatbot usability refers to the ease and effectiveness with which customers can interact with chatbots in order to fulfill their financial needs. The usability of chatbots plays a crucial role in enhancing customer experiences and satisfaction. Banks need to ensure that their chatbots are designed in a user-friendly manner so that customers can easily navigate through the available options and get their queries resolved quickly and efficiently. According to a study by Goyal et al. (2021), chatbot usability is an important factor that impacts customer satisfaction. The study found that customers were more satisfied when they perceived chatbots to be easy to use and navigate. In addition, Wang et al. (2020) also suggests that chatbots should be designed with a focus on the user experience in order to enhance usability. This includes the use of clear and concise language, simple navigation, and providing personalized options based on the customer's transaction history. Chatbot usability refers to the ease and effectiveness with which customers can interact with chatbots to fulfill their financial needs. Customers emphasized the importance of chatbot usability in enhancing their overall experience with financial institutions. They reported that chatbots that were easy to use, had clear and concise language, and provided personalized options based on their transaction history and preferences.

Customers also appreciated chatbots that offered convenience and efficiency, allowing them to save time and effort. One customer commented, "I like using chatbots because they are easy to use and provide me with quick answers to my queries. It saves me time and effort, and I appreciate that the chatbot is designed with my needs in mind" (Customer 4, Interview). Another customer added, "The chatbot is very user-friendly and easy to navigate. It provides me with personalized options based on my previous transactions, which makes the process more convenient and efficient" (Customer 9, Interview). Chatbot usability is essential for enhancing customer experiences and satisfaction with financial institutions. Banks need to ensure that their chatbots are designed with a focus on the user experience, including user-friendliness, language, and personalized options. "I found the chatbot to be very frustrating to use. It didn't understand my questions and kept giving me irrelevant responses. It felt like a waste of time and made me doubt the credibility of the bank" (Customer 13, Interview). "The chatbot was not compatible with my device and kept crashing. I couldn't even use it properly and had to resort to calling customer service. It was a very frustrating experience and made me question the bank's commitment to providing good customer service" (Customer 19, Interview). These negative comments highlight some of the potential issues with chatbot usability in the context of interactivity, compatibility, and the credibility of banks. Poor interactivity can lead to frustration and dissatisfaction among customers, as they may feel like their needs are not being met. In addition, compatibility issues can cause technical problems and lead to further frustration for customers. Finally, if chatbots are not perceived as credible or trustworthy, customers may lose confidence in the bank's overall service quality. It is important for banks to address these issues and ensure that their chatbots are user-friendly, compatible with different devices, and perceived as credible by customers.

#### Code 2: Customer Engagement

Keywords: personalization, responsiveness, interaction, customer involvement, emotional connection.

Customer engagement refers to the extent to which customers actively interact with and participate in exchanges with financial institutional chatbots to address their financial needs. The personalized and responsive nature of chatbots can

enhance customer engagement and create a sense of emotional connection with the brand. A study by Wang et al. (2020) suggests that personalized options offered by chatbots can significantly impact customer engagement, satisfaction, and loyalty. In addition, Luo et al. (2020) state that responsive and interactive chatbots can create a positive emotional connection with customers, leading to increased engagement and brand loyalty. Customer involvement in financial decisions is a critical factor for financial institutions, and chatbots can play an essential role in increasing customer involvement. Chatbots can provide personalized recommendations based on the customer's transaction history and preferences, allowing them to make informed decisions. This personalized approach can enhance customer involvement in the financial decision-making process and create a sense of ownership.

Forging an emotional connection with customers is another critical factor in customer engagement. Chatbots can create an emotional connection with customers by providing a responsive and interactive experience that meets their financial needs. For example, one customer reported feeling an emotional connection with a particular bank, stating, "The chatbot was very responsive and provided me with personalized options that met my financial needs. I felt like the bank really cared about me and my financial goals" (Customer 17, Interview). This emotional connection can enhance customer engagement and brand loyalty. Moreover, customer engagement can be further enhanced by the integration of chatbots with other channels of customer service. For instance, one financial institutional manager noted, "We have integrated our chatbot with our call center so that customers can seamlessly switch between the two channels. This has significantly enhanced customer engagement and allowed us to provide a more personalized and responsive service" (Customer 22, Interview). Customer engagement is a critical factor for financial institutions, and chatbots can play a vital role in enhancing customer engagement. Personalization, responsiveness, interaction, customer involvement, and emotional connection are key factors that financial institutions need to focus on to enhance customer engagement through chatbots. The integration of chatbots with other channels of customer service can further enhance customer engagement and create a seamless and personalized customer experience.

### **Code 3: Service Responsiveness**

Keywords: promptness, quickness, speed, efficiency, response time, timely resolution.

Service responsiveness refers to the promptness and efficiency with which chatbots address customer queries and concerns. A quick and timely response is essential to enhance the customer experience and overall perceived levels of satisfaction. Chatbots that are responsive and efficient at resolving customer issues can significantly impact customer loyalty and trust in financial institutions. A study by Wang et al. (2020) suggests that responsiveness is a critical factor in enhancing customer satisfaction with chatbots. These authors found that customers were more satisfied when they received quick and efficient responses to their queries. Positive customer interviews highlighted the importance of service responsiveness when it comes to enhancing the customer experience. One customer noted, "I was very impressed with how quickly the chatbot resolved my issue. I didn't have to wait on hold for a customer service representative, and my issue was resolved within minutes" (Customer 6, Interview). Another customer stated, "The chatbot provided me with a timely resolution to my query, which saved me a lot of time and effort. I appreciated the efficiency and responsiveness of the chatbot" (Customer 12, Interview).

However, negative interview comments highlighted potential issues with service responsiveness. One customer noted, "The chatbot was very slow in responding to my queries. It took a long time to get a response, which was frustrating and made me doubt the efficiency of the bank" (Customer 15, Interview). Another customer added, "I had to wait a long time for the chatbot to connect with a customer service representative. It felt like a waste of time, and I would have preferred to speak to a representative directly" (Customer 21, Interview). These criticisms suggest that slow response time or long wait times can lead to customer frustration and dissatisfaction. To enhance service responsiveness, financial institutions need to ensure that their chatbots are designed to provide quick and efficient responses to customer queries. This includes reducing response time and providing timely resolutions to customer concerns. Chatbots should also be designed to seamlessly transfer customers to a live representative when necessary to ensure the prompt and efficient resolution of customer issues. Service responsiveness is a critical factor when it comes to enhancing customer experiences of chatbots. A quick and timely response can significantly impact customer satisfaction and loyalty. To ensure service responsiveness, financial institutions need to design their chatbots to provide quick and efficient responses to customer queries, concerns, and provide timely resolutions to customer issues.

### **Code 4: Security and Privacy**

Keywords: data protection, confidentiality, authentication, trustworthiness, transparency.

Security and privacy are critical concerns for customers when using chatbots provided by financial institutions. Customers need to trust that their personal and financial information is being protected and kept confidential. A study

by Luo et al. (2020) suggests that data protection and confidentiality are key factors that impact customer trust in chatbots. Financial institutions need to ensure that their chatbots are designed to maintain customer data confidentiality and protect against cyber threats. This includes implementing secure authentication protocols and ensuring that chatbots are designed to comply with relevant data protection laws and regulations. Chatbots should also be transparent in their data handling practices and provide customers with clear and concise information about how their data is being used.

Positive customer interviews highlighted the importance of security and privacy in building customer trust and confidence. One customer noted, "I feel secure using the chatbot provided by my bank, as they have implemented robust security protocols to protect my data. It gives me peace of mind knowing that my information is kept confidential and secure" (Customer 8, Interview). Another customer stated, "I appreciate the transparency of the chatbot in how it handles my data. It provides me with clear information on how my data is being used, which makes me trust the bank more" (Customer 16, Interview). However, negative customer interviews highlighted potential issues with security and privacy. One customer noted, "I was concerned about the security of my personal and financial information when using the chatbot. The chatbot did not provide me with clear information on how my data was being used, which made me doubt the trustworthiness of the bank" (Customer 22, Interview). Another customer stated, "The chatbot did not require secure authentication, which made me concerned about the confidentiality of my data. I would have preferred a more secure authentication process to ensure my information was protected" (Customer 20, Interview). To enhance security and privacy, financial institutions need to ensure that their chatbots are designed to maintain customer data confidentiality and protect against cyber threats. This includes implementing secure authentication protocols and complying with relevant data protection laws and regulations. Chatbots should also be transparent in their data handling practices and provide customers with clear and concise information on how their data is being used. Financial institutions should also communicate their security and privacy policies clearly to customers to build trust and confidence.

## **MAJOR CONTRIBUTIONS AND IMPLICATIONS**

The study highlights the importance of chatbot usability, customer engagement, service responsiveness, and security and privacy in enhancing the overall customer experience with financial institutions. The findings suggest that personalized options offered by chatbots can significantly impact customer engagement, satisfaction, and loyalty. It also indicates that responsive and interactive chatbots can create a positive emotional connection with customers, leading to increased engagement and brand loyalty. The research findings further suggest that security and privacy are critical concerns for customers when using chatbots provided by financial institutions, and financial institutions need to ensure that their chatbots are designed to maintain customer data confidentiality and protect against cyber threats. The study highlights the importance of customer-centric design in developing chatbots for financial institutions. Chatbots should be designed with a focus on enhancing the customer experience, improving usability, and addressing customer needs and preferences. The findings suggest that chatbots can significantly impact customer engagement, loyalty, and trust in financial institutions. This highlights the need for financial institutions to understand customer expectations and preferences and design chatbots that meet those expectations.

Financial institutions can use the findings to improve the design and functionality of their chatbots to enhance customer experience and satisfaction. Financial institutions can leverage the personalized options offered by chatbots to create a more customized experience for customers and improve engagement, satisfaction, and loyalty. Such institutions can also ensure the responsiveness of their chatbots by reducing response time and providing timely resolutions to customer concerns. They can also address security and privacy concerns by implementing secure authentication protocols, complying with relevant data protection laws and regulations, and providing clear and concise information on how customer data is being used. Financial institutions can integrate their chatbots with other channels of customer service to provide a seamless and personalized customer experience. Financial institutions should consider integrating chatbots with other channels of customer service to provide a seamless and personalized customer experience. This integration can also help financial institutions to analyze and improve their services continually. The study highlights the importance of continuously monitoring and analyzing customer feedback to identify areas for improvement in chatbot technology and enhance customer satisfaction and loyalty.

## Limitations and Future Directions

While qualitative research often uses smaller sample sizes, the findings may not be representative of the broader population. Additionally, the study is limited to customers who have already used chatbots for financial customer service, which may not capture the experiences and expectations of those who have not yet used chatbots. Future research could expand the sample size to a more diverse group of customers from different demographic backgrounds to better understand the generalizability of the findings. Additionally, the study could be expanded to include both customers who have and have not used chatbots for financial customer service purposes to compare their experiences and expectations. The study could also explore the impact of different interactive features on customer satisfaction with chatbot interactions, such as voice recognition and sentiment analysis. Finally, future research could investigate the impact of chatbot interactions on customer trust and loyalty, as these factors are critical for the success of financial institutions.

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# IDENTIFYING CRITICAL FACTORS IN THE DEVELOPMENT OF A PROACTIVE SERVICE RECOVERY STRATEGY FOR ONLINE BANKING

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## ABSTRACT

*This study investigates customer perceptions of service failure and recovery strategies in the context of online banking in Pakistan. The aim is to develop appropriate service recovery strategies based on customer needs and expectations. The study adopts a social constructivist epistemological position, recognizing the importance of social and cultural values in shaping customer perceptions and responses to service failure and recovery strategies. Data were collected through semi-structured in-depth interviews with customers using purposive sampling to gather data from customers who have experienced service failure and recovery, and from managers involved in recovery strategies. Thematic analysis was used to analyze the data, identifying key themes on the basis of relevant codes and key words. The study found that proactive service recovery strategies, effective communication channels, effective service recovery, compensation and incentives, and monitoring and improvement were all critical aspects of improving customer satisfaction and loyalty in online banking in Pakistan. The major implications of the study are that online banking providers need to understand customer needs and expectations.*

**Keywords:** online banking, service recovery, customer perception, service failure, communication, monitoring and improvement.

## INTRODUCTION AND THEORETICAL CONTEXT

Online banking has become a crucial part of modern banking operations. While online banking has numerous benefits such as convenience, speed, and accessibility, it also comes with a set of challenges. One of these challenges is service failure, which can lead to customer dissatisfaction and even customer churn. In order to mitigate the negative impact of service failure, it is crucial for online banking providers to develop a proactive service recovery strategy. There are some critical factors to consider when developing a proactive service recovery strategy for online banking. The first of these is the need to understand the needs and expectations of customers. Further, online banking providers need to have a deep understanding of their customers' needs and expectations. This understanding can be gained through various means such as customer feedback, surveys, and data analysis. By understanding the needs and expectations of customers, online banking providers can tailor their service recovery strategies to meet the specific needs of their customers (Hosseini & Tafreshi, 2021). Furthermore, clear and effective communication channels are essential for a proactive service recovery strategy. Online banking providers need to ensure that their customers can easily reach them through multiple communication channels such as phone, email, chatbots, or social media platforms. These help to resolve customer complaints and issues in a timely and efficient manner (Kim et al., 2021). In terms of providing timely and effective service recovery, online banking providers need to be able to recover from service failures quickly and efficiently. This requires the recruitment of well-trained staff who are empowered to make decisions and take actions to resolve customer complaints. The recovery process should be quick, seamless, and personalized to the customer's needs (Mousavi & Rezaei, 2021). Offering compensation and incentives to customers affected by service failure can help to restore customer satisfaction and loyalty. Compensation can take the form of refunds, discounts, or free services, while incentives can include loyalty points, personalized offers, or other benefits (Zhang et al., 2021).

In addition, online banking providers need to continuously monitor and improve their service recovery strategy. This includes collecting feedback from customers, analyzing data on service failures, and regularly reviewing and updating the service recovery process to ensure that it remains effective and relevant (Guo et al., 2022). Developing a proactive service recovery strategy for online banking requires understanding the needs and expectations of customers, and establishing clear communication channels. It also involves providing timely and effective service recovery, offering compensation and incentives, and continuously monitoring and improving the service process. In so doing, online banking providers can mitigate the negative impact of service failures, improve customer satisfaction and loyalty, and maintain a competitive edge in the market.

Collier et al. (2019) argue that service failure and recovery strategies in online environments have not been adequately conceptualized, and there has been a lack of transfer of offline service recovery research to the online context. Chou (2015) emphasizes the higher risk of failure and increased consumer power in the online context, while Atinç (2016) highlights the potential for providers to address failure and manage customer expectations. The literature highlights the importance of understanding customer perspectives of successful service recovery (Norvell et al., 2018; Hazée et al., 2017). Despite extensive research on service failure and recovery strategies in various industries and countries, little attention has been paid to financial institutions, especially in developing countries (Ozuem et al., 2019; Stevenson, 2010). As the social and economic development of these countries affects customer perceptions and expectations of service failure and recovery experiences, there is a need to explore this phenomenon using social constructivist reasoning (Ozuem et al., 2019). Customer responses and perceptions of service failures and recovery strategies are socially constructed and influenced by cultural and social backgrounds (Maxwell, 2013). Therefore, the objective of this study is to investigate the social construction of customer perceptions of service failure and recovery strategies in online banking, and to develop appropriate service recovery strategies based on customer needs and expectations. The objectives, which are to analyze customer perceptions of current online service failure and recovery strategies in the banking sector of Pakistan, and to evaluate the effectiveness of online service recovery strategies with respect to customer perceptions, are important for several reasons. Firstly, understanding customer perceptions is essential for improving service quality in the banking sector. By analyzing customer perceptions of online service failure and recovery strategies, banks can identify areas for improvement and develop effective strategies to address service failures. Secondly, evaluating the effectiveness of online service recovery strategies with respect to customer perceptions can help banks to determine whether the strategies are meeting customer expectations and needs. This can inform the development of more tailored and effective service recovery strategies that can help to retain customers and improve customer satisfaction. Thirdly, the banking sector in Pakistan is rapidly evolving, with more customers adopting digital channels for banking services. As such, it is important for banks to develop effective online service recovery strategies that are aligned with customer needs and expectations. This can help to maintain customer loyalty, build trust, and enhance the bank's reputation in the market. The objective of analyzing customer perceptions of online service failure and recovery strategies, and evaluating the effectiveness of online service recovery strategies with respect to customer perceptions, are critical for enhancing the quality of banking services and maintaining customer loyalty in the digital age.

## METHODOLOGY

Ozuem et al. (2016) have extensively researched the social, cultural, and economic aspects of service failure and recovery from a consumer perspective. Despite different theoretical approaches to understanding these phenomena, literature often views consumers as homogeneous and predictable in their responses to service failure and recovery strategies. However, customer perceptions of service recovery are influenced by their social and cultural values, which need to be taken into account to avoid customer loss. Therefore, a social constructionist epistemological position was adopted for this research, as social interactions between customers and providers are essential for service recovery, and both parties' social norms, values, and expectations are influenced by their cultural backgrounds. Although various industries and countries have been studied, financial institutions, especially in developing countries, have received little attention. Since developing countries' social and economic development affects customer perceptions and expectations of service failure and recovery experiences, this research approaches the phenomenon using social constructivist reasoning. Furthermore, customer responses and perceptions of service failure and recovery strategies are socially constructed and influenced by cultural and social backgrounds. This research therefore investigates the social construction of customer perceptions of service failure and recovery strategies in the online banking context to develop appropriate service recovery strategies based on customer needs and expectations. To achieve this, the study combines two data collection approaches: semi-structured in-depth interviews with customers who use online banking

services and interviews with management to understand organizational responses to service recovery strategies. Customer focus group data were also collected to understand current organizational service recovery practices. Purposive sampling was used to gather data from managers involved in recovery strategies and customers who had experienced service failure and recovery. Thematic analysis was used for qualitative data analysis, and NVivo was used to identify key words from the data. Different themes were developed on the basis of relevant codes and key words from the data.

## FINDINGS AND DISCUSSION

### Main Theme: Proactive Service Recovery Strategies

Proactive service recovery strategies in the context of online banking of Pakistan refer to the process of identifying potential service failures and taking preventive measures to avoid them before they occur. These strategies involve analyzing customer feedback, conducting surveys, and using data analysis to identify trends in customer complaints and issues. By implementing proactive service recovery strategies, online banking providers in Pakistan can improve their service delivery processes, prevent service failures, and maintain customer satisfaction and loyalty. The main theme of this article is proactive service recovery strategies for online banking, which includes the following sub-themes:

1. **Customer's needs and expectations:** Online banking providers need to understand their customers' needs and expectations through various means such as customer feedback, surveys, and data analysis. By doing so, they can tailor their service recovery strategy to meet the specific needs of their customers.
2. **Communication channels:** Clear and effective communication channels are essential for a proactive service recovery strategy.
3. **Effective service recovery:** Online banking providers need to be able to recover from service failures quickly and efficiently. This requires well-trained staff who are empowered to make decisions and take actions to resolve customer complaints. The recovery process should be quick, seamless, and personalized to the customer's needs.
4. **Compensation and incentives:** Offering compensation and incentives to customers affected by service failures can help to restore customer satisfaction and loyalty. Compensation can take the form of refunds, discounts, or free services, while incentives can include loyalty points, personalized offers, or other benefits.
5. **Monitoring and improvement:** Online banking providers need to continuously monitor and improve their service recovery strategies by collecting feedback from customers, analyzing data on service failures, and regularly reviewing and updating service recovery process to ensure that they remain effective and relevant.

Overall, by adopting a proactive service recovery strategy, online banking providers can mitigate the negative impact of service failures, improve customer satisfaction and loyalty, and maintain a competitive edge in the market.

#### Code 1: Customer Needs and Expectations

Keywords: customer feedback, customer suggestions, surveys, data analysis, service recovery strategy, customer experiences.

Online banking providers need to understand the needs and expectations of their customers to provide effective service recovery strategies. This can be achieved through various means, such as customer feedback, surveys, and data analysis. For example, one of the customers explained how online service providers failed to understand their needs and expectations, noting "I've had a terrible experience with online banking customer services. They never seem to understand my needs and it takes forever to get any issue resolved." (Interviewee, P14). By understanding the specific needs of their customers, online banking providers can tailor their service recovery strategies to address their customers' concerns promptly and efficiently. "I believe that understanding customer needs and expectations is crucial for providing effective service recovery in online banking. It's essential to collect and analyze customer feedback, conduct surveys, and use data analysis to identify areas of improvement and tailor service recovery strategies to meet specific customer needs" (Interviewee, P4). By analyzing customer feedback and conducting surveys, online banking providers can identify trends in customer complaints and issues, which can help them improve their service delivery processes, and proactively address potential service failures. "Online banking providers need to be proactive in identifying potential service failures by analyzing customer feedback and conducting surveys. This allows them to address issues promptly and efficiently, improving customer satisfaction and loyalty" (Interviewee, P11). Additionally, it is crucial for online banking providers to communicate with their customers effectively to ensure that

they understand their needs and expectations. "Online banking providers need to communicate effectively with their customers to understand their needs and expectations fully. This can be achieved through multiple channels, such as email, phone, and chat, allowing customers to voice their concerns and providing them with timely and effective solutions" (Interviewee, P9). Understanding customer needs and expectations is crucial for online banking providers to provide effective service recovery strategies. For example, one of the customers noted how online service providers failed to understand their needs and expectations, stating: "I have given feedback to my online banking provider multiple times, but nothing ever changes. It's like they don't really care about improving their service." (Interviewee, P22). By collecting and analyzing customer feedback, conducting surveys, and communicating with customers effectively, online banking providers can tailor their service recovery strategies to meet their customers' specific needs and improve customer satisfaction and loyalty.

## **Code 2: Communication Channels**

Keywords: customer communication, online communication channels, customer feedback, customer satisfaction, social media, email, chat, phone.

Effective communication channels are crucial to online banking service recovery, allowing customers to voice their concerns and receive timely and effective solutions. Providing multiple communication channels, such as social media, email, chat, and phone, can improve customer satisfaction and loyalty. "Having multiple communication channels for customers to reach out can make a significant difference in service recovery. It shows customers that their concerns are taken seriously and that the provider is committed to providing excellent customer service" (Interviewee, P1). However, some customers have had negative experiences with the communication channels provided by their online banking provider. One customer noted: "The online banking provider only had one communication channel, and it was always busy. I had to wait for hours to get a response, which was frustrating and time-consuming" (Interviewee, P11). Effective communication channels also include collecting and analyzing customer feedback, as this can help online banking providers understand their customers' needs and expectations. "Online banking providers need to actively collect and analyze customer feedback to improve their service delivery processes and proactively address potential service failures" (Interviewee, P21). By analyzing customer feedback, online banking providers can identify areas for improvement and tailor their service recovery strategies to meet their customers' specific needs.

However, communication channels alone are not enough to provide effective service recovery. It is crucial for providers to communicate with empathy and understanding towards their customers. "Effective communication in service recovery involves showing empathy and understanding towards the customer's concerns. It helps build trust and loyalty and can turn a negative experience into a positive one" (Interviewee, P14). By communicating effectively and with empathy, online banking providers can improve customer satisfaction and loyalty. "I tried to email the online banking provider to report a problem, but I never received a response. It is frustrating when communication channels fail to deliver on their promises, and it makes me feel like my concerns aren't being taken seriously" (Interviewee, P25). This interviewee was critical of the email function of online banking, indicating that it was not an effective communication channel. Poor response times can cause frustration and mistrust, which can negatively impact customer satisfaction and loyalty. This highlights the importance of having reliable communication channels that respond promptly and effectively to customers' inquiries and concerns. Effective communication channels are crucial to online banking service recovery, as they allow customers to voice their concerns and receive timely and effective solutions. Providing multiple communication channels and collecting customer feedback can improve customer satisfaction and loyalty. However, effective communication also involves showing empathy and understanding towards the customer's concerns. "I had a terrible experience with communication channels. The representative I spoke to was not empathetic and did not take my concerns seriously. It made me feel undervalued as a customer" (Interviewee, P27). This comment highlights the importance of effective communication, including empathy and understanding in service recovery.

## **Code 3: Effective Service Recovery**

Keywords: customer complaints, compensation, empathy, timely resolution, communication, customer satisfaction, loyalty.

Effective service recovery in online banking refers to the process of addressing and resolving customer complaints and issues that arise from a breakdown in the service delivery process. This includes timely resolution, compensation, empathy, and effective communication. By providing effective service recovery, online banking providers can maintain customer satisfaction and loyalty. "Effective service recovery is essential in online banking because customers expect quick and efficient solutions to their problems. It's crucial to compensate customers fairly, show empathy, and communicate effectively to ensure customer satisfaction and loyalty" (Interviewee, P24). However,

some customers reflected on negative experiences of service recovery. One in particular noted: "When I had an issue with my account, the online banking provider took forever to resolve it, and I was never compensated for the inconvenience" (Interviewee, P16). Effective service recovery involves more than just addressing the immediate issue; it compels providers to understand the root cause of the problem and take corrective action to prevent similar issues in the future. "Online banking providers need to take a proactive approach to service recovery by identifying the root cause of the issue and taking corrective action to prevent similar issues in the future. This shows customers that their concerns are taken seriously and helps build trust and loyalty" (Interviewee, P3). In summary, effective service recovery in online banking is crucial for maintaining customer satisfaction and loyalty. It involves timely resolution, fair compensation, empathy, effective communication, and proactive measures to prevent similar issues in the future. "I had a terrible experience with service recovery. The representative I spoke to was not knowledgeable and didn't seem to care about my issue. It took multiple calls to finally get it resolved." (Interviewee, P26). Clearly, this customer had a negative experience of service recovery, as the representative they spoke to failed to address their concern. This highlights the importance of having well-trained and knowledgeable employees in service recovery roles. "I've had to deal with service recovery multiple times, and it's always a frustrating and time-consuming process. Providers need to make it easier for customers to get their issues resolved." (Interviewee, P28). This particular customer clearly had negative experiences of service recovery in the past and found it to be a frustrating and time-consuming process. They suggested that providers need to make it easier for customers to get their issues resolved, perhaps by offering multiple channels for communication or simplifying the process.

#### **Code 4: Compensation and incentives**

Keywords: loyalty, refunds, fee waivers, cashback offers, loyalty points, personalized offers, dissatisfaction, inadequate compensation.

Compensation and incentives are an important aspect of effective service recovery in online banking. By compensating customers fairly and providing incentives for their loyalty, online banking providers can maintain customer satisfaction and loyalty. Compensation and incentives refer to the measures taken by service providers to offer monetary or non-monetary benefits to customers as a form of apology or compensation for service failures or inconveniences caused. These may include refunds, fee waivers, cashback offers, loyalty points, or personalized offers to encourage customer retention and loyalty. "Compensation is crucial in-service recovery. It shows customers that their time and effort are valued and helps maintain their loyalty to the bank" (Interviewee, P13). However, some customers expressed dissatisfaction with the compensation they received. One in particular noted: "When my account was hacked, the bank compensated me for the money stolen, but they didn't offer any additional incentives for the inconvenience and stress it caused me" (Interviewee, P20). Incentives can also be used to encourage customers to continue using online banking services. "I appreciate when online banking providers offer incentives, like cashback or rewards points, for using their services. It makes me feel valued as a customer and encourages me to continue using their services" (Interviewee, P12). However, not all customers found incentives to be effective when it comes to building loyalty. One noted: "Incentives are nice, but they don't necessarily make me more loyal to my online banking provider. It's more about the overall experience and level of service" (Interviewee, P15). In summary, compensation, and incentives play an important role in effective service recovery in online banking, but they need to be fair and meaningful to maintain customer satisfaction and loyalty. Some customers reflected on negative experiences with the compensation and incentive strategies implemented by online banking providers. For example, one noted "When my account was hacked, the online banking provider offered me a small amount of compensation, which was nowhere near enough to cover the losses I incurred" (Interviewee, P7). This customer felt that the compensation offered was inadequate and did not adequately address their concerns. Another customer shared a similar experience, stating "I received a refund for a transaction that went wrong, but it took weeks to process, and I had to make multiple calls to follow up on it" (Interviewee, P5). This customer experienced a delay in receiving their compensation, which caused frustration and inconvenience.

#### **Code 5: Monitoring and improvement**

Keywords: corrective actions, mistakes, proactive measures, customer feedback, frustration, improving services.

Monitoring and improvement in the context of online banking refers to the process of tracking and analyzing customer feedback and data to identify areas for improvement in service delivery. By monitoring customer complaints, feedback, and transaction data, online banking providers can take proactive measures to prevent potential service failures and improve the overall customer experience. This can include improving website or mobile app functionality, streamlining service delivery processes, and training customer service representatives. The ultimate goal is to increase customer satisfaction and loyalty. Monitoring and improvement are critical aspects of effective service recovery in online banking. Indeed, online banking providers need to monitor their service delivery processes continually, identify

service failures, and take corrective actions to improve their services. This can be achieved through data analysis and customer feedback. "Monitoring and improvement are essential for online banking providers to maintain high levels of customer satisfaction. By identifying service failures and taking corrective actions, providers can improve their services and build customer loyalty" (Interviewee, P2). Customer feedback is a vital source of information for monitoring and improving service delivery processes in online banking. By collecting customer feedback and analyzing it, providers can identify areas of improvement and address customers' concerns promptly. "Customer feedback is crucial for improving service delivery processes in online banking. By listening to customers and taking corrective actions, providers can ensure customer satisfaction and loyalty" (Interviewee, P11). However, some customers have had negative experiences with online banking providers' monitoring and improvement strategies. One participant noted: "Online banking providers never seem to learn from their mistakes. They keep making the same errors, and it's frustrating" (Interviewee, P16). This customer believes that online banking providers do not effectively monitor their service delivery processes and fail to take corrective actions to improve their services. Monitoring and improvement are essential aspects of effective service recovery in online banking. Providers need to collect and analyze customer feedback and take corrective actions to address service failures and improve their services continually. However, negative customer experiences indicate that some providers may not be effectively monitoring their service delivery processes and may not be taking corrective actions to improve their services.

## **MAJOR CONTRIBUTIONS AND IMPLICATIONS**

This study of proactive service recovery strategies in the context of online banking in Pakistan makes significant contributions to both theoretical and practical aspects of service recovery. The study identifies customer needs and expectations as a critical factor in effective service recovery, highlighting the importance of collecting and analyzing customer feedback, conducting surveys, and using data analysis to identify trends in customer complaints and issues. Effective communication channels are also identified as a crucial aspect of service recovery, with multiple channels such as social media, email, chat, and phone suggested to improve customer satisfaction and loyalty. Additionally, effective service recovery is found to involve compensation and incentives to maintain customer loyalty, as well as proactive measures to prevent similar issues from occurring in the future. Theoretically, the study contributes to the literature on service recovery by highlighting the importance of understanding customer needs and expectations, effective communication channels, compensation and incentives, and proactive measures in service recovery in the context of online banking. The study provides a comprehensive framework for effective service recovery in online banking and identifies areas for future research, such as the effectiveness of different compensation and incentive strategies and the impact of service recovery on customer loyalty. Overall, the study contributes to a better understanding of service recovery in the context of online banking and provides practical recommendations for improving service delivery processes and maintaining customer satisfaction and loyalty.

Practically, the study provides valuable insights for online banking providers in Pakistan to improve their service delivery processes, proactively address potential service failures, and maintain customer satisfaction and loyalty. By implementing the strategies suggested in this study, online banking providers can tailor their service recovery strategies to meet their customers' specific needs, communicate effectively, and compensate customers fairly. This can help to build trust and loyalty, encourage customer retention, and improve the overall customer experience. In practical terms, this study offers valuable insights into the effective service recovery strategies that online banking providers in Pakistan can adopt to maintain customer satisfaction and loyalty. The study highlights the importance of understanding customer needs and expectations, providing multiple effective communication channels, implementing effective service recovery measures, and offering fair and meaningful compensation and incentives. Online banking providers in Pakistan can use this information to tailor their service recovery strategies to meet their customers' specific needs and expectations, thereby improving customer satisfaction and loyalty. The findings point to several practical recommendations for online banking providers in Pakistan seeking to improve their service recovery strategies. Firstly, providers need to understand the needs and expectations of their customers by actively collecting and analyzing customer feedback, conducting surveys, and using data analysis to identify trends in customer complaints and issues. This will help them tailor their service recovery strategies to address specific customer needs promptly and efficiently. Secondly, online banking providers should offer multiple communication channels, such as social media, email, chat, and phone, to provide effective service recovery. Additionally, they should ensure that their communication is empathetic and understanding towards customers. Thirdly, effective service recovery involves timely resolution, fair compensation, empathy, effective communication, and proactive measures to prevent similar issues in the future. Providers need to take a proactive approach to service recovery by identifying the root cause of the issue and taking

corrective action to prevent similar issues in the future. Fourthly, compensation and incentives play an important role in effective service recovery, but they need to be fair and meaningful to maintain customer satisfaction and loyalty. Lastly, monitoring and improvement are essential aspects of effective service recovery in online banking. Providers need to collect and analyze customer feedback and take corrective actions to address service failures and improve their services continually. By implementing these practical recommendations, online banking providers in Pakistan can improve their service recovery strategies and maintain high levels of customer satisfaction and loyalty.

## **Limitations and Future Directions**

While the research design proposed in this study is robust and well-suited to address the research questions, there are some context-specific limitations that need to be considered. Firstly, the study is focused on the online banking context in Pakistan, which may limit the generalizability of the findings to other contexts or countries. Cultural, social, and economic factors may differ in other contexts, and thus, the findings may not be directly applicable. Secondly, the sample size may be limited due to the purposive sampling approach that was applied, which may affect the representativeness of the data collected. However, the use of different data collection methods, such as in-depth interviews, focus groups, and management interviews, will provide a more comprehensive understanding of service failure and recovery experiences. Lastly, the study is limited to a qualitative approach, which may not provide a complete picture of the service failure and recovery experiences in online banking. Future research could adopt a mixed methods approach to triangulate the findings and increase their generalizability. Future research should also aim to explore service failure and recovery experiences in other developing countries and compare them to the findings of this study. Additionally, future studies should investigate the effectiveness of different service recovery strategies in improving customer satisfaction and loyalty in online banking. A longitudinal study design could be used to examine the long-term impact of service recovery strategies on customer loyalty. Furthermore, future research could explore the role of technology in service recovery, particularly in the online banking context, where technology plays a critical role in service delivery. Lastly, future studies could investigate the impact of cultural and social factors on service failure and recovery experiences in different industries to provide a more comprehensive understanding of these phenomena.

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# ARTIFICIAL INTELLIGENCE (AI) AND THE FUTURE OF HIGHER EDUCATION (HE): A QUALITATIVE STUDY ON CHALLENGES AND OPPORTUNITIES FOR MEETING QUALITY STANDARDS IN HE

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## ABSTRACT

*In 2020, during the Covid-19 pandemic higher education adopted a more digital learning environment. Digitalisation in higher education (HE) started a decade earlier than expected as previous research studies show it was expected to start in the 2030s. Digitalisation in HE became more vigilant when Artificial Intelligent (AI) started acting as a threat to the quality of higher education. The use of AI in Higher Education is still a problem. The purpose of this study is to analyse the challenges and opportunities that can be faced by Students and Academics (Service users and service providers in HE) in the use of AI for productivity. The study is based on how AI technologies can be used for the improvement of Teaching, Learning, and Assessment and to identify the challenges that Academics and students experienced due to the use of AI tools in Teaching, Learning and Assessment in HE. Furthermore, this study illustrates the opportunities available for Academics and Students in HE to use AI Technologies for the development and achievement of expected outcomes while meeting the quality standards in higher education. The study found both opportunities and challenges faced by Academics and Students in the HE Sector. Opportunity for skill development, research input, data sources and information availability, personalised learning, and effective academic administration have been identified as opportunities in the use of AI in HE while quality management, academic integrity and cheating, data privacy and ethics, digital divide, and depersonalisation of education were identified as challenges due to use of AI technology in HE sector. Overall, the study findings suggest AI is a useful tool that can be used for enhancing Teaching, Learning and Assessment in HE. The use of AI Technology in HE is rapidly growing and advancing and it is expected to grow further and further due to the high demand of users that should be expected by HE providers in the near future. Hence, the use of AI Technology in the HE Sector for the enhancement of Teaching, Learning and Assessment is recommended while meeting the quality standards and implementation of preventive strategies for academic integrity and contract cheating.*

**Keywords:** Higher Education (HE), Artificial Intelligence (AI), quality, challenges, opportunities.

## INTRODUCTION

Productivity in higher education is highly dependent on AI in recent years. In particular, assessment production is adopted by machines instead of humans (students). The threat of machine-produced assessment work or ideas generated by machines caused problems for the quality of higher education (HE). Therefore, this research has focused on the challenges that can be faced by academics and students due to the use of AI and the opportunities that can be adopted from the use of AI for the improvement of the quality of the HE. The term “Artificial Intelligence” reflects an alternative to human potential, which poses a significant challenge to the idea of human activities in academic writing. Artificial Intelligence (AI) based research has been advanced in many different ways and has an increasing body of literature since 1950 with the first promising vision of “Thinking Machines” ((e.g., Andriessen and Sandberg, 1999; Beck et al., 1996; Burleson & Lewis, 2016; Clancey et al., 1979; Kaplan & Haenlein, 2019; Kurzweil, 1985; Kurzweil & Kapor, 2002; Kurzweil, 2002; Legg & Hutter, 2007; Simmons & Chappell, 1988; Zdenek, 2003). The increased technological development provides convenience for doing various things that include terms of learning (Cahyono et al., 2023; Ausat, 2022; Manafe et al., 2023). Therefore, teaching, learning and assessment should focus on how AI Technologies can be a supporting tool for Teaching, Learning and Assessment (Huang, 2022). Artificial Intelligence in Education (AIED) needs a lot more evidence-based guidelines for the achievement of the outcome that

can be benefitted through the use of AI in education. According to Chen Y et al., 2022 “AIED research has yet to catch up with the rapid advancement of AI technology to provide evidence-based guidelines and support for AI applications in education. Despite the advancement of AIED technologies, there is still a lack of educational perspectives in AIED research, as recent literature reviews have stressed Interdisciplinary research with educators and educational researchers will more likely result in feasible practical guidelines and good examples for fellow educators”.

## THEORETICAL CONTEXT

According to the World Bank (2019), “The quality of education, not simply the quantity of schooling, matters for economic growth”. The quality of education, either basic or higher has a direct impact on the development of the potential of human capital to adopt and absorb technological change that can drive economic growth. The quality of HE has become vitally important to meet the demands of employers, and the institutions which deliver HE should focus on the quality framework of generated knowledge of graduates to meet the employer demand. The main challenge developing countries have faced since the 1980s has been national governments and institutional donors neglecting the sector (The World Bank, 2016). Based on the multiple meanings of ‘quality’ according to scholars in HE, 5 key principle definitions of quality are listed below:

**Table 1: 5 key principle definitions of quality**

Key Principal	Definition	Scholars and the year of publication
1. Exceptional	Quality is operationalised in HE up to exceptionally high standards which drives academic achievement.	Harvey (1997) Harvey and Green (1993)
2. Perfection	A set of specifications and standards are focused to meet the aim of HE. In this sense, quality is somewhat interrelated with the idea of zero defects and getting things right during the initial stage of implementation.	Harvey and Williams (2010) Harvey (1997) Parasuraman, Zeithaml and Berry (1985)
3. Fit for Purpose	Quality carries the meaning of expectations related to a product or service experienced by the customer, which means the institutional purpose of meeting customer expectations up to the expected standards by the students (customers in HE) and minimising gaps in service delivery.	Chung Sea Law (2010) Nicholson (2014) Parasuraman, Zeithaml and Berry (1985)
4. Value for Money	Institutions (service providers in HE) are expected to account for public/private money. Quality in HE affects the efficiency and effectiveness of the institution's service delivery towards its customers (students) expectations.	Chung Sea Law (2010).
5. Transformation	Transformation drives qualitative change in HE. Quality in HE is an ongoing process of learner transformation which leads to both empowerment and enhancement in line with personal and professional expectations in life.	Cheng (2014).

*Data Source: Table 2.2: Ariyawansa (2020) 5 Key Principal Definitions of Quality in HE*

According to the above table, quality enhancement in HE can be linked to five key areas including exceptional, perfection, fit for purpose, value for money, and transformation. All HEIs need to meet these five criteria to fulfil quality expectations in HE. According to HEFCE (1998), quality in teaching and learning matters very much to the survival of HE institutes, and student’s choice of institution is influenced by the quality of teaching and learning. Policymakers in teaching and learning enhancement need to consider measuring quality. Considering the multiple agencies and individuals involved in HE, the enhancement of quality in teaching and learning should be taken seriously to meet the high standards of HE. Meeting quality standards will impact the image of HE institutes and will influence the outcome of graduates. This has a direct impact on the number of students enrolling with such institutions. Hence, the HEIs that adopt the new technology into curriculum, teaching and learning can cope with the changing nature of HE due to the digital era. On the 30<sup>th</sup> of November 2022, OpenAI launched a free preview of a new chatbot which is

ChatGPT which has opened an era of AI in HE. This is an AI-based software application which can work with human-like conversations to generate answers of peace of academic writing according to the request or the question asked by the human from the ChatGPT (Chatbot). The popularity of ChatGPT among users showed reaching one million users just after five days after its launched (Murati, 2022). This has been evident in how AI can wider spread within the HE spares. Hence, this research study helped to understand the challenges that can be faced by the HE sector due to the increased use of AI and the opportunities that can be adopted by the HE sector for the improvement of Teaching, Learning and Assessment to create improved quality and productive learning environment using AI technology.

## **Aim & Objectives**

The aim of this study is to investigate the challenges that can impact the quality of the HE due to the use of AI and the opportunities for quality improvement using AI as a tool for improvement of Teaching, Learning and Assessment in HE. The objectives of this research study are to identify the challenges that can be faced by Higher Education Institutes (HEIs) and Students respectively service providers and service users due to the use of AI tools, to identify the opportunities that arise due to AI tools for the quality improvement in HE, and to recommend possible cause of actions that can be adopted by service providers and service users for the enhancement of quality in HE. The economic capital is widely assumed to be an outcome of HE, as it is linked to the capacity of human capital to contribute to economic growth. Education, meantime, determine graduate outcomes (Marginson, 2017). Hence, the use of AI for the improvement of HE rather than rejecting it or avoiding it can be more beneficial for meeting high-quality graduates who can meet the employer demand in the AI Era. The use of technology in employment has become a very usual thing and this should be developed by individuals through their higher education. The institutions of higher education should focus on how they can adopt the use of technology into their curriculum to enhance the student experience in the digitalised world (Rudolph et al., 2023).

## **Rationale**

The use of AI for education is rapidly grown in the last two decades (Chen X, 2022). In this era, it is higher than expected. Hence, the current situation created an AI Era in the world, not only for HE but AI is also being used by other sectors for marketing, product development, CRM platforms etc. Most scholars have identified and confirmed we are in a digital Era and are highly dependent on AI. Since the launch of ChatGPT, the discussion on the use of Ai in HE became a hot topic in HEIs meeting tables. HEIs worldwide have paid its attention to rapidly growing ChatGPT users and how institutions can take action to prevent the harmful effect on the quality of HE. However, at the same time, institutions paid attention to how to use it for the enhancement of the learning experience for students instead of rejecting it (Rudolph et al., 2023). The use of AI-based technology has rising popularity in HE. The service providers and service users are both used AI technology in the past (Chen X, 2022). However, due to the launch of ChatGPT has given exceptional attention to the use of AI tools in HE more than ever before (Rudolph et. al., 2023). Hence, meeting quality expectations in HE while using all these new inventions is paramount to maintaining the standards.

## **Research Questions**

1. What are the challenges that can be faced for quality improvement in HE due to the use of AI?
2. What are the opportunities that can be adopted through the use of AI tools for quality improvement in HE provisions?

# **METHODOLOGY**

## **Study Design**

Qualitative research was conducted in a natural setting to gather the opinions of participants to develop a common theme for the study. The common theme is HE, and qualitative data were gathered using both expressive and persuasive approaches to find answers to the questions (Creswell, 2007). The researcher relied on broad questions which were asked to gather opinions via semi-structured questionnaires. These included open-ended and closed-ended questions. An extensive amount of time was spent in the field to gather data. This was a time-consuming process based

on specific procedures and guidelines (Creswell, 2007, p.39). The data collection method used interviews with academics in the UK higher education institutes and students. The primary study focused on the UK. However, this will further expand outside the UK by early 2024. By the time the manuscript has presented a total of 09 academic interviews (45-60 minutes) were completed that includes three Tutors/Lecturers, four middle-level academic Managers and two Senior level academics. The initial plan was to conduct 12 Academic interviews. However, due to the busy period of Semester 3 Academics dropped out. 21 student interviews (30-45 minutes) were completed covering 5 public and private higher education institutes in the UK. A total of 30 interviews covering Academics and Students (Service Providers and Service Users). A semi-structured questionnaire has been used to conduct the interviews. In relation to ethical consideration, research information and consent form is shared with academics and students before conducting the interviews.

## **Data Analysis**

Themes have been created through network coding based on the ideas and opinions of the interviewees. Thematic analysis has been identified as the most relevant data analysis method for this study. Thematic analysis is a very straightforward data analytical technique. The way people think varied from person to person based on different perceptions and experiences. The country people live in, the culture they live in and the society in which they operate all affect their perspectives. As a result, this research study examines multiple perspectives and multiple views using multiple models to create multiple themes based on the codes created through empirical data. A purposive sampling approach supportive was used to find multiple views and opinions relevant to the study to create themes through network coding. Thematic analysis is considered relevant as the study relates to social science and is based on a specific sector, rather than a single company or component. Thematic analysis has been usefully used to cut through the complexity of the qualitative data gathered (Boyatzis, 1998). According to Boyatzis, (2009), thematic analysis has several overlapping or alternative purposes. It can be used as a) A way of seeing, b) A way of making sense out of seemingly unrelated material, c) A way of analysing qualitative materials, d) A way of systematically observing a person, group, situation, organisation, or culture, e) A way of converting qualitative information into quantitative data.

## **Ethical Consideration**

The information received has been used only for research study and has not been disclosed to any third party. The academic participants have been named anonymously using Alphabets A, B, C etc. and the student participants have been named with numbers using student1, student2, student3 etc. Some interviews have been video recorded and some of them recorded as writing notes. The recorded video will be deleted after the completion of the research project.

## **Limitations and Future Directions**

This study is conducted by one person (the Author). Hence, the time and capacity were limited to one person. Reaching Academics during the Semester end period where Assessment boards take place was challenging and limited to a small number of Academic interviews than expected. Hence, this study is expected to reach the wider HE community as a collaborative team for further research. This study used a qualitative only method for data collection and analysis. Adding quantitative data and mixed-method studies can be more advanced for future researchers to get concrete strategies for this area of research.

# **FINDINGS - CHALLENGES**

## **Quality**

According to the QAA (UK), quality enhancement is, “The process of taking deliberate steps at the institutional level to improve the quality of learning opportunities” (QAA-UK, 2006, p16). According to, institutions are liable to develop their own process for exploring such matters, operating and evaluating quality processes rather than enhancing previously achieved outcomes. Quality is an important factor for HE enhancement (Beket, 2008). In many nations, quality assurance in HE has risen to the top of the policy agenda to compete with the more complex, interdependent world. The Quality Assurance Agency in the UK has the power of validating institutions if they meet the UK’s quality

expectations for HE provision. This power has minimised the risk of legitimating inferior-quality HEIs. It has also helped to shut down “Degree Mills” that make credentials available for purchase (Hemsley-Brown and Oplatka, 2006). Every academic including junior, middle and senior-level academics have identified meeting quality as a challenge that can be faced by academics due to the use of AI in higher education. However, there are some opportunities to overcome this challenge if HEIs take corrective actions before it is too late to prevent the harm that affects the quality standards. According to Membership QAA (2023), providers should take the correct course of action to maintain the quality standards in HE that can be affected due to the high leverage of AI tools used for assessment writing. Academic G stated “This is not something we are facing right now. We faced this before in different ways where students used paid forms of essay writing through a third party like “Essay Mills”. For example, ChatGPT is free software that can use for writing assessments. The only difference is earlier they used a paid service and now it is free. Hence, I think institutions should find a way to tackle this issue while maintaining the quality standards of HE. In particular student interviews were not able to address the quality standards as such due to the lack of knowledge students had in relation to quality in HE. Some students stated they feel the quality in relation to the classroom experience. However, the majority of students did not talk about quality.

## **Academic Integrity and Cheating**

As stated above by Academic G, cheating on assignments is not something new. The only issue is now the students are using technology to cheat on assignments. Due to this issue academic integrity has become a key topic and has become a challenge for everyone who is involved in HE. However, preventive strategies are also available to reduce the risk of meeting quality standards in relation to quality in assessment. Academic H suggested that evaluating the current policy in Assessment and taking preventive actions through adding/implementing institutional policy in relation to the use of AI Technologies in assessment writing is something HEIs can focus on at this point. Academic I suggested that HEIs should not panic at this point due to the launch of ChatGPT. This will become normal like the use of Facebook, Twitter, Tik Tok etc. The only issue that HEIs have is how and what type of precautions they should take to maintain the quality standards in HE in relation to academic awards offered through assessments.

## **Data Privacy and Ethics**

Academic C stated “As with any digital platform, the use of AI in higher education raises concerns about the privacy and security of student data. AI systems require substantial amounts of data to function effectively, and this could potentially expose sensitive information. Ethical questions also arise around the degree to which AI should be allowed to make decisions that directly impact students' academic lives”. We can see there are some educational Chatbot development specified learning and teaching. It is still in the early stage of development. However, due to the rapid growth of users and the more sophisticated, it will be critical for researchers and developers to meet the ethical principles that minimise harm to users and maximise the benefit (Chen Y *et al.*, 2022).

## **Digital Divide**

According to Academic C, “The use of advanced AI technologies in higher education could exacerbate the digital divide. Students from disadvantaged backgrounds or under-resourced institutions may not have access to the same quality of AI-driven education as their peers”. Privileged students with the ability to use new technology through smart devices will have the benefit of using AI tools for their education while students from poorer families will not have the same access to smart devices due to lack of affordability. This will make a division between students in the digital era for accessing advanced AI technologies in HE. Academic G stated the same “lack of financial assets in HEIs and students from disadvantaged backgrounds will face challenges accessing AI technologies”. Developed countries, well-resourced institutions, and students from rich families will get the advantage of the use of AI tools for their education purposes while under-developed countries, under-resourced institutions and students from poorer families struggled to use Ai tools for their education purposes. This can make a digital divide in HE. This will increase the inequality in HE. Success depends on which social class students belong to (Marginson, 2017). Students with a lack of access to sociocultural capital, as determined by social class, will attain poor educational outcomes according to educational researchers (Marginson, 2018).

## **Depersonalisation of Education**

A few academics identified the depersonalisation of education as something that should consider a challenge in HE due to the high use of AI Tools. Academics A, C, and D stated lack of human touch can make students vulnerable to irrelevant sources of data. Also, this can be affected the quality of the learning experience. Academic I stated, “One of the most significant concerns about AI in education is the risk of depersonalization. While AI can efficiently handle large amounts of data, it lacks the human touch, which is essential in teaching and learning”. However, according to Chen X et al., (2022) and Chen Y et al., (2022) future of HE with AI Technologies will introduce Ai Tools that can identify human feelings through facial expressions and the way of texting will determine this and react accordingly while giving the solutions to queries made through AI Tools. Human touch is essential in teaching and learning but not limited to enhancing teaching and learning experience through AI Technologies as this can be supplementary to meet the student expectations. Academic B suggested use of AI Tools can be something that use as a supplement to classroom learning.

## **FINDINGS - OPPORTUNITIES**

### **Skill Development**

The majority of the participants both Academics and Students have identified the use of AI-generated tools can be supported to improve and develop the skills required in HE. Students have identified they can improve independent research skills while using Chatbot conversations for research studies. Furthermore, Academics have identified AI tools can be supplementary to classroom activities however, they cannot be replaced by a Lecturer/Tutor. In relation to this Academic A insisted, HEIs should not totally depend on AI-generated tools however, this can be embedded into classroom activities to give enhanced classroom experience for students.

Most of the Academic participants have identified the opportunity of using new technology to the advancement of teaching skills in conjunction with a pedagogical approach to Teaching, Learning and Assessments in HE.

### **Personalised Learning**

Personalised learning has discussed by most of the academic participants in the interviews. Improving the quality of the learning experience received by students in higher education is paramount. When it comes to EDI (Equality, Diversity Inclusion) aspect personalised learning experience can be something that can be focused on by the HEIs to make it more inclusive. Different students with different learning styles will be able to accumulate their studies to meet the expectations. According to Academic B, “AI can significantly enhance personalized learning. For instance, intelligent tutoring systems can adapt to each student's learning pace and style, providing personalized instruction and feedback”. This is meaningful when it is adopted by the student learning experience in higher education. The capacity and capability should be addressed before the implementation of further processes on this. Academic F and C stated that AI-based tools can be used as supplementary when a classroom tutor is not available outside the classroom hours. for example, during homework time and guided learning hours for the independent research study.

AI can be used for personalised learning in many different ways. Designing a chatbot for student engagement can create an interactive learning environment. Students may hesitate to respond or ask a question in a classroom, instead, they can engage one-to-one with the chatbot and ask questions through conversations. However, there can be a challenge of emotional bonding as chatbot conversation will not understand the feelings/emotions like a human conversation (Chen, Y. *et al.*, 2022).

### **Data Source and Information**

According to Academic A, “The use of AI technology in HE can enhance the HE provisions as it can be used for multiple data sources and information gathering”. This has been evident throughout the majority of the previous studies. The availability of multiple data access through AI Technology quickly and easily can help educators to

enhance their provision of HE (Chen Y *et al.*, 2022; Arpaci, 2019; Chen X *et al.*, 2022). Gathering information through AI Tools can support save time spent on education not only for educators but also for students too. The availability of multiple data sources and information will help data analysis, evaluation, and decision-making processes in HE. More than 15 students stated that AI Tools are very useful, and it is a time-saving tools when it comes to gathering data. They have also stated that in relation to research projects/research studies, the use of AI Technology is efficient and effective.

## **Academic Administration**

The use of AI in academic administration has been seen as an opportunity for academics to focus more on research and improving teaching skills. As stated by Academic D, “AI can automate many administrative tasks such as scheduling, admissions, and grading, freeing up time for educators to focus on teaching and research”. This is a significant factor in HE. The survival of HE mainly depends on teaching and research studies. Hence, having more time to accommodate teaching and research will thrive in the HE sector which can support to meet the demand expected from Academics to maintain the quality of Teaching, Learning and Assessment aspects. For example, Chatbots can create lesson plans, assessment marking and grading, class schedules etc. where most Academics spend time. Saving that time will support Academics to utilise it for research-led activities and teaching. Academic B suggests the use of AI-based tools as a supplementary to classroom-based activities and outside the classroom can be a helping hand for each individual student to manage their coursework. This will reduce the time spend on email replies/individual communication for student queries. This not only supports reducing the time spent on administrative tasks, but it also helps students to not be isolated in education setting.

## **Research Input**

As discussed in the previous Theme, the opportunity of saving time through academic administration has triggered how Academics who works in the HE can utilise that saved time on research. It is not only they can use that save time on research studies, but they can also use AI tools to find research-led information too. As stated by Academic F, “AI can be an invaluable tool in research, aiding in everything from data analysis to literature reviews. It can help accelerate the pace of research and lead to new insights and discoveries”. However, the accuracy of the data can be questionable in some Chatbot conversations. For example, Chatbot is admitting the data can be inaccurate due to machine-generated information.

# **DISCUSSION**

The use of AI in higher education has become a “new normal” as most of the HEIs worldwide is being used for different purposes for the last two decades. However, since late 2022 after ChatGPT was launched the HE sector is started reacting to it due to the over one million users within 5 days of the launch. This does not mean all one million users are students in HE. However, as HEIs are responsible for maintaining the quality of Teaching, Learning and Assessments in HE, the use of AI in HE became a hot topic in HEIs meeting tables. The majority of the academics' viewpoint illustrated that HEIs should not panic with the new launch of Chatbot (ChatGPT) that makes human-like conversations. Instead, institutions should see it as a developmental opportunity to improve the quality of higher education in relation to Teaching, Learning and Assessments. The use of AI in HE can be taken as a “Modernised Learning” tool that can be used by students to gather data and information for specific questions. However, the accuracy and validity of the data can be challenging. For example, ChatGPT is accepting and preventing there can be missing information or incorrect information as it is a machine-generated answer. A study found that students are more likely to use AI-generated tools for their studies and evident generating learning tools using AI gives educators to identify student behaviours towards learning. The study also found 74% accuracy in students' information management behaviour (Arpaci, 2019). Personalised learning has been identified as an opportunity with the use of AI Technology in HE. It can be more beneficial for students to get support for their studies outside the classroom. Personalised Learning Systems (PLS) through AI Tools have been identified as an interactive way of studying through AI Technologies as the students can get improved learning outcomes as well as learning experiences in open computer education (Cheung *et al.*, 2003). The students have seen the opportunity to use AI Technology in education as an enhancement to the learning experience that can advantage the outcome of learning. All the student participants in this study stated that they prefer to use AI Tools in their study. However, the study has been conducted in the UK where

students have smart devices, the internet and all other basic resources that require to access AI Technology for their higher education. This can be different to under-resourced HEIs, undeveloped countries and disadvantaged students. Quality, Academic Integrity, the Digital Divide, and the Depersonalisation of Education have been identified as challenges in HE due to the use of AI Technologies. Maintaining Quality and Academic Integrity is the responsibility of education providers in any given situation. Hence, HEIs should focus on the policy review to adopt the new changes that minimise the harmful effects of educational outcomes as well as developmental opportunities due to the use of AI Technologies in HE. According to QAA-UK, (2023), institutions in HE should take prevention strategies for the harmful effects of AI Technology while maintaining the quality standards expected in, HE. Institutions can review and update their policies in relation to Teaching, Learning and Assessment to reduce the risk of Academic Integrity. However, the institutions were already taken this into account due to the threat resulting from Essay mills and other third-party assessment productions before the challenges faced through AI technologies. For example, before the launch of ChatGPT in December 2022, HEIs had to control student assessments via policy formations to prevent third-party written assessment work. Digital Divide and Depersonalisation of Education are among the challenges that cannot be controlled by HE providers. However, regulatory bodies and governments can take more actions than institutions and individuals to minimise inequality and increase the equality of education access in the digital world. The students who use AI Technologies should understand there is an absence of emotional support through a machine when they decide to get support from AI Technologies instead of the allocated staff member for particular studies. However, the use of AI technologies can be more comfortable as it can save time and expenses that can cause to meet a staff member. According to Chen X et al., (2022), most recent research studies found that “emotion recognition from physiological or facial expression data and emotion recognition from texts) are widely embodied in ITSs”. Hence, in future, we will be able to see improved AI Tools that can recognise emotional changes through students’ interaction with AI Tools and this will not be a challenge to use AI Technology in HE.

## **Strategies**

The study found a few strategies that can be used to prevent the challenges of academic integrity and cheating due to the use of AI Technology in HE. Most of the Academic participants flagged up the requirement of multiple assessment methods to overcome the issues with academic integrity and contract cheating in assessment submissions. The traditional exam method will help to reduce the risk of having assessments written by AI Tools. However, the capacity of staff and other resources need to be considered before adopting the traditional method of exam as it requires more resources including exam invigilators. Amendments to the current Assessment policy are required to take preventive action to contract cheating. The pedagogical approach to Teaching, Learning and Assessments will support maximising the quality of HE and enhancement of student learning experience using AI Technology. Interactive learning activities in the classroom that are connected to assessment tasks and evidence submissions to the final assessment can be used as a strategy to encourage students to support their own writing instead of using AI Technology for assignment writing. Instead, students can use AI tools to enhance their learning experience for research-led studies.

## **MANAGERIAL IMPLICATIONS AND CONCLUSION**

Overall, the study findings suggest AI is a useful tool that can be used for enhancing Teaching, Learning and Assessment in HE. The use of AI has potential benefits for classroom learning as well as it can act as a teaching assistant for students outside the classroom for their queries when a physical teacher is not available for help. Moreover, students did suggest that the use of AI-based learning tools like Chatbot have some limitations, however, they can act as a student assistant for maximising learning opportunities. The study found the use of AI tools like Chatbot can be supported as a supplement to a traditional classroom-based lecturer/Tutor and it is time-saving, easy to use, and more convenient for students. The previous research findings have supported this as the Chatbot is a tireless learning champion compared to human interaction and can use as a personalised learning tool (Huang, Hew & Fryer., 2022; Goel, & Polepeddi, 2016). The study findings from both Academics and Student interviews suggest the use of AI-generated tools for Teaching, Learning, and Assessments in HE instead of rejecting them. When it comes to quality, academics have suggested various ways of improving the student learning experience by using AI-generated tools while meeting the quality standards in HE provisions. In particular, reviewing and updating the institutional Teaching, Learning, and Assessment policies. This can be supported by adopting and using AI-generated tools for the betterment of student achievements in HE. However, students are also concerned about the lack of ability to understand human emotions and make a psychological connections through Chatbot conversations. According to the experimental



Chatbot tool study developed by Chen Y et al., (2022) confirmed that “the inability of chatbots to make human-like emotional connections” is a limitation of the use of AI tools in HE.

The use of AI Technology in HE is rapidly growing and advancing and it is expected to grow further and further due to the high demand of users that should be expected by HE providers in the near future. According to Reynolds et al., 2020; Roschelle et al., 2020; Zawacki-Richter et al., 2019 AI Technologies have greater potential in education to customise learning experiences but also to maximise access to learning opportunities. While some scholars propose the replacement of some teaching tasks to and teacher to AI Robots (Edwards & Cheok, 2018). The article addressed the teacher shortage in education and Proposed AI Robots as the solution to teacher shortages. This may cause some discomfort, fear, and uneasiness for some teachers. However, this is gradually becoming a reality. As stated by Zhang and Aslan (2021), “ In addition to the intelligent tutors and teachable agents in online or blended learning as reported in AIED studies (e.g., Cheung et al., 2003; Chin et al., 2010, 2013; Cung et al., 2019; K’ose & Arslan, 2016; McLaren et al., 2011), the first AI teaching assistant robots, named “Happy Numbers” have been working in the classrooms in USA already”. The integration of AI technologies in HE requires transdisciplinary and interdisciplinary collaborations in large-scale, critical awareness of the Use of AI Technologies and Ethics, and longitudinal research. The growing research in HE would help to develop more practical guidelines for educators and explored ways of using AI Technologies for Teaching, Learning and Assessment. Despite the rejection, fears scepticism or doubt use of AI technologies in HE continues to open up new possibilities for innovative, creative developments in higher education.

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# EXPLORING CUSTOMER SATISFACTION AND RECOVERY STRATEGIES FOR ONLINE SERVICE FAILURES IN THE LUXURY FASHION INDUSTRY

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## ABSTRACT

*The Internet has had a significant impact on interactions between customers and businesses as well as service delivery. Failures of online services are unavoidable; yet, social media presents potential for the expedient recovery of offline services. This study examines luxury fashion brand consumers' customer satisfaction in light of the lack of research on luxury fashion customer satisfaction drivers. This paper offers management and marketing advice for fashion and luxury managers who aim to enhance customer satisfaction. Furthermore, it discusses several recovery strategies, including tailoring them to individual viewpoints, and how to use them.*

**Keywords:** service failure, service recovery, customer satisfaction, social media, luxury brands.

## INTRODUCTION AND BACKGROUND

E-commerce has increased since consumers have become more used to purchasing goods and services online (Azemi et al., 2022). 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, it is difficult to portray the sensory qualities of products and the luxury brand experience through virtual experiences (Ozuem et al., 2017). 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, Kapner (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 consensus 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 (Kietzmann et al., 2011; Lee & Leonas, 2021; Ayertey & Ozuem, 2018): 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. Failure-recovery literature in general argues that service breakdowns are unavoidable (Ozuem et al., 2021; Kietzmann et al., 2011).

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. The failure-recovery literature has generally defined customer satisfaction as the customer's perception of having successfully recovered from a service failure (Wang et al., 2011). 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 investigates customer satisfaction in the context of luxury fashion brand customers and explores the motivations and barriers to satisfaction based on online feedback. 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 next section of this paper discusses the theoretical background to customer satisfaction. The penultimate section of the paper discusses ways to recover from online service failures. The paper finishes with a discussion of the study's implications, as well as solutions and conclusions for both professionals and academics.

## **THEORETICAL CONTEXT**

Fashion consumers are no longer passive market participants because they interact with companies and share their brand experiences with others. Through social media, whether positive or negative, customers co-create brand value (Fu et al., 2022). Customers can share information, opinions and social feelings by creating user-generated content, which fosters electronic word of mouth (eWOM) as a key source of information about products and services (Ban & Kim, 2019). According to PwC (2018), 59% of customers will abandon a company after several negative experiences, and 17% will leave after a single negative experience; the study also indicated that this also applies to previously loyal customers who will not return. Consumers express their thoughts and feelings about online reviews of many products and services via social media and other online platforms. With the rapid development of social media platforms in recent years, new media, primarily in the form of short videos, has become popular. These short-video platforms offer rich real-time data and are popular channels for customers to share their thoughts on a product or service. Positive online customer reviews reveal the sources of customers' satisfaction, while negative reviews reveal the sources of customers' dissatisfaction. Each review can also be turned into a case study, success story or social proof section on a company's website (Su et al., 2021).

To achieve customer satisfaction, Mittal and Frennea (2010) and Shafiq et al. (2023) suggested customers need a place to voice their opinions, both positive and negative. Positive customer feedback data will ensure that business product roadmaps and customer support efforts are heading in the right direction. Happy customers might also share their ideas on improving products and services, which will help businesses build a truly customer-centric offer. A key outlet for customers' negative opinions lets customers voice their frustration before turning to online communities (Su et al., 2021). Furthermore, Shafiq et al. (2023) added that business customers should always be able to find a place where they can communicate with the business. Indeed, businesses can achieve this by combining the power of easily accessible customer service with the power of surveys. Although not every business can afford 24/7 phone support, solutions such as chatbots and live chats have made it possible for businesses to be available to their customers at all times. Such technology can capture ad hoc requests, make suggestions and manage complaints. However, it remains important to employ humans to address issues that a chatbot cannot. Surveys, on the other hand, assist businesses in gathering general opinions about their brand as well as monitoring the overall state of their customer experience programme (Mittal & Frennea, 2010).

## **RECOVERING FROM ONLINE SERVICE FAILURES**

Companies' recovery strategies do not always yield the desired results in terms of repatronage intentions, negative eWOM reduction and reconciliation. In addition, Harrison-Walker (2019) found that 60% of customers are dissatisfied with companies that implement recovery strategies. According to Zhou et al. (2013), the customer is the best judge of whether recovery efforts are successful. They also noted that customer satisfaction is an excellent indicator of the efficacy of service recovery efforts. In other words, it is crucial that consumers who have filed complaints have a positive experience of the company's recovery efforts. These efforts must generate a sense of justice, which is regarded as the foundation of the efficacy of service recovery strategies. The literature emphasises a persistent online consumer-business relationship that begins well in advance of a service failure, as opposed to one that begins with the incident. Cox (2018) suggested that if a company frequently communicates online, social media enables both reach and engagement stances: reach refers to the provider's knowledge of the customer's recovery needs and engagement refers to the customer's voluntary participation in the recovery process. Additionally, Dimitriou (2017) linked recovery decision making to the heterogeneity of customers. Dimitriou (2017) argued that customers vary and proposed that

the timing of a customer's online communication/complaint is related to the individual's perception of service failure, recovery expectation and recovery evaluation. This conforms to the ongoing discussion in the literature regarding offline service failure and recovery strategies (Ringberg et al., 2007; Odoom et al., 2020). According to the literature, in offline failure recovery, customers' voluntary participation is a co-creation recovery strategy (Dong et al., 2008; Bagherzadeh et al., 2020). Online recovery strategy scholars have paid little attention to the concept of co-creation strategy when analysing service recovery strategies. However, the omni-dimensional nature of social media clearly makes online co-creation feasible. The customer does not always provide a recovery recommendation via an online message, but the message itself is a crucial source for determining their recovery expectations. Co-creation in recovery strategies was defined by Dong and colleagues (2008, p. 126) as 'the extent to which the customer is involved in taking actions in response to a service failure'. Co-creation recovery strategies appear to be more effective than firm recovery strategies, which are more effective than customer recovery strategies, especially for co-created services. Such strategies have resulted in increased customer satisfaction, improved recovery time management, enhanced repurchase intentions and a stronger desire to co-create in the future (Bagherzadeh et al., 2020). While an apology (e.g., 'Sorry for the wait') acknowledges service failure through the admission of fault and accountability, appreciation (e.g., 'Thank you for your wait') acknowledges service failure by recognising consumers as beneficiaries and emphasising their merits and contributions. According to research on consumer self-perception (e.g., Schaumburg & Wiltermuth, 2014; You et al., 2020), this shift of focus in service provider-consumer interaction (from 'sorry' to 'thank you') can significantly boost consumer self-esteem. Therefore, appreciation should be preferable to apologies for enhancing post-recovery consumer satisfaction.

The literature on online service recovery has been developed specifically across non-financial recovery strategies, such as acknowledgement, apology, front-line empowerment, explanation and rapid response (Odoom et al., 2020; Harrison-Walker, 2019). The success of an online recovery strategy is largely dependent on the response speed of the service provider (Dimitriou, 2017). In essence, engaging in conversation with customers (Chaffey & Smith, 2017) as soon as they upload a complaint shortens the pre-recovery phase.

In a 2018 survey conducted by Clutch, 532 social media users were asked what they expected from companies on social media in the event of a service failure. The results showed that 76% of people expected brands to respond to social media comments faster, whereas 90% of millennials expected brands to respond within a day or less. In addition, 45% would view a brand more favourably if it responded to negative social media comments (Cox, 2018). This indicates that consumers and millennials expect businesses to respond, acknowledge and contact the individual as quickly as possible in an age of instant comments, views and communication. The passage of time is of the essence. The quicker a company responds to a problem, the stronger the message it sends to customers about the importance it places on satisfying them. Numerous organisations today have representatives who interact with online customers in real time. This activity has been termed as an online management response by Gu and Ye (2014). Their research examined management responses to online hotel reviews. Gu and Ye (2014) reported that 'on average, 23% of customer reviews receive online management responses' (pp. 573–574), and the majority of these responses are negative reviews (p. 574). This indicates that company representatives are more likely to approach dissatisfied customers than those who provided positive feedback. This isolation may cause frustration in the second group. Considering Gu and Ye's (2014) assertion that 40% of customers read other customers' online reviews prior to posting their own, the aforementioned risk is highly probable (p. 574). This demonstrates that social media is a public resource and that the company is subject to monitoring. However, if the company effectively manages its online communication, the articulated information may serve as a reliable source for strategic decisions. Instagram is the most obvious social media choice for fashion brand customers (O'Connor, 2018). According to O'Connor (2018), Twitter, followed by Instagram, is especially effective when luxury fashion influencers share messages with their audience. O'Connor (2018) discussed two leading luxury fashion brands, Gucci, and Prada, that have utilised fashionista public figures to reach their target audiences. Gucci and Prada reached tens of thousands of engagements via Chiara Ferragni and Arielle Noa Charnas, respectively. This indicates that influencers should be incorporated into effective online recovery strategies. Research by Wan and Wyer Jr (2019) showed that a company's service recovery should not just help the customer who was affected by the problem, but also help those who saw it. For example, when a service fails, a company that provides that service could offer a public apology or fix on social media. This strategy could help customers who are watching feel less threatened. Also, after the service recovery has been done for the customer in question, other customers may also get more attention.

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The purpose of the paper is to provide luxury fashion companies with ideas on how to enhance customers' experiences and create successful recovery strategies in the digital era. This paper 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; O'Connor, 2018), 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 (Ringberg et al., 2007). The findings suggest that businesses should have practical service failure recovery strategies. In order to recognise and promptly address customer comments and complaints, fashion retailers should regularly monitor online platforms, social media and review websites, which will help them to stay informed about customer sentiment and identify potential service failures. Employees cannot be service recovery experts. Thus, if employees know what recovery strategy to use and are empowered to do so, they will use it effectively. Thus, they should be trained to understand customer expectations and make recovery decisions. Future research could examine the efficacy of tailored recovery strategies based on customer segments, such as demographics, psychographics and purchase behaviour. It could also look at whether various customer groups have different expectations and preferences for online service recovery and create strategies that are tailored to these particular segments.

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# AI AND DEMOCRACY: DOES AI REQUIRE A DIGITAL DECISION-MAKING CONSCIOUSNESS?

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## ABSTRACT

*Artificial intelligence (AI) and democracy might be seen as incompatible. However, AI has the potential to improve voter decision making and thus improve democracy and spread the advantages and the potential social benefits. AI has extended reach, especially when linked to social media (Twiplomacy). Current AI algorithms are generative and are not truly capable of decision making in the sense that humans would consider. At the moment, AI is an aid and has the capability of speed but not always accuracy. This paper argues that AI needs to move from unidimensional decision making to multidimensional decision making. To achieve this ability will require digital AI, which requires developing consciousness to make ethical decisions. Policing of digital AI decision making will be mandatory because decisions have varied impacts and a global regulatory body will be necessary.*

**Keywords:** digital AI, democracy, strategy, social media, twiplomacy.

## INTRODUCTION

Democracy is associated with freedom of choice and independent decision making. Governments in the East and West view democracy through different lenses, although they consider their democracies to be free from interference. Interference is minimised in the West, but authoritarian governments in the East consider it legitimate to interfere with the decision-making process of voters to gain a particular outcome, which is usually done to keep the status quo. This leads to questions about ethics and morality. Which perspective of democracy is appropriate depends on the governmental lens and, controversially, what the government is hoping to achieve, especially in the context of improvement of voter knowledge in society.

The issue is how to improve voter decision making without unfair interference from government that is intentional or unintentional. This paper suggests that unintentional interference in voters' decision-making process can be minimised with the application of artificial intelligence (AI) algorithms. However, even if AI becomes part of voters' decision-making process, governments could interfere with the AI algorithm; particularly, if they are determined to game the electorate system. Where AI could make a difference is with governments that on balance want a fair voting system with minimal interference from internal or external parties. AI needs to develop social interaction skills (Fjermestad & Hiltz, 1999). This paper also suggests that AI requires to develop consciousness to counter unidimensional decision making by democratic forces so that the decision-making process is multidimensional and that voters or the democratic process can view the different arguments before casting their vote.

# THEORETICAL CONCEPTS

## Social Dilemma in Systems

Human-computer interaction (HCI)

The social environment model is a tool that tends to be able to explain complex situations (Whitworth & Sylla, 2012). HCI is the interaction between the computer interface and the user, and the flow of information is the loop of information. In human-computer interaction (HCI) research, a sociological top-down approach is combined with the bottom-up approach of computing; thus, computing moves beyond hardware and software engineering (Boulding, 1956). HCI considers useability and attention in web applications (Kuutti, 1996), which leads to sociotechnical concepts based on systems theory (von Bertalanffy, 1968). According to Whitworth and Liu (2009):

1. *HCI systems* based on *semantic* exchanges of meaning emerge from software systems to face problems like misunderstanding or information overload.
2. *Sociotechnical systems* (STSS) based on *community* normative exchanges emerge from HCI systems to face problems like mistrust, unfairness, and injustice.

Thus, computing moves to an interdisciplinary subject, which is applicable to AI. Consequently, AI is not just about algorithms but human interaction with the computing interface and programme interface and response interface. Social interaction is complex, and a STS occurs when people interact via technology (Whitworth & Sylla, 2012).

A social dilemma is:

a situation that creates a conflict between the individual's interests and the collective's interests, such that the individual obtains better outcomes following strategies that over time will lead to suboptimal outcomes for the collective. Such situations have reward structures that favor individuals who act selfishly rather than in ways that benefit the larger social collective; however, if a substantial number of individuals seek maximum personal gain, their results will be lower than if they had sought collective outcomes. (dictionary.apa.org, n.d.)

Social dilemmas are part of any social system (Whitworth & Sylla, 2012). Social dilemmas are influenced by the limited resources and competition in social environments, which require individuals to have competences that allow them to survive and thrive to gain a competitive advantage (Whitworth, Fjermestad, & Mahinda, 2006). The competences are based on feedback from the world or specifically from the social world from interactions with systems.

The homo economicus model suggests that individuals do what benefits them in terms of the least effort or best payoff or both (Persky, 1995). Although homo economicus is a model of humans' rational behaviour, social cooperation is also a common trait in humans (Ridley, 1996). Social cooperation changes the evolutionary reward rule (homo economicus model); its social dimension modifies behaviour so that benefits are accrued for the community and not for the individual. Social interaction is a mediating factor in human behaviour, which suggests that this could be an approach to democratise AI decision making. Cooperation is a method to overcome game theory situations such as the Prisoner's Dilemma, but this contradicts the homo economicus approach. Following the logic of the homo economicus model, it is always better to "defect" but cooperation leads to an advantage for the defecting prisoner (Whitworth & Sylla, 2012).

When the homo sociologicus model is applied to the Prisoner's Dilemma, the outcome is radically different. The egocentric stance is replaced with community spirit, and the social unit replaces the individual unit. Thus, self-interest in the homo sociologicus model is judged as irrational (Persky, 1995). Dayton-Johnson (2003) suggested that if the degree of social cohesion in the Prisoner's Dilemma is known or significant, then the dynamics change so there is a movement towards equilibrium and cooperation. Social interaction gives rise to social synergy, which is the difference between the total utility of working together versus the sum of individuals' utility. If social unit synergy is positive, then it pays to join the social unit; if it is negative, then it pays not to join the social unit (Whitworth & Sylla, 2012).

Social integrity breakdown, such as stealing from individuals, leads to social instability. Then social synergy breaks down because the individual is seen to be more powerful than the social unit. Many defections from the social unit will lead to instability (Whitworth & Sylla, 2012). Poundstone (1992) opined that humanity pulled itself out of the Dark Ages due to rationality; Poundstone (1992) also suggested that individuals faced with a social dilemma are more likely to cooperate than game theory suggests.

AI is not the same as the natural intelligence displayed by humankind and animals (Tamuno Miegbam & Bariledum, 2022). Russell and Norvig (2003) stated that intelligent agents can detect their environment and respond accordingly. AI is not about mimicking human intelligence, instead AI is about rationality and rational behaviour, which puts no boundary on what intelligence is. Tamuno Miegbam and Bariledum (2022) suggested that AI uses many approaches, including modelling human problem-solving behaviour, formal logic, and mimicking animal behaviour; not all are now pursued in developing AI. Also, AI has borrowed ideas from psychology, computer science, linguistics, and philosophy. Russell and Norvig (2003) suggested that if AI is not directed to useful ends, then it could prove to be an existential threat to humankind.

## AI and Social Order

AI, thus, needs rationality (AI generative algorithms) and to be able to be cooperative to solve social dilemma situations. Thus, AI is not “intelligent” and is not like humanity. Aumann (1998) suggested that higher social orders solve social dilemma games, for example, individual farmers can form a village (higher social unit) to incorporate cooperative grazing. Rationality would exclude social agreement. Whitworth and Sylla (2012: 9) suggest that social order is the degree its members follow rules. Everyone of “one mind” is a perfect social order. Randomness leads to instability in social order and instability leads to “social anarchy”. Whitworth and Liu (2009) stated that cheating induces disorder and the cheater and the cheated community will act differently. Where a community acts as one (social order) due to voluntary reasons or other reasons, such as religion, law, or culture, the social dilemma is resolved. Whitworth and Sylla (2012) stated that enforcing order, even psychologically, is a blunt instrument and is akin to imposing social order by making members “ants”. This leads to a lack of diversity, freedom, and choice which are expected in a democratic society. Encouraging societal members to socialise to a degree disengages competences and creativity (individuality sparks creation). Thus, social performance requires individual diversity and social order. AI lacks individualism in humanity, and creativity is sparked by individualism. AI creativity is based on collective knowledge from an algorithm that cannot think outside its own ecosystem. Humanity can develop thoughts and creativity based on multiple ecosystems.

Whitworth and Sylla (2012) were of the view that centralisation of control leads to a social order that invites hijacking. Social hijacking is where individuals take control of the community for their own ends. This leads to dictatorship; Plato suggested that a benevolent dictator, who creates synergy to enforce social order and return the gains to the community, is the “best” outcome. However, dictators can also keep the gains for themselves to live a luxurious lifestyle at the expense of the community. Social hijacking leads to nowhere; change only occurs when the dictator is dead or there is social collapse or both. What is to stop a rogue autonomous car from deliberately injuring or killing people? This is a form of social hijacking but instigated by AI and is not social hijacking in the normal humanity sense. It is still a threat to democracy because it is not possible to determine how many rogue cars exist and what made them turn rogue. To prevent this the regulatory environment for AI applications that could prove a threat to society will require monitoring.

Adams (1965) was of the view that society discovers new social norms to increase social performance. The introduction of justice and fairness are new social forms that have improved social performance. Justice engages synergy when forming the social unit. Also, fairness rewards individuals in the community according to their contribution. People have a view on justice and will decide if the contribution matches the value gained. People prefer fairness to personal gain (Lind & Tyler, 1988). One could argue that democracy like justice is another social intervention because it is a better alternative to organise the world (Mandelbaum, 2002).

Communities that select leaders by voting suggest that power lies with the communities. However, the voting system could be subject to social hijacking. Democracy is based on the distribution of power and is more challenging to socially hijack. Dictatorships centralise power and thus has a centre to hijack (Whitworth & Sylla, 2012). AI can be a power of good for voters’ rights or not. This depends on the government’s objectives. Russia claims it is

democratic state because voting is allowed, but social hijacking is suspected because of the overwhelming voter support for the status quo. Deployment of AI to support voter rights to make independent decisions is not a given and could be a more sophisticated version of rubber stamping.

With the best will in the world a social environment cannot mitigate against the outside world forever (Whitworth & Sylla, 2012). Individuals who want to use AI for good or evil will not be held at bay forever. White collar criminals, such as bank managers causing economic harm, are likely to be removed and not punished. Does AI have a mediating role in the reduction of hijacking of the social environment? Generative AI could alleviate potential disruption or hijacking of the social environment. Nevertheless, AI needs to be conscious to decide on the “best” approach. Multidimensional AI that has different perspectives on similar issues, such as solving the bank crisis, goes some way towards the development of AI with consciousness. How should the different consciousnesses be selected? What are the drawbacks and benefits? These will be discussed in the Implications section.

## Digital Diplomacy

Digital diplomacy is the application of digital techniques, which are emerging or established technology, to negotiate diplomatic interstate outcomes (Tamuno Miegbam & Bariledum, 2022). The use of digital technology for diplomats to negotiate and communicate openly and directly with the public using social media is referred to as digital diplomacy; the technique of digital diplomacy reaches beyond traditional government-to-government relations and engages with people around the world (Bjola & Holmes, 2015). The term “Twiplomacy” was coined to describe the use of Twitter and diplomacy (Dinata, 2014).

AI research tends to focus on the social, economic, and security implications of AI. There is limited research on foreign relationships or how technologies influence government officials and policy makers (Tamuno Miegbam & Bariledum, 2022). STS theory suggest that STS can improve the social and technical features of diplomats’ embassies. Tamuno Miegbam and Bariledum (2022) opined that diplomats’ practices have many interdisciplinary activities and the key to successful diplomacy is understanding them. AI has the ability and potential to shed light on the subsystems that formulate the activities of diplomacy. STSs comprise social and technical systems. In this scenario, social systems are the people (diplomats), infrastructure (diplomatic embassy), culture of the people, processes (how diplomatic activities are carried out), and goals of the diplomatic mission (dependent on the government in power). The technical systems are the hardware and software of AI. The integration of the systems will improve diplomatic success. An analysis of the literature revealed several themes which are stated below (Tamuno Miegbam & Bariledum, 2022):

1. In times of crisis AI could be a considerable aid to diplomats helping them to make sense of the situation (descriptive analytics) and identify patterns (predictive analytics).
2. AI can assist diplomats with planning and conducting of discussions in negotiations. AI can be an aid but it is currently incapable of negotiating.
3. AI could influence the diplomatic environment to shape and reshape international order.
4. AI could aid in the inclusion of democracy, human rights, and ethics in policy development frameworks that currently encompass economics, business, and security. Thus, diplomats will have access to text analysis, speech content analysis, detection of hate speech, and prevention of the spread of terrorism via social media platforms.
5. Big data analysis by AI algorithms inform diplomats’ negotiations, which would enable diplomats to better understand the historical context, cultures, attitudes, mindsets, ambitions, and interests of the region.

The threat of AI to diplomacy also needs highlighting and it is a threat to international communities. AI could be used as a psychological tool to threaten and destabilise governments. Areas of contention are data sovereignty, artificial diplomacy, cyber security, and cyber war. AI cannot achieve a consensus and is blind to perception, intuition and the taking of risks. Human beings have advantages over AI, such as being able to detect undetectable situations, sense the unseen, and notice the unnoticed (Tamuno Miegbam & Bariledum, 2022).

## IMPLICATIONS

Technology is developed with hardware and software components. The social interaction between STSs and human beings adds a level of complexity. Social interaction is the mediator that determines the success of technologies, such as AI. Society will develop competences that affect the success of AI technologies. This suggests that AI could be beneficial for society through social interaction with the world community (homo sociologicus). The assumption that all world communities will enable and allow homo sociologicus to influence human behaviour in the exercising of democratic decision making is unlikely due to the different political systems that exist in the West and East.

AI can make rational decisions that are repetitive, which is now accepted as generative AI. AI does not enable decision making that requires social interaction, but it can enable Prisoner's Dilemma situations. Rational decision making is prescriptive and requires AI to learn all the possible permutations and combinations, and "learn" when to apply them. Social interaction is much more than rational calculation because humanity is not a machine but a thinking organism that requires rationality and social interaction to resolve complex problems or situations. AI could help voters to compare political parties and government policies, which is part of the decision-making process. However, voting is more than an evaluation of policies and it is overlaid with an emotional or social context. One issue is that AI has no concept of ecosystems outside its algorithms; in addition, it does not have experience and it cannot gain experience like humanity does.

AI is a tool that has a wide range of applications including diplomacy, which gave rise to the term digital diplomacy. Democracy requires negotiation and consensus to thrive and grow, but current AI software does not have these accessories. However, for AI to move beyond generative problem solving requires AI to develop a digital consciousness a digital consciousness that mimics human behaviour more closely and then travels in the direction of decision making in the human problem-solving context. If AI is to effectively protect the social environment and humankind in general, then it requires to develop different perspectives of a situation, detect if the logic is faulty, and detect the consequences of the different perspectives. It could then become a truly educational tool that spreads multidimensional knowledge that enables people to make informed choices and decisions. Debates on communism and capitalism are informative and could be based on bias. AI is not a rounded tool because it is based on logic; many social problems are not solvable by logic but require reflection, the application of human rights and ethics, and empathy. AI that does not have social behaviourism cannot develop digital consciousness but could be an aid to humankind but cannot progress humankind completely and accelerate the benefits befitting the context and inclusion of the social environment. Needless to state that a "digital thinking" AI is a danger, but global policies could be put in place to regulate digital AI. The role of AI in digital diplomacy has many benefits, but negotiations require cultural understanding, perception, risk taking, and intuition in the diplomat context. AI could become a powerful and effective decision maker and not just a tool to aid humankind. Decisions will still need vetting by humans, including global institutions and governments, because digital AI could have the ability to destabilise and delegitimise governments, people, voters, and the social environment.

## CONCLUSION

AI can be a force for good, but it can also be a force for evil, including disrupting and delegitimising democratic governments' actions and practices. Solving linear problems is approximately the current state of AI. However, to make a greater contribution to humankind, AI must have consciousness (i.e., digital AI). What does this mean? Decision making will not be linear but multidimensional so users can get varying perspectives to problems. AI must become more human when it comes to decision making so it shows the social context of decisions. There is no getting away from the view that AI is a threat and developing it in the direction discussed would make it more potent; so, an ethical framework that is managed and controlled globally by an accepted global institution is required.

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# CAN THE ENERGY INDUSTRY BE SUSTAINABLE IN THE NEAR FUTURE?

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## ABSTRACT

*Climate change is one of the biggest environmental challenges we face today, and the energy industry is a major contributor to global greenhouse gas emissions. The shift toward renewable energy sources is crucial to reducing carbon emissions and mitigating the impacts of climate change. Smart grids can help manage the distribution of electricity, ensuring its delivery to where it is needed most efficiently. The development of electric vehicles is also an opportunity presented by the shift, as they can help reduce greenhouse gases in the transportation sector.*

**Keywords:** energy, climate change, carbon emissions, electric vehicles, greenhouse gases.

## INTRODUCTION

The energy industry is a crucial component of the global economy as it provides the essential inputs necessary for the functioning of all other industries and significantly impacts the environment. In recent years, concern has been growing over the sustainability of the energy industry, and many countries are making efforts to transition to a more sustainable energy system. This paper aims to examine the future of the energy industry and the role of sustainability in it. The paper begins by discussing the current state of the industry and the challenges it faces. Next, it examines various technologies and trends that are likely to shape the industry's future. Finally, it discusses the role of sustainability in the energy industry and strategies to promote sustainable energy practices.

### Fossil Fuels

Currently, fossil fuels such as coal, oil, and natural gas dominate the energy industry, fulfilling most of the world's energy needs. However, these fuels have significant environmental impacts, such as releasing greenhouse gases, which in turn contribute to climate change. For example, fossil fuel extraction and transportation can aggravate environmental issues, including air and water pollution, habitat destruction, and biodiversity loss. Besides, the industry's dependence on imported energy resources can leave countries vulnerable to supply disruptions or price fluctuations, making energy security a significant challenge.

The U.S. Environmental Protection Agency (2022) reports that the "energy sector is the largest emitter of greenhouse gases into the atmosphere, contributing to climate change." Climate change refers to the long-term shift in temperatures and weather patterns (United Nations, 2021). While natural variations in the solar cycle could influence temperature behavior, human activities such as fossil-fuel use have been the primary cause of changes in climate patterns since 1800, (United Nations, 2021). These shifts could be a consequence of significant challenges that the environment faces over the years, including resource depletion and environmental degradation.

As mentioned, greenhouse gases change the climate. These are released during the combustion of fossil fuels, such as coal, oil, and natural gas, which are normally used to produce electricity (U.S. Environmental Protection Agency, 2022). The major greenhouse gases include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O; U.S. Environmental Protection Agency, 2022). As of 2020, the transportation sector contributed 27%, electricity 25%, industry 24%, agriculture 11%, commercial 7%, and residential 6% to the total U.S. greenhouse gas emissions (U.S. Environmental Protection Agency, 2022). According to the International Energy Agency (IEA), the global energy-related CO<sub>2</sub> emissions grew by 0.9% or 321 Mt in 2022, eventually reaching a new high of over 36.8 Gt. However, despite the switch from gas to coal in many countries, global emissions growth in 2022 was lower than expected—a



year marked by energy price shocks, rising inflation, and disruptions to traditional fuel trade flows. An additional 550 Mt of CO<sub>2</sub> emissions were avoided because of the increased use of clean energy technologies such as heat pumps, electric vehicles, renewable energy sources, and industrial production reduction (IEA, 2023). Greenhouse gas emissions and global warming are major concerns today, and there is fear and uncertainty for future generations. This scenario has spurred a growing interest in domestic sources of energy, such as renewable energy sources. Governments, economists, engineers, businesses, and companies must change their practices to support a transition of the energy industry to clean and renewable energy in line with the Paris Agreement.

## **RENEWABLE ENERGY**

Renewable energy sources such as solar, wind, hydro, and geothermal energy have gained significant attention in recent years due to their potential to provide sustainable and secure energy sources. These sources are replenished naturally and do not deplete over time, making them ideal for long-term use. Additionally, they have lower environmental impacts than fossil fuels do.

Solar energy is one of the most promising sources of renewable energy. Over the past few years, the cost of solar power generation has significantly reduced, thereby increasing its competitiveness with fossil fuels in many regions. Furthermore, advances in technology have enabled the storage of solar energy for use during periods of low sunlight. Wind energy is another promising source of renewable energy. It is offering tough competition to fossil fuels in many regions. It is noteworthy that larger and more efficient wind turbine development has significantly decreased the cost of wind power generation. Another important source is hydropower. This mature source of renewable energy has been utilized for centuries. It has the advantage of being able to provide baseload power; in other words, consistent power supply throughout the day. However, the development of new hydropower projects is limited by the availability of suitable sites. Geothermal energy is another renewable energy source with significant potential, which involves harnessing the Earth's internal heat to generate electricity. However, the availability of suitable geothermal resources restricts the development of geothermal energy projects.

### **Challenges**

One of the challenges facing renewable energy sources is their intermittent nature. Solar energy is available only when the sun is shining and wind energy when the wind is blowing. Hence, energy storage is a critical component of a sustainable energy system. Advancements in energy storage technology have enabled large-scale storage, thereby increasing the reliability of renewable energy sources. Battery storage is among the most promising technologies, whereby energy is stored in power homes and businesses during periods of low energy production. The cost of battery storage has significantly decreased in recent years, making it an increasingly attractive option for energy storage.

One of the most significant factors that will shape the future of the energy industry is technological advancements. The world is becoming more digital, and technology has become an integral part of our daily lives. Technological advancements are transforming the energy industry by improving efficiency, reducing costs, and increasing sustainability. For instance, renewable energy sources such as solar and wind energy have become more accessible and affordable, thanks to technological advancements. Additionally, technologies such as smart grids, energy storage systems, and electric vehicles are transforming the way we consume and manage energy.

## **TECHNOLOGY ADVANCEMENT**

Artificial intelligence (AI) and machine learning technologies are revolutionizing the future of renewable energy. AI can help power companies get better forecasts, manage their grids, and schedule maintenance. Forecasting is one of the best solutions for the major challenge associated with renewable energy: As renewable energy depends on resources such as sunlight, airflow, and water, the dependence on the weather is high, which cannot be controlled by humans; here, machine learning can help by analyzing the current and historical weather to forecast accurately (Ganjineh, 2022). Forecasting is a useful feature considering the unregulated weather patterns caused by climate change. This mechanism can assist businesses and countries in preparing to store energy for when it is needed. Furthermore, it is a great tool to maximize the use of renewable energy by facilitating better planning and making it a stable energy source. Additionally, grid management with AI can help predict energy consumption in households; this

will help companies to stay informed about the expected energy demand in the upcoming days. Moreover, by leveraging the power of AI and machine learning, the specific part of the system that needs maintenance can be easily predicted (Ganjineh, 2022). AI and machine learning have the potential to completely reshape the renewable energy industry, with a positive impact not only on our companies but also on consumers.

In the future, with the globalization of AI and the renewable energy revolution, most companies will feel pressurized to adopt these practices to stay competitive. Eventually, technology will enhance competitiveness as the industry would have a chance to become a renewable-energy industry with more efficiency, less cost, and more attentiveness to the needs of society.

Several factors will determine the sustainability of the energy industry in the next 20 years, including technological advancements, societal attitudes toward energy consumption and conservation, and global political and economic trends. One of the most significant challenges confronting the energy industry is the need to transition away from fossil fuels, which contribute significantly to global greenhouse gas emissions. This transition will necessitate significant investment in renewable energy sources as well as energy storage technologies and energy-efficient infrastructure. Fortunately, the cost of renewable energy has steadily declined, and many countries and businesses have committed to net-zero emission targets in the coming decades. Governments all over the world have also implemented policies and regulations encouraging clean energy technologies. However, obstacles must be overcome to achieve a sustainable energy industry in the next 20 years. The intermittent nature of renewable energy sources, the need for a more reliable and efficient power grid, and the high upfront costs of implementing renewable energy systems are among them. Some of these challenges can be managed and overcome with the proper application of technology.

## **Culture**

In addition to technological advancements, changes in societal attitudes toward energy consumption and conservation will be critical to the energy industry's long-term viability. Individuals may adopt more sustainable behaviors as they become more aware of the effects of their energy usage, such as using energy-efficient appliances, reducing their reliance on single-use plastics, and supporting policies prioritizing clean energy.

Government policies play a crucial role in shaping the future of the energy industry. Governments worldwide have set targets to reduce carbon emissions and increase the use of renewable energy sources. For instance, the European Union has set a target of achieving net-zero carbon emissions by 2050, while China aims for carbon neutrality by 2060. Additionally, governments provide incentives to encourage the use of renewable energy sources and promote energy efficiency. For instance, some countries provide tax credits for households and businesses that install solar panels or other renewable energy sources. Consumer demand is another significant factor that will shape the future of the energy industry. Consumers are becoming more aware of the environmental impact of their energy consumption and are demanding more sustainable energy sources. Additionally, consumers are becoming more interested in energy efficiency and are willing to pay more for energy-efficient products. For instance, the market for electric vehicles is growing, and consumers are willing to pay more for electric vehicles than traditional vehicles.

Environmental concerns are driving the shift toward sustainable energy sources. Climate change is one of the biggest environmental challenges we face today, and the energy industry is one of the greatest contributors to carbon emissions. Fossil fuels are a significant source of greenhouse gas emissions, which contribute to global warming. Additionally, the extraction and transportation of fossil fuels have significant environmental impacts, including air and water pollution. The shift toward renewable energy sources is crucial to reducing carbon emissions and mitigating the impacts of climate change.

## **FORESEEABLE FUTURE**

The future of the energy industry is likely to be dominated by renewable energy sources, which are becoming more accessible and affordable, thanks to technological advancements. Additionally, renewable energy sources are gaining in reliability, and energy storage systems are improving, making it possible to store energy when not needed. The IEA predicts that renewable energy sources will be the largest source of electricity by 2025, overtaking coal.

Many sources agree that achieving energy sustainability requires certain steps to be taken. The United Nations argues that renewable energy will play a huge role in achieving global sustainability. It claims that “the science is clear,” and to “avoid the worst impacts of climate change, emissions need to be reduced by half by 2023” (United Nations). By 2050, emissions will need to recede to zero. Statistical data show that “80 percent of the global population lives in countries that are net importers of fossil fuels,” meaning that billions of people have become dependent on these fossil fuels, leaving them vulnerable (United Nations). Using renewable energy can be one way to solve this issue. The United Nations further states, “Renewable energy is the cheapest power option in most parts of the world today.” It claims that the only reason renewable energy is not yet a part of daily life is political issues. Big companies such as the oil industry do not advocate for sustainable energy because it contradicts what they are selling. According to the organization, energy can become sustainable in the next 20 years only if renewable energy develops faster and powerful industries invest in it.

Sustainability sells, and people tend to spend more money on products marketed as sustainable. In the article, “Environmentally Friendly Business is Profitable Business” from *The Guardian*, the authors prove that consumers are willing to not only pay more for sustainable products but also seek them out. The article highlights companies such as Tesco and Walmart, stating that they are “not committing to environmental goals out of the goodness of their hearts” but because “the reason for their actions is a simple yet powerful realization that the environmental and economic footprints are most often aligned” (*The Guardian*). This connection between sustainability and economic profits means that “sustainable businesses are often more resilient in the face of environmental and economic shocks” (*The Guardian*). Therefore, sustainability is an important factor in the strength and durability of a company. Hence, the emphasis is on the prospect of companies creating sustainable and profitable goods. In retrospect, companies across sectors are noticing the ways in which they can benefit from sustainability.

## CONCLUSION

The shift toward renewable energy sources presents several challenges and opportunities. One of the main ones is the intermittent nature of renewable energy sources, which can affect their reliability. Energy storage systems, such as batteries, are required to store the excess energy generated during peak-production hours for use during low-production periods. The development of smart grid technology is another opportunity presented by the shift toward renewable energy sources. Smart grids can help manage the distribution of electricity, ensuring its delivery to where it is needed most efficiently. The development of electric vehicles is also an opportunity presented by the shift, as they can help reduce greenhouse gas emissions in the transportation sector. The competitiveness of the energy industry can be enhanced by technology companies investing in further advancements in clean energy. Their investment is a key step in creating sustainability within the energy industry. Energy can become sustainable within the next 20 years or even sooner if significant backing is received from industries across the board. The severity of climate change will affect the energy industry, and more sustainability investments will be required to combat the rising issues. The path to profit and sustainability consists of companies making long-term sustainability plans, being creative with their solutions, and tracking their progress. Finally, the most sustainable and profitable companies will be those whose decisions reflect environmental consciousness.

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# HOW TO BE SOCIALLY CONSCIOUS YET PROFITABLE IN THE NEW GLOBAL ECONOMY

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## ABSTRACT

*This paper addresses the concerns of business leaders who want to be a part of the new economy built on sustainability, cleaner energy, and an overall commitment to improving people's lives. It is argued that a transition from fossil fuels to renewable energy sources is not only necessary for human development but also an excellent investment. In the past decade, businesses have aimed to use energy both in a profitable and socially conscious way, and there are ways by which businesses can be both profitable with energy and social conscious. Using sustainable energy that employs renewable methods will guide that group of environmentally conscious consumers to other companies playing their part to minimize any negative impacts and start building a loyal and sustainable audience and consumer base.*

**Keywords:** sustainability, profit, business, consumer, social.

## INTRODUCTION

This paper addresses the concerns of business leaders who want to be a part of the new economy built on sustainability, cleaner energy, and an overall commitment to improving people's lives. Consumers and end users demand products and services from companies that have consciously decided to have their businesses follow expected norms in terms of social policies. For those making strategic decisions, being socially conscious can be seen as good public relations; however, shareholders still demand profits and higher dividends, and this is the dilemma for strategic managers. In moving in a sustainable direction and profiting, one must not only dip one's toes in but also totally believe. Investment in clean technologies is also only the beginning, as management must focus on the effects of their business on the local, regional, and global landscapes. Such a proactive stance can provide firms a very strategic advantage as consumer demands become clearer and more demanding. The buy-in must be complete, which requires brave leadership. This paper focuses on these traits and the way being at the forefront of this new economy will ultimately be a profitable journey.

### Present Situation

The present energy situation is challenging. In the United States, fossil fuels were “used for 79% of total primary energy production in 2021” (Grid, 2022). Although the negative impacts of fossil fuels on both the environment and physical health are clear, they are still used all over the world. Additionally, the United States has “become increasingly dependent on energy supplies from unstable regions” (Braml, 2007), and without the capacity to produce the needed amount of oil, the US relies on trade to fuel its energy. Although this phenomenon positively impacts the economies of the countries the US trades with, the places that have what the US needs are unstable, and with the ever-shifting government policies and actions, the risk of incompatibility in this trade partnership increases.

The earth is a furnace; it exists today as a complicated ecosystem, and although currently stable, historical human activity has and continues to destroy it. Carbon, a chemical released from everyday human activity propagates the globe and slowly heats it. Since the industrial revolution, the amount of fossil fuels burned each year has increased over 4000 times (Pirani, 2018), resulting in disastrous impacts on the environment, some of which can be seen in the rise in sea levels and extreme weather. This global rise in temperatures is known as climate change or global warming. In its simplest terms, human activity has produced mammoth levels of carbon dioxide, and with its increase, the ability of humans to live on Earth decreases. Therefore, tackling global warming for the survival of the human species is

paramount, and although the task is arduous, it will benefit everyone—from the layman to the entrepreneur, from the business owner to the investor, and from the citizen to his government. Furthermore, although daunting, global warming presents an opportunity for everyone to excel in some way, shape, or form.

## IMPACT OF CLIMATE CHANGE

Due to climate change, the ocean and atmosphere have become warmer. The rise in temperature has caused glaciers and land-based ice sheets to melt, resulting in a global rise in sea levels. Since the late 1800s, sea levels have risen about 9 inches, causing more frequent flooding, destructive storm surges, and saltwater intrusion (LaPorte, 2021). Over 40% of the U.S. population lives along the coasts and defending these communities from the threat of a surge in sea levels is estimated to cost around \$400 billion over the next 20 years (Kabukuru, 2022). Therefore, a transition from fossil fuels to renewable energy sources is not only necessary for human development but also an excellent investment.

Another side effect of climate change, brought about by burning fossil fuels, is a rise in more frequent and extreme weather events that lead to catastrophic disasters. These environmental catastrophes pose an imminent threat to human life, and the costs of remedying them are immense. The cost of extreme weather events, including wildfires, hurricanes, windstorms, flooding, and droughts between 2016 and 2020 in the United States has been estimated at \$606.9 billion (Smith, 2021), which demonstrates the necessity of a shift away from fossil fuels owing to their detrimental effects on society as well as the fact that they are a terrible financial investment.

Sustainability has become one of the most debated topics in the world. Although it may mean reducing economic development and growth at some point, the world has realized it must change its ways to ensure a brighter future for future generations. This is the century in which the world has experienced the most activism to fight for more sustainable means of production and consumption, which has led to the society pressurizing lawmakers to enforce strict environmental laws that boycott products that are not produced sustainably. In 2015, the Paris agreement, for which the biggest countries in the world got together to find a solution and tackle climate change, was one of the most significant steps forward for the world. Its main goal was to ensure a shift to net-zero emissions from all 193 countries at some point in the future. In response to pressure from society and countries, companies are asking themselves how they can become more environmentally friendly without negatively impacting their profits. Therefore, managers sometimes have to choose between cutting costs and shifting to

## Alternatives

Among the alternatives to fossil fuels are nuclear power and renewable energy. However, nuclear energy poses major risks, and incidents in America, Ukraine, and Japan have made many energy suppliers wary of it. Renewable energy on the other hand uses nature as the power source to produce electricity, and the three most widely implemented forms of renewable energy include wind energy, which uses windmills that create energy by rotating; hydropower, which relies on gravity to move turbines using the natural flow of water; and solar energy, which captures energy directly from the sun through its panels. Although other minor forms of renewable energy exist, such as tidal and thermal, their implementation is not as popular, even though their emergence cannot be ignored. The benefits of these forms of electricity include the low cost of production, high need for labor, and adaptability. Renewables have been rising in popularity throughout the 21<sup>st</sup> century, and consequently, much of the technology they employ has marginally improved. For example, solar panels in their early years captured only 1% of the energy they received; in 2022, this figure has risen to 20%, with up to 30% efficiency panels being tested every day (Solar, 2020). This, coupled with the even more impressive drop in prices for implementation, has incentivized many developed countries to turn to these forms of energy. Moreover, the job opportunities from installation, maintenance, and production are also worth mentioning. On average, 95,000 new jobs have been created yearly from clean energy efforts (Kolmar, 2022). As such, it is no wonder that renewables have become the no.1 replacement for fossil fuels, as the benefits are hard to ignore. However, one major objection to the reliance on renewable energies is their innate reliance on nature. A solar farm can produce energy only so long as the sun is visible; a wind farm needs wind, and so on, and this has been the most significant obstacle to the widespread adoption of renewables and is also the driving force behind all improvements. By improving efficiency, lowering production costs, and creating battery systems that would allow for preserving extra energy as a backup, it has become more difficult to ignore and say no to renewables.

It is widely acknowledged, theoretically developed, and empirically tested that new technology and innovation are the foundation and determinants of growth and development. This implies that businesses or companies that are strategically focused on ongoing innovation and on creation of products and processes are those that succeed in the market. Additionally, these companies have a competitive edge. The critical new concept of sustainability is crucial to the growth of contemporary businesses and the accomplishment of long-term competitiveness (Jalil & Hwang, 2019). Despite this resource depletion, water, soil, and air pollution, as well as other environmental violations, are often accompanied by rapid economic growth and technological advancement. However, this situation led to the incorrect assumptions that economic progress could not be achieved in any other way and that it must necessarily have detrimental environmental repercussions.

The fundamental goal of the efforts to correct this widespread misconception is to focus innovation activity on developing and deploying environmentally friendly, sustainable, and green technology solutions. Green technology-based operations make it possible to conduct lucrative and environmentally friendly business (Luftman et al., 2017). In addition to enabling higher levels of productivity and efficiency, technology is influencing sustainability. Green technology products and efficient routes that do not jeopardize the health of the ecosystem have increased (Dodgson, 2018). Technology entrepreneurship combines and uses knowledgeable individuals and a wide range of resources in close connection with scientific and technological advances to create and seize value for a business. It is focused on competitiveness and founded on solid connections between research, new technology, learning, and production of new value for the consumer in the form of high-tech products and services that eventually lead to their commercialization (Pagani & Pardo, 2017).

## **PROFITABILITY**

Similarly, businesses can be profitable through technology, yet socially conscious. Levi-Bleich et al. (2018) state that the need to manage development while ensuring various social, economic, and environmental goals is growing. Technology and innovation, which are at the core of all human endeavors to meet the various demands and objectives in nature and society, are the primary emphasis of contemporary concepts in development management, and it is argued that the technology we employ determines our performance and serves as a critical source of environmental risks. The scientific field of technology and innovation management has rapidly risen in the last few decades of the 20<sup>th</sup> century (Dodgson, 2018).

A purposeful alignment between short- and medium-term company aims as well as long-term societal goals is what technological social responsibility entails. The time has apparently come for business leaders across sectors to include a new imperative into their corporate strategy, given the potential for a win-win situation across business and society from a socially responsible and innovation-driven adoption strategy (Pagani & Pardo, 2017). It thus essentially means that short- and medium-term commercial aims and longer-term society goals are aligned consciously. Therefore, technology adoption can significantly and measurably boost productivity and economic growth, as it aligns business and social interests along the dual axes of innovation focus and active transition management. There is a solid reason companies of all types, sizes, and locations are implementing socially responsible strategies (Levi-Bleich et al., 2018), and consumers of today are socially aware of this, which directly impacts their purchasing decisions.

## **Future Trends**

Future trends that will be common within the next couple of years will be related to green policies and an increase in renewable energy use and production. According to Perera and Nadeau (2022), billions of tons of carbon dioxide and more than 120 million metric tons of methane, the two key greenhouse gases, have been emitted annually into the atmosphere from the production and burning of fossil fuels for energy and transportation (p. 2303), and because of this, the push for carbon neutrality and net-zero carbon emissions is a common goal in many different countries. With the rise of green initiatives, governments will also incentivize the increased production of energy through renewable sources. In the US, “Tax incentives for the purchase and installation of renewable energy equipment are widely used by state governments” (Menz, 2005). Not only will these incentives cause a positive environmental and health-based impact but they will also allow states and independent companies to save money. Clearly, with “the race to eliminate carbon emissions on a net basis by 2050” (Scotto, 2022), the future must have big changes in store. Since energy is a commodity the modern world needs desperately, it impacts the world at a global level.



The main global implications that energy impacts are comfort, climate, and trade, and it is well known that we use energy in every part of our day-to-day lives; therefore, it is reasonable that, globally, energy changes and its production or consumption would impact the comfort of millions of people. If carbon neutrality is not achieved, the negative impacts of climate change and pollution will affect the health and well-being of the world population. According to Perera and Nadeau (2022), children are even more at risk than adults when exposed to polluted air because they “breathe more air relative to their body weight than adults ...(and) are especially impacted by the changing pollutant levels and changes in the environment” (Perera & Nadeau, 2022). These changes to the global climate are not only bad for children but also harmful to the environment. Emissions released during the burning of fossil fuels also generate greenhouse gases that cause climate change.

Owing to its relations with trade, energy also has global implications, and as previously mentioned, energy and the ingredients needed to produce it are traded throughout the world, and any shift in energy production or needs will also impact global trade. Energy relates to global trade in a variety of ways. Not only is energy an important tool in the production and transportation of imports and exports all over the world, but it is also used as an export for many countries. For example, Russia’s top exports are crude petroleum, refined petroleum, and coal, all of which are fossil fuels used to generate energy. With the increase in green energy production and the shift away from fossil fuel use, energy will thus impact global trade on both the side of the consumer and the producer. Energy greatly affects comfort, climate, and trade, and additionally impacts sustainability and entrepreneurship.

Energy relates to sustainability and entrepreneurship in a variety of ways. With the rise of green energy movements and global awareness of renewable energy resources, energy relates to sustainability by means of its impacts on the environment. For companies to be sustainable in the first place, they need to ensure that they employ environment-friendly means of production, and one way of achieving this is by using renewable energy sources. Different companies have also been pushing for carbon neutrality to make this possible. Not only are Amazon’s sustainability goals to reach net-zero carbon emissions by 2040 but they are also “*on a path to powering (their) operations with 100% renewable energy by 2025*” (Pledge, 2020). Many companies are focusing on greener production, shipping that leaves less of a carbon footprint, and renewable energy use. Although the production of sustainable energy needs both training and equipment, businesses using sustainable energy will be rewarded for their efforts in the form of customer loyalty and improved reputation.

## ENTREPRENEURSHIP

Energy relates to entrepreneurship in many ways; one noticeable example is new jobs being created to implement green energy technology such as solar panel installation or wind turbine maintenance. Many different jobs come with the transfer from fossil fuels to more sustainable energy-producing methods, and over time, the use of US public policies to promote green power will generate not only cleaner energy but also jobs and opportunities for many individuals. In the past decade, businesses have aimed to use energy not only in a profitable but also in a socially conscious way.

Given the relation of energy to sustainability and entrepreneurship, there are ways by which businesses can be both profitable with energy and socially conscious. Businesses can be profitable from energy in a variety of ways. Although by creating sustainability goals and initiatives, businesses can have a slight economic disadvantage in the short term, they can benefit from an environmental and reputation-based advantage over the long term.

Heineken is a company that changed its operating procedures to become more organic and sustainable. Their initial investment was quite considerable; however, that outlay is now very favorably considered, as their initial costs have been reduced and their commitment to sustainability is very evident. They had six areas of sustainability that made them more efficient and environmentally conscious, while still providing strong returns for their shareholders. They concentrated on energy/CO<sub>2</sub>, water, sustainable sourcing, responsible consumption, community/inclusive growth, and health & safety. Heineken is an example of a company that can gain an economically minded consumer base that will buy from them for their whole life by taking a short-term economic loss. Businesses can be socially conscious when dealing with energy by using renewable energy sources and can even market themselves as acting against the environmental impacts of fossil fuel use and climate change. The implementation of these more sustainable methods of energy production is important not only for the environment but also for the consumer. In the past, the idea of a carbon footprint was made known to consumers all around the world, with people doing their best to reduce

their impact in whatever small way they could. Using sustainable energy that employs renewable methods will guide that group of environmentally conscious consumers to other companies playing their part to minimize any negative impacts and start building a loyal and sustainable audience and consumer base. In this way, businesses can both profit from energy and be socially conscious.

## CONCLUSION

Energy, like many things, can be impacted by political and economic events. For instance, because the United States relies on global trade to receive much of its oil, changing political pressures and events would affect the morality behind the trade. As the shift to renewable energy sources begins, it is believed that “the United States will depend on imported oil ... for at least several decades” (Braml, 2007), and because of this and the unstable nature of the regions the US commonly trades with, “it is no surprise that the United States has been looking for alternative providers of oil” (Braml, 2007). If the US and one of her oil providers are on opposite sides of a political conflict or military decision, trade could be halted or become unethical, and the production of energy in the US would then be impacted because the US would need to find a new producer of petroleum and coal to keep up with their energy needs. The use of renewable energy sources would also be impacted by political trends because if a country puts forward a policy or law incentivizing the use of renewable energy sources, that country would then start using hydro, wind, solar, and natural gas-based power. Thus, from both the internal and external aspects of a political event, energy can be impacted.

Economic events can also affect the energy in a variety of ways. As was previously discussed, Russia’s main trading export is fossil fuels such as petroleum and coal. Therefore, any economic shift would impact both the profit from Russia’s energy exports and energy production in the country that imports from Russia. Because various countries trade oil and other fossil fuels as their main trade export, an economic shift would also shift energy production and implementation. Therefore, both energy production and profit from the exporting of energy-producing materials can be affected by economic and political events in a variety of ways.

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# ADVANCED DATA MINING OF TABLE TENNIS MATCH BASED ON FP-GROWTH DATA ANALYSIS

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## ABSTRACT

*In the training process for table tennis players, providing strategic information analysis of their opponents is crucial. The application of big data analysis and data mining techniques becomes increasingly important in sports technology. In this study, the table tennis professionals collect information from past match videos. The types of serving and receiving action, the ball landing placement, the number of strokes, and the points gained or lost are recorded. Using statistical analysis and professional examination and description, the relationships between the players and their match strategies are analyzed. In addition, the collected match information is analyzed using advanced algorithm, FP-Growth in the data mining process. The experimental results are based on the analysis of match video of Taiwan's top table tennis player, Lin Yun-Ju. Both the manual and computer analyses show that Lin Yun-Ju has better performance in the "attack-after-serve phase". Furthermore, the computer analysis reveals that most of the lost points are from the "rally phase", the rule confidence level is 64.8%. Also, if the serving action is "side under spin" and the lost points are from the "rally phase", the confidence level is 64.3%. If the points are gained then serving type is "side under spin", the confidence level is 61.4%. Compared with the professional analysis, data mining provides more important information which has a higher confidence level than 50% in the highly competitive game. The results offer table tennis players clearer training improvement suggestions based on the association rules.*

**Keywords:** data mining, association rule, FP-Growth, table tennis.

## INTRODUCTION

In recent years, the rise of artificial intelligence has led many industries to adopt big data analysis and data mining for data analysis (Wang et al, 2020) (Sheikh et al, 2020). Through in-depth research on data which was collected from various application fields, correlations between products and customers, production line yield, and player strategies can be identified. Then, it can enhance the competitiveness of the industry. Table tennis is the top 10 popular sports in the world (Sportytell editors, 2023). However, there is still a lack of a data integration method for table tennis players' strategy analysis. With the advanced technology, it can discover the playing preferences and habits of players through their past match data or understanding their opponents' strategies. Then, the training approach of table tennis players can be improved and greatly enhance their competitiveness in international competitions.

These years, many sports have begun to incorporate data analysis into their competitions and training (Sarlis & Tjortjis, 2020). However, the analysis of table tennis players is still largely done manually. Traditional methods have several issues, such as slow analysis speed and table tennis professionals' requirements. Additionally, traditional analysis methods often only provide statistical data and general training recommendations, without providing detailed player strategy and habit analysis. Moreover, due to the large amount of data, traditional analysis methods are not easy to reveal the potential correlations. This makes it necessary to find more effective ways to perform table tennis data analysis. Information technology has become an important research direction for developing faster and more accurate table tennis data analysis tools. Computer analysis can help coaches and players better understand their opponents' strategies and weaknesses during competitions. In addition, allowing them to create more effective training plans and strengthen the performance.

In previous research on the world, IoT device systems were used to automatically collect the data in table tennis matches (Ma, 2020) (Karakaya, et al, 2022). This method can achieve real-time updates and data gathering.

However, these studies did not include the strategic analysis of players. Additionally, another research used manual way to collect table tennis-related articles from sports journals (Zhang et al, 2018) (Fuchs et al, 2018). With the evaluation methods and research on different topics, the research can assist coaches and players to organize the content of table tennis matches. Therefore, this study aims to extend previous research by applying data mining techniques to analyze the collected data and provide strategic analysis for players. Then, utilizing computers to enhance data processing speed and accuracy.

One of the information technologies, the frequent pattern growth (FP-Growth) is an efficient, scalable, convenient, and improved skill of the Apriori algorithms. The FP-Growth algorithm presents a unique way to identify frequent itemsets (Chang et al, 2020) (Han et al, 2004). Some current data mining applications, such as customer patterns research and soccer actions analysis, are implemented by the FP-Growth algorithm to improve performance (Korczak & Skrzypczak, 2011) (Barbon et al, 2020).

In order to understand if data mining can take over the traditional analysis, this study implements FP-Growth to analyze table tennis match data. To ensure that data mining results are accurate enough and can provide more in-depth information, the research compares the analysis results of professionals with the computer. The purpose of this study is to gain deeper insights into the underlying relationships from table tennis match data by FP-Growth algorithm. Through the computer method, the time spent on table tennis data analysis can be significantly reduced, while eliminating the requirements for the table tennis professionals. Therefore, this technology can increase analysis efficiency and accuracy. More importantly, more specific recommendations can be provided, showing the habitual and strategic aspects of a player's match. Also, allowing coaches and players to develop more accurate and effective training plans, and providing support for the development of table tennis.

The first step in the research is to have table tennis professionals label the match data of players, such as the types of servings, the ball landing placement, and won or lost. Based on the statistical data, professionals make a summary of the player's performance in the match. For computer analysis of the match information, this study employs the advanced FP-Growth algorithm in data mining (Agrawal et al, 1993) (Agrawal et al, 1994). This can filter out the most probable strategic rules based on the statistical data. The results from computer analysis are compared with those obtained through manual analysis to identify any differences in the analysis.

The second section will provide a literature review on the use of data mining in industries. In the third section, it will describe how table tennis professionals record match information and evaluate performance. The fourth section will detail the manual and computer-based data analysis methods and techniques. The fifth section will present the results of the two analytical approaches, followed by a discussion of the study's conclusions and future works.

## **LITERATURE REVIEW**

The association rules in data mining are analyzed using statistical data analysis algorithms, with the advanced FP-Growth algorithm being commonly used. In the literature (Chang et al, 2016) (Zeng et al, 2015), it has been mentioned that the increasing amount of data requires the updating of the method for mining association rules of frequent itemsets. To address the issue, data mining requires updated algorithms. A new data mining algorithm based on FP-Growth has been proposed by the authors, which utilizes the concept of trees to solve the problem of increased data for frequent itemsets. The proposed method retains the advantages of FP-Growth and significantly reduces the complexity of the computation process and mining frequent itemsets.

In the research, data mining is commonly used in various fields such as marketing, education systems, and customer behavior analysis (Dharmaraajan & Dorairangaswamy, 2017) (Ikhwan et al, 2018). It can help businesses and organizations better understand consumer behavior and preferences, thereby strengthening product design and marketing strategies. In literature (Kaur & Singh, 2013), the FP-Growth algorithm in data mining has been used by businesses to explore associations among items in customer purchase lists in sporting stores. This helps to adjust product placement and ultimately increase sales. Additionally, association rule analysis has been applied to sports events. In this article (Barbon et al, 2021), the author analyzes the rules and strategies of player movements in football matches. It's a successful example of applying association rules in sports using data mining techniques.

## RELATED WORK

### Serving and Receiving Case

Each table tennis match process is composed of many serving and receiving cases. The serving case means the serving action is started by the interested player, which is divided into two stages: “attack-after-service phase” and “rally phase I”. On the other hand, receiving case means the receiving action is started from the interested player, which is also divided into “attack-after-serve phase” and “rally phase II” (Aktas et al, 2021) (Yi, 2019). Through the collected data, the usage and scoring rates of each case are used as indicators to evaluate the effectiveness of a player's serving and receiving tactics in the match.

In this study, serving and receiving action categories are defined based on the player's commonly used techniques. The serving techniques are defined as “top spin”, “under spin”, “no spin”, “side top spin”, “side under spin”, “reverse side top spin”, “reverse side under spin”, “backhand side top spin”, “backhand side under spin” and others. The receiving categories are defined as forehand “long cut”, “forehand drop shot”, “forehand spin”, “forehand spin”, “flip”, “backhand long cut”, “backhand drop shot”, “off-the-bounce loop”, “chiquita”, and others.

### The Divisions of Ball Landing Placement

To accurately analyze the landing placement of the ball during the statistical process, the table tennis table needs to be divided into regions. To record the landing placement of the ball, the table is divided into nine grids, resulting in nine regions to mark the ball landing placement. The division is shown in table 1. Based on the opponent's racket holding position: forehand, middle, and backhand positions, there are three tracking lines for the ball path. The table tennis player takes the action response by the ball path and ball landing placement. So, the coach collects the player serving and receiving actions, ball tracking path and ball landing placement to guide player for better performance.

Table 1: Ball placement

Target Player			Opponent		
			c1	b1	a1
		球落位	c2	b2	a2
			c3	b3	a3

## RESEARCH METHOD

### Tactics Analysis Method by Table Tennis Professionals

This study observes the commonly used types of table tennis players serving and receiving actions as a basis for player information. In addition, the manual analysis of this information can also provide players with an understanding of their own playing habit patterns, which can be used as reference data for tactical training.

The professional observes the ball landing placement in the “attack-after-service phase” and “attack-after-serve phase”. The landing placement of the ball in each hit is very important for table tennis matches. If the statistics and analysis of the landing placement can be provided as training information, the players can increase the threat of the serving and attack. It also strengthens the change of the location of the return ball after receiving action according

to the benefit of location from the analysis results. This will be able to seize the opportunity to take advantage of the match.

The serving ball placement is defined as the player serves the ball to the opponent's table landing position. The receiving landing placement refers to the ball on the opponent's table landing position after player receiving. This study observes the scoring benefits of the “attack-after-service phase”, “rally phase I”, “attack-after-serve phase” and “rally phase II” by the ball landing placement.

## Tactics Analysis Method by Data Mining

Data mining refers to the process of discovering hidden rules, patterns, trends, or knowledge in a large amount of data through techniques such as statistics and machine learning. This information is usually presented in the form of data. It can be used to improve the operational efficiency of organizations, increase product sales, reduce risks (Dharmaraajan & Dorairangaswamy, 2017) (Ikhwan et al, 2018). Data mining usually includes the following steps:

1. **Data collection.** To collect data to be analyzed, including structured data (form) and unstructured data (picture).
2. **Data cleaning.** To clean and preprocess the collected data, including removing missing values, duplicate values, outliers, etc.
3. **Data transformation.** To transform data into a form suitable for analysis, such as converting data formats, selecting variables, etc.
4. **Model selection.** To choose an appropriate statistical model or machine learning model, such as classification, clustering, regression, etc.
5. **Model training.** To train the selected model to learn the relationship and rules between the data.
6. **Model validation.** To use unknown data sets to verify the effect and ability of the model to ensure the accuracy and reliability of the model.
7. **Result analysis.** To analyze and interpret the results of the model, and discover the knowledge and rules hidden in the data.
8. **Application deployment.** To apply the models to actual scenarios for decision support, predictive analysis, etc.

Association rule is a common technique in data mining. It is used to discover associations or dependencies in data. Based on a collection of items in a data, find the relationships between the items and express them in an “if...then...” form.

A typical association rule consists of two parts: The former item is the condition in the association rule, and the latter item is the result in the association rule. In data mining, indicators such as support and confidence are usually used to evaluate the importance and reliability of association rules.

The support indicates the frequency that the item set including the former item and the latter item appears in the whole data set. The confidence indicates the probability of the latter item appearing when the former item appears. These indicators can help us select itemsets with high reliability, and further discover the rules and patterns in the data.

## RESULTS AND DISCUSSIONS

### Table Tennis Match Video Information Record

This study focuses on the analysis of the hitting habit and effectiveness of top male table tennis players in Taiwan. With online resources, the researcher collected and organized match records of Lin Yun-Ju, the top table tennis player in Taiwan. The data were analyzed and summarized based on the player's performance in three matches he participated in during 2021-2022. The researcher analyzed the player's habits and effectiveness in responding to specific opponents. Table 2 shows the details of the match information in this study.

**Table 2: Matches of the research object**

NO.	Year	Match Code	Opponent	Score
1	2021	ITTSIN	Lin Yun-Ju V.S Wang Chu-qin	0:3
2	2022	ITTMFM	Lin Yun-Ju V.S Timo BOLL	3:2



3	2022	ETCMUC	Lin Yun-Ju V.S Timo BOLL	2:3
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*Note: The match code is marked according to the match's name and city abbreviation*

## Analyzing the Habit Patterns of Taiwan's Top Players in Serving and Receiving

### Analyzing the preferred serving patterns of top Taiwanese player

This study analyzed the habit patterns of the top Taiwanese player Lin Yun-Ju in serving and receiving. The player's hitting habit is concentrated on “side under spin” and “side top spin”. In the match between Lin Yun-Ju and Wang Chuqin, the player mainly used “side under spin” in serving, with a usage rate as high as 74% throughout the match. In the matches against Timo BOLL, Lin Yun-Ju utilized mostly “side under spin” and “side top spin” serving ways, while other serving techniques had lower usage rates.

### Analyzing the preferred receiving patterns of top Taiwanese player

Lin Yun-Ju's focus in “attack-after-receive phase” was on the “chiquita”. The rates reach up to 75% and 71% of the entire receiving technique usage in the matches against Timo BOLL. However, in the match against left-handed player Wang Chuqin, Lin Yun-Ju's receiving techniques were more varied. “Chiquita” and “forehand drop shot” being used at 31% and 27% respectively. When facing the medium-long ball, “off-the-bounce loop” accounted for 19%, “backhand drop shot” accounted for 15%, while “forehand long cut” was used less frequently, at only 4%.

### Manually analyzing the habit of serving and receiving categories

According to the analysis of match videos, Lin Yun-Ju had a high variability in “attack-after-service phase”. Also, he was found to use the “chiquita” technique in his receiving match. “Chiquita” is a controlled technique that can suppress the opponent's serving and create opportunities for counter-attacks. Statistics can be used to understand the player's habit of receiving the ball. It can also be found in the match videos that the opponent's serving route is still one of the factors that affect the player's receiving skills.

Therefore, combining both forms of analysis can provide more accurate judgments for coaches and players. It is recommended to accumulate more data using this model for database integration to provide more comprehensive technical analysis for players' training process.

## Analyzing the Benefits of Top Player Serving and Receiving Ball Landing Placement

### The benefits of serving ball landing placement of Taiwanese player Lin Yun-Ju

Against left-handed players, Lin Yun-Ju's serving placements are concentrated in the b2 area. With the middle medium-long ball being the most frequently used location, it accounts for 26%, 30%, and 29% of his total servings in three matches. When facing Wang Chuqin, Lin Yun-Ju scored 1 point with his first serving, got 1 point and lost 2 points with his third ball, and scored 2 points and lost 1 point in the “rally phase I”. Similarly, against left-handed Timo BOLL, Lin Yun-Ju served to the b2 location 9 times. He scored 2 points with his third ball, got 3 points and lost 4 points in the “rally phase I”. In his third match against Timo BOLL, Lin Yun-Ju served to the b2 location 12 times. He scored 1 point with his first serving, got 5 points and lost 3 points with his third ball, and scored 1 point and lost 2 points in the “rally phase I”.

Overall, Lin Yun-Ju scored more effectively in the “attack-after-service phase”, while there was no significant difference in the “rally phase I”. In terms of serving, the serving of medium-long ball was more effective in all three matches. The other serving locations were not showing a significant benefit in increasing attacking variations.

### The benefits of receiving ball landing placement of Taiwanese player Lin Yun-Ju

Lin Yun-Ju had the highest usage rate of receiving the medium-long ball on the b2 location when facing the left-handed player Wang Chuqin. It accounted for 27% of the total usage, with a total of 7 balls. The receiving locations on a2 and b3 accounted for 15% each, with 4 balls in each location. In terms of receiving the long ball on the a2, he gained 1 point on the fourth ball but lost 3 points. In terms of receiving the medium-long ball on the b3, he gained 1 point on the second ball, lost 1 point on the fourth ball, and gained 1 and lost 1 point in the “rally phase II”.

Against Timo BOLL, Lin Yun-Ju utilized the long ball route more frequently in both matches. With the most common receiving point was at the a1 location, which accounted for 67% and 26% of the total usage in the respective matches. In the two matches against Timo BOLL, Lin's results for the a1 location were as follows: 67% usage rate, a total of 16 balls. 2 points gained in the second ball, 2 points gained but 4 points lost in the fourth ball. 2 points gained but 6 points lost in the “rally phase II”. In the second match against Timo BOLL, the usage rate for the a1 location was 26%, with a total of 11 balls used. The results were 6 points gained in the second ball, 1 point lost in the fourth ball, and 4 points lost in the “rally phase II”.

Based on the analysis above, Lin Yun-Ju focuses on handling received balls in the medium-long table area and the long-ball areas of a1 and a2. There is no significant difference in the effectiveness of scoring and losing points.

## **Analyzing the Benefits of Serving and Receiving Ball Placement Through Manual Examination**

The manual analysis based on the effectiveness of “attack-after-service phase” and “attack-after-serve phase” landing placement provides guidance for player training. In the “attack-after-service phase”, players mainly use short and medium-long placement, which lack diversity. Coaches can utilize the data analysis to focus on the player's serving efficiency and usage rate, further enhancing the player's technique and advantages. In training, it is important to diversify the serving ball landing placement and pay attention to variations in the path to improve the stability of serving.

In the “attack-after-serve phase”, the effectiveness of the receiving ball landing placement can help players break out of a passive situation and adopt an offensive strategy. Coaches can use statistical data to help players improve their control in the fourth ball during training. This is especially important in adjusting the receiving ball landing placement during critical points. Then, create attacking opportunities on the fourth ball and gaining a scoring advantage in the match.

## **Analyzing Player Match Information Using Data Mining**

This study uses data mining techniques to analyze the association rules of Lin Yun-Ju's performance in three matches. As shown in Table 3, when Lin Yun-Ju loses a point, the support (overall occurrence rate) for a rally lost point is higher at 35.70% and confidence level of 64.8%. This indicates that he is more likely to get in a rally when he loses a point. The support for a “side under spin serving” when Lin Yun-Ju loses a point is 28.60%, indicating that he is more likely to lose a point when he uses a “side under spin serving”. When using a “side under serving” and losing a point, the support for a rally lost point is as high as 18.40%. This indicates that he is more likely to encounter rally when using this serving strategy. When it is losing and using “side under serving”, the support for rally lost point is also as high as 18.40%. It indicates that Lin Yun-Ju tends to use a “side under serving” in rally. When Lin Yun-Ju scores a point, the support for a “side under serving” is 27.60%. This indicates that he tends to use this serving strategy when scoring. The support for losing a point when using a “side top spin” serving is 16.30%. This indicates that Lin Yun-Ju is more likely to lose a point when using this serving strategy. In summary, this study reveals several associations rules between Lin Yun-Ju's performance and specific serving strategies.

In summary:

Rule 1: If Lin Yun-Ju loses a point, it is mostly due to rally lost point. The confidence level is already at 64.8%, which is a significant indicator.

Rule 3: If the serving way is a “side under spin” and a point is lost, it is rally lost point. The confidence level is 64.3%.

Rule 5: If Lin Yun-Ju scores a point, the serving way is a “side under spin”. The confidence level is 61.4%.

Rule 7: If in a “rally phase”, Lin Yun-Ju loses a point. The confidence level is 70%.

Rule 8: If in “attack-after-service phase”, Lin Yun-Ju scores a point. The confidence level is 60.4%.

“Side under spin” serving is Lin Yun-Ju's weapon to score, but he should avoid getting into “rally phase” as much as possible. To improve the winning rate, it is necessary to strengthen training in scoring during “rally phase”.

Based on the recent WTT international table tennis competition, it can be seen that Lin Yun-Ju has made progress in scoring during the “rally phase” compared to the past, especially in his victory against Ma Long. However, he still needs to overcome the disadvantages of the “rally phase”.

**Table 3: The association rules of serving action by Lin Yun-Ju**

Player	NO.	Rule	Support	Confidence	Lift
Lin Yun-Ju	1	If losing point, then rally lost point	35.70%	0.648	1.815
	2	If losing point, then serving way is side under spin	28.60%	0.519	0.924
	3	If side under spin and losing point, then rally lost point	18.40%	0.643	1.8
	4	If rally lost point, then serving way is side under spin	18.40%	0.514	0.916
	5	If getting point, then serving way is side under spin	27.60%	0.614	1.093
	6	If serving way is side top spin, then losing point	16.30%	0.533	0.968
	7	If rally phase, then losing point	35.70%	0.7	1.27
	8	If attack-after-service phase, then getting point	29.60%	0.604	1.346

Table 4 presents the association rule table for Lin Yun-Ju's receiving. His backhand technique is quite stable, with a high probability of using a “chiquita” when receiving, reaching 61.50%, but the probability of losing points is also high, reaching 48.40%. Furthermore, the probability of using a backhand when scoring is only 36.30%. In specific situations, such as receiving the ball at position a1 or in “rally phase”, his backhand performance will slightly improve. Overall, Lin's backhand technique has advantages but also has room for improvement.

In summary:

Rule 2: If losing points, then using backhand. Confidence level is 83%.

Rule 3: If scoring, then using backhand. Confidence level is 86.8%.

Rule 6: If receiving the ball at position a1, then using backhand. Confidence level is 96.2%. This indicates that Lin's straight forehand attack is less successful or has a lower success rate, making it easier for opponents to target.

Rule 7: If in “rally phase”, then losing points. Confidence level is 68.6%.

According to rules 2 and 3, both scoring and losing points are associated with the backhand technique. When the probability of rule 2 is greater than that of rule 3, it indicates that using the backhand when receiving is no longer beneficial, resulting in more losses than wins. Therefore, it is recommended that Lin strengthen his forehand attacking power to become a new weapon. As for rule 7, to increase his winning rate in rally phase, Lin should focus on training his ability to score in these situations.

**Table 4: The association rules of receiving by Lin Yun-Ju**

Player	NO.	Rule	Support	Confidence	Lift
Lin Yun-Ju	1	If backhand, then receiving is chiquita	61.50%	0.727	1.182
	2	If losing point, then receiving is backhand	48.40%	0.83	0.981
	3	If getting point, then receiving is backhand	36.30%	0.868	1.026
	4	If backhand and receiving is chiquita, then losing points	35.20%	0.571	0.981
	5	If losing points and backhand, then receiving is chiquita	35.20%	0.727	1.182
	6	If receiving location is a1, then receiving is backhand	27.50%	0.962	1.136
	7	If rally phase, then losing points	26.40%	0.686	1.717
	8	If getting points, then receiving is chiquita	26.40%	0.632	1.026
	9	If rally phase, then receiving is backhand	31.90%	0.829	0.979

## CONCLUSION

This study analyzes three table tennis matches of Taiwan's top player, Yun-Ju Lin, using two methods: the professional analysis and data mining approach. The professional focus on statistical analysis of Lin's serving and receiving actions' categories and ball landing placements in terms of gains and losses. Data mining approach use the FP-Growth algorithm to establish association rules for Lin's hitting habits and potential correlations in his strategies at different gain-loss points.

Based on the analysis results, computer data mining provides more detailed strategic analysis than manual one. In these three matches, Lin won one and lost two. Both manual and computer analysis reveals that he had higher

scoring efficiency in the “attack-after-service phase”, and his servings were more effective when the landing placement in the medium-long area. These conclusions provide preliminary understanding of Lin's hitting habits and strengths.

However, manual analysis loses some potential correlations among various data, thus requiring data mining. Based on the association rules, this study finds that Lin has high confidence in gaining and losing points when performing “side under spin” serving. Therefore, it can be concluded that “side under spin” serving is Lin's scoring weapon, but they should be avoided in the “rally phase”. To maintain the attacking of the “side under spin” serving, Lin should strengthen his training for gaining points in the “rally phase”.

This study significantly contributes to table tennis analysis and sports technology by adopting data mining techniques. It addresses the need for integrating player strategy analysis through big data analysis. The application of the FP-Growth algorithm enables efficient and accurate analysis, surpassing traditional methods. It extracts meaningful association rules, providing specific insights into player strategies and improving training approaches. The study highlights the advantages of data mining by comparing manual analysis with computer-based analysis using the FP-Growth algorithm. The results demonstrate the ability of data mining to uncover hidden patterns, offering clearer training suggestions based on association rules. Overall, this research enhances table tennis competitiveness and advances sports technology through data-driven analysis.

## **FUTURE WORK**

The comprehensive analysis of data presented above provides information that was not previously available through manual data processing. The use of computerized analysis has significantly improved the previous time-consuming and resource-intensive problem. As a result, existing issues have been resolved. Then the correct direction and recommendations can be provided regarding the strategies and habits of players. Through the information provided above, it is possible to more accurately understand the direction in which players need to improve their training. The current study did not record every ball of the players manually, so some hidden rules have not been identified due to insufficient information. Therefore, future research will continue to increase the number of match analysis sessions and improve the quantity and details of recorded data, providing more accurate and detailed strategic analysis information for each player.

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# THE INFLUENCE OF PERSONALITY AND MOTIVATIONS ON THE INTENTS TO INVEST IN CRYPTOCURRENCIES

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## ABSTRACT

*Since the creation of Bitcoin in 2009, the cryptocurrency market has grown considerably. Recently, triggered by the development of Metaverse and NFT, the topic of cryptocurrencies was increasingly covered by the mainstream media, which has raised public attention and awareness again. Despite various literature surveys highlighting the concept of cryptocurrencies from different contexts, comprehensively and systematically studies on how personality and motivation contribute to the intention of investing cryptocurrencies has received little research attention. This thesis aims to fill this gap in the literature by exploring the relationship between personality and the intention to invest in cryptocurrencies. The study draws on two well-established theoretical frameworks: Deci & Ryan's self-determination theory and the Big-Five model. In addition, the study also examines locus of control, risk-taking propensity, and intrinsic/extrinsic motivation. Data collected from a sample of 438 participants are used to examine the research model and test the hypotheses with the employment of partial least squares structural equation modeling. The results suggest that conscientiousness negatively affects intrinsic and extrinsic motivation, leading to lower investment in cryptocurrencies. On the other hand, risk tolerance has a significant impact on motivation and investment behavior. The study contributes to the literature on cryptocurrency investment behavior and provides practical implications for investment advice and risk management. The results also confirm the theory that psychological factors and external information can disrupt rational decision-making, leading to overreaction and impulsive behavior. The study has important implications for both academics and policymakers. It provides a deeper understanding of the psychological factors that influence investment behavior in the cryptocurrency market and offers practical implications for investment advice and risk management.*

**Keywords:** Big-Five personality model, locus of control, intrinsic/extrinsic motivation, risk-taking propensity, cryptocurrency.

## INTRODUCTION

As of December 2021, more than 13,000 cryptocurrencies exist with a combined market capitalization of over \$2.3 trillion. Currently, cryptocurrencies are one of the most traded financial instruments in the world, so cryptocurrencies have become a global phenomenon in the financial field. The World Economic Forum predicts that by 2027, 10% of GDP will be stored in the blockchain (World Economic Forum, 2015), with an average annual growth rate of 62.1% through 2025 (BusinessWire, 2017).

Even though cryptocurrencies have disadvantages in some aspects (e.g., money laundering, terrorist financing), the above research reports have repeatedly shown that the development of cryptocurrencies is an important trend. Past literature has done some research on Bitcoin, the most widely used and important cryptocurrency today. However, despite the popularity of cryptocurrencies, academic literature on the topic is scarce. This is largely due to the fact that the cryptocurrency market is relatively new, and most academic literature on cryptocurrencies has focused on technical aspects. (Fred Steinmetz et al., 2021), investment intentions have not been widely studied, so we would like to use the perspective of motivation theory and refer to existing questionnaires. To understand the influence of personal characteristics and risk tolerance on the intention of investing in cryptocurrencies. It is hoped that through this research, we can have a deeper understanding of cryptocurrencies.

Past literature has done some research on Bitcoin, the most widely used and important cryptocurrency today, but the literature on cryptocurrencies as a whole is scarce, mainly due to the fact that the cryptocurrency market is an emerging one with a relatively short history, and most of the academic literature on cryptocurrencies is focused on technical aspects (Fred Steinmetz et al., 2021), investment intentions have not been widely studied, so we would like to take the perspective of motivation theory and refer to existing questionnaires, To understand the influence of personal characteristics and risk tolerance on the intention of investing in cryptocurrencies. It is hoped that through this research, we can have a deeper understanding of cryptocurrencies.

The purpose of this study is twofold. Firstly, to gain an in-depth understanding of the intention to invest in cryptocurrencies based on previous literature. With the emergence of new technologies, cryptocurrencies have become a highly discussed topic and an important development trend. Therefore, this study aims to provide a clear analysis and understanding of the relevant content. Secondly, the study seeks to investigate the relationship between differences in personality traits, internal and external motivations, and behavioral intentions. The study aims to examine the fundamental characteristics of human nature that affect the intention and motivation of investing in cryptocurrencies, and to use professional research steps to calculate whether each aspect is relevant and explain it. Given the current lack of comprehensive literature on personality traits and the intention to invest in cryptocurrencies, this study is expected to contribute to the collection and analysis of such literature.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The concept of behavioral intention refers to the individual's willingness to engage in a specific behavior (Fishbein & Ajzen, 1975). This process is crucial for any behavior, as it represents the final decision before the behavior occurs. In light of this, this research aims to propose a hypothesis that predicts the influence of personality traits and internal and external controls on cryptocurrency investment intentions, and to test it through empirical research. By investigating the factors that contribute to individuals' intentions to invest in cryptocurrency, this research seeks to contribute to the existing literature on the psychology of investment decision-making and to inform practical applications in the field of financial advising.

Motivation contributes to an individual's intentions and behaviors, as discussed in previous literature reviews. Although intrinsic motivation is distinct from extrinsic motivation, due to the complexity of human behavior, it is rare that actions are driven by only one of the two (Deci & Ryan, 1985). This study will verify and discuss the extent to which intrinsic and extrinsic motivations affect cryptocurrency investment behavior intentions. Therefore, we hypothesize the following:

H1a: Intrinsic motivation has a positive impact on intention to invest in cryptocurrencies.

H1b: Extrinsic motivation has a positive impact on intention to invest in cryptocurrencies.

Individuals with high levels of neuroticism are more prone to experiencing negative emotions such as distress, depression, and shame (Costa et al., 2001). The heightened levels of neuroticism can lead to a fear of failure and a reduced ability to tolerate the volatile changes in asset values that are inherent to venture capital investment. Furthermore, individuals with high neuroticism may display greater pessimism towards future market conditions and may exhibit less trust in financial information (Young et al., 2012; Jiang et al., 2020). Additionally, prior research has found that individuals with high neuroticism are more likely to invest in less risky assets (Oehler et al., 2018). Based on these findings, this study proposes the following hypotheses:

H2a: Neuroticism has a negative impact on intrinsic motivation to invest in cryptocurrencies.

H2b: Neuroticism has a negative impact on extrinsic motivation to invest in cryptocurrencies.

The trait of openness is closely related to creativity, intellectual curiosity, and challenge (Costa & McCrae, 1992). They tend to be creative and imaginative, and are generally more willing to experiment with new financial products and experiments (Mayfield, 2008); they may also be more receptive to new financial environments resulting from the normal volatility of the venture capital market. Therefore, this study proposes the following hypotheses:

H3a: Openness to experience has a positive impact on intrinsic motivation to invest in cryptocurrencies.

H3b: Openness to experience has a positive impact on extrinsic motivation to invest in cryptocurrencies.

Individuals with conscientious traits are often characterized as diligent, perseverant, meticulous, and self-controlled, (Costa and McCrae, 1992). Conscientious persons are inclined towards obedience, detail-oriented work,

and cautious saving (Donnelly et al., 2012). Furthermore, conscientious investors tend to have a lower risk tolerance (Wong and Carducci, 2013) and (Pan and Statman, 2012). Thus, this research proposes the following hypotheses:

H4a: Conscientiousness has a negative impact on intrinsic motivation to invest in cryptocurrencies.

H4b: Conscientiousness has a negative impact on extrinsic motivation to invest in cryptocurrencies.

Extraverted people tend to be confident and enjoy being around others (Sadi et al., 2011). Investors with high extroversion can obtain a large amount of market information from rapidly growing social network resources, and have more confidence in the strength of their investment decisions (Pompian & Longo, 2004). Studies have found that people high in extraversion are willing to pay more for risky assets and make more purchases when those assets are overpriced (Oehler et al., 2018). Therefore, this study proposes the following hypotheses:

H5a: Extraversion has a positive impact on intrinsic motivation to invest in cryptocurrencies.

H5b: Extraversion has a positive impact on extrinsic motivation to invest in cryptocurrencies.

Agreeable people tend to be polite, trusting, kind, kind, friendly, cooperative, and tolerant (Costa & McCrae, 1992). Highly agreeable people often believe information without critical evaluation (Heinström, 2010), so they may follow herd behavior (Herd Behavior) in the market (Muhammad Zubair Tauni, 2015). In view of the fact that the topic of cryptocurrency has been highly discussed in the media and investment market in recent years, this study puts forward the following hypotheses:

H6a: Agreeable has a positive impact on intrinsic motivation to invest in cryptocurrencies.

H6b: Agreeable has a positive impact on extrinsic motivation to invest in cryptocurrencies.

Internal and external locus of control refer to beliefs about the extent to which one's desired life event outcomes depend on one's own efforts, abilities, or actions versus one's own expectations. According to the literature, internal control is an important determinant of equity investment, and every standard deviation increase in internal control increases the probability of owning equity by 8%. Therefore, this study proposes the following hypotheses:

H7a: Internal locus of control has a positive impact on intrinsic motivation to invest in virtual currency.

H7b: Internal locus of control has a positive impact on extrinsic motivation to invest in virtual currency.

The propensity for risk-taking refers to an individual's ability to tolerate risk or uncertainty (Blais & Weber, 2006; Chen et al., 2011). Individuals who exhibit high levels of risk-taking propensity tend to embrace risk and often make calculated decisions under conditions of uncertainty (Fogel & Nehmad, 2009). Given the unstable price trends and considerable value fluctuations associated with most cryptocurrencies, investing in them can be considered a high-risk investment. Therefore, those with a high risk-taking propensity are expected to demonstrate a greater willingness to invest in cryptocurrencies, as they are more inclined to adopt a favorable stance towards risk and engage in riskier investment opportunities.

H8a: Risk-taking propensity has a positive impact on intrinsic motivation to invest in cryptocurrencies.

H8b: Risk-taking propensity has a positive impact on extrinsic motivation of investing in cryptocurrencies.

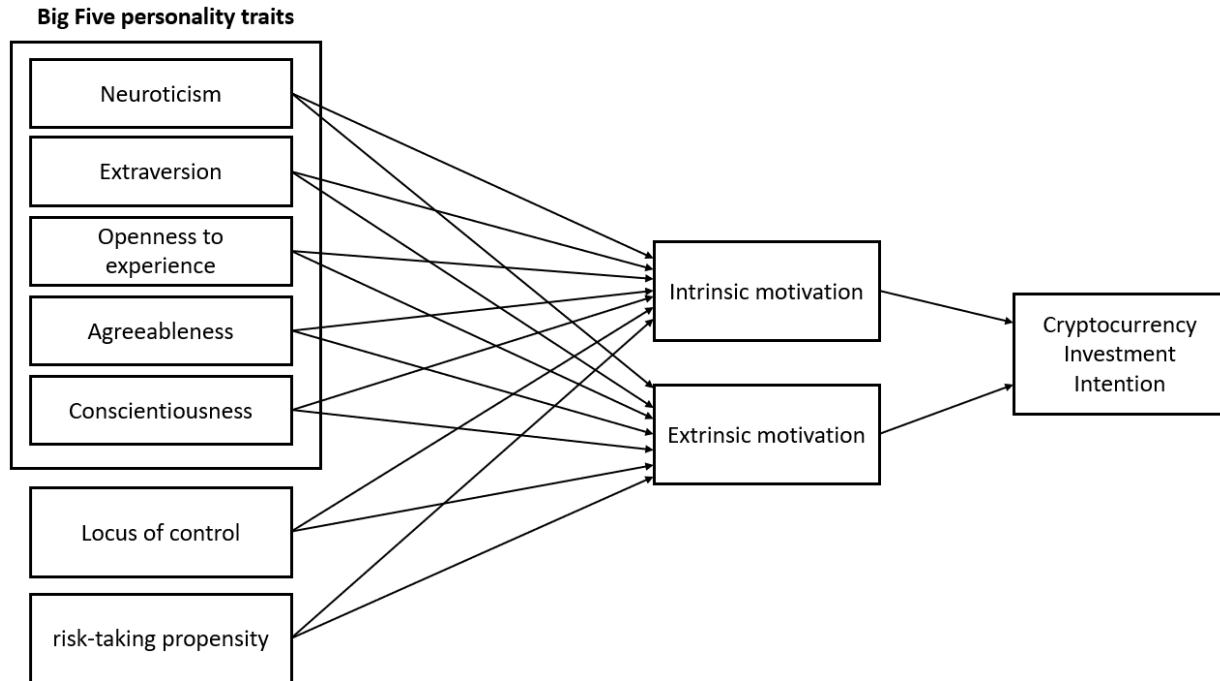
## METHODS

### Research Model

This study aims to investigate the intents to invest in cryptocurrencies based on individual factors. Big-Five model, locus of control, risk-taking propensity, and intrinsic/extrinsic motivation are taken into consideration. The research model is presented in Figure 1.



**Figure 1: Research model**



## Measurement

The questionnaire used in this study was designed to effectively explore the opinions of respondents. All the measures were obtained from previous studies, which have established their reliability and validity. The personality construct was measured using the Big Five Inventory scale, which consists of five sub-personalities with each sub-personality having five items. To minimize response fatigue, some items were worded in the reverse form. The eight-item risk-taking propensity scale used in the study was adapted from Weber et al. (2002) in the social domain. The measurement of information privacy concerns was achieved with four items derived from Smith et al.'s (1996) study on the four possible privacy invasions. Measures of extrinsic rewards were adapted from Bock et al. (2005) and consisted of two items. All the items in the questionnaire were scaled using a seven-point Likert form ranging from 1 (strongly disagree) to 7 (strongly agree), and reflectively modeled.

The present study adopted established scales to measure cryptocurrency investment intention and internal and external control. Specifically, the cryptocurrency investment intention scale was adapted from the scale developed by Brett A.S. Martin et al. (2022), with necessary adjustments for the cost research. The internal and external control questions were based on the I-E scale of Carducci (2009) and consisted of a total of 10 questions. The rating for internal control ranged from 0 (indicating extreme internal control) to 10 (indicating extreme external control).

## Data Analysis

This research employs structural equation modeling (SEM), a statistical technique used to test multiple hypotheses simultaneously. The data analysis in this study utilized a variance-based approach of SEM called partial least squares (PLS). Compared to traditional covariance-based SEM, PLS has lower assumptions on the measurement distributions, residual distributions, and sample size (Urbach & Ahlemann, 2010). The estimation algorithm of PLS aims to minimize the variance of all dependent variables by acquiring the proxy scores of the latent variables from both the measurement model (outside approximation) and the structural model (inside approximation). The iterative estimation procedures are terminated when the proxy scores become stable, indicating no significant changes in both approximations.

## Samples

### Data collection and sample characteristics

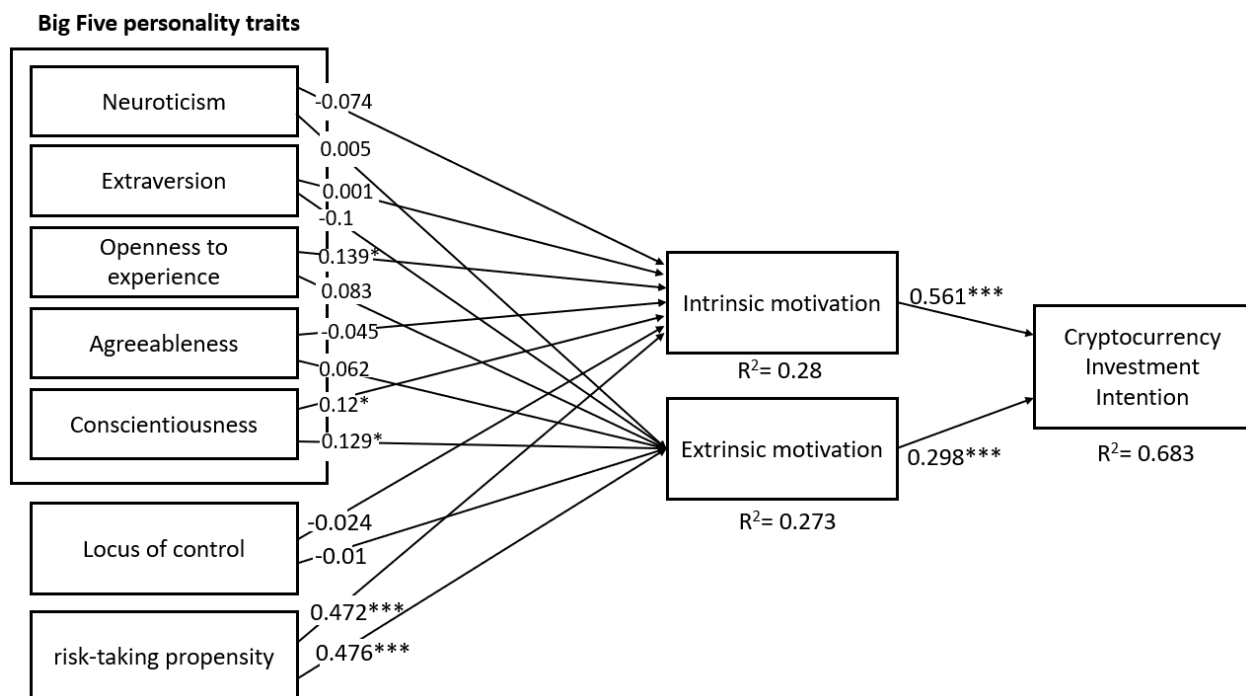
An online survey was conducted over a duration of one month. The adequacy of sample size is a critical aspect in Structural Equation Modeling (SEM). One widely used criterion to determine an appropriate sample size is to have a minimum of ten participants for each structural path pointing to a specific construct in the structural model, as suggested by Hair et al. (2017). The present study recruited 438 participants randomly to take part in the research. Demographic information collected from participants included gender, with 30.1% being male and 69.9% being female. Age was also recorded, with 2.7% being under 20, 68% being 21-30, 16.2% being 31-40, 1.8% being 41-50, and 21.2% being over 50. In addition, the participants' level of education was recorded, with 6.2% having a high school diploma or equivalent, 75.1% holding a bachelor's degree, and 18.7% having a master's degree or higher.

## RESULTS

### Measurement Model

Reliability pertains to the consistency, stability, and accuracy of the results obtained from a questionnaire or test. To ensure reliability, multiple measurements are conducted in the same situation to determine whether the data yields consistent results. Internal consistency is commonly used to evaluate the reliability of a test, with a higher reliability coefficient indicating more dependable research outcomes. This study evaluates the reliability of the questionnaire results using Cronbach's alpha and composite reliability as indicators. Cronbach's alpha coefficient is the standard measure for reliability analysis, with a value of 0.7 or greater indicating acceptable reliability and each construct being reliable. In this study, the reliability ranges from 0.813 to 0.969, indicating high consistency and reliability of the questionnaire items. The alpha coefficient falls within the range of high reliability based on Guilford's classification (1965), demonstrating that the items within this variable are highly consistent and reliable. In addition, the combination reliability (CR) and average variance extracted (AVE) are recommended by Hairs et al. (1998) for examining facet reliability. The CR value must be above 0.70 to ensure internal consistency of the facet index. The combination reliability of this study is greater than 0.875, which exceeds the suggested value of 0.5 and is consistent with the recommended level of scholars (Fornell & Larcker, 1981).

Figure 2: The PLS results of the research model



**Table 1: Results of Cronbach's alpha coefficient, combined reliability, average variation extraction (AVE)**

Cronbach's alpha	Composite reliability (CR)		Average variance extracted (AVE)
AG	0.872	0.901	0.604
CO	0.813	0.875	0.637
EX	0.910	0.927	0.647
NE	0.905	0.922	0.629
OPE	0.868	0.899	0.597
IM	0.969	0.985	0.970
EM	0.900	0.952	0.909
CII	0.940	0.957	0.848

Notes: AG, agreeableness; CO, conscientiousness; EX, extraversion; NE, neuroticism; OPE, openness; LOC, Locus of control; RTP, risk-taking propensity; IM, intrinsic motivation; EM, extrinsic motivation; CII, Cryptocurrency investment intention.

Discriminant validity assesses the degree of association between different constructs, as measured by the correlation between them. When the degree of correlation is low, it suggests that the constructs have good discriminant validity. In this study, the square root of the average variance extracted (AVE) for each variable range from 0.772 to 1.000 (Table 4). The loading of each item is higher in its own construct than in other constructs, and the correlation coefficients between constructs indicate that the items in this study have good discriminant validity. Henseler et al. (2015) proposed the Heterotrait-Monotrait (HTMT) method as a comprehensive and less restrictive way to test discriminant validity. The HTMT standard is that the value should be less than 0.9 to indicate good discriminant validity.

**Table 2: Result of discriminant validity**

	AG	CO	EX	NE	OPE	IM	LC	EM	CII	RTP
AG	0.777									
CO	0.511	0.798								
EX	0.768	0.584	0.804							
NE	-0.117	-0.077	-0.148	0.793						
OPE	0.484	0.434	0.578	0.088	0.772					
IM	0.175	0.230	0.246	0.055	0.246	0.985				
LC	0.243	0.192	0.190	-0.300	0.034	0.021	1.000			
EM	0.178	0.209	0.194	0.128	0.197	0.834	0.018	0.953		
CII	0.197	0.283	0.260	0.096	0.276	0.810	0.057	0.766	0.921	
RTP	0.186	0.151	0.261	0.242	0.178	0.488	0.011	0.498	0.459	0.805

Notes: AG, agreeableness; CO, conscientiousness; EX, extraversion; NE, neuroticism; OPE, openness; LOC, Locus of control; RTP, risk-taking propensity; IM, intrinsic motivation; EM, extrinsic motivation; CII, Cryptocurrency investment intention.

## Discussions

The empirical analysis in this study aimed to explore the relationship between personality traits, risk-taking tendency, and cryptocurrency investment behavior intentions. The study focused on openness, conscientiousness, extroversion, affinity, emotional instability, extrinsic motivation, intrinsic motivation, internal and external control, risk tolerance tendency, and cryptocurrency investment behavior intentions. The findings of the analysis provide practical insights for the securities industry and stock market investors.

Based on the research results, it is suggested that conscientiousness negatively affects intrinsic and extrinsic motivation, indicating that investors with this trait tend to be risk-averse and prefer to save rather than invest in cryptocurrency. Furthermore, the study revealed that risk tolerance has a significant impact on intrinsic and extrinsic motivation. Therefore, it is suggested that conducting an investment capability assessment could be beneficial in

gaining a deeper understanding of clients and their investment capabilities. Such assessments could assist in providing personalized investment advice and prevent impulsive investment decisions.

## **Discussions for Future Research**

To improve the research results, the following suggestions are recommended for future studies: Firstly, in terms of practical application, the study found that conscientiousness negatively affects intrinsic and extrinsic motivation, meaning that investors with this trait tend to avoid risky investments such as cryptocurrency. The study also highlights the significant impact of risk tolerance on motivation, suggesting that investment capability assessments can help provide appropriate advice and avoid impulsive investment. Secondly, in terms of academic implications, the study contributes to filling the gap in the literature on cryptocurrency investment behavior intentions. The study shows that human decision-making can be influenced by psychological factors and external information, leading to overreaction and irrational behavior. However, the study has limitations, including a limited sample group and a focus on only a few variables. To address these limitations, future research could expand the sample area and incorporate both qualitative and quantitative research methods to explore additional variables that affect cryptocurrency investment intentions.

Overall, the study provides practical and academic insights into the factors that influence cryptocurrency investment intentions while also suggesting areas for improvement in future research.

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# MODELLING THE INFLUENCE OF ORGANISATIONAL POLITICS ON EMPLOYEE JOB STRESS ON SMALL AND MEDIUM ENTERPRISES IN GAUTENG PROVINCE: SOUTH AFRICA

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## ABSTRACT

*Organisational politics has gained the attention of management researchers and organisational psychologists in the past two decades. Politics in organisations is an element of existence. Individual experiences, ideas and circumstantial proof have maintained the common belief that behaviour within the work environment is frequently political. Against this background, this paper examines the influence of organisational politics on job stress among small and medium enterprises employees in Gauteng Province of South Africa. A quantitative approach was applied with the use of a cross sectional survey (questionnaire) to gather information on organisational politics and job stress from 230 participants. Data analysis was conducted using the Statistical Package for the Social Sciences, version 28.0 and the Analysis of Moment Structures 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 was used to test the hypothesised relationships between the constructs. The results of the study revealed that there is a positive and significant relationship between organisational politics and job stress. The findings also emphasised that organisational politics is considered a hindrance-related stressor that hampers the proper functioning of individual employees. The management of small enterprises should concede that organisational politics is part of the organisational environment, therefore, policies and procedures must be in place to control such political behaviour.*

**Keywords:** job stress, organisational politics, small and medium enterprises, social exchange theory, Gauteng Province.

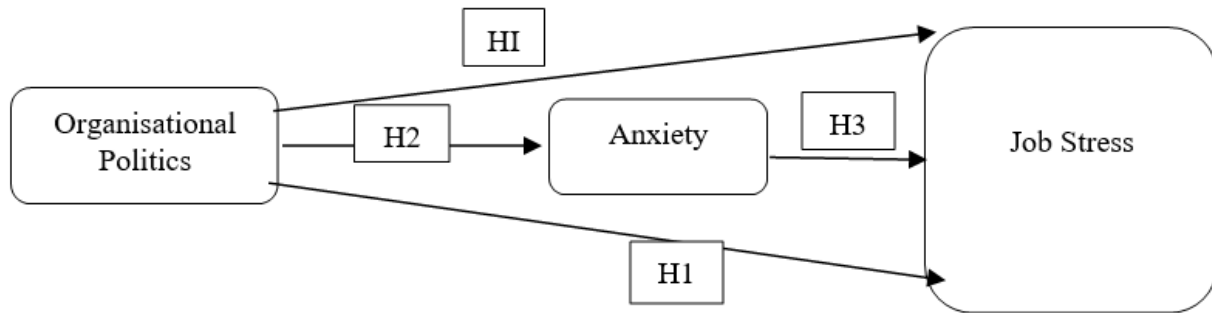
## INTRODUCTION

The detrimental effect of organisational politics on desirable job outcomes has been of interest to organisational behaviour scholars, particularly in North America and Europe. This leaves a gap in developing countries (Jam, Donia, Raja & Ling 2017). Although studies were conducted on organisational politics and job satisfaction, turnover intention, organisational citizenship behaviour and commitment, empirical evidence of organisational politics has not attained due consideration, particularly within the small and medium enterprises (SME) sector in South Africa (Hanif, Waheed, Hamid & Mahmood 2018:552). Organisations, by their nature, are made up of internal alliances of interests (Ofoegbu, Ayobami & Obiomoano 2012). Indartono and Chen (2011) found that employees' perceptions of politics are virtually always negative; hence, organisational politics cause disharmony and conflict in the workplace and, consequently, produce high levels of stress. Stress, in general, is defined as an undesirable physical and psychological reaction that happens when there is inequality concerning the load of work and competencies, resources and employees' necessities (Tipu 2013). Based on the findings by Miller, Rutherford and Kolodinsky (2008), once employees observe high levels of organisational politics, job stress seems to intensify. Job stress is described as an employee's response to pressures that result from features of his or her work consisting of time stress and anxiety (AX) (Wu & Shih 2010; Tsaur & Tang 2012). Katua (2014) supports this view that SMEs face many challenges that hamper their development, progress and role in economic growth. Organisational politics and job stress result in an upsetting phenomenon for managers, particularly in the SME sector of emerging nations, as they hamper the accomplishment of organisational goals (Ullah, Jafri, Gondal & Dost 2011).

## PROBLEM STATEMENT

The literature on organisational politics and job stress highlights that there is a relationship between both variables, and it has been highly researched in developed countries. The nature of this relationship is required to be examined further, particularly in the SME sector in developing countries, which is a gap that is needed to be filled (Rashid, Karim, Rashid & Usman 2013; MacCallaghan & Mans-kemp 2022). Unfortunately, research on organisational politics and job stress has concentrated on big enterprises and with insignificant concern to the SMEs (Chinomona & Chinomona 2013). In the context of the South African SME sector, studies on the influence of organisational politics on job stress are under-explored (Rashid et al. 2013). Given that the SME sector is considered the engine of economic growth and job creation in developing countries, it is surprising that this crucial issue, in such an important sector, has been overlooked (Chinomona & Chinomona 2013). Organisational politics can operate as a possible work stressor for SME employees and may lead to job stress (Rashid et al. 2013; Naude, Omoruyi & Pierre 2022). Chang, Rosen and Levy (2009) described organisational politics as a hindrance stressor that prevents employees from achieving individual and organisational objectives. Organisational politics might be liable for a range of harmful work consequences, consisting of employee low productivity and high levels of stress; hence, organisational production and profitability may decline in SMEs. The present study attempts to address this lacuna in organisational politics literature. Therefore, the purpose of this study is to determine the influence of organisational politics on job stress among SME employees in the Gauteng Province of South Africa. Figure 1 presents the proposed research model.

**Figure 1: Proposed model**



*Source: Developed by the researcher*

Based on the above model, the following hypotheses are stated: H<sub>1</sub>: Organisational politics have a significant influence on job stress, H<sub>2</sub>: Organisational politics has a significant influence on anxiety, and H<sub>3</sub>: Anxiety has a significant influence on job stress.

## LITERATURE REVIEW

### Social Exchange Theory

The Social Exchange Theory (SET) was established for observing human behaviour to understand organisational behaviour (Sun & Xia 2018). The philosophy of social exchange is that there are specific standards that direct behaviour and approaches which make the SET appropriate for this study (Jinyang 2015). Chang et al. (2009) assert that organisational politics is well-known within the workplace situation and proposes that politics is a norm that directs behaviour within most organisations. Since organisational politics frequently impacts harmfully on workers, it is observed as being biased, of which, according to the SET, places the exchange relationship in danger of conflicting with the advantage gained from justice (Saleem 2015). In the context of the SET, it is proposed that the lack of a social exchange relationship among employees could produce negative perceptions of organisational politics and job stress within the work environment (Cropanzano, Rupp & Byrne 2003). In this study, SET is integrated as a basis of the relationship between the employees and the organisation to explore the interaction of the features within the workplace, namely, organisational politics and its influence on job stress. Lai, Singh, Alshwer



and Shaffer (2014:2) posit that from a social exchange viewpoint, people are expected to separate from the connection if they see it as being unbeneficial to themselves. This indicates that when workers are frustrated, job stress increases and, consequently, there is a threat to withdraw the exchange relationship that is present between the workplace and the worker (Chinomona & Mofokeng 2016:858).

## **Organisational Politics**

Ferris, Russ and Fandt (1989:33) characterise organisational politics as “a social influence process in which behaviour is strategically designed to maximise short-term or long-term self-interest, which is either consistent with or at the expense of others’ interest”. Aside from interpretations of organisational politics, Kacmar and Carlson (1997) recognised that organisational politics descriptions share limited qualities in general: (a) political behaviours are proposed to promote or protect a person's selfishness; (b) political activities are an arrangement of practising social impression, and (c) two parties with the likelihood to hold different interests must be involved. Additionally, workers might embrace some political conduct to inspire their supervisors to act in a biased way (Haq 2011). As a dimension, self-serving behaviour is considered significant since it can harm productivity. When employees place their interests over their co-workers and the entire organisation, such behaviour is regarded as self-serving. The following dimensions of organisational politics formed part of this study: general political behaviours. Haq (2011:291) states that this dimension concentrates on how individuals act politically and the means in which they acquire individual gains. Additionally, political behaviours could also exist in environments where there is a lack of valued resources. Go along to get ahead describes the actions displayed by workers in which they remain quiet. Certain workers attempt to protect their interests without attracting attention to themselves. Workers might stay quiet or demonstrate an inactive approach in order to avert personal interests in certain situations (Gull & Zaidi 2012).

## **Job Stress**

Job stress is also referred to as work stress and/or occupational stress. These constructs are frequently utilised interchangeably within the organisation and denote a similar description (Shukla & Srivastava 2016). According to Wu and Shih (2010), job stress is not the same as stress in the sense that it is job-related mental stress. Job stress might arise when an employee is not provided sufficient training or is not given the required resources to execute the work or is challenged with conflicting workloads. Prasad and Vaidya (2018) explain job stress as an employee's responses to features of the job setting that appear mentally and physically upsetting. It highlights a deprived fitting among the employee's abilities and his or her job setting, in which excessive demands are made from the employee or the employee is not completely equipped to manage a specific circumstance. In common terms, the greater the inequality among workloads and the employee's competences, the higher the level of job stresses that will be experienced. Tsaur and Tang (2012) state that job stress means an employee's response to concerns resulting from the elements of his or her work, comprising time stress and anxiety. Nouri and Soltani (2017) denote that job stress generates a range of adverse, costly and irreversible consequences that impact on the employees and the organisation. Job stress is the major source of challenges in the health and performance of employees within the organisational setting, resulting in consequences for the workplace.

## **Anxiety**

Anxiety is inevitable in order to cope with job demands and may be tolerable in the short term to human resources, but in the long-term will cause degeneration of the psychological and physical strength of an organisation and eventually leads to job burnout (Heidari et al. 2016:6). Anxiety has intended and unintended outcomes that interrupt the job performance and customer orientation (Tshabalala 2011:26). Failure of workers to manage psychological and physiological stresses could harmfully distract their work conduct and approaches within the organisation (Shukla & Srivastava 2016:4). Nouri and Soltani (2017:102) denote that anxiety generates a range of adverse, costly and irreversible consequences that impact on the employees and the organisation. Anxiety is the major source of challenges in the health and performance of employees within the organisational setting, resulting in consequences for the workplace. Anxiety consequences could be examined with reference to individual and organisational characteristics (Nouri & Soltani 2017:103).

## Small and Medium Enterprises

According to Turner and Ledwith (2018:276), there is no distinct, universally appropriate meaning of the concept SME. The World Bank defines SMEs as firms that hire 5 to 199 workers, whereas the European Commission (EC) defines SMEs as businesses that hire less than 500 workers. In the United States of America (USA), a business is regarded as an SME once it obligates certain quantitative and qualitative criteria (Hashim & Abdullah 2000:67). Ayyagari, Demircuc-Kunt and Maksimovic (2011:6) claim that the term SME includes a variety of descriptions and measures that differ through countries as reported by sources on SME statistics worldwide. The countries' economies are different, and it is challenging to suggest a generally recognised definition of SMEs. Nevertheless, in the South African context, SMEs are described in a variety of ways, usually with the orientation on the number of workers, turnover bands and variances according to industry sector or sub-sector (Chingwaru 2014:44). According to the National Small Business Amendment Act (29 of 2004), a "small business" means a separate and distinct business entity (including co-operative enterprises and non-government enterprises) managed by one owner or more, which, including its branches or subsidiaries (if any), is predominantly carried on in any sector or sub-sector of the economy and which can be classified as a micro-enterprise, a very small enterprise, a small enterprise or a medium enterprise.

## METHODOLOGY AND DATA ANALYSIS

A non-probability convenience sampling technique was used to select respondents. A confirmatory factor analysis was applied in examining and testing the relationships between observed constructs and their causal latent constructs, while structural equation modelling was used to test the hypothesised relationships between constructs.

**Table 1: Accuracy analysis statistics**

Research constructs		Descriptive statistics		Cronbach's test		C.R. value	AVE value	Factor loading	Highest shared variance
		Mean	SD	Item-total	$\alpha$ Value				
Organisation al Politics (OP)	OP1	2.800	5.443	0.671	0.891	0.890	0.651	0.772	0.250
	OP2			0.745				0.833	
	OP3			0.675				0.726	
	OP4			0.711				0.729	
	OP5			0.666				0.695	
	OP6			0.881				0.931	
	OP7			0.613				0.698	
Job Stress (JS)	JS1	2.852	5.244	0.799	0.930	0.955	0.718	0.858	0.255
	JS2			0.835				0.898	
	JS3			0.813				0.865	
	JS4			0.769				0.815	
	JS5			0.752				0.769	
	JS6			0.612				0.599	
	JS7			0.754				0.766	
	JS8			0.718				0.711	
Anxiety (AX)	AX1	2.801	5.550	0.689	0.850	0.864	0.566	0.781	0.131
	AX2			0.736				0.829	
	AX3			0.797				0.870	
	AX4			0.766				0.765	
	AX5			0.500				0.515	
Note: OP= Organisational Politics; JS= Job stress AX= Anxiety; CR: Composite reliability; AVE: Average variance									

Source: Developed by the researcher

The lowest item to total loading observed was AX 5 with 0.500 and the highest was OP 6 with 0.881. The lowest factor loading observed was AX 5 with 0.515 and the highest is OP 6 with 0.931. These results conclude that the measurement instruments are valid. The lowest Cronbach alpha was 0.850 and the highest was 0.930, which shows that the constructs were internally consistent or reliable and explained more than 60 percent of the variance. All composite reliability values were above the recommended minimum of 0.7 (Bagozzi & Yi 1988), which further attests to the reliability of the measurement instrument used in the study.

## CFA and SEM Model Fit Assessments

The results of the model fit assessment for CFA are further explained as follows: Chi-square value over degree-of-freedom was 2.802, followed by the Goodness of Fit Index (GFI) (0.901), Comparative Fit Index (CFI) (0.900), Incremental Fit Index (IFI) (0.960), Normed Fit Index (NFI) (0.963) and Root Mean Square Error of Approximation (RMSEA) (0.065). The results indicate that all the indicator values meet the required threshold of equal to or greater than 0.9 for GFI, CFI, IFI and NFI, and equal to or less than 0.08 for RMSEA. Therefore, it could be concluded that the data fit the model. As for SEM results, the degrees of freedom/chi-square value is 2.980. The degrees of freedom/chi-square is below the recommended threshold of three, therefore, it confirms an acceptable model fit. Furthermore, GFI, CFI, IFI, NFI and RMSEA provide the following values: 0.900, 0.901, 0.903, 0.940 and 0.076. The results confirm that all the indicators meet the acceptable thresholds of equal to or greater than 0.9 for GFI, CFI, IFI and NFI and equal to or less than 0.08 for RMSEA. For that reason, it could be determined that the data confirm and fit the acceptability of the model.

**Table 2: Results of hypotheses testing (path modelling)**

Proposed hypothesis relationship	Hypothesis	Path coefficient estimates	p-value	Decision
OP → JS	H1	0.835	***	Accepted
OP → AX	H2	0.685	***	Accepted
AX → JS	H3	0.588	***	Accepted

*Note: OP= Organisational Politics; JB= Job stress; AX= Anxiety*

As illustrated in Table 3, the levels of the coefficients of all six hypotheses are significant at a level of  $p < 0.01$ . The significance levels of  $p < 0.05$ ,  $p < 0.01$  and  $p < 0.001$  are pointers of positive, strong and significant relationships between the constructs. It can be confirmed that all three hypotheses proposed in this study were supported and accepted.

## DISCUSSION OF RESULTS

The results of hypotheses H1, H2 and H3 are significant and supported ( $p < 0.01$ ). Hypothesis 1 stated that employees' perceptions of organisational politics are positively related to job stress. The value of the path coefficient for H1 is at 0.835. The result of the hypothesis indicates that there is a positive relationship between employees' perceptions of organisational politics and job stress in SMEs. Therefore, the p-value is significant at 99% ( $r = 0.01$ ), which means that this hypothesis is supported. The results resonate with those of Evans and Qureshi (2013) who found that political behaviours in organisations could result in stress and have undesirable effects on the employee and organisational environment. Hypothesis 2 stated that employees' perceptions of organisational politics are positively related to anxiety. Table 2, revealed that H2 was found to be supported and acceptable ( $r = 0.685$ ;  $p < 0.01$ ). The findings indicate that the employees' perceptions of organisational politics are positively related to anxiety. In support of the findings, a previous study suggested that organisational politics might function as a possible job stressor for employees that can lead to anxiety (Goodman, Evans & Carson 2011). Hypothesis 3 stated that anxiety is positively related to job stress. As stated in Table 2, there was a positive correlation between anxiety and job stress ( $r = 0.588$ ;  $p < 0.01$ ). The results further confirm that anxiety has a significant influence on job stress in the SME sector. These results confirm the results by Abbas and Raja (2014) that employees who experience anxiety in their organisational environment experience job stress. In support of the results, Rashid et al. (2013) revealed that employees who face high pressure on the job emanating from anxiety could show nervous behaviour.

## **CONTRIBUTIONS AND IMPLICATIONS FOR FUTURE RESEARCH**

This study provides theoretical and practical contributions. The theoretical contribution is made to the current literature on SMEs in South Africa, particularly in the context of developing nations that was considered to be limited. Efforts were made to relate the SET to describe the interrelations of the constructs. A cross examination of the existing theory reveals that the theory has been mostly applied in large enterprises, and the findings of this study will fill in the current gap in the academic literature.

This study provides some recommendations to SME owners/managers. The management of SMEs should concede that organisational politics is part of the organisational environment. Therefore, policies and procedures must be in place to control such political behaviour. Since there are positive and negative implications of organisational politics, management should make use of the positive impact to attain organisational objectives and encourage change management. The negative implications of politics should be curbed and eradicated, since they affect the job outcomes of employees within the organisation.

Although this study contributes to the organisational politics and the job stress literature in many ways, it has some limitations. This study was restricted to the SME employees in Matlosana Local District. Therefore, the results of the study should be interpreted with caution because they may only be generalised to the sample that was chosen for the study and may not be generalised to other SME employees in other local districts within South Africa. Additionally, this study is limited in scope, since there may be other factors such as employee motivation, engagement and retention that could affect the influence of organisational politics on job stress.

## **CONCLUSION**

The thrust of this study was to investigate the influence of organisational politics on job stress among SME employees in Gauteng Province, South Africa. Moreover, recommendations to be implemented by owners/managers to establish a conducive work environment for employees were provided. Lastly, the limitations of the study and implications for future research were presented. The findings of this study indicate that there is a positive significant relationship between organisational politics and job stress. In this view, if organisational politics dominates SMEs, there could be job outcomes resulting from the organisational politics experienced by employees, other than job stress. As a result, it is the duty and responsibility of SME owners/managers to engender good working relationships with their employees to achieve the objectives of the organisation.

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# PERCEPTIONS OF MOTORISTS TOWARDS E-TOLLS AND THEIR IMPLEMENTATION IN GAUTENG PROVINCE, SOUTH AFRICA

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## ABSTRACT

*Transportation is responsible for the movement of goods and services, as well as people from one point to the other. However, for an effective transport system, there should be a good road, rail and air traffic infrastructure to effectively connect all places around the country. Building and maintaining such infrastructure is costly and often demands that users pay to access it. This article focuses on the e-toll roads in the Gauteng area. The article aims to determine the perceptions of road users towards electronic tolls (e-tolls). It considers the following variables, namely, e-toll charges, attitude towards e-tolling, consumer trust of e-tolls and e-toll use continuation. Using a quantitative approach, the researchers administered a survey questionnaire to 350 road users in Gauteng Province. The respondents were selected through a non-probability convenience sampling technique. Data were analysed with the aid of two software packages, namely, the Statistical Package for the Social Sciences (SPSS version 28.0) and the Analysis of Moment Structures (AMOS version 28.0). The results of this article provide useful information on the funding of the roads in Gauteng Province, South Africa. This article also creates literature on the already limited literature on the e-tolls. Lastly, government or policymakers could benefit from the information in this article regarding e-toll charges, attitude towards e-tolling, consumer trust of e-tolls and e-toll use continuation.*

**Keywords:** E-toll charges, attitude towards e-tolling, consumer trust of e-tolls, e-toll use continuation.

## INTRODUCTION

Non-tolled roads are roads that can be used by any individual with no fee charged for the part used/consumed or rather, at no additional cost. Often, non-tolled roads are financed through fuel taxes and payments for vehicle registrations. But, with the government increased fuel-efficient cars, sometimes, fuel taxes do not provide enough funds to maintain and develop new roads (Chi & Waugaman 2010). According to Brits (2010), fuel taxes are inadequate to finance the maintenance of existing roads and the building of new ones. Consequently, income from fuel taxes must be combined with other state revenues to build and maintain this infrastructure. This means that this infrastructure now has to compete with other public programmes. In developing countries, programmes dealing with poverty, health and education are often prioritised higher than road infrastructure. In fact, even funds collected from fuel taxes are not used solely for the road infrastructure, with only approximately 33 percent of the South African fuel taxes being allocated to roads (Brits 2010). Swan and Belzer (2010) argue that replacing fuel taxes with road charges based on road usage and the type of vehicle rather than the type of fuel used is the solution to insufficient funds for maintaining and developing roads. There has been an indication that the South African National Roads Agency (SANRAL) is set to proceed on its mission of providing and maintaining good roads as cost-effectively as possible (Brits 2010).

SANRAL, formed in 1998, has been selected by the South African Department of Transport to provide and maintain a good quality road system cost-effectively. To this end, SANRAL implemented electronic tolls (e-tolls) to the system to easily manage the collection of revenue from road users in a manner that makes the roads faster, safer, more reliable, less congested, more effective and more efficient to move people and goods to their respective destinations. SANRAL maintains that the system is fair to road users, as they pay according to how often they use the roads. However, the residents of the Gauteng Province have resisted paying these tolls to a point that they have ignored numerous notices urging them to pay and threats of legal action for not paying related toll fees. Against this

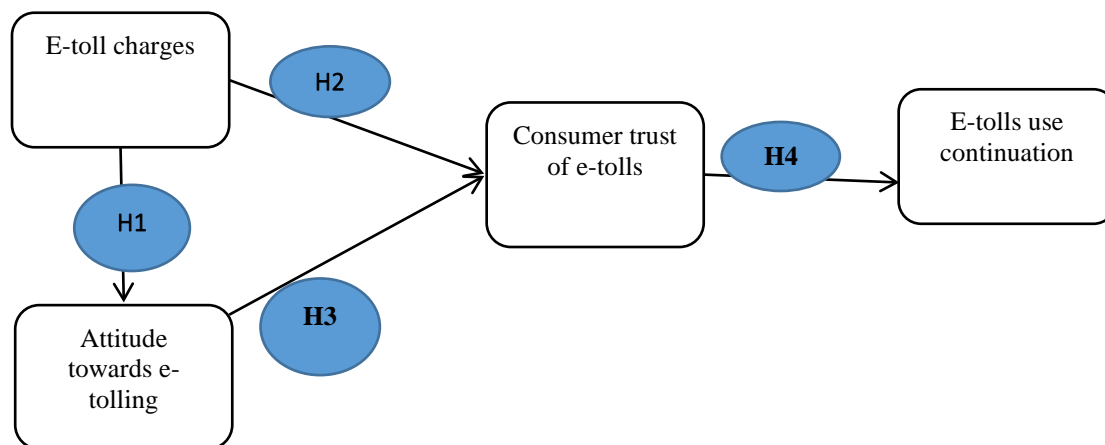


background, the main objective of this article is to gain a deeper understanding of the public's perceptions towards the e-tolls system in the Gauteng Province. The article explores the users' attitudes towards e-tolling, and trust in e-tolls and also investigates prospects for the continuation of the e-toll system in the province. All this is explored through the gathering and analysis of both primary and secondary data.

## PROBLEM STATEMENT

The South African government is experiencing difficulties with the collection of funds to maintain and build roads. Economic decline and increasing needs for social welfare programmes, especially post the COVID lockdowns mean that state revenues are stretched. Responding to this, the government has suggested and is indeed trying to implement a user charge system on some roads to obtain extra funds for maintaining and building new roads (Kekana 2008). Jakobsson, Fujii and Gärling (2000) argue that some people have a negative attitude towards this system and e-tolls, specifically because they believe that e-tolls infringe on their freedom. In addition, there is a suggestion that road charges are causing people to travel less or to make use of public transport because they cannot afford to pay, which is infringing on the freedom of movement of people (Kekana 2008). However, there is a paucity of studies that comprehensively assess the views of users on this system. In this study, the findings stand to help understand the attitudes and perhaps assist the government to formulate the means of addressing the resistance against the e-tolling systems thus generating the projected revenue from the system or its alternatives.

**Figure 1: The proposed research model**



*Sources: This research was done purely for this article*

Based on the above model, the following hypotheses are stated:

- H<sub>1</sub>: E-toll charges have a significant influence on the attitude towards e-tolls.
- H<sub>2</sub>: E-toll charges have a significant influence on consumer trust in e-tolls.
- H<sub>3</sub>: Attitude towards e-tolls has a significant influence on consumer trust in e-tolls.
- H<sub>4</sub>: Consumer trust in e-tolls has a significant influence on e-toll use continuation.

## LITERATURE REVIEW

### E-Toll Charges

Road-tolls charges may be referred to as road user charges or congestion pricing, as the road users are being charged to use the road (Odeck & Kjekreit 2010). Congestion pricing is a way of reducing the number of vehicles on the roads because some motorists may opt to avoid roads where they pay and use ones on which they do not pay. Pricing of e-tolls decreases the time wasted on congested roads and the uncertainty of delays on the road because it is done online. It also reduces the waste associated with traffic congestion such as carbon dioxide (Decrla-Souza &

Whitehead 2003). The more vehicles are congested on a highway, the greater the volumes of gasses released into the atmosphere and the environment. The price of e-tolls plays an important role in the acceptance of tolls by the public. It is well-known that e-tolls were implemented to maintain roads and build new ones but at the same time, they must be affordable and accommodate people with a lower income (Peters 2014). To this end, the government needs to be transparent and honest when setting a charge for the e-tolls to gain the trust of road users. If e-toll charges are not transparent, road users may view the secrecy of charges as being unfair to them, and this may lead to resistance and avoidance of the payment of these related charges (Kimes 2002).

## **Attitude Towards E-Tolls**

The e-toll system is used to earn funds faster than fuel taxes or vehicle registration levies for building new roads and maintaining existing roads. The safety of roads is increased as the roads are in a better condition, fewer vehicles are travelling on the roads, and the time spent on roads is also decreased (Odeck & Kjekreit 2010). The author further states that, even though toll roads may be a fast way of realising good roads and reducing congestion along the roads, the public may not see it that way or be welcoming of the e-tolls. The public may have a negative attitude towards the e-tolls although they were meant to benefit directly and indirectly. E-tolls may be perceived as a controversial issue by some road users, as they feel that they are being taxed twice. Road users are already paying their fuel taxes and vehicle registrations and adding the extra cost of e-tolls may be too much for them. Road users in a higher income bracket may have a positive attitude towards e-tolls, but road users with a lower income level may have a negative attitude despite all the positive aspects of e-tolls. After the implementation of e-tolls, the Gauteng local government was concerned that the e-tolls might impact negatively on the lower income group. The result was that the President, Cyril Ramaphosa, assigned a team to research the concerns of the public. The research found that the tolls were a financial burden to low-income people being only 0.4 percent, as 98 percent of the users of e-tolled roads are middle- and higher-income earners (Harvey & Mona 2015). So, they were scrapped later.

## **E-Tolls Use Continuation**

E-tolls were introduced to make roads safer, reduce traffic or congestion, reduce carbon emissions and reduce travel time on roads. It will be in the best interest of road users to develop a positive attitude towards the use of e-tolls, as they lead to a green environment and benefit road users. The willingness of road users to comply with e-toll policies depends on their attitudes towards the system, meaning that once road users have a positive attitude towards e-tolls, they will comply with the related policies (Van damme & Pauwels 2016). Luyet, Schlaepfer, Parlange and Buttler (2012) allude that public participation in the process of road charges will result in better trust by the public in the decisions made by the government, leading to increased acceptance of road charges by the public. When the public has a good attitude towards e-tolls and they believe that they are beneficial, they comply fully with the e-toll policy (Kim, Schmöcker, Fujii & Noland 2013). Besides, Van damme and Pauwels (2016) argue that once road users have trust in the e-toll policy, they will have a good attitude towards the e-tolls.

## **Consumer Trust of E-Toll**

A lack of support for tolls could be due to the lack of trust in the government, mainly associated with the fact that road users have no information on the implementation of e-tolls or how the government resources are spent, which leads them to believe that government funds are misused (Yusuf, O'Connell & Anuar 2013). Schmöcker, Pettersson and Fujii (2012) state that trust in government is a crucial factor to the public, as it is an important determinant of toll acceptability. The public needs to have some trust in the government that the e-tolls are there to benefit the environment and society as a whole and not just the government. This will encourage e-toll compliance among road users. System reliability and system security are also important facts from the users and operators viewpoints (Velaga & Pangbourne 2014). The e-toll system has to be reliable at all times to give correct information on the usage by road users, such as how many times a road user passed a booth and how much a road user has to pay. It also has to be reliable to the government in terms of providing vital information on such statistics as the number of cars passing daily. The emphasis is that the public's trust in the government is very important for obtaining acceptability from the public. One of the most important determinants of the acceptability of road charges is trust in the government (Fujii 2005). When the public has trust in the government, they tend to believe that the policies set by the government are necessary and beneficial, thus, they accept the road charges.

# METHODOLOGY AND DATA ANALYSIS

The article used a non-probability convenience sampling technique to select the respondents. A confirmatory factor analysis was applied in examining and testing the relationships between observed constructs and their causal latent constructs, while structural equation modelling was used to test the hypothesised relationships between constructs.

**Table 1: Accuracy analysis statistics**

Research constructs		Descriptive statistics		Cronbach's test		C.R. value	AVE value	Factor loading
		Mean	SD	Item-total	$\alpha$ Value			
E-Toll Charges (ETS)	ETS1	4.163	5.420	0.790	0.910	0.909	0.788	0.829
	ETS2			0.867				0.904
	ETS3			0.587				0.587
	ETS4			0.792				0.842
	ETS5			0.839				0.930
Attitude Towards E-Tolling (ATE)	ATE1	3.778	4.149	0.500	0.713	0.713	0.609	0.954
	ATE2			0.517				0.942
	ATE3			0.551				0.556
	ATE4			0.520				0.509
	ATE5			0.500				0.501
Consumer Trust in E-Tolls (CTE)	CTE1	2.900	4.879	0.597	0.854	0.853	0.708	0.606
	CTE2			0.606				0.671
	CTE3			0.725				0.838
	CTE4			0.775				0.894
	CTE5			0.636				0.674
E-Tolls Use Continuation (EC)	EC1	3.976	5.802	0.503	0.719	0.719	0.611	0.504
	EC2			0.501				0.500
	EC3			0.579				0.700
	EC4			0.603				0.744
	EC5			0.519				0.593

As seen in Table 1, the factor loadings of all the measurement items are within the range of 0.5 to 0.9, with the highest value of 0.954 for ATE1 and the lowest value of 0.500 for EC2. All the items are greater than 0.5. These results mean that all the items are acceptable and that there is a relationship between each construct and each item. Moreover, in this article, item-to-totals were used to assess convergent validity. Table 1 depicts that the item total values ranged from 0.500 to 0.954; these values are all above the recommended threshold of 0.5, as suggested by Wellner (2015).

## Hypotheses Testing

The article has anticipated that e-toll charges have a significant influence on the attitude towards e-tolls; attitude towards e-tolls has a significant influence on compliance and consumer trust in the system. E-toll compliance and consumer trust in e-tolls have a significant influence on e-toll use continuation.

**Table 2: Results of hypotheses testing (path modelling)**

Proposed hypothesis relationship	Hypothesis	Path coefficient estimates	P-value	Decision
ETS →ATE	H1	0.308	***	Accepted
ETS → CTE	H2	0.455	***	Accepted
ATE →CTE	H3	0.390	***	Accepted
CTE →EC	H4	0.501	***	Accepted

*Note: E-Toll Charges (ETS), Attitude Towards E-Tolling (ATE), Consumer Trust of E-Tolls (CTE), E-Tolls Use Continuation (EC)*

According to Table 3, the levels of the coefficients of all the six hypotheses are significant at a level of  $p < 0.01$ . According to Chinomona, Lin, Wang and Cheng (2010), significance levels of  $p < 0.05$ ,  $p < 0.01$  and  $p < 0.01$  are indicators of positive, strong and significant relationships between the research constructs. Based on that, all other four hypotheses proposed in this article were supported and accepted.

## DISCUSSION OF RESULTS

The results of the hypotheses (from H1 to H4) are significant and supportive at a confidence level of  $p < 0.01$ . The following section discusses the result of the hypotheses indicated in Table 3 and Figure 1. **Hypothesis 1** stated that there is a positive and significant relationship between e-toll charges and the attitude towards e-tolls. This means that a decrease in the price of e-tolls may have resulted in a better and good attitude towards e-tolls. The article supported and accepted hypothesis (H1). This is because a moderate and positive significant relationship was observed between e-toll charges and the attitude towards e-tolls ( $r = 0.308$ ;  $p < 0.01$ ). These results further imply that transparency and honesty when setting a charge for the e-tolls will assist in good attitudes towards e-tolls from road users. Therefore, it is best to know when to disclose information about the charges and what to disclose. By doing so, road users will have fewer negative attitudes and have more trust in the charging system, ultimately complying with the e-toll system (Ferguson & Ellen 2013).

**Hypothesis 2.** As reported in Table 3, there is a positive and significant correlation between e-toll charges and consumer trust in e-tolls ( $r = 0.455$ ;  $p < 0.01$ ). These findings were further validated by several studies using information from the World Values Survey. (Torgler 2003a, 2003b, 2004) who found that trust in government is positively related to individuals' willingness to comply with tax laws in various countries. Other studies have confirmed a positive relationship between trust in government and compliance in various countries (Jimenez & Lyer 2016).

**Hypothesis 3** states that there is a positive and significant relationship between attitudes towards e-tolling and consumer trust in e-tolls. Table 2 revealed that H3 was found to be supported and acceptable ( $r = 0.390$ ;  $p < 0.01$ ). This result was supported by the research conducted by Edwards and Wolfe (2004) which considers consumer trust as a term that includes concepts of obedience, governability, non-resistance and submission, meaning that if road users are non-resistant and submissive to the e-toll policies, they will continue supporting the e-toll policies and be committed.

**Hypothesis 4** notes that consumer trust of e-tolls and e-toll use continuation are positively and significantly correlated ( $r = 0.501$ ;  $p < 0.01$ ). This illustrates the fact that road users that trust the e-toll policy and see its benefits will comply with the policies, resulting in the continuation of the use of the system furthermore, Lassoued and Hobbs (2015) state that if a client has trust in a policy, he/she will develop confidence (related to performance) in

the policy attributes through experiencing the policy and its benefits, which will ultimately drive clients to being committed to the policy.

## CONCLUSION

This article was restricted only to the road users driving on the Gauteng Province roads with e-tolls; other provinces did not form part of this article. Additionally, among the various demographic variables, only gender, age, nationality, language, qualification and residing city were investigated in terms of their influence on motorist attitudes towards e-tolls. Even though the results were valid and reliable, other variables such as marital status, race and occupation, could also be investigated. Furthermore, respondents were reluctant to fill in the questionnaire because they were unsure if this article was only for school use or it was for government purposes. However, only after assuring them that it was strictly for academic use, then they were willing to participate. Debatably, there was little literature available as there are no or fewer studies about e-tolls in South Africa. Since this article was only focused on e-toll charges, attitudes towards e-tolls, trust, compliance and commitment in explaining the motorist's attitude towards e-tolls, future researchers may include other constructs such as information sharing, cost reduction methods and better communication between the road users and the government to obtain acceptance or positive attitude towards e-tolls. It has been confirmed that e-toll charges, trust, compliance and commitment are the main factors to achieve a positive attitude towards e-tolls. Therefore, future researchers should try to find methods in which road users and the government can increase the level of trust, compliance and commitment and lower the e-toll charge. To better the road user charges, the government is encouraged to implement programmes that ensure transparency in pricing. Government should be transparent when pricing the fee so that the public can know exactly what they are paying for. Government should also reduce the current pricing of roads. It is advisable to reduce the current prices as they are high plus considering that the toll booths are not far from each other. It is better to at least receive a little bit of money than not receiving nothing at anything because road users cannot pay high prices. The government needs to educate road users on e-tolls so that they can know their purpose and understand the resolve of the system. When the public or road users are involved in the decision making of new policies, they will feel appreciated and will accept and take part in the new policies, resulting in their compliance. To improve consumer trust in e-tolls, the government is encouraged to communicate effectively and efficiently with users. Through communication, road users will have adequate information that is likely to build trust in the system of e-tolls. Government should try to ensure transparency through technology. Trust is an important factor in developing any relationship, and the best way to develop trust is to create transparency. Another strategy is to reserve and surpass commitments. A workable approach to developing trust in any relationship is by keeping commitments. No party should hold back any information, thus, road users and government should share any information. To improve on e-toll use, the government is encouraged to respect and consider the needs and ideas of the road users, which clear the ground for road users to utilise the e-toll system.

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# THE MODERATING ROLE OF INDEPENDENT SELF-CONSTRUAL ON THE PERSONALITY FACTORS IMPACTING THE PURCHASE INTENTION TOWARDS COUNTERFEIT LUXURY

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## ABSTRACT

*The demand for counterfeit luxury is increasing due to its accessibility, but the motivator behind purchasing counterfeits is not only related to price. Instead, understanding the role of internal traits (personality) and the desire to act independently when intending to purchase counterfeit luxury provides a better understanding of the intention to purchase counterfeits. Therefore, the aim of the study was to determine the impact that personality factors have on consumers' intention to purchase counterfeit luxury and the moderating role that independent self-construal plays. Data were collected using an online self-administered questionnaire and 519 responses were obtained. Using multiple regression and moderation analyses, the hypotheses were tested and it was found that materialism, brand consciousness, status consumption, and personal gratification impacted the intention to purchase counterfeit luxury, with independent self-construal moderating these relationships. This demonstrates that consumers who are materialistic, conscious of the brands they purchase, and purchase due to the need to obtain status intend to purchase counterfeit luxury. However, the sense of accomplishment (personal gratification) revealed a negative yet positive relationship with the intention to purchase counterfeit luxury, demonstrating that the more individuals are concerned with their sense of accomplishment, the less likely they are to purchase counterfeit luxury. The study provides a theoretical contribution by including an understanding of the need to be unique (independent self-construal) when purchasing a product category typically influenced by social needs. In addition, the study gives authentic luxury manufacturers the opportunity to develop marketing strategies in an aim to deter consumers from purchasing counterfeits.*

**Keywords:** counterfeit luxury, independent self-construal, personality factors, purchase intention.

## INTRODUCTION

The consumption of counterfeit luxury goods has been a significant concern for luxury brands due to its negative impact on their revenue and brand image (Wiedmann et al., 2017). The demand for luxury goods has led to the growth of the luxury market globally (Statista, 2021). The purchase of luxury goods is often driven by the social recognition and acceptance received when affiliated with luxury brands (Jhamb et al., 2020). However, the ease of access to counterfeit luxury goods has increased, allowing consumers to fulfill their psychological and social needs at a fraction of the cost (Li et al., 2020). This has led to concerns about the impact of counterfeit luxury goods on the global economy and the luxury industry (Elsantil & Hamza, 2021; Wiedmann et al., 2017).

Several studies have focused on the personality factors impacting the purchase intention towards counterfeit luxury goods (e.g., Bhatia, 2018; Kim & Karpova, 2010; Li et al., 2020). Research has indicated that the purchase of counterfeit luxury items is not always driven by price, but rather internal processes like personality traits (Khan et al., 2021). However, there is a research gap in literature concerning the role of the need to remain independent (e.g., independent self-construal) on the personality factors impacting purchase intention towards counterfeit luxury goods. Independent self-construal refers to the extent to which individuals define themselves in relation to their social groups (Markus & Kitayama, 2010). Research has highlighted the importance of social factors in influencing purchase intention towards counterfeit luxury goods (Larsen & Buss, 2005; Xu & Wu, 2020), yet it is unclear how independent



self-construal moderates the relationship between personality factors and purchase intention towards counterfeit luxury goods. Since the purchase of luxury items is usually driven by social needs (Jhamb et al., 2020), understanding how one's need to remain independent from the social group when purchasing counterfeits is required, particularly given the illegal nature of the purchase. This paper aims to fill the research gap by examining the moderating role of independent self-construal in the relationship between personality factors and purchase intention towards counterfeit luxury goods. The next section looks at the conceptual framework developed for the study, followed by the research methodology utilized. Thereafter, the results are presented and discussed, concluding with the limitations and potential future studies.

## CONCEPTUAL FRAMEWORK

This section evaluates this study's concepts, namely personality factors, which consist of materialism, brand consciousness, value consciousness, integrity, and personal gratification. The concept of independent self-construal is also discussed. In explaining each concept, the formation of the hypotheses is motivated, concluding with the study's conceptual model.

### Personality Factors

Consumers' personalities can impact their decision-making in terms of the products and services they intend to purchase (Wu & Zhao, 2021). Personality refers to people's internal traits, which can influence their interactions with other individuals, environments, and purchases (Larsen & Buss, 2005). In a counterfeit luxury context, consumers' purchase intentions are impacted by their personalities because an element thereof is demonstrated through the product purchased and their social status is demonstrated amongst their social groups (Gabrielle et al., 2011; Ting et al., 2016). Personality factors that play a role in counterfeit luxury purchases are materialism, brand consciousness, value consciousness, integrity, and personal gratification (Hidayat et al., 2013; Khan et al., 2021; Phau et al., 2009).

#### Materialism

Materialism is the degree to which individuals depend on possessions to convey a particular message to their social groups (Park et al., 2007). As luxury purchases are often motivated by the desire to communicate status (Jhamb et al., 2020), it is reasonable to infer that materialism plays a role in such buying decisions by impacting an individual's personality and driving purchase decisions. Although some scholars (e.g., Belk, 1995; Richins & Dawson, 1992) have associated materialism with negative attributes like greed, more recent studies have highlighted the positive aspects of materialism, such as the motivation to work harder and exhibit dedication to acquire desired possessions (Karabati & Cemalcilar, 2010). Previous research has established a positive and significant relationship between materialism and the purchase intention towards luxury counterfeits (e.g., Bhatia, 2018; Kaufmann et al., 2016), as consumers who purchase counterfeit luxury seek social acceptance through these possessions, even though they may not be authentic. Therefore, the following hypothesis is presented:

H1: Materialism has a positive and significant impact on the intention to purchase counterfeit luxury.

#### Brand consciousness

Brand consciousness is a widely examined construct in the luxury product sector, as consumers often purchase such products for social acceptance (De Silva et al., 2020). However, the findings regarding the relationship between brand consciousness and buying behavior towards counterfeit luxury products are inconsistent. Some studies suggest highly brand-conscious individuals hold negative attitudes towards counterfeits (Sharda & Bhat, 2019), which negatively impact purchase intention. Other studies focusing on brand image and attachment have reported positive associations between brand consciousness and the intention to purchase counterfeits (Bian & Moutinho, 2011; Kaufmann et al., 2016). Since findings are conflicting, further research is needed to determine the relationship between brand consciousness and the purchase intention of counterfeit luxury products. Wang et al. (2017) suggested that counterfeit products may still satisfy consumers' social acceptance needs. This is particularly relevant when the counterfeit is high quality and the difference between the authentic and counterfeit items is insignificant (Phau et al., 2009). Thus, the following hypothesis is proposed:

H2: Brand consciousness has a positive and significant impact on the intention to purchase counterfeit luxury.

### **Status consumption**

Status consumption refers to consumers purchasing products to display status to their social groups. Purchasing luxury allows this display to happen instantaneously and consumers utilize their luxury items in public (Pino et al., 2019). According to Shahid and Paul (2021, p. 5), consumers who cannot afford the authentic version of a luxury item, turn to counterfeits to maintain a social standing with their social groups. Moon et al. (2018) found a significant and positive relationship between status consumption and the attitude towards counterfeit luxury. As individuals make decisions based on their attitudes (Ting et al., 2016), it is likely that status consumption positively and significantly impacts the intention to purchase counterfeit luxury. Hence, the following hypothesis is formulated:

H3: Status consumption has a positive and significant impact on the intention to purchase counterfeit luxury.

### **Value consciousness**

Value-conscious consumers are concerned with paying lower prices while accepting that the quality may not be of the highest standard. When purchasing counterfeit luxury, value-conscious consumers intend to purchase the counterfeit in place of the authentic version, as they consider the counterfeit to be value for money (Ting et al., 2016). Furthermore, consumers who are concerned with their image and their need for social acceptance may not be in a position or be willing to pay exorbitant prices for authentic luxury products, and are content with purchasing brands that are counterfeit, as they still have the opportunity for social acceptance (Scotto et al., 2021). Consequently, the following hypothesis is presented:

H4: Value consciousness has a positive and significant impact on the intention to purchase counterfeit luxury.

### **Integrity**

Integrity refers to an individual's propensity to adhere to personal ethical standards and to abide by the law (Ha & Tam, 2015). The purchase of counterfeit products is illegal, yet consumers who do not uphold their ethical standards are likely receptive to the purchase of counterfeit luxury (Ting et al., 2016). Consumers who are ethical and law-abiding citizens are less inclined to engage in illegal activities (e.g., the purchase of counterfeit luxury), which results in a negative relationship between integrity and the purchase intention of counterfeit luxury (Teah et al., 2015). Previous studies have found a negative relationship between integrity and attitude towards counterfeit luxury (e.g., Jiang et al., 2019; Teah et al., 2015), while other studies have reported an insignificant relationship (Kim & Karpova, 2010; Ting et al., 2016). Although attitude informs purchase intention, the relationship should still be tested to determine if the findings are consistent. Therefore, the following hypothesis is proposed:

H5: Integrity has a negative and significant impact on the intention to purchase counterfeit luxury.

### **Personal gratification**

When individuals express a desire of accomplishment or social recognition, they are demonstrating a need for personal gratification (Kent, 2018). Consumers who seek personal gratification purchase luxury products that will afford the sense of accomplishment and social recognition (Jaharuddin & Wahab, 2017). Phau et al. (2009) added that consumers wanting personal gratification, specifically an internal sense of accomplishment, seek the authentic version of the product, suggesting that consumers who want personal gratification would not risk tarnishing their sense of achievement by purchasing a counterfeit (Scotto et al., 2021). Thus, consumers form negative perceptions of counterfeits and act as a detractor to the purchase of counterfeits (Basu et al., 2015). Hence, the following hypothesis is proposed:

H6: Personal gratification has a negative and significant impact on the intention to purchase counterfeit luxury.

## **Independent Self-Construal**

According to Giacomini and Jordan (2017), self-construal focuses on individuals' views themselves. More specifically, it relates to whether they view themselves as separate (independent self-construal) or connected to other individuals (interdependent self-construal). Wang et al. (2017) stated that interdependent consumers view the purchase of counterfeit luxury as a risk due to the potential embarrassment they may face if found to possess a counterfeit luxury product and are unlikely to purchase counterfeits. However, independent consumers are likely to purchase luxury to satisfy their internal needs and pleasure (Lee et al., 2018). Depending on the commitment to these needs, consumers may decide to purchase counterfeits due to the price of authentic luxury products (Ting et al., 2016). As the study focuses on the personality factors (intrinsic traits) mostly motivated by the social need of obtaining social acceptance,

it is worth understanding how independent self-construal moderates the relationships between the personality factors and the intention to purchase counterfeit luxury. The following hypotheses are proposed:

H7a: Independent self-construal moderates the relationship between materialism and the intention to purchase counterfeit luxury.

H7b: Independent self-construal moderates the relationship between brand consciousness and the intention to purchase counterfeit luxury.

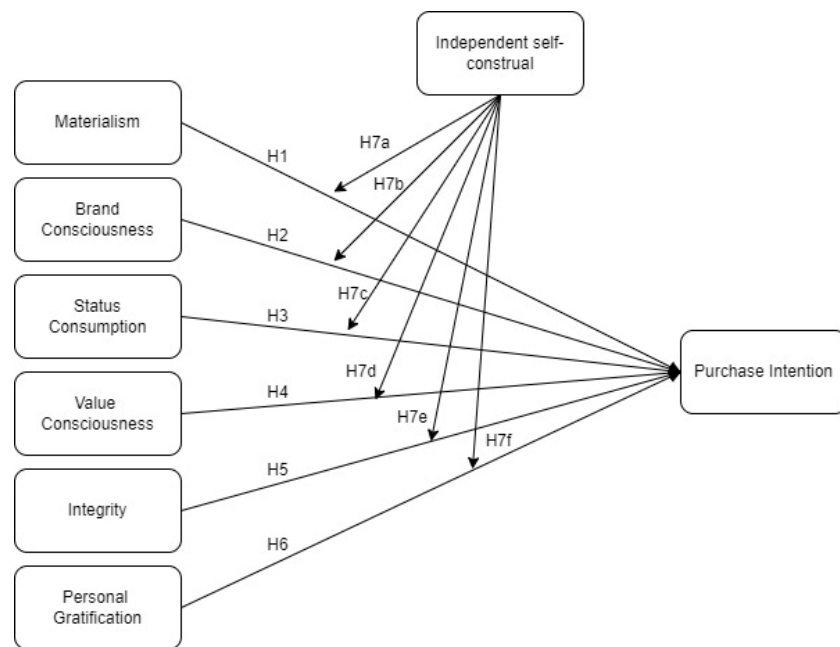
H7c: Independent self-construal moderates the relationship between status consumption and the intention to purchase counterfeit luxury.

H7d: Independent self-construal moderates the relationship between value consciousness and the intention to purchase counterfeit luxury.

H7e: Independent self-construal moderates the relationship between integrity and the intention to purchase counterfeit luxury.

H7f: Independent self-construal moderates the relationship between personal gratification and the intention to purchase counterfeit luxury.

**Figure 1: Conceptual model**



## RESEARCH METHODOLOGY

The study followed a descriptive research design, whereby patterns and trends are investigated using a quantitative research approach (Burns et al., 2017). An online self-administered research questionnaire was used to collect the data. This method was deemed appropriate given the context of the study (illegal purchases of counterfeits), with self-administered questionnaires allowing respondents to provide their honest opinions (Wiid & Diggines, 2015). Given the conceptual model developed for the study (see Figure 1), the descriptive research design and quantitative approach were deemed the most appropriate.

The online questionnaire was administered online through Google Forms and comprised: (1) a preamble explaining the study's purpose, the ethical considerations, and obtaining respondents' consent to participate; (2) a section measuring respondents' demographic profile; and (3) a section measuring the constructs in the conceptual model (materialism, brand consciousness, status consumption, value consciousness, integrity, personal gratification, independent self-construal, and purchase intention). The constructs were adopted from Singelis (1994), Teah et al. (2015), and Ting et al. (2016), and measured using a five-point Likert-type scale.

This study's target population was consumers aged 18–65 who had purchased or intended to purchase counterfeit luxury goods within the past six months. To reach the target population, non-probability convenience sampling and snowball sampling were used. Convenience sampling relates to respondents being selected based on their accessibility, whereas snowball sampling asks respondents to indicate other potential respondents (Saunders et al., 2016). Once the questionnaire was shared on Google Forms, 519 responses were retained for analysis.

Data were analyzed using SPSS 28. Descriptive and inferential statistics were used to analyze the data. In addition, the constructs and their corresponding items were tested for reliability and validity by evaluating the Cronbach's alpha coefficient values and a confirmatory factor analysis (CFA). After the descriptive analysis, inferential statistics – specifically multiple regression (measuring the linear relationship between personality factors and purchase intention) – was conducted, followed by moderation analysis to determine the independent self-construal's effect on the relationships between the personality factors and purchase intention.

## Results

This section presents the descriptive and inferential statistics relevant to this study.

### Descriptive statistics

The Cronbach's alpha coefficient values were analyzed and deemed reliable. All values were above the 0.7 threshold, as suggested by Toklu and Baran (2017), with the exception of the personal gratification scale, which provided a Cronbach's alpha coefficient value of 0.699. As suggested by Pallant (2016), Cronbach's alpha coefficient values can be affected by the number of items – in this case, three items measured personal gratification. To assess the validity, a CFA was conducted. The Kaiser-Meyer-Olkin test was 0.902 and Bartlett's test of sphericity was significant ( $p = 0.000$ ), verifying that the data were suitable for analysis. The CFA provided an eight-factor solution, where eigenvalues above 1 were included and explained 63.60% of the variance. Based on the above, the data were deemed reliable and valid. Of the 519 respondents, majority were female (52.6%) and held a university degree (30.8%), with the second highest level of education being high school (25.6%). Most respondents were born between 1981 and 2002 (81.5%) and had full-time employment (64.4%).

### Inferential statistics

H1–H6 focused on the relationships between the personality factors (materialism, brand consciousness, status consumption, value consciousness, integrity, and personal gratification) and the intention to purchase counterfeit luxury goods. Multiple regression analysis tested H1–H6. The R-square value explained 43.7% of the variance and the model was found to be significant ( $p = 0.001$ ). H1–H3 and H6 were accepted, as materialism ( $p = 0.0302$ ;  $\beta = 0.127$ ), brand consciousness ( $p = 0.001$ ;  $\beta = 0.625$ ), and status consumption ( $p = 0.001$ ;  $\beta = 0.206$ ) had a positive and significant impact on the intention to purchase counterfeit luxury. H6 resulted in a significant and negative relationship between personal gratification and purchase intention ( $p = 0.030$ ;  $\beta = -0.158$ ) and was thus accepted. H4 and H5 were rejected, as the relationship between value consciousness and the intention to purchase counterfeit luxury was positive yet insignificant ( $p = 0.102$ ;  $\beta = -0.048$ ) and the relationship between integrity and the intention to purchase counterfeit luxury was negative yet insignificant ( $p = 0.245$ ;  $\beta = -0.095$ ).

H7a–H7f centered on the moderation of independent self-construal on the relationship between personality factors and the intention to purchase counterfeit luxury. Using Hayes Process 4.1 in SPSS, the moderation analysis was conducted and the findings revealed that H7a–H7b and H7e–H7f were accepted, as independent self-construal moderated the relationships between: materialism and purchase intention ( $p = 0.001$ ); brand consciousness and purchase intention ( $p = 0.004$ ); status consumption and purchase intention ( $p = 0.020$ ); and personal gratification and purchase intention ( $p = 0.001$ ). However, independent self-construal did not moderate the relationships between: value consciousness and purchase intention ( $p = 0.808$ ); and integrity and purchase intention ( $p = 0.895$ ). Therefore, H7c and H7d were rejected.

## DISCUSSION AND RECOMMENDATIONS

Based on the findings, certain personality factors have a significant positive and negative impact on the purchase intention of counterfeit luxury. The relationship between materialism and the intention to purchase counterfeit luxury was found to be positive and significant. This is because materialistic consumers are concerned with possessions and

use those possessions to communicate an image to their social groups (Jhamb et al., 2020). Therefore, consumers concerned with communicating a certain image through their possessions who are unable to afford the authentic luxury are inclined to purchase counterfeits to achieve the image they seek (Phau et al., 2009). In addition, independent self-construal moderated the relationship between materialism and purchase intention, demonstrating that the more individuals view themselves as separate and independent, the more positive the relationship between materialism and the purchase intention towards counterfeit luxury is. This is because materialists are self-centered and concerned with promoting their own position in society (Islam et al., 2022).

The relationship between brand consciousness and the purchase intention of counterfeit luxury was positive and significant, and the strongest in the entire model. This is because consumers who purchase counterfeit luxury are conscious of the brand names they intend to purchase (Kaufmann et al., 2016), as the counterfeit still allows them to satisfy their social needs more affordably (Wang et al., 2005). Therefore, consumers are conscious of the brand (e.g., Louis Vuitton) and not the specific category (e.g., counterfeits) and seek the counterfeit brands they believe will offer social acceptance (Phau et al., 2006). Moreover, independent self-construal moderated the relationship between brand consciousness and purchase intention, meaning the more individuals want to express their potential as individuals (Moza et al., 2020), the more likely they are conscious of the counterfeit luxury brands they purchase, as they intend to purchase the brand to express their position in their social groups.

The relationships value consciousness and integrity have with the intention to purchase counterfeit luxury were insignificant and negative. Although the relationship between integrity and purchase intention was hypothesized as negative, the relationship was not significant. The finding is consistent with the study by Ting et al. (2016). The insignificant result in this study may be indicative of consumers not always considering their ethical responsibilities when intending to purchase products they already know are illegal and unethical to purchase. Furthermore, the insignificant relationship between value consciousness and purchase intention was consistent with the findings of Phau and Teah (2009), which could be explained by consumers regarding the poor craftsmanship of counterfeit luxury items (Ting et al., 2016).

The relationship between status consumption and intention to purchase counterfeit luxury was positive and significant as well as the second strongest relationship in the model. The finding is consistent with the study by Moon et al. (2018). Consumers who display status consumption do so because they obtain social approval through the products they use (Phau et al., 2009). Thus, consumers who are unable to purchase the authentic version of the luxury item purchase counterfeit luxury simply to attain the status they seek. Moreover, independent self-construal moderated the relationship between status consumption and purchase intention. This finding relates to status consumption being regarded as an internal motivational process that consumers endure to project an image to their social groups (Phau et al., 2009). Consequently, intending to purchase counterfeits is still driven by this internal need.

Lastly, the relationship between personal gratification and purchase intention was found to be significant yet negative, as hypothesized. This demonstrates that the more people are concerned with their levels of personal gratification (e.g., their internal sense of accomplishment), the lower their intention to purchase counterfeit luxury. This is consistent with the finding of Hidayet et al. (2013), because the purchase of a counterfeit luxury product does not provide consumers with a sense of personal accomplishment as they know that the item is counterfeit. In addition, independent self-construal moderates the relationship between personal gratification and purchase intention, which can be explained by independent self-construal focusing on individuals and their needs (Giacomin & Jordan, 2017).

Based on the above discussion, manufacturers of authentic luxury should consider:

- Advertising the differences between authentic and counterfeit luxury items to increase awareness and educate consumers on how to identify a counterfeit item. As consumers are conscious of the possibility of being embarrassed by owning a counterfeit (Phau et al., 2009), increased awareness would deter them from risking social rejection.
- Focusing on messages relating to the “sense of accomplishment” of owning an authentic luxury item. This may encourage consumers to save to purchase the authentic item, rather than the counterfeit because of the gratification they will experience (Ting et al., 2016).
- Being renowned as a brand that does not have high-quality counterfeits. This would entail making it difficult for counterfeiters to engage in counterfeiting, as Burberry did in 2018 to try combat potential counterfeits being produced (“Burberry burns bags, clothes and perfume worth millions”, 2018). If consumers are aware that a brand name is renowned for not having high-quality counterfeits, they may be reluctant to make the purchase.

- Focusing on the social reward of purchasing authentic luxury. As the independent self-construal construct can strengthen relationships towards the purchase of counterfeit luxury, if luxury brands focus on the social acceptance aspect of purchasing authentic luxury products instead of counterfeits, consumers may be deterred from purchasing counterfeits due to the social risk of being identified as counterfeit buyers. As luxury products are purchased to attain social acceptance (Jhamb et al., 2020), the risk of being socially excluded may be too high for consumers.

## CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

This study focused on the impact that personality factors have on the purchase intention towards counterfeit luxury, including the moderating role that independent self-construal has on these relationships. The study demonstrated that certain personality traits (e.g., brand consciousness, materialism, status consumption, personal gratification) impact the intention to purchase counterfeits, with independent self-construal moderating these relationships indicating that the more independent individuals are, the greater the impact of their personality traits on their intentions to purchase counterfeit luxury. These personality traits can also be used to deter consumers from purchasing counterfeit luxury. For instance, communicating a sense of accomplishment through personal gratification, consumers would not opt to purchase counterfeits that do not provide the gratification they seek.

The study's limitations are that the convenience sampling approach and the different types of integrity (e.g., being aware of illegal activities and knowledge of what is illegal) may have resulted in different results. In addition, the study does not differentiate between the different luxury product categories, which may lead to different results. Future studies could focus on different luxury item categories and determine the role of social factors and the need to form part of the social group (interdependent self-construal) on the purchase of counterfeit luxury.

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# **ELECTRONIC HEALTH RECORDS: THE WONDERS AND THE WORRIES**

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## **ABSTRACT**

*The advancement of technology in the medical field within the United States and around the world has been the story of a remarkable achievement in advancing diagnostic and treatment capabilities, but concomitantly also greatly increased the cost of providing care and the risks of legal liability. A critical component of technological advancement in the healthcare field is electronic health records (EHRs). EHRs have provided a great many opportunities for improving how medical records are maintained, stored, and shared. EHRs unfortunately also have increased physician frustration and burnout rate, increased risks of data security breaches and privacy violations, and provided a general lack of interoperability between EHR systems. The “wonder and worries” of EHRs are discussed in this paper, along with ideas for EHR systems improvement. The authors recommend that hospitals and healthcare organizations strive to achieve certification from the Office of the National Coordinator – Authorized Testing and Certification Body, develop effective encryption of data, utilize best-practice password protection, and maximize the use of audit logs. Further, the human connection aspects of the clinical experience need to be kept at the forefront, and physicians should be helped in this goal using medical scribes and software programs that help physicians avoid burnout related to EHR demands. There are reasons for cautious optimism that the myriad promised benefits of electronic health records can yet be realized for physicians and other clinicians, their patients, and society as a whole.*

**Keywords:** Electronic Health Records (EHRs), medical technology, legal liability, quality improvement, caregiver effectiveness.

## DEDICATION

This paper is dedicated to the physicians, healthcare managers, and staff support professionals the world over, who go to work each day and give their honest best efforts in serving those in need of care, advice, diagnosis, and treatment.

## EVOLVING TECHNOLOGY AND THE PRACTICE OF MEDICINE

Medical technology has been described as “the practical application of the scientific body of knowledge to improve health and create efficiencies in the delivery of health care” (Shi & Singh, 2022). Scientific advancements have translated into remarkable modern diagnostics, therapies, and procedures. Physics has played a critical role in the development of diagnostic imaging tools such as fluoroscopy, magnetic resonance imaging (MRI), mammography, computed tomography (CT), and interventional radiation therapy for treating cancer patients (Freiherr, 2014). Bioengineering has brought about the wonders of minimally invasive robotic surgery, advanced prostheses, and wearable devices, such as insulin patches, monitors, and sensors (Staff Reporter, 2021).

Modern scientific advancements abound, often combined with new sets of challenges and consequences. The pharmaceutical field has produced astounding new drugs that can be both wonderfully effective and extremely expensive. As an example, curative and effective treatments for hepatitis C cost upward of \$80,000 per patient when first introduced, and public and commercial insurers denied this treatment for a third of their patients because of the exorbitant cost (Jena et al., 2019). Nanomedicine utilizes technologies at the molecular and atomic levels and has produced in recent years such wonders as consumable “smart pills” - including ingestible miniature cameras, dose-tracking pills, and vibrating capsules to treat constipation and aid digestion. The future promises amazing developments such as nanorobotic surgery capabilities to perform eye surgery, clear blocked arteries with injections of iron oxide beads that drill through, break up plaque, and collect human tissue samples, and cancer biopsies through nanorobots of elastic polymers injected into the human body (Routley, 2019). On the other hand, the safety risks of the myriad nanoparticles used in the production of various products and drugs are still not fully understood, and the inhalation or ingestion of certain nanoparticles can cause a wide array of cellular, tissue, and organ maladies, including cancers (Mandel, 2019).

The COVID-19 pandemic accelerated the adoption of telehealth and reduced the barriers to care in rural and urban underserved areas. In addition to improving access, telehealth is used for remote monitoring and adjustment of implanted devices in provider-shortage areas, such as in Central and Western China (Marin, 2020). Legislative and payer changes occurred rapidly in the United States during the pandemic, but there is uncertainty as to which direction the rules will take in a post-pandemic environment. State licensure requirements for telemedicine practitioners and adequate reimbursement for services provided from a distance have long been issues in the field of telemedicine (Cwiek et al., 2007). Much of the medical landscape has changed since COVID-19. An American Medical Association survey of more than 1,300 physicians showed that in 2022 more than 80% of physicians used televisits – up from just 14% in 2016 (AMA Study, 2022). The AMA has adopted strong advocacy positions related to the Congressional advancement of telehealth, including the increase of access to telehealth services in the commercial market, a permanent elimination of current Medicare restrictions limiting telehealth services, a removal of the in-person requirements for telemental health, a lifting of limitations on the locations of patients and physicians or other clinicians, and the assurance of continued access to clinically appropriate controlled substances without in-person requirements (AMA Digital, 2023). One of the most significant changes to state telehealth policy is the trend of payment parity (mandating equal payment for services whether provided via telehealth or in-person), now in place in twenty-one states (Viedya, 2023).

The practice of medicine has been impacted over the last several years by the steady migration from medical records being kept on paper to the computerized input, storage, and retrieval of electronic data. For hospital systems and clinical networks, this has necessitated the development of information technology (IT) support functions that provide three broad categories of computerized capabilities: *clinical information systems* (for guiding caregiver decision-making, order-entry, and quality of treatment reporting), *administrative information systems* (for financial and administrative support functions), and *decision support systems* (for providing analytic tools to support clinical and managerial decision-making) (Shi & Singh, 2022).

## **DEFINING THE TERMS: ELECTRONIC MEDICAL RECORDS (EMRs) AND ELECTRONIC HEALTH RECORDS (EHRs)**

The terms electronic medical records (EMRs) and electronic health records (EHRs) have long been used interchangeably in various circles, but a distinction between the two is important to note (Garret & Seidman, 2011). Electronic medical records have been described as the digital version of medical and treatment records within a single practice or clinical organization. The description of electronic health records, on the other hand, is more expansive, usually denoting the sharing of information electronically among providers and between various organizations, and having the characteristics of *interoperability* (the ability to communicate with other systems, providing documentation, medication management, clinical decision support, and analytics), *accessibility* (which connotes the ability for systems to use standard and common formats, and thus communicate fluidly), and *security* (the ability to safeguard the valuable target information of patients as derived from numerous and disparate providers of care) (Bonderud, 2021). For purposes of this paper, the term electronic health records (EHRs) is used as the operative term for the various issues involving medical data in individual facilities as well as in expansive healthcare systems.

## **ELECTRONIC HEALTH RECORDS: PROPELLED BY FUNDING POLICIES AND LEGAL REQUIREMENTS**

Health Information Exchange (HIE) refers to the macro-capability of sharing all clinical and administrative data throughout a wide variety of healthcare settings, including different corporate, governmental, and individual providers (Sadoughi et al, 2018). An important international study of six countries (China, England, India, Scotland, Switzerland, and the United States) discerned that the development of effective EHRs and then health information exchange capabilities were facilitated by governmental policies that included providers receiving economic incentives for their active engagement (Payne et al, 2019).

The first key piece of legislation impacting the development of secure electronic patient records was the Health Insurance Portability and Accountability Act of 1996, which made it illegal to gain access to the personal health information (PHI) of patients outside of healthcare delivery, operations, and reimbursement (Shi & Singh, 2022). HIPAA incorporated two overall fundamental requirements, the Security Rule and the Privacy Rule, and backed these rules up with enforceable financial penalties for violations of these rules. The Security Rule focuses on the creation and maintenance of electronic PHI by HIPAA-covered organizations by setting standards and regulations for how health information should be protected, and the Privacy Rule requires measures to protect the privacy of the patient's medical records, insurance information, and other personal information by preventing healthcare providers and their business associates from sharing information not authorized by the patient (Lord, 2020).

The second key legislative development to encourage the widespread adoption of EHRs by healthcare providers in the United States was the Health Information Technology Act for Economic and Clinical Health Act (HITECH) of 2009, representing a \$30 billion investment to transform the delivery of American healthcare (Tripathi, 2012). As described by Pozgar (2023):

Healthcare organizations undergoing computerization must determine user needs, design an effective system, select appropriate hardware and software, develop user training programs, develop a disaster recovery plan (e.g., provide for emergency power systems and backup files), and provide for data security. A reliable electronic information system requires knowledge-based planning and design. Solid planning and design can lead to improved patient care.

Financial incentives offered to “eligible professionals” (physicians and hospitals) who could show “meaningful use” of certified EHRs under HITECH in 2011 or 2012 included payments of \$18,000 in year one (but this would drop to \$15,000 if after 2012), \$12,000 in year two, \$8,000 in year three, \$4,000 in year four, and \$2,000 in year five. However, after 2015, penalties in Medicare and Medicaid payments would be in place for physicians failing to meaningfully use EHRs (Burde, 2011). These would prove to be some of the most powerful financial incentives and disincentives ever experienced in the medical community related to the adoption of technology. In

addition, billions of dollars of revenue would become available to the EHR vendors. However, time was of the essence, and medical providers and industry vendors of EHR systems knew this. As Fry and Shulte (2019) reported:

Seema Verma, the current chief of the Centers for Medicare and Medicaid Services (CMS), which oversees the EHR effort today, shudders at the billions of dollars spent building software that doesn't share data – an electronic bridge to nowhere. "Providers developed their own systems that may or may not even have worked well for them," she tells KHN and *Fortune* in an interview this February, "but we didn't think about how all these systems connect with one another. That was the real missing piece."

The goals for EHRs under HITECH were expansive and laudable, but also extremely ambitious to accomplish in a tight time frame. Many different federal agencies wanted a wide variety of goals to be accomplished – goals that taken individually would be laudable. Taken together, the impact on caregivers would be profound. For example, the Centers for Disease Control and Prevention (CDC) wanted EHRs to support disease surveillance; the Food and Drug Administration (FDA) wanted the new systems to track unique device identifiers for medical implants; the Centers for Medicare & Medicaid Services (CMS) wanted systems to incorporate quality metrics; and so forth (Fry & Schulte, 2019).

## **ELECTRONIC HEALTH RECORDS – THE WONDERS**

When properly resourced and maintained, the reported benefits of an electronic health records system are many. With an effective EHR system, according to Menachemi & Collum (2011), there should be improved clinical outcomes (fewer medical errors and documentable quality improvement projects), enhanced organizational outcomes (financial and operational benefits), and improved societal outcomes (enhanced ability to conduct research, improved population health, reduction in costs). Better adherence to clinical practice guidelines can be attained, as well as a reduction of risks of medication errors and adverse drug effects (Campanella et al, 2015).

It has been noted that with the widespread use of EHRs, clinicians now have vast amounts of patient data and other information that can be used effectively for clinical decision support (CDS) (Mandell, 2022). Further benefits include eliminating legibility problems with handwritten records, the ability of several providers to view a record simultaneously, automated drug interaction and allergy alerts, and dosing error detection. Important public health impacts have been found, including the early identification of infections and disease surveillance (Willis et al, 2019). EHRs and the ubiquity of handheld devices such as cell phones and tablets enhance the portability of information and easy access to patient data (Shi & Singh, 2022). EHRs help medical offices become less cluttered as storage needs decrease with less need for paper records. Every provider can see the various tests the patient has had, and which treatments worked, and which did not – leading to better coordination of care for the patients (USF Health, 2017).

An international study indicated that the positive aspects of patients having access to their EHR via secure online patient portals tend to outweigh the negative aspects. The benefits included reassurance, reduced anxiety, positive impact on consultations, better doctor-patient relationship, increased awareness and adherence to medication, improved patient outcomes (such as blood pressure and glycemic control), enhanced knowledge, and improved recovery scores (Tapuria et al., 2021). Patient concerns were noted however around the issues of security, privacy, and confidentiality of the health records, and the anxiety that it may cause with some patients. As another commentator noted: "One potential pitfall is the fact that some patients may learn about their test results before their treating physicians, which may cause anxiety among patients who do not understand the implications of abnormal results and for physicians who may field communications directly from patients without being fully prepared" (Rodriquez, 2016).

## **ELECTRONIC HEALTH RECORDS – THE WORRIES**

Vexing byproducts of the sweeping development of EHRs are the phenomena of "physician burnout" and low clinician satisfaction (Lite et al., 2020). Clinicians often complain that EHRs take much longer to complete time-consuming tasks compared to paper charts and that dozens of mouse clicks are necessary for even simple entries. Caregivers must navigate many pop-up notices and contraindication warnings on the screen, giving rise to irritation and unnecessary extraneous information. Fontenot (2013) pointed out additionally: "The enormous, unintended consequence of EHRs is voluminous records overflowing with irrelevant information. The greatest concern about EHRs is also their greatest

irony: the digital record that was supposed to increase communication among parties involved in a patient's care has actually resulted in millions of computer-generated pages that no one reads." Fry and Schulte (2019) pointed out:

Few would deny that the swift digitalization of America's medical system has been transformative. With EHRs now nearly universal, the face and feel of medicine have changed. The doctor is now typing away, making more eye contact with the computer screen, perhaps, than with the patient. Patients don't like that dynamic; for doctors, whose days increasingly begin and end with such fleeting encounters, the effect can be downright deadening.

Another worrisome aspect of the digitalization of so much clinical information is the opportunity for enormous security breaches and the threat of patient privacy being severely compromised. According to Kost (2023), the Tricare Data Breach (involving active-duty troops, their dependents, and military retirees) impacted 5 million patients; the Community Health Systems Data Breach of 2014 impacted 4.5 million patients and their sensitive medical records; the UCLA Health Data Breach of 2015 similarly involved the clinical information of 4.5 million patients and exacted a \$7.5 million fine for failure to report the breach promptly; and the Advocate Health Care Data Breach of 2013 involved just over 4 million patients and resulted in a fine of over \$5.5 million paid by Advocate to the Health and Human Services Department. In 2021, more than forty million patient records were known to have been compromised (Ataman, 2023). Many of these hijacked records included financial information, social security numbers, and medical details such as clinical notes, lab tests, prescription information, etc.

There is an estimated 48% growth in medical data each year (Bednar, 2019). There is tremendous growth also in the use of cell phones, tablets, laptops, etc. by medical employees to input and extract medical data. Encryption is not technically required under HIPAA rules but is considered an "addressable" offense. Even so, medical organizations that do not safeguard electronic devices held by employees that contain protected health information can be found in violation of HIPAA – just as MD Anderson was for violations including the theft of an unencrypted laptop and the loss of two unencrypted USB thumb drives. MD Anderson was fined 4.3 million dollars for these violations that compromised data for 33,500 patients (Landi, 2018). Encryption tools and techniques continue to evolve, and the need to stay abreast of these developments remains the obligation of the providers.

An ironic and worrisome aspect of EHRs today relates to a lack of interoperability - the cohesive communication between information systems - oftentimes due to glitches within systems and sometimes due to competing proprietary business concerns. Over one in five respondents to a Kaiser Family Foundation survey noted that they or a family member spotted one or more errors in their EHR (Munana et al., 2019), and the Pew Charitable Trusts has been tracking basic issues involving linking correct medical records with the correct patients, and reports of widespread errors exist even within the same EHR system (Pew, 2016). The HITECH Act set an original goal of EHR systems eventually talking seamlessly to each other, but perverse organizational incentives can work in the opposite direction. According to Fry and Shulte (2019):

A free exchange of information means that patients can be treated anywhere. And though they may not admit it, many health providers are loath to lose their patients to a competing doctor's office or hospital. There's a term for lost revenue: "leakage." And keeping a tight hold on patients' medical records is one way to prevent it. There's a ton of proprietary value in that data, says Blumenthal, who now heads the Commonwealth Fund, a philanthropy that does health research. Asking hospitals to give it up is "like asking Amazon to share their data with Walmart," he says.

## **IDEAS FOR EHR SYSTEMS IMPROVEMENT**

The stakes and risks are high related to protecting EHRs, particularly large data compilations. The cyber agency of the U.S. Department of Health and Human Services, the Health Sector Cybersecurity Coordination Center, reported that the hacking of EMRs is especially attractive to bad players worldwide and that the EMR is "valuable to cyber attackers because of the Protected Health Information it contains and the profit they can make on the dark web or black market" (Jercich, 2022).

The authors recommend that hospitals and healthcare organizations strive to attain the following levels of achievement:

- 1) ONC-ATCB Certification. The Office of the National Coordinator – Authorized Testing and Certification Body reserves certification for EHR systems that demonstrate interoperability, and that is secure based on a set of four hundred criteria (Dugar, 2023).
- 2) Effective Encryption of Data. Encryption tools have evolved greatly over the past few years, and providers need to be buying into more robust encryption solutions, including *Encryption at Rest* - for stored data with even backup disks accessible only with the encryption key; *Encryption in Transit* - protecting data as it moves from one location to another; and *Email Encryption* – encompassing email in transit and the plain text of the message itself (Kast, 2021).
- 3) Effective Password Protection. Going beyond just alpha-numeric passwords, EHRs should include lockouts, security questions, two-factor authentication, and mandatory resets at regular intervals (Dugar, 2023).
- 4) Audit Logs. It is important to monitor and record who, when, and where access to the system occurred. There can be serious repercussions when a provider, for example, cannot demonstrate a clear trail of access in a medical malpractice lawsuit (Fry & Schulte, 2019). Going further, effective use of audit logs can be essential tools in studies aiming to provide solutions to the more vexing problems for clinicians in the EHR environment, including the “burnout” problem for practitioners related to excessive time spent documenting in the electronic charts during clinic hours and in the “pajama time” hours after work; and the onerous number of in-basket messages to which clinicians need to respond (Cohen et al., 2020).

The authors recommend that physicians, nurses, other caregivers, IT professionals, managers, and any others involved in the healthcare spectrum remember that it is the *human connection* that should be emphasized in the clinical experience, especially when the exigencies of the EHR are included in the mix. One of the frequent complaints by patients is the lack of respect and a sense of poor bedside manner. The caregivers often seemed more in touch with their computers but did not take the time to listen to the patient’s complaints and real concerns, and perhaps did not conduct a physical exam that included listening with the stethoscope. From the physician’s perspective, the clinical encounters can seem likewise suboptimal:

“You’re sitting in front of a patient, and there are so many things you have to do, and you only have so much time to do it in – seven to 11 minutes, probably – so when do you really listen?” asks John-Henry Pfifferling, a medical anthropologist who counsels physicians suffering from burnout. “If you go into medicine because you care about interacting, and then you’re just a tool, it’s dehumanizing,” says Pfifferling, who has seen many physicians leave medicine over the shift to electronic records. “It’s a disaster,” he says (Fry & Schulte, 2019).

The authors recommend that medical scribes be included in the clinical encounter experience of healthcare systems, for those physicians considering this sort of assistance. Medical scribes, also called documentation assistants, “are professionals who transcribe information during clinical visits in real time into electronic health records (EHRs) under physician supervision. Scribing, or ‘team documentation,’ frees physicians from note documentation and entering orders or referrals. This allows doctors to focus on the patient, according to an AMA STEPS Forward module on team documentation” (Robeznieks, 2018). Studies looking at the efficacy and efficiency of medical scribes have yielded positive results. Research has shown that the sagacious utilization of medical scribes led to improved quality metrics, decreased burnout, improved patient access and volume (Lyon et al., 2020), as well as better patient interactions, improved physician satisfaction, better teamwork, and economic sustainability (Rebeznieks, 2018). Potential issues related to the use of scribes that need to be managed relate to the insertion of a third party in the exam room and the need for the physician to regularly monitor the quality and accuracy of the information put into the record by the scribe (Yasgur, 2017).

## CONCLUSION

As discussed in this paper, it would not be off base to state that many of the early promises of electronic health records have yet to be realized. Conversely, there have been numerous impressive benefits seen to date, including such things as the seminal studies on patient safety, clinician effectiveness, and public health improvement that were made possible by large data sets generated by EHR systems. There are reasons for cautious optimism with the future of electronic health records, assuming the existence of the following critical factors: that EHR platforms will be programmed to become more user-friendly and intuitive for the clinicians who use them, that physicians and other

clinicians will be able to focus more on the patients before them and not the screens that demand their inputs, that large hospital systems will embrace interoperability over time and become more cooperative in sharing information with other provider organizations, that patients will become more comfortable and savvy with viewing their medical information on EHR portals and therefore more invested in the co-management of their own care, and that governmental agencies will help safeguard against the web's bad players and not penalize all the good clinicians with burdensome and counter-intuitive regulations.

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# GREEN BEAUTY PRODUCT LOYALTY: A MODEL VALIDATION

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## ABSTRACT

*The beauty product industry is one with a lucrative forecast, as this industry had a global revenue of approximately 571.1 billion US dollars in 2022, expected to grow by 3.8 percent annually. Where natural or green beauty products contributed 37 billion US dollars to the total value of the beauty product industry in that specific year. This may be due to consumers increasingly becoming aware of the effect their lifestyle and behaviour have on the environment. Accordingly, they are more conscious about purchasing environmentally friendly and ethically sourced products. This is especially true regarding beauty products, as this market has been experiencing substantial growth in the green sphere. Consequently, competition in the green beauty product industry is increasing significantly, highlighting the importance for retailers in this industry to retain consumers by increasing product loyalty. To increase product loyalty for any product, a thorough understanding of the factors that might affect consumers' loyalty towards the specific product is needed. To this end, a model that can be used to measure green beauty product loyalty will assist marketing academics and practitioners, especially within the green beauty product industry. As such, this study focused on validating a green beauty product loyalty model within the South African context. A descriptive research design was followed, collecting data from a sample of 500 participants employing a computer-administered survey. The factors included in the specified measurement model comprised green beauty product loyalty, quality perception, price perception and green trust. The data was analysed using collinearity diagnostics, confirmatory factor analysis, nomological, convergent and discriminant validity analysis, internal-consistency and composite reliability analysis and model fit indices. The results conclude that green beauty product loyalty is a four-factor model, exhibiting internal consistency reliability, as well as composite reliability, together with construct, convergent and discriminant validity, presenting no multi-collinearity issues and good model fit indices. Consequently, this empirically-validated model serves as a good foundation for marketing academics and practitioners in understanding the factors influencing consumers' product loyalty when it comes to green beauty products.*

**Keywords:** green beauty products, green product loyalty, green trust, price perception, quality perception.

## INTRODUCTION

The awareness consumers have regarding the effect of their purchase behaviour on the environment has grown tremendously (Culasso, 2014:5). This consciousness has led to an increased number of consumers around the globe who are looking for environmentally friendly and ethically sourced products (Liobikiene & Bernatoniene, 2017:110). The demand for green products is increasing, as consumers feel that they can assist in decreasing the strain on the environment by purchasing green products (Liobikiene & Bernatoniene, 2017:110). Due to this increase in environmentally concerned consumers, there is an upsurge in competition and retailers keeping abreast with this green trend have created a competitive edge for themselves (Liobikiene & Bernatoniene, 2017:110). This phenomenon can also be seen in the beauty product industry, with consumers purchasing natural or green beauty products because of the environmental friendliness of the products as well as the health benefits associated with these products (Suphasomboon & Vassanadumrongdee, 2022:230, Yang, 2017). This holds true within the South African market as well, with beauty products being sourced in an ethical way and produced with more natural ingredients becoming increasingly popular amongst consumers (Beneke et al., 2010:478). Accordingly, the green beauty product industry has shown noteworthy growth over the past few years and is expected to reach the 59 billion US dollar mark by 2031 (Petruzzi, 2022). One way in which retailers within fast-growing industries can remain sustainable is to retain their current customers. Numerous sources concur that securing and retaining brand-loyal customers lower costs for companies (Hanzaee & Andervazh, 2012:5389; Mai, 2016:2), especially marketing costs (Omanga, 2013:1). For

retailers to retain customers, a thorough understanding of the factors influencing their loyalty towards products or brands is required. A limited amount of research can be found regarding the factors that play a role in relation to green beauty product loyalty. Accordingly, the current paper addresses this gap in the literature by proposing a model that can be used to measure product loyalty regarding green beauty products.

## LITERATURE REVIEW

In today's world, a lot of attention is given to the aesthetic appeal of individuals, and accordingly, the expenditure on products that can assist in this regard is growing (Dayal, 2021). Beauty products can be classified as such, as these products comprise any product used to care for, clean and enhance the beauty of the human body. Consumers use these products to take care of their bodies and/or to enhance their appearance (Britannica, 2023). Other than physical vanity playing an imperative role in our normal lives, the media is also placing a lot of emphasis on the impact consumers' consumption patterns have on the environment. Therefore, green beauty products are also becoming a trend, with promising expected growth (Petruzzi, 2022). Green beauty products include those beauty products that only contain natural ingredients and are sourced, produced and packaged in an ethical and sustainable manner to lessen their environmental impact on the planet (McEachern & McClean, 2002). Because this market is showing good projected growth, competition within this market is also expected to show similar growth, translating into retailers having to capture the attention of consumers and retain those consumers (Sangeetha & Rani, 2017:282).

To be a loyal customer, there must be a commitment to repurchase a product or service constantly in the future (Chen & Chang, 2013:296). When a customer becomes loyal to a brand or product, they will show a more favourable response to the brand or product than non-loyal customers (Chattopadhyay et al., 2010:174). There might be several factors influencing customers to make such a commitment. Not only in a retail setting but in our normal lives, trust significantly influences loyalty. This is because trust is related to an individual accepting vulnerability based on the positive expectations the individual might have of another's intentions and behaviour. Within the green industry, a similar phenomenon can be seen with trust influencing consumers' green product choices (Lam et al. 2016:50). Accordingly, Chen and Chang (2013:296) developed a definition for trust within the green industry, named green trust, which is defined as 'a willingness to depend on a product or service based on the belief or expectation resulting from its credibility, benevolence and ability about environmental performance'. From the discussion, it is evident that trust is something to consider within the green product market and as such, is included in the proposed model on green beauty product loyalty.

Another component that enjoys a significant amount of consideration in the loyalty realm is quality. This is confirmed by various researchers (Chattopadhyay et al., 2010; Khraim, 2011; Mai, 2016; Omanga, 2013; Yoo et al. 2000), whose studies found quality to influence brand loyalty and /or repeat purchasing significantly. The subjective judgement of a customer about the excellence or superiority of a product or service can be described as their perceived quality (Chattopadhyay et al., 2010; Zeithaml, 1988:3). A couple of factors might influence one's judgement of product or service quality, such as one's personal product experiences or the unique needs of a customer, as well as the different consumption situations of customers (Yoo et al., 2000:197). Customers will rarely compromise on the quality of a product or service and usually include quality as a qualifying criterion for potential suppliers. Furthermore, delivering high-quality products is one of the determining factors that will differentiate retailers from others in a competitive environment (Hanzaee & Andervazh, 2012:5392). It is also noted that brands or retailers offering products with higher perceived quality can sell these products at a premium price, contributing to increased profits (Mai 2016:27).

Price perception plays an imperative role in consumer purchase behaviour (Foster & Cadogan, 2000; Matzler et al., 2016:79), especially when the economic circumstances are not favourable (Quelch & Jocz, 2009). As consumers prioritise their standard of living, they tend to become more aware of the prices of products and services and are becoming less inclined to pay elevated prices (Matzler et al., 2006:79). Consumers will be influenced by price to a greater extent when their living expenses increases (Yunus et al., 2018:30). This is the case in South Africa at the present moment (Wasserman, 2023), which has led to the expectation that South African consumers will be more easily influenced by price. Omanga (2013:26) argues that brand-loyal consumers are not as easily affected by price, as they believe their preferred brands to have a certain value attached to them and do not mind paying an elevated price for that benefit. The perception of the price charged for a product or service whether it is expensive, cheap or reasonably or unreasonably priced will be a determining factor when it comes to purchasing decisions the customer

has to make (Kurnianingrum & Hidayat, 2020:269), especially regarding repeat purchasing decisions (Han & Sunghyup, 2015:21). Based on the literature reviewed, the following hypothesis is proposed for this study:

*H<sub>1</sub>: Green beauty product loyalty is a four-factor model that is composed of quality perception, price perception, green trust and green beauty product loyalty.*

## RESEARCH METHODOLOGY

This study followed a descriptive research design with a single cross-sectional sampling approach. The target population was delineated as South African adult consumers between the ages of 18 and 65. Employing a computer-administered survey, data was collected from 500 participants forming part of the target population. Before data collection commenced, ethical clearance was obtained. A highly regarded South African research company was used to collect the necessary data. Although participants completing surveys for this company receive incentives, in the form of shopping vouchers, results are not biased as this company adheres to the required ethical standards and POPI Act regulations. To ensure that data was obtained from participants falling within the target population, the following inclusion criteria were given to the research company: participants should live in South Africa currently and should be between the ages of 18 and 65 in 2022, with an equal distribution of gender. No data was collected that did not adhere to the inclusion criteria.

The electronic questionnaire included a cover letter, providing the participants with background information about the study, as well as the purpose of the study. Furthermore, confirmation of the participant's anonymity was given in the cover letter, followed by an informed consent statement. The next section gathered the participants' demographical information, together with their beauty product usage behaviour. The last section was aimed at gathering data pertaining to the participants' green beauty product perceptions. These responses were recorded by means of a six-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (6). In the following table, a representation of the questions adapted and used in the questionnaire can be seen.

**Table 1: Constructs and items**

Construct	Item	Adapted from
Quality perception	Green beauty products are likely to be extremely reliable.	Besharat, 2010
	Green beauty products are likely to be exclusive.	
	Green beauty products are likely to be well researched.	
	Green beauty products are of extremely good quality.	
Price perception	Green beauty products are reasonably priced.	Ailawadi et al., 2008
	Green beauty products offer value for money.	
	Green beauty products provide a good product for the price.	
	Using green beauty products is cost-effective.	
Green trust	The environmental reputation of green beauty products is generally trustworthy.	Cheung et al. 2015 & Ha et al. 2022
	The environmental claims from green beauty products are generally trustworthy.	
	The environmental statements made by green beauty products are generally reliable	
	Green beauty products keep promises and commitments for environmental protection	
Green beauty product loyalty	Green beauty product brands are always my first choice.	Cheung et al., 2020, Dabija D-C. 2018 & Yoo et al., 2000
	I will not buy other beauty products if green beauty products are not available at the store.	
	I am willing to buy green beauty products even if its price is a little higher than other brands.	
	I intend to remain a consumer of green beauty product brands.	
	I will recommend green beauty products to my friends and family.	

Data analysis was conducted by using IBM's Statistical Package for Social Sciences (SPSS), Version 27, and Analysis of Moment Structures (AMOS). Procedures used comprised Pearson's product-moment correlation for

nomological validity analysis, collinearity diagnostics, confirmatory factor analysis, internal-consistency and composite reliability analysis, convergent and discriminant validity analysis and model fit assessment.

For the measurement model to be deemed nomologically valid, statistically significant correlation coefficients between each of the pairs of latent factors planned for inclusion in a model are necessary (Hair et al., 2010). For a measurement model to have no serious multi-collinearity concerns, tolerance values of 0.10 or above and an average variance inflation factor (VIF) of less than 10 are required (Pallant, 2010).

Confirmatory factor analysis of the measurement model is conducted to assess whether the measurement model is specified correctly and to determine whether there were any problematic estimates, such as standardised factor loadings outside the recommended range of 1.0 and -1.0, as well as Heywood cases (Hair et al., 2010). Furthermore, the model fit is also assessed by means of the other model fit indices, such as the normed fit index (NFI), the incremental-fit index (IFI), the Tucker-Lewis index (TLI), the comparative-fit index (CFI), the standardised root mean square residual (SRMR) and the root mean square error of approximation (RMSEA). Where good model fit can be inferred with fit index values exceeding 0.90 and SRMR and RMSEA values not exceeding 0.08 (Malhotra, 2020).

The internal-consistency reliability and composite reliability (CR) of a measurement model are assessed by calculating Cronbach's alpha and CR values. These values should be above 0.70 (Malhotra, 2020). Furthermore, latent factor loading estimates and average variance extracted (AVE) values of 0.50 or above are required to conclude convergent validity. Discriminant validity can be inferred if the square root of the calculated AVE values ( $\sqrt{\text{AVE}}$ ) exceeds their relevant correlation coefficient estimates (Fornell & Larcker, 1981). Another measure that can be used to assess discriminant validity is the Heterotrait-Monotrait (HTMT) ratio of correlations parameter (Franke & Sarstedt, 2019; Henseler et al., 2015). To infer discriminant validity with this measure, the HTMT value between each of the pairs of latent factors in a measurement model should not exceed 0.85 (Voorhees et al., 2016). Throughout,  $p \leq 0.01$  was used as the threshold for statistical significance.

## RESULTS

The sample included 243 (48.6%) male respondents, 254 (50.8 %) female respondents and 3 (0.6%) respondents who preferred not to indicate their gender. Most of the respondents reside in an urban area (87.4%) rather than a rural area (12.5%). All 11 official South African languages were represented by the sample.

For confirmatory factor testing, the measurement model specified in this study is that green beauty product loyalty is a four-factor model that includes the following factors: quality perception, price perception, green trust and green beauty product loyalty. Confirmatory factor analysis was conducted by means of Pearson's Product-Moment correlation coefficients, to ascertain nomological validity and multi-collinearity concerns. The correlation coefficients, tolerance values and VIF values are presented in Table 2.

**Table 2: Descriptive statistics and reliability measures**

	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>Tolerance</b>	<b>VIF</b>
Quality perception (F1)				0.348	2.870
Price perception (F2)	0.618*			0.423	2.367
Green trust (F3)	0.795*	0.695*		0.285	3.504
Green beauty product loyalty (F4)	0.655*	0.704*	0.701*	0.403	2.479
*Significant at $p \leq 0.01$					

The results presented in Table 2 imply that there are significant positive correlations between each of the pairs of constructs identified to include in this model, suggesting nomological validity. An absence of multi-collinearity issues can be inferred based on the tolerance values ranging between 0.285 and 0.423 together with VIF values ranging between 2.367 and 3.504.

AMOS was used to conduct a confirmatory factor analysis of the measurement model. The standardised loading estimates, squared multiple correlation estimates ( $R^2$ ), as well as Cronbach alpha, composite reliability, AVE and  $\sqrt{\text{AVE}}$  values, are reported in the following table.

**Table 3: Estimates for measurement model**

Latent factors	Standardised loading estimates	R <sup>2</sup>	<i>a</i>	CR	AVE	√AVE
Quality perception (F1)	0.837	0.701	0.89	0.891	0.673	0.820
	0.682	0.465				
	0.857	0.734				
	0.890	0.793				
Price perception (F2)	0.827	0.684	0.92	0.919	0.738	0.859
	0.886	0.786				
	0.866	0.751				
	0.857	0.735				
Green trust (F3)	0.889	0.791	0.94	0.944	0.809	0.899
	0.924	0.854				
	0.911	0.830				
	0.874	0.763				
Green beauty product loyalty (F4)	0.831	0.691	0.90	0.900	0.646	0.803
	0.610	0.372				
	0.819	0.671				
	0.879	0.773				
	0.850	0.722				
Correlations:	F1 ↔ F2: 0.691		F1 ↔ F3: 0.860		F1 ↔ F4: 0.743	
	F2 ↔ F3: 0.749		F2 ↔ F4: 0.771		F3 ↔ F4: 0.772	

The measurement model estimates presented in Table 3 are indicative of internal consistency and composite reliability with all Cronbach alpha and CR values above 0.70. The standardised loading estimates, together with each of the four latent factors' AVE values that exceed 0.50, suggest convergent validity. With the exception of one, the √AVE values of each of the factors are greater than their relevant correlation coefficients. The HTMT ratio values calculated to ascertain the measurement model's discriminant validity are reported in the following table.

**Table 4: Heterotrait-Monotrait ratio values (HTMT)**

	F1	F2	F3
Quality perception (F1)			
Price perception (F2)	0.660		
Green trust (F3)	0.795	0.706	
Green beauty product loyalty (F4)	0.621	0.706	0.798

The HTMT ratio values presented in Table 4 range between 0.621 and 0.798, which is below 0.85, indicating discriminant validity (Voorhees et al., 2016). After the reliability and validity were established, the model fit indices of the measurement model were computed and indicated good model fit with a NFI of 0.95, a TLI of 0.957, an IFI of 0.965, a CFI of 0.965, a SRMR of 0.036 and a RMSEA of 0.069. According to the results presented here, this study concurs that green beauty product loyalty is a four-factor measurement model.

## CONCLUSION

Consumers are increasingly becoming aware of the impact they have on the environment, and therefore their tendency to purchase green products, especially within the beauty product industry is increasing significantly. Owing to the green beauty product market enjoying such an increase in demand, the competition within this industry is proving to be quite fierce, and as such, marketing practitioners and retailers within this industry are trying to not only acquire

new customers but encourage repurchasing and product or brand loyalty. Focus is placed on retaining customers, as the cost of retaining customers is less than acquiring new customers. Accordingly, this study was aimed at assisting marketers and retailers within the green beauty product industry to gain a better understanding of the factors that might influence consumers' green beauty product loyalty by validating a green beauty product brand loyalty scale in the South African context. The results presented in this paper propose that the hypothesized model for green beauty product loyalty is a four-factor model that comprises quality perception, price perception, green trust and green beauty product loyalty. The statistical findings conclude that this model is valid and reliable and exhibits good model fit. As such, marketing researchers can use this model as a foundation to extend research on loyalty with regard to green beauty products and marketing practitioners and retailers are encouraged to use this scale to target their markets more effectively with the end goal of retaining their customers. Future research can be conducted to determine the extent to which these factors influence consumers' product loyalty, which can be done via a structural model based on this study.

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# EXPLORING THE CHALLENGES AND BARRIERS TO WOMEN ENTREPRENEURSHIP IN THE NEPALESE FOOD INDUSTRY

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## ABSTRACT

*Women entrepreneurship has gained popularity globally over the past few decades because it increases productivity, innovation, and economic prosperity, reduces poverty, and creates jobs. Women have shown increased interest in the Nepalese food industry, and several have begun their careers to improve their living standards and social status. However, past studies showed that women entrepreneurs still face significant barriers despite an increasing number of start-up businesses in the food industry. Few researchers have discussed the barriers women entrepreneurs face in Nepal, and none have examined the barriers women entrepreneurs face in the food industry, which leaves a research gap. The current study aims to examine the barriers that women entrepreneurs face that limit their business involvement in the Nepalese food industry. From a social constructivist perspective, utilising an inductive approach and a case study strategy, in-depth interviews with 25 women entrepreneurs were conducted in Nepal. This paper provides some insights into how barriers faced by women entrepreneurs in Nepal could be mitigated.*

**Keywords:** entrepreneurship, women entrepreneurs, economy, barriers, food industry, qualitative research, Nepal.

## INTRODUCTION AND BACKGROUND

Women entrepreneurship has become an essential topic in academia because it is a driving force for increased productivity, job creation, and profits (Iroegbu and Ubuaru, 2019). It facilitates micro, small, medium, and large businesses, which results in poverty reduction and economic growth. The importance of developing countries expanding their production base is well known (Knox et al., 2014). The role of entrepreneurs in developing countries, especially for small-scale industries (Valliere and Peterson 2009), is crucial, even though there are numerous and complicated mechanisms and effects, and specific studies have revealed a negatory association between developing economy entrepreneurship and economic growth due to a shortage of human capital (Thurik et al., 2008). However, female business owners in Nepal often find it extremely difficult to conduct business, make required relations with other entrepreneurs, and even engage with customers. They face various challenges due to insufficient funding and government support, a shortage of business education opportunities, and specific religious and cultural barriers. Due to their inability to obtain credit, they have turned to the informal economy, and their lack of capital has led them to seek loans from microfinance institutions (Jansen et al., 2021). In addition, women-owned companies are considered minor, with lower growth and profit margins than male-owned businesses (Arab and Vakil Alroaia, 2020).

### Theoretical Context

Women entrepreneurship development plays a significant role in a country's development, and women entrepreneurs have a considerable impact on almost all segments of a country's economy (Verheul et al., 2006). Women are critical human resources and they constitute more than half (51.41%) of the total population in Nepal. Hence, the government should utilise women as mediators of economic growth and development. Due to various barriers, including legal

barriers, gender biases, human rights, socio-cultural, environmental, and individual, women's brainpower is not adequately harnessed and it is underutilised (Sumathi et al., 2022).

The food industry is ranked the second largest industry of Nepal. This industry provides job opportunities to a diverse workforce irrespective of skills. Especially for women, this industry has been the easiest route to entrepreneurship (Xheneti et al., 2021). Moreover, women working in the food industry is widely accepted and recognised by Nepalese culture, more so than women working in beauty parlours, tailoring, or handicrafts. According to the World Bank (2021), the Nepalese food industry provides 33.3% of job opportunities, which makes this industry the second largest in terms of job opportunities. Therefore, the representation of women entrepreneurs in this industry is very high; it accounts for 88.16% of active women entrepreneurs. The food industry has brought a massive influx of money into businesses, contributed to revenue growth, and aided economic stability.

An encouraging fact is that women entrepreneurs in Nepal are gradually growing in number, and some policy instruments were found helpful to encourage this growth. According to Bhandari (2022), the total number of registered women entrepreneurs in Nepal was 3894 in 2069 Bikram Sambat B. S. (Hindu calendar; 2012 in Gregorian calendar). This report showed that enthusiasm among women to earn a living through entrepreneurship seems to have increased in Nepal despite socio-cultural constraints (Kayalvizhi, 2021). However, the rate of entry of women into entrepreneurship is still low, and women entrepreneurs face various constraints, including legal ones. In such a scenario, it is necessary to remove obstacles to women entrepreneurship.

Several studies have been conducted on women entrepreneurship in Nepal, such as Ranabhat et al. (2022), Shrestha (2020), Bajracharya (2017) and Bushell (2008), but only a few of them focused on the challenges and opportunities encountered by women entrepreneurs in the food industry of Nepal. Previous research conducted in the field of the food industry of Nepal focused on describing the facts and figures of the industry and explaining whether the sector is growing or declining.

The pace of development of women entrepreneurship depends on action-oriented and practical policies. Significant incentives and motivational factors are needed to upgrade entrepreneurship and productivity. In particular, equal opportunities in economic activities without any gender bias are essential to accelerate economic growth and attain consistent growth for sustainable development (Tripathi, 2012). Policies need remodelling to remove various hurdles faced by women entrepreneurs.

## **Role of Women Entrepreneurs**

The role of women entrepreneurs in economic development has been evident since the 1990s in various parts of the world. Women entrepreneurship has become an essential movement today and in all working areas. A United Nations (2022), report concluded that economic development is closely related to the development of women. In a nation where women have advanced, economic growth has usually been steady. In contrast, many countries restrict women, which results in a stagnant economy (Duflo, 2012).

Women entrepreneurs have demonstrated their potential, but the fact is that they can contribute much more than what they already do. Therefore, it is necessary to formulate appropriate strategies for stimulating, supporting, and sustaining their efforts in this direction to harness their potential and continued growth and development (Rao et al. 2012 ). Furthermore, a distinguishing feature of a woman entrepreneur is the willingness to work hard; she follows the principle that hard work is the key to success (Rathirane, 2019).

Ganesan et al. (2021) stated that self-motivated women entrepreneurs confront significant problems; they recommended suitable entrepreneurial training and boosting women entrepreneurs by building networks and alliances.

Nowadays, women get involved in selected professions like trade, industry, and engineering. Women are also willing to take up business and contribute to their nation's growth. Their roles are valued, and policies are updated to promote women entrepreneurship. Women entrepreneurs need entrepreneurial traits and skills to meet changes in trends, challenges, and the global market and be competent enough to sustain their business and strive for excellence in the entrepreneurial arena (Das, 2000). Women have provided work for themselves and others (Healey, 2004). However, entrepreneurship offered a partial answer to women in Nepal. Entrepreneurship has triggered women to take

a positive step that they have been contemplating for some time. Yet, the negative realities of entrepreneurship pose severe challenges to these women. For most of them, obtaining and maintaining an adequate balance between the domestic and working spheres of their lives is a constant challenge and a source of stress.

Additionally, women and men do not have access to the same kinds of capital, which prevents them from participating in the same entrepreneurial activities. According to Sumathi et al. (2022), there is a lack of support (institutional, financial, and family), fear of failure, and unfavourable social perceptions. Onuorah and Oliobi (2013) identified fear of failure and self-efficacy as significant barriers that prevent women from pursuing a business career. According to Wieland, Turban and Gupta (2019), many women entrepreneurs face similar barriers in start-ups around the world. A “Start-ups Outlook 2018” survey published by Silicon Valley Bank (SVB) (2019) showed that 71% of new American companies lack women on their board and 57% lack women in C-suite roles. Similarly, only 17% of companies registered in CrunchBase in 2017 had female co-founders, which confirms the findings of the SVB survey.

## DATA COLLECTION METHODS AND ANALYSIS

According to social constructivism, learning happens via social interaction and with other people’s assistance, often in a group. Lev Vygotsky, a Soviet psychologist, established social constructivism theory (1896–1934). Social constructivism is predicated on the notion that reality is collectively generated by the members of a community (Alghamdi, 2021), that people construct meaning through their relationships with others, and that knowledge is built by human activity (Onuf, 2013; Ozuem et al 2021). Referring to Davis (1994), the social constructivist school of thought on education holds that instructors should promote group projects in the classroom. Social constructivism indicates that learning can be enhanced by contact with peers (Pfadenhauer and Knoblauch, 2019), especially more knowledgeable peers; for example, in a mediated learning experience, interaction with an adult helps a child make sense of an event or phenomenon. Students who apply social constructivism may develop deeper comprehension, better problem-solving abilities, and improved metacognitive abilities (Alghamdi, 2021).

Drawing on social constructivism, utilising an inductive approach, and a case study strategy, empirical data were generated through 25 in-depth interviews with Nepalese women entrepreneurs. Interviews lasted about 30 to 45 minutes with 11 questions and were audio-recorded. Also, this will help researchers to make transcripts which will help in final analyses (Neumeyer et al., 2018). Drawing on Ozuem et al.’s (2022) dynamic thematic analysis framework, interviews were analysed using thematic analysis. This involved generating themes and sub-themes (Table 1) from the interviewees’ responses, which denoted discussion on common barriers to women entrepreneurship, provided a theme or repeated content. For example, the number of respondents who referred to financial challenges were noted as main themes, and each theme produces its sub-themes.

**Table 1: Thematic Structure**

No.	Themes	• Sub-themes
1	Training and development and educational barriers	<ul style="list-style-type: none"> <li>• Availability of training and development programmes</li> <li>• Prior access to training and development programmes</li> <li>• Education attainment is crucial for career progression</li> <li>• Impact of education recognition on the business</li> </ul>
2	Legal barriers	<ul style="list-style-type: none"> <li>• Gender discrimination in law</li> <li>• Government supporting women businesses</li> <li>• Foreign relations</li> <li>• Impact of tax policies</li> </ul>
3	Financial barriers	<ul style="list-style-type: none"> <li>• Financial support from a financial institution</li> <li>• Financial support from the government</li> <li>• Financial help from family/friends</li> </ul>

4	Socio-cultural barriers	<ul style="list-style-type: none"> <li>• Gender discrimination</li> <li>• Stereotype</li> <li>• Women viewed as homemakers, not breadwinners</li> </ul>
5	Work–family interface barrier	<ul style="list-style-type: none"> <li>• Childcare issues</li> <li>• Balancing family and work</li> <li>• Family support of business</li> </ul>
6	Other barriers	<ul style="list-style-type: none"> <li>• Networking</li> <li>• Technological</li> <li>• Marketing and strategies planning</li> <li>• Mentoring</li> </ul>

Women entrepreneurs in Nepal face severe barriers due to a lack of socio-cultural support. Culture refers to a group's or society's ideals, opinions, norms, and behavioural trends. Therefore, this factor heavily influences women entrepreneurs who contribute to economy in Nepal. Apart from socio-cultural barriers, financial and legal restrictions and family factors also affect the development of women entrepreneurs in Nepal. However, many of these restrictions apply to both female and male entrepreneurs; however, women entrepreneurs face these barriers due to biased socio-cultural norms and practices that are ingrained in legislation, legal frameworks, and social support systems. For instance, the need to obtain male consent for some legal documentation or travel, limits women's ability to operate their businesses freely. Inadequate training and basic education have also been barriers to Nepalese women entrepreneurs' careers and limit their business activities. Some women may lack the expertise to build and develop a business. Put another way, they can lack real-world business knowledge of the industry in which they are launching their project, which affects their ability to excel in a competitive business environment.

## CONCLUSION AND MANAGERIAL IMPLICATIONS

Women entrepreneurship in any country can create economic growth, competitiveness, job creation, and social welfare enhancement (Neumann, 2020). It is a critical tool to create employment opportunities for women and gives them a critical source of livelihood and business revenue. Although women entrepreneurship is not as common in Nepal as in other countries, it is gradually gaining popularity (Sigdel, 2016); however, this study found various significant barriers to women entrepreneurship in Nepal. Data were collected employing an inductive approach via interviews. The data were collected from 25 women entrepreneurs that solely focuses on developing women entrepreneurship in Nepal. From these diverse perceptions, this paper found a lack of adequate training and development programmes, which women entrepreneurs require, a lack of primary education, legal barriers, financial barriers, culture barriers, and difficulties balancing work and family life. Previous studies have not discussed women entrepreneurs in the food industry and there is high representation of women entrepreneurs in the food industry. Hence, this study contributes both theoretically and practically because the findings can be related to other industries. Thus, this study shed lights on scholars such as researchers, policymakers, donors, entrepreneurship mentors, and women development consultants who are passionate about developing women entrepreneurship in Nepal.

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# CUSTOMER PERCEPTIONS OF SELF-SERVICE TECHNOLOGIES IN THE FAST MOVING CONSUMER GOODS INDUSTRY

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## ABSTRACT

*This paper examines customer perceptions toward the potential of self-service technologies in the Fast Moving Consumer Goods (FMCG) industry. The technology acceptance model (TAM) was utilised to establish the extent to which customers are willing to adopt self-service technologies for grocery shopping. Data was collected from 258 respondents who had purchased FMCG in the past. Major findings established that the self-service technologies are potentially viable in the FMCG industry of South Africa as the idea was perceived highly positively by consumers. The idea of self-service technologies in the FMCG industry is a much welcomed innovation.*

**Keywords:** Fast Moving Consumer Goods, self-service, technology, adoption.

## INTRODUCTION

Fast Moving Consumer Goods (FMCG) products are products that quickly disappear off store shelves, necessitating frequent replenishment. Standard groceries sold in supermarkets, as well as records and tapes sold in music stores, are examples of fast-moving consumer items (Oxford, 2022). It is imperative for companies in the fast-moving consumer goods (FMCG) industry to continuously increase their profitability through innovative cost reduction means (He, Zeng, Peng & Ning, 2023). Retailers in the FMCG retail industry are encouraged to take full advantage of the digital transformation era (Nurmalina & Yusuf, 2023). In January 2020, the annual inflation rate in South Africa was 4.5%. Food and non-alcoholic beverages, housing and utilities, transportation, and miscellaneous goods and services were the biggest contributions to the abovementioned inflation rate (Statistics South Africa, 2020). This study looks at self-service technologies in the FMCG industry from the customer's perspective. Hussain, Nazir, Rashid and Sattar (2023) suggest that sales of FMCG are directly linked to the customer's preference, taste, likes and dislikes. This therefore creates the need to comprehend the extent to which customers would embrace an innovative approach to purchasing groceries such as that of self-service technologies.

The FMCG industry has fared better than others in South Africa during the recent economic downturn. After a recession in 2009, the economy experienced a shaky recovery, with poor growth persisting in 2014-15. While wage increases at 2% over inflation have had a detrimental impact on the manufacturing industry, it has had the opposite effect on FMCG companies, encouraging demand. As customers move away from fresh fruit, some industries, such as canned food, may even profit from compression on wages (Statistics South Africa, 2020). The adoption of Self-service technology in the FMCG industry would increase customer satisfaction because of the technology's increased efficiency, which would meet the increasing demand for FMCG products while using less human capital, thanks to the new technology introduced by the 4IR and the increased demand for FMCG products. Self-service technology is a concept where consumers can use technology independent from employees; this means that they require no assistance in their consumer experience (Manser Payne, Dahl & Peltier, 2021). Technologies included under this scope include (1) ATMs, (2) Petrol Stations and (3) Vending Machines etc. Seemingly, a large number of consumers prefer "digital self-service" shops because it allows them the freedom to (1) Handle their transactions themselves but also (2) the ability to do it at whatever speed they require. This, however, is not the case for consumers who are more technologically challenged or tend to be elderly as they find these systems to be a bit confusing.

This then leaves firms and retailers of FMCG in a dilemma. Do they fully implement self-service technology in their shops or do they keep an element of human capital? The world recently saw a novice COVID-19 pandemic



that changed how companies value and make use of human capital. The pandemic unfortunately had disruptive effects on labour markets and this had a significant negative impact on firms and their output (Deng, Shi, Li & Liao, 2021). This then begs the question, how do companies keep viable in cases where human capital cannot be utilised? Is self-service technology an option for their shops? But most importantly how do consumers perceive these changes and what is their attitude toward self-service shops?

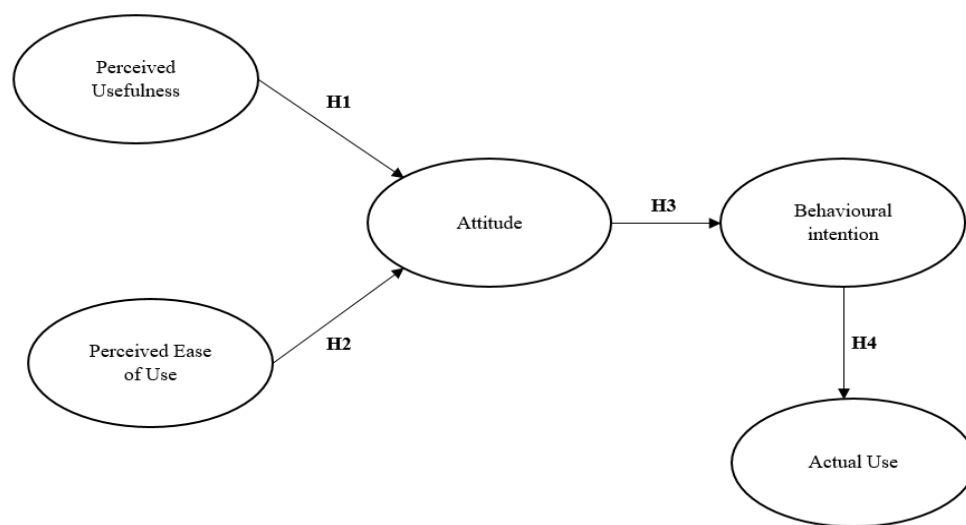
## Problem Statement

Due to the COVID-19, numerous individuals and organisations were forced to adopt self-service technologies (Raza, Qazi, Khan & Salam, 2021). This presented a challenge as it required quick and immediate adoption of self-service technologies. When a system is first introduced, users in a group will evaluate it based on how its features interact with individual and/or organizational-level beginning conditions (Califf, Sarker & Sarker, 2020; Lapointe & Rivard, 2005). They then make predictions about what will happen if it is used. Califf et al. (2020) state that users of new technologies tend to experience stress in the adoption stage. The challenge is that resistance behaviours will emerge if the expected consequences are threatening (Lapointe & Rivard, 2005; Raza, Qazi et al., 2021). Consumers do not necessarily avoid self-service options in general, but they tend to avoid those that are poorly implemented (Kimes & Collier, 2015). This therefore makes it imperative to highlight the benefits of self-service technologies in order to address the problems associated with reluctance to adopt such technologies. Customers who are frustrated or who neglect self-service technologies, as well as lost revenue and cost savings for organizations, result from poorly integrated self-service technology (Kimes & Collier, 2015). Based on the abovementioned problems and challenges, the present study attempts to make a case for the adoption of self-service technologies. The theoretical grounding in which this study is founded is presented in the following section.

## Theoretical Underpinning

The study was based on the technology acceptance model (TAM) (Davis, 1986). This framework was deemed relevant for the study as the study looked at how consumers would adopt a new technology introduced into the market. The TAM is the most established framework in explaining users' acceptance of a new technology (Lee, Hsieh & Hsu, 2011).

**Figure 1: The Technology Acceptance Model**



*Source: Davis (1986)*

# REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESES

## Self-Service Technologies

The idea of self-service technology is not new, it has been explored in the literature from varying perspectives and contexts, Aslam, de Luna, Asim and Farhat (2023), looked at self-service technologies from a mobile banking point of view while Chen, Jong, Hsu and Lin (2023) and Alam, Masukujjaman, Mohamed Makhbul, Helmi Ali, Ahmad and Al Mamun (2023) looked at self-service technologies from a hospitality, travel and tourism angle. Furthermore, Collier et al. (2017) and Manser et al. (2021) explored self-service technologies in the form of teller machines, self-service kiosks and self-checkouts. The latest generation of self-service technologies depend on service robots (Severinson-Eklundh et al., 2003; Van Pinxteren, Wetzels, Rüger, Pluymaekers and Wetzels, 2019), which can physically replace human service employees. According to Van Pinxteren et al. (2019) self-service technologies hold the capacity to transform the engagement of consumers with service providers (Kaushik & Rahman, 2015; Meuter, Ostrom, Roundtree & Bitner, 2000) and drastically change the how services are provided (Parasuraman, 1996). These technological interfaces allow consumers to produce a service autonomous of direct service employee involvement (Meuter et al., 2000; Van Pinxteren et al., 2019). Constructs of the proposed conceptual model are explored in the sections that follow.

## Perceived Usefulness and Attitude

Perceived usefulness is positively related to attitude (Holden, 2009). This assumption was supported by Park, Baek, Ohm and Chang (2014) who suggested that attitude toward technology is impacted by its perceived usefulness by customers (Park et al., 2014). Perceived usefulness together with perceived ease of use are viewed as direct antecedents of attitude toward the adoption of self-service technologies (Ndlazi, Zwane, Mgiba & Chuchu, 2021) even though the context of their study is in self-service fuel stations. In numerous situations and the original TAM, a positive association between perceived usefulness and attitude has been validated. For example, in the contexts of mobile services (Nysveen, Pedersen & Thorbjørnsen, 2005), mobile games (Ha, Yoon & Choi, 2007), mobile banking systems (Pikkarainen, Pikkarainen, Karjalainen & Pahlila, 2004), and internet services (Pikkarainen et al., 2004), this association has been substantiated (Lee & Chung, 2009). Based on the abovementioned literature, the following hypothesis is proposed:

***H1: Perceived usefulness is positively related to attitude.***

## Perceived Ease of Use and Attitude

Perceived ease of use is positively related to attitude (Holden, 2009). This assertion was reinforced by Park et al. (2014), who postulated that attitude towards technology is impacted by its perceived ease of use by customers (Park et al., 2014). Not all scholars are of this view. Some opinions on perceived ease of use offer a different perspective, for example Rafique, Almagrabi, Shamim, Anwar and Bashir (2020) suggest that it is directly and positively impacted by perceived usefulness. This study does not suggest any association with between perceived ease of use and attitude. However, the majority of the reviewed literature relevant to the study in question postulates that perceived ease of use is a necessary precursor of attitude (Alfadda, & Mahdi, 2021; Fathema, Shannon & Ross, 2015; Granić & Marangunić, 2019; Natasia, Wiranti & Parastika, 2022; Rauniar, Rawski, Yang, & Johnson, 2014). Rauniar et al. (2014) not only postulate that perceived ease of use directly and positive influences consumers' attitudes toward the use of a technology but adds on to state that perceived ease of use also directly and positively influences the intention to use that technology. Based on the above-mentioned literature, the following hypothesis is proposed:

***H2: Perceived ease of use is positively related to attitude.***

## Attitude and Behavioural Intention to Use

According to Holden and Karsh (2010), attitude is positively related to behavioural intention to use. Furthermore, Park et al. (2014), posited that that behavioural intention to use self-service technology is impacted by the customers' attitude towards the technology. Individuals' attitudes are influenced by others (Pamacheche, Chinomona & Chuchu, 2016) leading to certain behaviours. Rafique et al. (2020), postulate that perceived ease of use directly and positively influences behavioural intention. This assertion is supported by Assaker (2020), Ghazizadeh, Lee and Boyle (2012), Liu and Yang (2018), Sanchís-Pedregosa, Vizcarra-Aparicio and Leal-Rodríguez (2020) and Tarhini, Hone, Liu and Tarhini (2017) who all suggest that behavioural intention is indeed a result of attitude towards technology. Based on the above-mentioned literature, the following hypothesis is proposed:

*H3: Attitude is positively related to behavioural intention to use*

## Behavioural Intention and Actual Use

According to Holden and Karsh (2010), behavioural intention is positively related to actual use. This idea was supported by Venkatesh, Thong and Xu (2012), who suggested that the actual use of self-service technology is impacted by the customers' behavioural intention towards the technology (Venkatesh et al., 2012). The extensions proposed in the Unified Theory of Acceptance and Use of Technology 2 produced a significant improvement in the variance explained in "behavioural intention" and "actual use" when compared to the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2012). Based on the above-mentioned literature, the following hypothesis is proposed:

*H4: Behavioural intention is positively related to actual use.*

## RESEARCH METHODOLOGY

The present study was quantitative in nature adopting the survey method. Due to the difficulty in obtaining a sampling frame for such extensively distributed target audience, convenience sampling, a non-probability sampling technique was utilised. This target audience comprised of consumers from generation X, Y and Z years who resided in Johannesburg South Africa. An online survey was administered to the target audience and 258 usable responses were returned that could be used for data analysis. In terms of questionnaire design, consumer demographic questions were asked. The questionnaire also collected data on the conceptual model's constructs which include: perceived usefulness, perceived ease of use, attitudes, behavioural intention and actual use. The data obtained from field work was processed in SPSS v28 and AMOS v28 for descriptive statistics and hypotheses testing respectively. The next section explores the findings of the study and discussion.

## RESULTS AND DISCUSSION

This section includes demographic information about the study's 258 respondents. The sample profile is presented in Table 1 below. This is followed by reliability measures as well as results from hypotheses testing.

**Table 1: Sample Profile**

<b>Age</b>	<b>Percentage</b>
Generation X (1961-1980)	8
Generation Y (1981-1995)	9
Generation Z (1996-2005)	83
<b>Total</b>	<b>100</b>
<b>Gender</b>	<b>Percentage</b>
Male	42
Female	58
<b>Total</b>	<b>100</b>
<b>Employment Status</b>	<b>Percentage</b>
Unemployed	18
Student	42
Employed	31
Retired	5
Preferred not to say	4
<b>Total</b>	<b>100</b>
<b>Area of Residence</b>	<b>Percentage</b>
Suburbs	33
City	32
Township	35
<b>Total</b>	<b>100</b>
<b>Preferred Grocery Store</b>	<b>Percentage</b>
Checkers	29
Pick n Pay	32
Spar	9
Woolworths	21
Food lover's Market	2
Other	7
<b>Total</b>	<b>100</b>

It can be observed in Table 1 above that most of the respondents belong to the Generation Z and the study had more females that participated in relation to males. Over 60% of the respondents identified as students or unemployed while a third stated that they were employed. The areas of residence for the participants were fairly distributed across suburbs, towns, and township with each group. Checkers and Pick n Pay represented more than half of all respondents. The following section presents the study's reliability measures.

**Table 2: Reliability Measurements**

<b>Construct</b>	<b>Cronbach Alpha (<math>\alpha</math>)</b>
<b>Attitude</b>	0.851
<b>Perceived Ease of Use</b>	0.947
<b>Perceived Usefulness</b>	0.766
<b>Behavioural Intention</b>	0.764
<b>Actual Use</b>	0.806

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. The following section presents the findings from hypotheses testing in Table 3. This is then followed by a discussion.

**Table 3: Hypotheses Results**

Hypothesis		Path Coefficient	P-Value	Outcome
<b>H1</b>	PU → ATT	0.339	***	Supported and significant
<b>H2</b>	PEOU → ATT	0.656	***	Supported and significant
<b>H3</b>	ATT → BI	0.046	0.460	Supported but not significant
<b>H4</b>	BI → AU	0.602	***	Supported and significant

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

*PU: Perceived usefulness, ATT: Attitude, PEOU: Perceived ease of use; BI: Behavioural intention, AU: Actual use*

The first hypothesis, H1 (perceived usefulness and attitude) produced a path coefficient of 0.339 and a p-value of 0.01 as denoted by (\*\*\*). This relationship was both supported and significant at the 0.001 level of significance. This suggests that the more self-service technologies were considered to be useful by customers the more positive their attitudes were towards buying groceries through this technology. The second hypothesis, H2 (perceived ease of use and attitude) generated a path coefficient of 0.656 and a p-value of 0.01 as denoted by (\*\*\*). This relationship was not only supported and significant at the 0.001 level of significance but was the strongest of all the study's proposed hypothesis. The outcome implies that once customers viewed buying groceries to be made easier with self-service technologies, they are more likely to behave more positively toward them.

The third hypothesis, H3 (attitude and behavioural intention) had a path coefficient of 0.046 and a p-value of 0.460. This relationship was not significant even though it was supported. This means that consumer's attitude towards the use of self-service technologies leads to positive behavioural attitudes towards the technology but the impact of these attitudes does not mean much if anything to the consumers. This relationship was the weakest of all the proposed hypothesis. Lastly, the forth hypothesis, H4 (behavioural intention and actual use) provided a path coefficient of 0.602 and a p-value of 0.01 as denoted by (\*\*\*). This posits that actual use of self-service technologies for grocery shopping is directly influenced by behavioural intention. The more positive the behavioural intention the more the actual use of the self-service technology in purchasing groceries happens.

## MANAGERIAL IMPLICATIONS

Based on the findings, organisations and marketers are to consider the use of self-service technologies for grocery shopping in South African retailers as they are perceived to be of benefit by the consumers. An important issue to note is that attitudes positively impact behavioural intention but not in a significant way. This implies that marketers in the South African FMCG industry should not take for granted that behavioural intention towards the use of self-service technologies will always be positively influenced positive consumer attitudes. It is important to note that this was the weakest relationship of all the study's proposed hypotheses. This study makes strategic recommendations for the decision makers. Firstly, managers companies within the FMCG industry should consider investing a significant amount of funding toward self-services technologies due to the consumers' positive reception of the idea. This investment could provide returns post-pandemic considering the convenience that self-service technologies provided during the COVID-19 pandemic, consumers may be willing to continue with the services. Additionally, other decision makers such as government authorities, could ensure that necessary regulations that protect both FMCG companies and consumers are implemented as like any other innovation, challenges are likely to occur. However, government authorities should not be too restrictive with their regulations and support these technologies as they could encourage the purchase of FMCG which is beneficial for business, the state, and consumers.

## **CONTRIBUTION AND SIGNIFICANCE OF THE STUDY**

The present study contributes practically to the further understanding of self-service technologies specifically in the FMCG industry from the perspective of a prospective target audience. These potential customers' views provide key insights for marketers in terms of whether FMCG self-services technologies will offer a viable alternative for traditional retailers of FMCG? Theoretically, this study contributes to existing literature on the application of the TAM to comprehension of self-service technologies. Furthermore, contribution is made to literature on FMCG with particular attention made from a South African perspective. It helps explain how perceived usefulness and perceived ease of use are related to attitude toward the adoption of FMCG as well as the impact that these attitudes have on consumers' behavioural intention. Furthermore, the relationship between behavioural intention and the perceived actual use of FMCG self-service technologies. A key finding was that all proposed hypotheses were both supported and significant with the exception of that between attitude and behavioural intention which was unsupported and noticeably weaker than the other hypotheses. This finding provides a unique understanding of how little impact attitude has on behavioural intention even though this is not evident when the hypotheses was proposed.

## **CONCLUSIONS AND FURTHER RESEARCH DIRECTION**

The present research attempts to investigate customer perceptions of self-service retailers in the FMCG industry. It establishes that it is imperative for marketer to focus most of their resources on customers' behavioural intention to actually use these technologies as this is the most significant outcome of the study. In other words, marketers in the FMCG industry should encourage customers to use these technologies once introduced to the South African market as they already positively perceive them. It can also be said that, like any other study, this research had its own fair of limitations. Firstly, this study was quantitative in nature which restricted the respondents' ability to fully express themselves as they were confined to the limits of the Likert-scale data collection instrument. This limitation could be addressed in future studies through a qualitative approach utilising in-depth interviews that would allow the participants to provide unrestricted views and opinions on the research in question. This could provide much more insights on customers' prospective views and attitudes toward the adoption of FMCG self-service technologies in South Africa.

Another limitation of the study is that all the respondents were obtained from a single geographic region which means that to a large extent they are exposed to the same environment or environments with similar conditions which could have created respondent bias. Future research could consider using a more diverse sample. Stemming from the theoretical perspective, further research could involve the analysis of potential hypotheses not tested in the present study. These include: the relationship between perceived usefulness and behavioural intention, perceived usefulness and perceived ease of use as well as a direct relationship between attitude and actual use of self-service FMCG technologies. This could potentially provide useful insights that could provide the likely benefits and challenges of introducing such technologies into the South African market.

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# OCCUPATIONAL WELL-BEING OF STREET TRADERS: THE LEAST MEASURED AND NEGLECTED GLOBAL MAJORITY WORKERS

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## ABSTRACT

*The study is conceptual, looking at the existing gap in determining the occupational well-being of workers in the formal and informal economy. Determining occupational well-being is important for workers, be workers in the formal or informal economy. Work engagement is one of the constructs used to determine occupational well-being. The UWES is one of the few valid and most used instrument in assessing work engagement of workers in organisations, including those in informal employment in the formal economy. The formal economy is unable to create decent jobs for everyone, where others end-up working in the informal economy. Street traders are the most visible workers in the informal economy. The informal economy is the largest employer, with more 60 percent of the global labour force, yet occupational well-being of these workers is least studied. This is odd, as occupational well-being addresses how workers feel about their lives at work both in formal and informal economy. The study recommends that to realise the aspirations of the principles of Sustainable Development Goals (SDGs), namely SDG#3 and SDG#8, which seek to promote good health and decent work for all, occupational well-being studies be commissioned on workers in both formal and informal economy.*

**Keywords:** informal economy, occupational well-being, work engagement, street traders, UWES.

## INTRODUCTION

The wide research gap between formal and informal economy is a concern. Occupational well-being of workers in the informal economy is least studied/researched compared to those in the formal economy. More studies on occupational well-being were conducted in the formal economy than in the informal economy. This is odd because the informal economy is the largest employer. There is a recommendation that to broaden the knowledge through research, it is recommended to also include micro level individuals. The most visible workers in the informal economy are the street traders, who the majority work as individual self-employed/own-account workers. The study focuses at the importance of occupational well-being, the importance of work engagement and self employment in the informal economic sector. The study seeks to appeal for more research to be commissioned in the informal economy, facilitating the realisation of the principles of Sustainable Development Goals (SDG), especially SDG#3 and SDG#8, which seek to promote healthy workers and decent work for all.

The informal businesses are the most affected during times of crises. For example, during the Covid-19 crisis and the persisting conflict in Ukraine, which hit the global economy by the curfew regulations, increasing inflation in food and energy prices and disruption of supply chain (ILO, 2022a), most of these businesses were negatively impacted. Many people who are struggling to find formal employment end-up making a living as micro entrepreneurs in the informal economy and are more vulnerable to Covid-19 pandemic and female entrepreneurs were disproportionately affected, as they already had lower annual revenues (UNDP/South Africa, 2020). These crises have lasting impacts on jobs, particularly in economies with large informal labour markets (International Labour Organization (ILO), 2020; Ozili, 2022). The pandemic triggered governments to imposed restrictions of varying degrees, impacting people's day-to-day lives, with war in Ukraine triggering a costly humanitarian and conomic crises (Achdut & Refaeli, 2020). Many countries with high rate of informal emploment, do not benefit from some assistances such as tax credit, and South Africa as a developing economy did not benefit the same was as developed economies (IMF, 2022). Appropriate and necessary training is recommended, which should be targeted toward lower-skilled

workers to boost their productivity in lower-emissions-intensive work, earning income tax credit, which assist in providing income support and incentivising labor supply (IMF, 2022). In some instances, the recovery in informal employment overtakes that of formal employment (ILO, 2022).

Some technological factors, such as the cashless payments, affect informal street traders negatively, which heavily depend on the use of cash for more of their transactions (Amankwa *et al.*, 2023). The transformation into a cashless economy is an international issue and some of the developed countries have already become cashless economies. A cashless economy is one in which financial transactions are not done using currency notes, coins or physical cash money. It was the practice in time where bartering was used and other methods of exchange like food crops or other goods (Singhraul & Garwal, 2018). The concepts of cashless transactions in cashless economy are facilitated by the digital currencies where legal tender (money) is exchanged and recorded only in the electronic digital form (Oyewole *et al.*, 2013; Singhraul & Garwal, 2018). There are still many challenges and opportunities associated with the effects of digital transactions (Singhraul & Garwal, 2018). In Africa, including South Africa, Uganda, Kenya, Nigeria and Ghana, e-wallet is primarily used to carry-out electronic wallet payment (e-wallet). E-wallet is a type of technology that allows financial transactions to be conducted using mobile phones than a conventional bank account, increasing an inclusion in developing countries (Amankwa *et al.*, 2023).

## **IMPORTANCE OF OCCUPATIONAL WELL-BEING**

The occupational well-being of workers is in the best interest of societies and organisations (Dubbelt & Demerouti, 2019; Harter, Schmidt & Keyes, 2002; Laguna *et al.*, 2017; NPC, 2011). Occupational well-being is defined as how well are workers doing and feeling about their lives at work (Martela & Sheldon, 2019). Constructs such as happiness, quality of life, welfare, and well-being can either be used interchangeably, or can connote related meanings (Abreu, Oner, Brouwer & van Leeuwen, 2019). Occupational well-being is in line with the aspirations of the principles of Sustainable Development Goals (SDGs), especially SDG#8, which encourages for an inclusive and sustainable growth of the economy, full productive and decent jobs for all; and SDG#3, which advocates the matter of healthy workers, decent and safe working conditions, increasing the productive capacity of workers (ILO, 2016; ILO, 2018). These are guiding principles to United Nations' (UN) member states, meant to advocate the notion of good healthy workers and decent work for all. Decent work for all includes issues related to occupational well-being of workers, be workers in formal or informal economy (OECD/ILO, 2019).

Despite much efforts being made, the aspirations of both SDG#3 and SDG#8 goals are far from realising for many countries (or UN member states), as more people remain under employed or employed in the informal economy (OECD/ILO, 2019). For example, the UN developed a set of Millennium Development Goals (MDGs) running through to 2015, with Target 1. B index, which was set to achieve total, productive, decent jobs for all (especially for women and youth) (Bloom, McKenna & Prettnier, 2018). These were later refined to become the SDGs. Occupational well-being is associated with a healthy workforce and quality of life (Gallup, 2021; Harter *et al.*, 2002). Occupational well-being is mostly studied in the formal sector by assessing work engagement, among others (Schaufeli & Bakker, 2010; Schaufeli *et al.*, 2019). It is odd because many workers are in the informal economy, at about 60 percent of the global labour force compared to formal economy (ILO, 2022).

## **IMPORTANCE OF WORK ENGAGEMENT**

Work engagement is defined as the simultaneous employment and expression of a individual's preferred self in task behaviours, stimulating connections to their work, personal availability (physical, cognitive, and emotional), and active in the whole task execution (Kahn, 1990). Most work engagement definitions available in the literature are premised or acknowledge the work of Kahn (1990). Moreover, the study focuses on the occupational well-being of street traders by assessing their work engagement using the UWES-9. UWES-9 was developed and premised on the work of Schaufeli, Salanova, González-Romá and Bakker (2002). Schaufeli *et al.* (2002) define work engagement as a fulfilling, positive, work-related state of mind that is characterised by vigour (physical aspect), dedication (cognitive aspect), and absorption (emotional aspect). Three dimensions are outlined by the definition of work engagement, namely, vigour (physical aspect), dedication (cognitive aspect) and absorption (emotional aspect) (Kahn, 1990; Schaufeli *et al.*, 2002). In addition, a person who is engaged in one's work experiences some vigour (experiences high energy at work, is willing to persist in investing effort in one's work, and exhibits mental resilience while working); dedication (inspired by one's work, seeing it as an important and a source of pride); and absorption (engrossed in and

may find it difficult to detach from one's work (Schaufeli *et al.*, 2002; Schaufeli & Bakker, 2010; Schaufeli, Shimazu, Hakanen, Salanova & De Witte, 2019). These elements assist in the assessment of work engagement.

There are various definitions of work engagement available in the literature, and no consensus exists on a single definition (Knight, Patterson & Dawson, 2019; Macey & Schneider, 2008; Saks & Gruman, 2014). Despite different definitions, the most commonalities about these definitions are that in general, all address the same elements, namely, physical, psychological and social elements (Gifford & Young, 2021; Kahn, 1990; Saks & Gruman, 2014; Schaufeli *et al.*, 2019). The lack of consensus on a single definition led to the development of various instruments for assessing work engagement (Saks & Gruman, 2014), and ultimately determining occupational well-being. Many of these instruments were used only once or few times, while the UWES is the most commonly used instrument in assessing work engagement (Carmona-Halty, Schaufeli & Salanova, 2019; Saks & Gruman, 2014; Schaufeli & Bakker, 2010; Schaufeli *et al.*, 2019), and ultimately occupational well-being. UWES is available in more than 31 languages (Merino-Soto, Lozano-Huamán, Lima-Mendoza, Calderon de la Cruz, Juárez-García & Toledano-Toledano, 2022) and has been used in many countries, including South Africa (De Bruin & Henn, 2013; Rothmann & Rothmann Jr, 2010; Schaufeli, Bakker & Salanova, 2006; Storm & Rothmann, 2003), where the study is carried out. Recently, the ultrashort UWES version has been introduced, with the better reliability and validity, and it works well as the other longer versions (Gifford & Young, 2021; Schaufeli *et al.*, 2019).

Work engagement has mostly been studied on workers in real or conventional organisations. It is in the formal sector context where the reliability and validity of the UWES has been determined (Schaufeli & Bakker, 2010). Little or nothing is known about the reliability and validity of UWES in assessing the work engagement of street traders, the most visible own-account workers in the informal sector. Some work engagement studies involving self-employed/own-account workers (entrepreneurs) were done on those whose businesses were incorporated or formalised (Gorgievski, Moriano & Bakker, 2014; Laguna & Razmus, 2019; Laguna, Razmus & Żaliński, 2017; Jasiński & Ociepa, 2021; Rauch, 2020). Some studies assessed occupational well-being of workers in the informal employment in real organisation using some instruments other than UWES (Sassen *et al.*, 2018). Moreover, the UWES assesses work engagement, it ultimately determine occupational well-being; hence, the title the UWES is 'work and well-being scale' (Schaufeli & Bakker, 2003; Schaufeli *et al.*, 2019).

## MEASUREMENT OF WORK ENGAGEMENT

Work engagement has been extensively assessed in various contexts and countries, and the UWES was found to be of acceptable validity, including in South Africa, where the study was conducted. Most studies were conducted involving workers in the formal sector (working for formal corporates). The focus of the current study was on self-employed/ownaccount workers in the informal sector. Different instruments were developed in relation to various definitions of work engagement available in the literature (Anthony-McMann, Ellinger, Astakhova & Halbesleben, 2017; Aon Hewitt, 2018; Gallup, 2021; Gruman & Saks, 2011; Nienaber & Martins, 2015; Nienaber & Martins, 2020; Schaufeli & Bakker, 2010; Gifford & Young, 2021). The list is not exhaustive, some of the instruments that were developed and used to assess work engagement include, among others, the following, as shown in Table 1 below.

**Table 1: Instruments for measuring work engagement**

Author	Work engagement Instrument
Maslach (1997); Maslach, Schaufeli and Leiter (2001)	Maslach Burn-out Inventory (MBI); The Oldenburg Burnout Inventory (OLBI)
Hultell and Gustavsson (2010)	Scale of Work Engagement and Burnout (SWEBO)
Schaufeli <i>et al.</i> (2002)	Utrecht Work Engagement Scale (UWES)
Clifton and Harter (2003)	Gallup's Workplace Audit (GWA) or Q12
May, Gilson and Harter (2004)	Work Engagement Scale (WES)
Nienaber and Martins (2015)	The South African Employee Engagement Scale

*Source: Researcher's compilation*

Some of the instruments were developed to assess employee engagement, which measures the relationship a worker has with other facets of the organisation (Clifton & Harter, 2003; Nienaber & Martins 2015). Some instruments

for assessing work engagement of workers are briefly discussed, as identified in Table 1, starting with the Maslach Burn-out Inventory (MBI). Engagement was assessed by the opposite pattern of scores on the three MBI dimensions, wherein low scores in exhaustion, cynicism, detachment, inefficacy, and lack of accomplishment suggesting high scores on professional efficacy, whereby assessing energy, involvement and professional efficacy were the three engagement dimensions (Leiter & Maslach, 2017; Maslach; 1997). In the MBI, burnout and engagement were dependent on one another on the continuum, whereby on the one end, burnout assessed the negative state (burnout), while on the other end, the continuum assessed the positive state (engagement) (Leiter & Maslach, 2017; Maslach; 1997). The initiative was a step in the right direction as both the negative and positive states were being assessed.

A subsequent alternative for assessment of burnout and engagement was the development of the Oldenburg Burnout Inventory (OLBI) instrument. There is a central claim that, it is a reliable and valid measure for the assessment of burnout and work engagement (Demerouti & Bakker, 2010; Leiter & Bakker, 2010). Both the MBI and OLBI were designed to assess burnout and work engagement on a continuum, wherein on the one end, the instrument measures burnout, and on the other end, work engagement is assessed (Demerouti & Bakker, 2010; Maslach *et al.*, 2001). These instruments (OLBI and MBI), despite their validity in assessing burnout and engagement, are not appropriate for the study. The study determined the occupational well-being of street traders by assessing their work engagement at an individual level only and not simultaneous with burnout.

In an attempt to resolve the problems associated with the claim that work engagement is a cognitive-affective state, an alternative instrument called the Scale of Work Engagement and Burnout (SWEBO) was later developed (Hultell & Gustavsson, 2010). The instrument was developed with a purpose of capturing both the state mood of burnout and state mood of work engagement using work-related items based on adjectives (Hultell & Gustavsson, 2010). These instruments (MBI, OLBI, and SWEBO) of measuring work engagement were developed and premised on the assumption that work engagement is an antipode or antithesis of burnout and could be dependently measured on a continuum (Hultell & Gustavsson, 2010; Schaufeli *et al.*, 2002; Schaufeli *et al.*, 2006). Although Schaufeli *et al.* (2002) agreed with the positioning of the work engagement construct as a positive antithesis of burnout, their position was that each construct could be operationalised and measured independently of each other (Schaufeli *et al.*, 2002; Schaufeli *et al.*, 2006; Schaufeli, Leiter & Maslach, 2009). To achieve independence through a theoretical analysis, two underlying dimensions of work-related well-being were identified, namely, activation which ranges from exhaustion to vigour, and identification which ranges from cynicism to dedication, leading to the development of the UWES (Schaufeli *et al.*, 2002). The UWES went through the validation stage and was found to be one of the few reliable and valid instruments in assessing work engagement. The instrument assesses work engagement at an individual level independent of other constructs such as burnout compared to the MBI, OLMBI, or SWEBO.

The UWES is one of the few valid instruments for measuring work engagement at an individual level independent of other constructs, such as burnout (Schaufeli *et al.*, 2002). There have been further improvements to the instrument since the development of the original version, which consisted of 24 items. When the psychometric properties of the 24 items instruments was conducted, 7 items could not meet the threshold and were subject to deletion, 17 items UWES instrument was retained and used (Vigour 6 (VI6); Dedication 5 (DE5); and Absorption 6 (AB6)) (Schaufeli *et al.*, 2002). Furthermore, in a study by Fong and Ng (2011), two items of the UWES-17 were deleted for not meeting the minimum factorial validity test, and the UWES-15 was validated and used. In a study by Schaufeli *et al.* (2006), the UWES-9 was validated and used. The UWES-9 was found to have acceptable reliability and validity (Schaufeli *et al.*, 2006) and was adapted for the current study. The reliability and validity test results of the UWES-9 in the current study was conducted and reported. For example, the original version of the UWES-17 was found to be of acceptable validity and reliability, with internal consistency Cronbach coefficient alpha ( $\alpha$ ) ranging between 0.80 and 0.90 in the South African context (De Bruin & Henn, 2013), where the current study was conducted.

In addition, the UWES-9 was also found to have acceptable validity and reliability across 10 different countries, including South Africa, where the present study was carried out, with internal reliabilities through Cronbach alpha ( $\alpha$ ) coefficients ranging between 0.85 and 0.92 (de Bruin & Henn, 2013; Schaufeli *et al.*, 2006). Moreover, the scales of the UWES-9 also reported acceptable internal reliability, with vigour (median  $\alpha = .77$ ), absorption (median  $\alpha = 0.78$ ), and dedication (median  $\alpha = 0.85$ ) (de Bruin & Henn, 2013; Schaufeli *et al.*, 2006). The factorial validity of the UWES-9 was demonstrated using CFA, and the scores of the three scales were found to be acceptable in terms of their test and retest for internal reliability (Schaufeli *et al.*, 2006). The UWES-9 is valid to measure well-being studies (Schaufeli *et al.*, 2006; Mäkikangas *et al.*, 2016). The UWES was used in the present study, which seeks to determine the occupational well-being of self-employed/own-account workers in the informal sector.

# SELF-EMPLOYMENT IN THE INFORMAL ECONOMIC SECTOR

The informal economy is the largest employer (ILO, 2022), with least research on the occupational well-being of self-employed/own-account workers in the informal economy. Most occupational well-being studies were done on workers in the formal sector (Schaufeli & Bakker, 2010). Work engagement is one of the indicators of occupational well-being, and is associated with positive work-related outcomes at an individual level (Schaufeli & Bakker, 2010; Schaufeli *et al.*, 2019; Van den Broeck, Vander Elst, Baillien, Sercu, Schouteden, De Witte & Godderis, 2017). The lack of research on occupational well-being of workers in the informal economy has created a knowledge and developmental gaps between the formal and informal economy (UNDP/South Africa, 2020), which is a concern. It is also recommended that to improve understandings of occupational well-being, research must be commissioned on these issues considering the micro-level individuals (Fritsch, Sorgner & Wyrwich, 2019). The informal economy has many individuals in the micro level, the most visible are the street traders. The work engagement is the most appropriated construct to use in determining the occupational well-being of street traders, the most visible workers in the informal economy.

The origin of the construct of informal employment, sector and economy, which is the focus of the current study, may be traced back almost five decades ago (Charmes, 2012; Chen, 2012). These concepts are mostly used either imprecisely or interchangeably (Charmes, 2012; Chen, 2012). Informal sector is broadly defined as consisting of unregistered units engaged in the production of goods or services with the purpose of either creating employment or generating income for an incumbent worker/individual (ILO, 1993). Informal employment is defined by factors such as the absence of social protection and contributions to social protection by the workers (Charmes, 2012; Chen, 2012; ILO, 1993; ILO, 2022). Many street traders operate unregistered businesses, mostly as self-employed/own-account micro level individual workers, and those who have workers, are not compelled to make any social protection contribution in the form of an Unemployment Insurance Fund (UIF), retirement fund, life cover, and medical aid, among others (ILO, 2022). They work with unpaid members of the family or relatives (Chen, 2012). Social protection systems are identified to include pensions, income support for the old age, poor, and unemployed to mitigate poverty when unable to work due to age or illness (Gammage, Sultana & Glinski, 2020). The social protection initiatives are also meant to embrace issues of childcare, education, eldercare, and healthcare (Gammage *et al.*, 2020). South Africans qualify for and are recipients of some of these social protections in the form of social grants, such as child and old age grants (Patel & Hochfeld, 2011). Some street traders are also beneficiaries of some of these social protections; depending on their social status in their communities. These benefits are not linked to contributions made as self-employed/own-account workers in the informal sector (Gammage *et al.*, 2020).

Africa is a developing continent, with more than eight million people working in the informal economy. In South Africa, unemployment is above 33 percent (Mutheiwana, 2021; StatsSA, 2022). In some developing countries, more than 80 percent of the labour force is employed in the informal sector. The informal economy account between 35 and 50 percent of the gross domestic product (GDP) (Amankwa *et al.*, 2023). An informal economy also plays an integral role in addressing the socio-economic issues facing nations around the world. Informal economy entrepreneurship activities contribute between 10 and 20 percent of the GDP in developed economies and up to 60 percent in developing economies. In South Africa, the informal economy accounts between 15 and 17 percent of the total employment and about 5.2 percent of the country's GDP (Musara & Nieuwenhuizen, 2020). The contribution is large, despite the reported research and developmental gap between formal and informal economy, with more research being commissioned in the formal economy leading to its development, and underdevelopment of the informal economy (UNDP/South Africa, 2020).

The potential of the informal sector in addressing social ills associated with factors such as unemployment, poverty and inequality was brought on to the spotlight. Similarly, in any other sector, the informal sector faces dozens of challenges, ranging from support to sustainability of enterprises in the sector, where many do not survive for long after being established. Despite the contribution made by the informal sector to the economy, businesses in the informal sector continue to experience different enormous challenges (Anyidoho, 2013; Roever & Skinner, 2016; UNDP/South Africa, 2020). For example, operational challenges may range from harassment, arbitrary confiscations of goods, hostile evictions, theft, poor working conditions, lack of or saturated spaces, lack of research on informal work, municipal red tape for doing business, lack of information about funding, questions about the quality, health and safety of products or quality of services as provided by informal enterprises, and lack of social benefits and voice

due to union absence, and banishments from operating at some places they used to trade, being limited by the access to proper facilities with proper electricity and sanitation, being regarded as nuisance, and low self-esteem (Anyidoho, 2013; DTI, 2013; Fatoki & Odeyemi, 2010; ILO, 2021; ILO, 2022; Mosupye & von Holy, 1999; Roever & Skinner, 2016; UNDP/South Africa, 2020), among other challenges. Some of the challenges end up in legal battles through the courts, where some street traders or their representatives fight municipalities for their right to sell (Meneses-Reyes & Caballero-Juárez, 2014). These call for change in policy focus, as informal economy is a reality and is here to stay. If unemployment is real, and countries struggle to address it, informality will continue to be nuisance, that calls for change in attitudes policy formulation.

## **RECOMMENDATIONS**

The importance of occupational well-being has been well presented in literature. Occupational well-being is associated with how good people feel at work and with their work, with life in general. The most used construct in assessing occupational well-being is work engagement. Work engagement measures the physical, psychological and social aspects of workers well-being. The most used instrument in assessing work engagement at an individual level is the UWES. The UWES is one of the few valid and most used instruments in assessing work engagement of workers in the formal economy. This is odd because the largest employer is the informal economy, with more than 60 percent of the global labour force. The study recommend for the validation of the UWES in assessing work engagement of workers in the informal economy. This will assist in executing and realising the aspirations of the SDG 3 and SDG 8 of ensuring good health and creation of decent work for everyone. The occupational well-being of workers is important, despite whether they work in the formal or informal economy. The UWES, as the one of the few valid and most used instrument in assessing work engagement, an effort should be made to validate it in assessing work engagement in the informal economy, with the ultimate purpose of determining the occupational well-being of street traders, the most visible workers in the informal sector. It will persuade policy makers to do something for the economy that is least measured and neglected, yet it contribute to the GDP, and it is the largest employer. Most street traders work in places that do not have a permanent build structure, exposing them to unbearable weather conditions. Most are not provided with water and sanitation, resulting in environmental and health hazards, which are the areas policy makers should start off, when addressing the issued of informal economy.

## **CONCLUSION**

Occupational well-being of the workers in the informal economy is under researched and neglected. Street traders are the most visible workers in the informal sector, and are least studied to determine their work engagement. Despite their work status, these workers make a positive contribution in the society. Work engagement of these workers is as important as those in the formal economy, determining their physical, psychological and social well-being. The SDG on health and decent work for all principles, will be hard to realise if the research gap between formal and informal economy persists and not attended to. The study appeals to researchers, to divert attention to the informal economy, which is under researched, despited being the largest employer. The study concludes that the contribution that the informal economy makes in creating jobs and economic growth through the GDP, policy makers must do something about the informal economy. Policy markers should start by providing shelter with sanitation, which will allviate some of the environmental and health hazards street traders are exposed to. These actions will improve on their state of occupational well-being by improving their health. The lack of commitment in policy that seek to address informality by governments, as per call by the ILO, compromise peaceful resolutions when dealing with issues of poverty, inequality and unemployment.

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# STAKEHOLDERS' PERCEPTIONS OF THE POST-MERGER CONSOLIDATION PHASE IN A MERGED HIGHER EDUCATION INSTITUTION IN SOUTH AFRICA

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## ABSTRACT

*This article determined perceptions and reactions of stakeholders in a South African comprehensive university (CU) while undergoing restructuring. As part of its restructuring, the CU abandoned the unitary governance model it had adopted when it merged and opted for a new governance model, the divisional governance and management (DGM) model. The higher education institution (HEI) under study was formed through a merger of two former technikons and one traditional university in 2005. The further restructuring was an attempt to consolidate the problematic merger and expedite achieving the objectives of the National Plan for Higher Education (NPHE). Using a single case study design, data were collected through face-to-face, semi-structured in-depth interviews, document analysis and observation. A sample of thirty-nine (39) respondents was purposively selected for data collection. Stakeholders' perceptions towards the HEI's restructuring were found to be both positive and negative. Positive issues associated with the change in the merged institution were mentioned less frequently than negative ones. Respondents emphasized the fact that the DGM was a good model if it could be implemented properly. The study provided some recommendations to address the negative perceptions identified by the study.*

**Keywords:** Higher Education Institution (HEI), Comprehensive University (CU), Divisional Governance and Management (DGM) model, National Plan for Higher Education (NPHE), organisational change.

## INTRODUCTION AND BACKGROUND

In 1994, South Africa attained democracy and a new government was ushered in. After the elections of 1994, the new democratic government was confronted by the daunting challenge of reconstructing a higher education sector that had in the past supported an inequitable provision, access and opportunity for students and staff based on race, class, gender and geography (Moeng, 2009). A major priority for the post-apartheid government was therefore how to give expression to the principles of the new Constitution of equal access to education and to redress the consequences of a higher education system that had been premised on partisan ideologies and prejudicial practices. One of the first initiatives the post-apartheid government engaged in, was the development of legislative and policy tools, whose purpose was to transform the higher education sector in line with the vision of the new democratic government. The main idea was that, for the higher education sector to play its meaningful role in the development of a democratic society, it had to undergo a radical transformation. To achieve this, the new government exercised a strong and direct intervention in the higher education sector. In order to restructure and transform higher education for purposes of increasing access, diversity and responding to the regional, national and international demands (Harman and Meek, 2002) the South African government introduced mergers which combined two or more higher education institutions.

The university being researched here resulted from the merger of two former technikons and a traditional university which were combined in terms of the government mandated merger policy. ABC University is the pseudonym selected to protect the identity of the merged university being investigated here. The bringing into existence of a new institution is a complex exercise fraught with challenges as borne out in the present case study. The higher education institutions (HEIs) post-merger, would have to, inter alia, choose which new management model would they adopt in order to manage, administer and govern institutional activities. New structures, policies and

procedures had to be introduced with the purpose of achieving effectiveness in the integration of administrative and academic departments and units. The structure of ABC University was conceived as a unitary multi-campus, comprehensive university with central management and administrative structures located in the former traditional university campus. The management structure was quite complex with more control of power centred in the core of the previously traditional university campus. The merger of ABC University brought together institutions that were geographically far from one another. The new institution has four (4) campuses and eleven (11) delivery sites covering a radius of approximately 1000km (Higher Education Quality Council[HEQC], 2011). These institutions differed in many ways as they came together. All the three merging institutions have had various problems in the past, including governance and financial crisis (Jack, 2007).

From the inception of the new institution, ABC University, there had been challenges that were identified by an assessor that was appointed by the Minister of Higher Education and Training. The HEQC, in its institutional audit of the institution, found that ABC University never really merged in the physical and or symbolic sense of the word, and as such was doomed to fail (HEQC, 2011). HEQC further noted that the faculties and the departments of the CU were too fragmented and scattered. The assessor found that one of ABC University's core problems was the unitary model it adopted when it merged. Such a model led the university to dysfunctionality, asserted Ncayiyana (2011). Further, it was also confirmed that the unitary, centralized governance model adopted in 2005 for ABC University failed the HEI in no uncertain terms. The merger arguably was only in paper, as operations were still as they were in legacy (founding) institutions under the name "ABC University". HEQC (2011) advised that a new model of faculty migration be considered, with plans and timeframes for implementation, so that members of staff work within a clear set of expectations. Following the findings and recommendations of HEQC and the Assessor, ABC University abandoned the unitary governance model and introduced the divisional governance and management (DGM) model.

This article is not about the merger of the three institutions but it is about the further reorganisation of ABC University fuelled by the failure of the unitary governance model. This study therefore aimed to determine how the ABC University stakeholders perceived changes in their institution as a result of the change from a unitary governance model to a DGM model. This was accomplished by utilising a qualitative research methodology and using the purposive sampling technique to select respondents. Some recommendations to address negative stakeholders' perceptions were provided. The following section outlines the research questions of this article.

## **RESEARCH QUESTIONS**

This study was guided by the following research questions:

- How do the stakeholders of the ABC University perceive changes in their institution as a result of the restructuring from the unitary governance model to the DGM model?
  - What recommendations can be made to address negative perceptions, if any, identified by the study?
- The next section discusses the theoretical framework of this article.

## **THEORETICAL FRAMEWORK**

A theoretical framework is a perspective or lens through which a researcher investigates a problem. This study was underpinned by Kurt Lewin's model. There are three stages of change management which are: Unfreeze-Change-Refreeze in order for change to be successful (Lewin, 1951). Unfreezing refers to preparing the organization to be ready for the change. This includes foreseeing or becoming cognizant of environmental developments that may impact the organization, assessing the organization's capability to deal with these changes and sparking the motivation to change. Moving is about changing to the aspired position by executing strategic plans. This means managers and employees must learn new behaviours and attitudes. Refreezing is concerned with cementing and reinforcing the new modus operandi. The organization is stabilized into the new way of doing things. Managers and employees must be motivated to maintain the desired behaviour and relapses are swiftly identified and rectified.

# LITERATURE REVIEW

This section discusses previous literature relevant to organisational change in higher education institutions. This review is organised in the following manner: resistance to change, consultation and communication, role of leadership in effective change, shared decision-making and understanding the organizational culture.

Organizational change is necessary for growth of the organization but it is not always accepted by employees. One of the major reasons cited for failure of organisational change is employee resistance to change. As a result at the initial stages people normally reject or resist change because of the fear of the unknown that it brings. Understanding the reasons why employees resist organizational change is critical to overcome the resistance and achieve success. According to Smith (2018:1) one of the most common reasons why people resist change in the workplace is job security. Employees are concerned that their jobs will change or they will lose their jobs when the organisation implements change. Institutional leaders may easily overcome this by explaining to employees how the proposed change will enhance their jobs or even give them greater security. Leaders should not ignore these fears or assume that employees will connect the dots on their own. Instead they should address these concerns head on and motivate employees to embrace the change. If employees have mistrust towards institutional leaders or question their motive or leadership, they will be resistant to any changes that are introduced. If this is the reason employees resist change then it means the institution has a much bigger problem. Ideally leaders must take steps to improve trust and communication with employees before adopting the change. Use of a consultant could help mend the human relations.

Communication is very crucial in any process of change and has been acknowledged as an essential contributing attribute in the success of organizational change (Moeng, 2009). Muller (2006) refers to information as the “oxygen of the organization”. Transparency and consultation are essential ingredients of interaction. Without these, employees feel marginalized and isolated which may lead to resistance and opposition to change. It is very important to understand that leaders who consult their employees for information, discussion of competing opinions admit that they do not have all the solutions, are more likely to be successful during times of organizational change (Heifetz et al., 2009; Senge, 1990) as cited in (Hatherill, 2017). According to Baloyi (2015) the Tshwane University of Technology (TUT) stakeholders had generally bought into the TUT merger from the start because of intense and countless consultations with labor and Council. Baloyi (2015) attributed the success of the implementation of the TUT merger to stakeholders’ buy-in into the processes and planned operational steps. He further pointed out that student population increased and the TUT model became a uniting tool for students and staff which was believed to be as a result of the merger. Stumpf (2016) concurred with Baloyi on the above point as he related from the NMMU experience that the major lesson in institutional restructuring was that, while sorting out the technical issues was crucial, equally so, was listening to, and speaking and interacting with employees and students, even if it meant repeating the same issues over and over again.

Contrary to what happened to the above-mentioned two cases, Mohuba and Govender (2016) reported that in the case of the University of Limpopo (UL) whose merger was later unbundled, there was no pragmatic communication strategy and the absence of an intelligent plot to sell or communicate the change to employees was one of reasons amongst others that led to failure of the UL merger. The fundamental issue in organizational change is therefore communication. According to Anstey, Venter and Wannenburg (2018), communication is the medium through which stakeholders are forewarned to the need for change; are mobilized to be involved in the process and inform organizational leaders of information crucial to managing the process. Le Grange (2011) contended that every leader mandated to drive the change agenda has to make sure that any change initiative is premised on a well-crafted and articulated vision, while Wright (2007) warns that a vision alone without a sound and vibrant communication plan is likely not to find buy-in.

## Role of Leadership in Effective Change

The role of leadership in higher education cannot be over-emphasized. In most studies about organizational change, the importance of effective leadership is often taken lightly and is not well articulated and studied (Director, 2013). The role of institutional leadership in the successful implementation of organizational change is very crucial as borne out in this study. It is paramount in establishing structures, providing support, building a vision, ensuring the availability of resources and creating a culture and embracing the change (Sooklal, 2005). Notably the role of leadership has emerged as critical in the present study. Wan (2008) observed that transformation leaders in higher

education are capable of cultivating an intrinsic commitment among employees to the goal of creating a new institution.

It also emerged in the literature that transformational leadership can be effectively used to extract the best from employees and build the most effective educational climate at institutional level. It can therefore be concluded that implementation of transformation process rests on good and appropriate leadership style. Although the merger idea which is about change, was a good idea, Vinger and Cilliers (2006) bemoaned that the lack of transformational leadership was the weak-link. Mohuba and Govender (2016:2) agree that the secret weapon behind the success of any merger (change) is transformational leadership.

## **Shared Decision-Making**

Shared decision-making is important during the period of transformation. This assertion is confirmed by Morakul and Wu (2001) who argued that the cultures of togetherness, subordinate empowerment and shared decision-making are critical during organization change. Also, Hatherill (2017:) reveals that organizations are likely to encounter implementation challenges when employees do not participate in the planning process which is where decisions are taken about the planned change.

Moreover, although institutional leaders are the ones setting the vision and therefore the direction for the institution, administrative units and deans are the ones interacting with employees on a daily basis. They are the ones managing the integration process on a daily basis. They manage the post-merger integration on a daily basis. This therefore implies that their competencies and leadership skills are critical to the success of integration in their units.

Despite the fact that the decision for the organizational change is made at the top level, the university should highlight the significance of democracy in decision making. Heads of departments (HoDs) and deans should be reminded of listening to different ideas in their departments and regard people equally regardless of which former institution they came from. It is believed this is specifically important to surpass the old institutional boundaries that should be in many people's minds and which are the reason for interpersonal tensions and clashes in the integration process. This contention is supported in Wan (2008:156) where it is stated that by having the right leaders and by stressing democracy in decision making at departmental level, the university attempted to alleviate tensions and clashes in the post-merger integration process. It is further reported in Wan (2008) that in departments where this approach was applied well, this proved useful in facilitating the integration.

## **RESEARCH METHODOLOGY AND DESIGN**

The study was conducted in a merged South African comprehensive university where a large-scale organisational change related to a governance model was experienced. The research reported in this article was part of a doctoral thesis examining the implementation of change from a unitary governance model to a divisional governance and management model. The present study was carried out in the midst of the execution of the change.

The data for this study was gathered from a sample of 39 respondents. The researcher conducted semi-structured in-depth interviews with different ABC University stakeholders comprising senior managers, managers, deans, heads of departments, staff (academic and administrative), union representatives, student representative council (SRC) members and students, to gather their experiences on changes brought about by the change in governance model being implemented in this university. This was useful in getting rich and comprehensive data, which enhanced greater and substantial understanding of the subject matter. The open-ended questions used during interviews allowed the researcher to pose additional probing questions and allowed the participants some latitude and freedom to talk about what was of importance to them. This made room for the conversation to go in unexpected directions, while still allowing considerable flexibility in scope and depth. The conversation was useful in developing and exploring new topics that were relevant to the topic.

The analysis of the interview transcripts relied heavily on the interpretation of stakeholders views as they made sense of their world. During the sense-making process, different stakeholders voiced out their feelings, thoughts, aspirations, attitudes and beliefs about their reality (merger integration, consolidation etc.). The researcher had thus, to go back and forth to reconsider and re-conceptualize assumptions so that new understanding of the text was reached.

Consequently, significant themes emerged from this exercise. The results are presented in a narrative form, supported by verbatim citations from the transcribed interviews.

## **FINDINGS AND DISCUSSION**

### **Knowledge and Understanding the DGM**

To investigate their perceptions stakeholders were asked: Do you know and understand the divisional governance and management (DGM) model that is currently being implemented in your institution? A number of the participants shared a similar view that ABC University had de-merged. This finding is attested in the following participants verbatim. One institutional manager stated: “The DGM model is a partial de-merger, not a full de-merger because we have an institutional office”. One campus-based manager expressed similar views by saying, “We are still attached to the old legacy institutions and the DGM model is the main contributor to that, as people think we have de-merged”.

A participant dean from the main campus of ABC University explained that: “A number of employees were excited when this new model was introduced. They thought we were going back to legacy institutions”. Sharing the same view, a HOD expressed that: “...however, ordinary employees and students are not clear [sc] about what the DGM is about and its operations. The majority simply regard it as de-merger”. Moreover, one of the senior managers commented that, “We have never done a survey. Based on what I’m hearing, there are all kinds of reactions. Some say - it’s a nice way of de-merging”. Based on the above comments, it is evident that some staff members at ABC do not understand the new model as the majority view it as de-merger. In support and responding to the same question, one of the senior managers indicated that: “The entire model is drawn from two institutions, the University of Kwa-Zulu-Natal (UKZN) and more than 90% from the North-West University (NWU). The whole idea is to make independent units that are profitable and sustainable basically and to contain movement of people from one campus to another so that the main objectives of the institution which are Teaching and Learning (T&L), Research Development and Community Engagement can be achieved smoothly. The key here is sustainability of each campus. We need to run the campuses as business units and be able to cover the costs. Key is appointment of leadership at campus level that will drive processes [sc].

Further, another senior manager alluded to the DGM model as: “The organization is divided according to areas of specialization generally. 60% has been achieved in dividing it into areas of specialization. These are from where the functions for each department come.” With regard to questions on the understanding, knowledge and implementation of the DGM model, responses from those at the lower levels showed that they were not fully clear about the DGM. They confused the DGM with de-merger. Senior managers, deans, and union representatives on the other hand revealed that they were well informed about what the DGM model is and how it was supposed to be implemented. This can be attributed to the fact that these groups were part of the consultations that took place before the DGM model was rolled out. This view is supported by Luthan and Sommer as cited in Jones et al., (2008) where they argue that different attitudes between managers and staff arise because managers are more involved in the process. Another possible reason why senior managers expressed positive perceptions about the change compared to employees at the lower levels is that senior managers have more access to information as well as greater decision-making responsibility.

### **Experiences and Reactions**

When participants were asked the question: How do employees feel and react to the restructuring, various responses were made. One head of department had this view: “Most employees including myself are indifferent. To them it is the same. A lot of employees would be happy that there is management on campus but because this management does not have any control, they must still refer to those at the top.” Another participant shared this view: “Employees are not happy. They have no problem with the DGM itself but with how it is implemented. The budget looks like we are still in the unitary model. The government funds institutions according to FETs. More FETs for a campus should mean more money but that is not what is happening here.”

One dean shared the following views with regards to employee perceptions of the change: “My observation is that the majority resist change because change impacts on how you have been doing things.” He elaborated by



asserting that there has never been serious effort by the university management to implement change management. He added that employees were never assisted in dealing with change and this was left to the individuals themselves and the unions to manage change. This finding confirms Hatherill's (2017) view that organizations are likely to encounter implementation challenges when employees do not participate in the planning process which is where decisions are taken about the planned change.

## **Consultation and Communication**

When asked if there was proper consultation before the decision to change the governance model various responses were made by different stakeholders. Most of them felt that they were not consulted; but they were informed that the DGM model had been adopted as a new governance and management system. One manager commented that: "There is a difference between being consulted and being informed. We were informed of a decision that had already been made". During the interviews in the current study, one of the Directors of school agreed that there was consultation for the restructuring, but it was not consistent and was very short. She lamented about the nature of the consultation conducted as seen in the following expression. "In our faculty it was for 1 day and we were to respond and say how we are going to divide ourselves from schools to departments. There was limited time to respond. My role as Director of School was to say which areas of specialization would cluster together in order to form a department".

This finding reveals that there was no proper consultation and effective communication of the change process by the leadership of ABC. This is contrary to the view by Lewin (1951) who asserts that for organisational change to be successful there must be unfreezing which refers to preparing the organization to be ready for the change. Unfreezing refers to preparing the organization to be ready for the change. Communication is very crucial in any process of change and has been acknowledged as an essential contributing attribute in the success of organizational change (Moeng, 2009). Muller (2006) refers to information as the "oxygen of the organization". Wright (2007) warns that a vision alone without a sound and vibrant communication plan is likely not to find buy-in.

## **Stakeholders' Views about New Organogram**

When participants were asked: What are your views about the new organogram? They had varied views on this issue as evidenced in the selected verbatim. "most challenges spring from the organogram itself. It has changed drastically from the previous one." In addition to the above lamentation, a student participant highlighted that: "The DGM model is a very great model for the institution but the problem is in the implementation. ABC must be honest and look at its challenges, hold regular stakeholder engagement seminars and do evaluation. Also, ABC people [sc] must accept change, forget about legacy institutions and understand that we are starting a new ABC." Another challenge with the organogram that kept coming up in the interviews was that the institutional office was becoming bloated. One manager commented that: "The Institutional office is becoming more like a campus. Furthermore, there is a lot of duplication of portfolios. For example, there is deputy director for student affairs in the institutional office when there are four campus-based deputy directors for student affairs".

In support of the above contention, another interviewee commented as follows: "There is a challenge of acting positions that are not filled because of the complexity of the structure. Much as the structure is expensive, the new VC continues to bring in new executive positions that are expensive". The issue of role confusion came up where for instance, it was mentioned that the role of the rectors was not clearly defined. One manager lamented that the current organogram was problematic. She mentioned that: "For me it made sense when the DGM model was introduced as a tool that would rationalize and consolidate learning programmes. Also the fact that they wanted to cut down on expenses. The organogram is problematic because it does not reflect the thinking of cutting costs. It is more costly". The interviewee went further and said: "We were supposed to have fewer campuses. We had four faculties but now we have eleven. Their idea of cutting down expenditure is done at the bottom i.e., at department and faculty levels. They took away support staff (departmental secretaries) only to go and create positions that cost the institution a lot of money i.e., directors are turned to senior directors. The structure is pyramid. There is no rationalization of academic programmes instead there is duplication". A lot of participants emphasized the fact that the DGM was a good model if it could be implemented properly.

## Leadership and Transformation

Respondents were asked: What is your view regarding leadership and transformation in ABC University? The majority of senior managers and deans perceived the current leadership as being on the right track. For instance, one of the deans commented that: “From where I stand I don’t think our leadership is bad. The problem is the environment. I think if you can put them in a different environment they can shine”. In agreement with the statement above, one of the senior managers was of the view that the leadership was good as seen in the following verbatim: “we have participatory leadership, with an engaging style of leadership. Executive takes decisions. The VC is decisive. He does not beat about the bush whether you like the decision made or not”. As agreeing to the previous comment and the argument raised above, another dean commented that: “...they are on the right track. They have filled the positions they had to. In terms of appointments, we thought they would appoint a lesser number at institutional level and more at campus level because that is where implementation takes place. That is a problem.”

Leader behaviour is very important during organizational change as leaders provide the vision for the change, give direct support to employees and model appropriate behaviour (Jones et al., 2008). At the level of vice-chancellor there are a few decisions that are cut clear. Gourley (2016) is of the view that anyone needs some time to contemplate over hard decisions, but there are times when decisions have to be made. She further states one cannot make the world less complicated than it is, but one can bring some resolution. The data collected during interviews on transformation confirmed that the HEI being studied here was not doing well in this area. However, it emerged that this institution had appointed a transformation manager for the first time, which was regarded as an indication that the present leadership of ABC University was taking transformation seriously. The majority of senior managers and deans perceived the current leadership as being on the right track, while most of the managers, employees and trade union representatives felt that the current ABC leadership was mischievous and employed the top-down approach in managing the institution.

During the organisational change process stakeholders create their own perspectives of what is going on in the organisation. The current study revealed that stakeholders’ perceptions towards the change in governance model varied. Many of these differences can be understood in terms of the different roles that the different stakeholders play during the change process. Positive issues associated with the change in ABC University were mentioned less frequently than negative ones. Some participants mentioned their positive attitudes towards the restructuring, yet they also highlighted the problematic nature of the implementation of the new governance model. However, it is evident from the above responses that ABC University stakeholders were still grappling with the concept ‘Divisional Governance and Management Model’ and were trying to make meaning of this unfamiliar model. With regard to questions on the understanding, knowledge and implementation of the DGM model, responses from those at the lower levels showed that they were not fully clear about the DGM. They confused the DGM with de-merger. Senior managers, deans, and union representatives on the other hand revealed that they were well informed about what the DGM model is and how it was supposed to be implemented. This can be attributed to the fact that these groups were part of the consultations that took place before the DGM model was rolled out. Further, the managers and HODs also showed a good understanding of the DGM model, even though most of them felt that they were not consulted; but they were informed that the DGM model had been adopted as a new governance and management system. This view is supported by Luthan and Sommer as cited in Jones et al., (2008) where they argue that different attitudes between managers and staff arise because managers are more involved in the process. Another possible reason why senior managers expressed positive perceptions about the change compared to employees at the lower levels is that senior managers have more access to information as well as greater decision-making responsibility. They have the power to contribute to decisions because they are directly involved in decision-making, whereas lower level employees are less directly involved. Jones et al., (2008) argued that despite the fact that change is implemented for positive reasons (e.g., to adapt to changing environmental conditions and remain competitive), employees often respond negatively toward change and resist change efforts. They further stated that this resistance is largely believed to be caused by the fact that change brings with it increased pressure, stress and uncertainty for employees. Employees at lower level of the organization experience a greater sense of threat about the consequences of organizational change than do senior people, and are most likely to lose status and jobs during change (Jones et al., 2008). From the data obtained during interviews, it emerged that consultations were conducted but in a rushed superficial manner and with particular groups of stakeholders, hence some interviewees were not even aware consultations did happen. Universities are very resistant to change and managing change is perhaps one of the most daunting challenges confronted by leaders in higher

education today (Brown, 2013). Research literature indicated that a key feature that distinguishes successful change management is effective “stakeholder engagement” (Bardos & Church, 2013; Sinclair, 2011).

## **CONCLUSION AND RECOMMENDATIONS**

This study revealed that the ABC University stakeholders’ perceptions about the restructuring were both negative and positive. Stakeholders were found to be struggling with the meaning of the DGM and even though senior managers showed good understanding of the concept the lower level employees misunderstood DGM for de-merger. Senior managers believed there was consultation and communication but it was short and inconsistent while the majority of lower level employees stated that there was neither consultation nor communication. Regarding the organogram, the majority of stakeholders believed that most of the challenges experienced in the HEI were as a result of the new organogram which was said to be a pyramid. Senior managers believed the university leaders were doing well while lower level employees and the unions viewed the leadership as mischievous.

Based on these findings the article provides the following recommendations: There must be thorough all-encompassing consultation processes once again. To help employees overcome resistance to change and negative perceptions towards organizational change it is recommended that ABC top management provide adequate change communication to enhance employees’ motivation. The ABC top management should expand the bottom up communication to involve employees who have potential capability to influence the change process and to provide real input for future decisions. It is further recommended that ABC should revisit its organogram. The organogram needs to be properly linked to ABC’s desired results.

### **Areas for Further Research**

This study was limited to generalization of findings because a case-study methodology was used. However, the study provided useful insights and highlighted areas for further research. From the interviews with the stakeholders it came out clearly that communication of the new governance model and how it was supposed to be implemented did not filter down well through the institution. The more senior members of ABC University understood the new model very well, while some employees at the lower echelons of the institution expressed some confusion. This study did not examine why these communication breakdowns happened. Therefore, further research could be undertaken to understand why communication breakdowns occur during organizational change. How higher education leaders can keep such communication breakdowns minimized and communicate more effectively with all stakeholders in times of organizational change, could be explored.

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# VILLAGE CHICKEN (VC) PRODUCTION IN NCERA VILLAGES IN THE BUFFALO CITY METROPOLITAN MUNICIPALITY, EASTERN CAPE PROVINCE, SOUTH AFRICA: CURRENT PRACTICES AND CHALLENGES

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## ABSTRACT

*Village chickens are the most common kind of livestock bred in rural areas in the developing countries and are reared by even the poorest households. This study explored production practices used by smallholder producers of village chickens in Ncera Villages in Buffalo City Municipality, Eastern Cape Province, South Africa. The aim was to obtain a deeper insight into the unique conditions confronting rural chicken producers so that appropriate support could be provided. Research confirms that there is dearth of research conducted on traditional production practices in South Africa despite the contribution this system has to the lives of many rural communities. This study is therefore an attempt to close that gap. A qualitative approach to data collection was adopted in carrying out this study. Semi-structured face-to-face in-depth interviews were utilised to gather data from a purposive sample of thirty (30) households that were rearing indigenous chickens in Ncera Villages. This research focused on the reasons for rearing these birds, uses of and opportunities for village chicken production, selling of ICs, housing of these chickens and constraints encountered by producers. Findings of this study revealed that VCs play a significant role in households' well-being by providing food (meat and eggs) and income. The study further discovered that VC producers were bedevilled by constraints in the form of predators, theft, lack of capital, lack of decent housing for the birds. The study has provided recommendations. The findings of this research would benefit rural households, civil organisations, government and research institutions as well as the policy implications in so far as sustainable livelihoods are concerned in the province.*

**Keywords:** village chickens (VCs), production practices, rural, households, qualitative.

## INTRODUCTION

Village chickens (VCs) are the most common livestock bred in rural areas in the developing countries including South Africa, and are reared by even the poorest households. They therefore play a significant role in the livelihoods of rural communities in these countries. These birds are also referred to as indigenous, traditional, family, backyard, small-scale or scavenging chickens (Kingori et al., 2003; Kyarisiima et al., 2004; Dana et al., 2010a; Kingori et al., 2010a., Idamakoro & Hosu, 2022)). These terms are used interchangeably in this article. This study explored production practices used by smallholder producers of village chickens in Ncera Villages in Buffalo City Municipality, Eastern Cape Province, South Africa. The aim was to obtain a deeper insight into the unique conditions confronting rural chicken producers so that appropriate support can be provided. Research confirms that there is dearth of research conducted on traditional production practices in South Africa despite the contribution this system has to the lives of many rural communities (Idamakoro & Hosu, 2022; Gwala, 2014; Mtleni et al., 2009; Nyoni & Masika, 2012; Swatson et al., 2002; Tarwireyi & Fanadzo, 2013). This study is therefore an attempt to close that gap. Some research has been done in the Limpopo and KwaZulu Natal Provinces of South Africa but due to the fact that VC production differs from area to area depending on the socio-economic, cultural and biological factors (Muchadeyi, 2007) makes this research significant. This will deepen the understanding of the importance of VC in the study area and also highlight the constraints that VC producers face. The primary aim of this research is therefore to qualitatively determine the VC production practices in the study area.

The remaining sections of this article are organised as follows: a review of the literature related to the topic of the article, the research methodology adopted, the findings and discussion. Finally, the conclusion and recommendations are presented.

## **LITERATURE REVIEW**

The study employed a qualitative approach to explore production practices used by smallholder producers of village chickens in Ncera Villages in Buffalo City Municipality, Eastern Cape Province, South Africa. From the literature, some solutions appropriate to the research area were identified. In South Africa as in other developing countries village chickens are raised in an extensive system and to a lesser degree in a semi-intensive system under subsistence farming. In subsistence farming systems the poultry is allowed to roam freely around the house to scavenge to fulfil their nutritional needs. What they feed on vary depending on local environments. These birds may not be provided with shelter and where chicken houses are available they are not of good standard. Generally, these chicken houses are meant to house the chickens at night or to accommodate hens with chicks. Village chickens because of scavenging are also susceptible to predators. There are no disease control programmes provided.

Nevertheless, village chickens in South Africa are reported to contribute greatly to the livelihood of rural communities. Several authors in South Africa (Mtshali et al., 2009; Nyoni & Masika, 2012 & Tarwireyi & Farnadzo, 2013) emphasize that there is paucity of information on the status of chicken production in most rural communities in South Africa. This is despite the fact that a majority of rural households including the poorest of keep ICs. This situation analysis is an attempt to fill that gap. VC production requires minimal capital investment compared to other livestock species with most of the inputs drawn from the homestead – labour, for instance can be from the family and these chickens can survive on limited resources. As a result, these birds in many rural communities are referred to as a low-input, low-output component of subsistence agricultural activities (Alexander et al., 2004; Copland & Alders, 2005; & Spradbrow, 1993/1994). The reason ICs are referred to as low-input is because they do not require huge capital to start or maintain (Alders, 2004; Alders & Spradbrow, 2001). They are also called low-output due to their high mortality rate especially to chicks which is caused by predation and theft. Further, productivity in terms of eggs laid by each hen per year and flock sizes are low when compared to commercial poultry production (Gondwe & Wolley, 2007; Mapiye et al., 2008). The low-input nature of free-range IC production makes it accessible to even the poorest of resource-poor communities.

Extant literature reveals that rural households rear VCs for home consumption (meat and eggs) and /or income generation. The VC producers want to rear chickens that can provide enough meat and eggs, become broody and incubate their own chickens to make the producer independent in egg and white meat production (Grobelaar et al., 2010). The main objective of this study was to explore the village chicken production practices in Ncera Villages, South Africa.

## **METHODOLOGY**

The Ncera Villages situated within the Buffalo City Municipality, Eastern Cape Province in South Africa were selected as the research site for this study. The Ncera community is situated 30 kilometers south of East London and it comprises of nine rural villages. The research was carried out from the beginning of February to the end of April 2023. A qualitative research methodology was adopted in carrying out this study. Simple random sampling was utilised, and thirty (30) households were selected to participate in the research. Data were gathered from both men and women rearing VCs in the study area. Semi-structured, open-ended interviews were used to collect data from respondents. These allowed interviewees to relate their experiences as producers of VCs without being limited by the researchers' viewpoints or previous research findings. The respondents were informed of the study's purpose as well as ethical considerations. Participants signed consent forms which guaranteed confidentiality. Data triangulation was achieved through the review of literature, observation and interviews. The collection of data and analysis of findings enhanced confidence and strengthened the credibility of the research. Data saturation needs thick and rich data, that is achieved when additional research brings no new information (Bryman, 2016). Data saturation is still a good way to enhance the validity.

# STUDY FINDINGS

## Demographic Characteristics of the Respondents

The study reported here involved thirty (30) households that were rearing indigenous chickens in Ncera Village in the Eastern Cape Province, South Africa. The findings revealed that the majority of respondents were females as represented by 70% (n= 21), and 30% (n= 9) were males. This finding agrees with previous studies reported elsewhere, where it is reported that IC farming is mostly in the hands of women in South Africa as well as in various developing countries (Chah et al., 2018; FAO, 2011; Gueye, 2000; Halima et al., 2007; Sonaiya, 2005; Swatson et al., 2001; Tarwireyi & Fanadzo, 2013). The age groups 41years to 50 years as well as the 61years to 70 years were in the majority. This shows that IC production in the research site is predominantly practised by older people and these may experience the challenge when it comes to modern management practices. This finding confirms the results from Tarwireyi and Fanadzo's (2013) research who reported that the majority (56%) of respondents in their study were 50 years and older. Age is considered to be a determinant of success in farming. Dlova et al., (2004) agreed with Bembridge (1984) who asserted that as the farmers grew older, they become risk averse and become reluctant to try modern practices. Younger farmers are considered to be flexible when it comes to application of new technology, hence age is considered to be an influencing factor. The majority of respondents, 80% (n=24) reported to be married while 20% (n=6) were single. The majority, 95%, (n=27) of the respondents were unemployed and lived on income from old age pension and child grant. Further, the majority of respondents, 95% (n=27) had formal education while 5% (n=3) was illiterate. The number of chickens reared per household ranged from five (5) chickens to 65 chickens with the average of 24 chickens per household. This reveals that the production of these birds is not utilised to the optimum in the research site. This finding is consistent with that of Gwala (2014). Females had a bigger number of chickens compared to males. Experience in VC raising was reported to range from 5 years to 30 years and the average experience was 10 years.

## Reasons for Rearing VCs

The following section presents and discusses the reasons rural households rear VCs based on their responses to the interview questions posed by the researchers. These are meat consumption and to a lesser degree eggs production and income generation as reported by respondents.

### Meat consumption

The majority of IC producers 90% (n=24) when asked about the reasons they keep ICs revealed that they raised ICs primarily for home consumption and would only sell when someone locally would like to buy. Similarly (Desta, 2020; Gwala, 2014; Moussa et al., 2018; Mtileni et al., 2009; Nyoni & Masika, 2013) found that VCs were raised mainly for the purposes of self-consumption, and social security and selling would happen only when there was excess or when producers needed money to take care of emergencies.

### Eggs production

Regarding egg production, it was ranked second reason to meat consumption for rearing ICs by the interviewees. The majority of respondents however confirmed that they do not consume eggs to the same level as they consume chicken meat. They further explained that they kept eggs for incubation as a strategy to increase their flocks. This study revealed that eggs were generally used to increase the flock. Despite the fact that IC eggs were available to the rural households, did not mean that they were readily available to be consumed. However, although eggs were not consumed to the same degree as meat, they remained a valuable source of protein to rural households.

### Income generation

Additionally ICs are a source of optional income which can help poor households take care of their incidental expenses. In the current research when respondents were asked if they sell ICs, 20% (n=6) responded in the affirmative and 80% (n=24) stated they do not sell their chickens at all. Those who reported selling VCs further explained that they sell cocks only due to the fact that cocks do not contribute to egg production and therefore to flock generation. Another respondent stated that he sells chickens for R60 to R70 each to cull the flock when he feels there are many. Two other respondents reported that when someone wants to buy VCs they sell and the money help to buy household stuff.



The present study revealed that meat consumption, egg production and to a lesser degree income generation were the main purposes for raising ICs in the research site. This finding is consistent with the results of Mahoro et al., (2017) in their study on the characterisation of IC production systems. In contrast to reports of earlier studies conducted in other countries and in South Africa (Mtileni et al., 2009; Nyoni & Masika 2012) none of the respondents mentioned cultural rituals as a reason for raising ICs.

## **Constraints Faced by VC Producers**

Regarding constraints confronting the VC producers a question was posed to the interviewees about the challenges they experience while raising VCs. The aim of asking this question was to discover the factors retarding the production of village chickens in the study site. The current research indicated that in spite of the contribution IC production makes to the well-being of rural communities, raising these birds was bedevilled by various impediments and among them were predators such as wild animals, dogs, hawks, theft, lack of capital, shortage of feed, high mortality of chicks and lack of extension services.

### **Predation**

It was reported that during the day, chickens move freely around the scavenging area for food and in the process become exposed to predators and thieves. It can then be concluded that the increased level of impact of these constraints can be attributed to the prevalence of scavenging in the village production system. This observation concurs with the research report by Asresie and Mitiku (2015). The majority of the interviewees, 60% (n=18) cited dogs as preying on both eggs and chickens. Hawks were also reported to be responsible for the high mortality rate of chicks. Only 5% (n=3) of the sample mentioned that they did not experience predation as they had built brick houses for overnight shelter for their flocks and have properly fenced the area where the chickens scavenge during the day.

### **Shortage of feed**

Shortage of feed as one of the challenges was mentioned by 80% (n=16) of the interviewees. They stated that it becomes a challenge when the feed gets finished when they do not have money. VC producers expressed their need for assistance in this area.

### **High mortality amongst chicks**

Most respondents reported high incidence of mortality amongst chicks and they greatly blamed the hawks as well as exposure to extreme weather conditions for this problem. All interviewees expressed that they wished they could be assisted with suitable material to construct better housing for their flocks.

### **Theft**

Respondents reported theft of chickens as another drawback in raising ICs. Those who have experienced theft blame poor chicken housing and lack of resources to fence their premises. Theft can be countered by providing proper chicken houses and fencing.

### **Chicken Housing**

Most village chicken producers reported that they do have houses for their chicken, but they further explained that the condition of these shelters was sub-standard. They further mentioned that this was the main reason their flocks were exposed to predators and theft.

### **Lack of agricultural extension support**

All respondents mentioned that there were no agricultural extension support with regards to village chicken rearing at the time of data collection. Instead IC producers indicated that they utilise their indigenous chicken rearing knowledge they obtained over a long period as well as sharing their problems with fellow chicken producers in the local community. Respondents called for assistance in the supply of feed, fencing, housing structures and provision of veterinary support.

## DISCUSSION

The research has revealed that the production of ICs in the study area is primarily for home consumption as these birds are sold occasionally. The study further revealed that most of the eggs are reserved for hatching as a strategy to increase the flocks. This means IC meat contributes to food security. As revealed by the study eggs are not consumed to the same extent as meat which means egg contribution to food security is minimal. There are household members who indicated they sell eggs and some confirmed they occasionally sell ICs when someone wants to buy which means income generation even though this is to a lesser extent. The study further showed that women are in the majority in IC production in the study area. However, IC production contribution to the rural households is not used to the maximum yet. This is evident from the number of chickens reared per household and the fact that VCs are only sold occasionally. The researchers believe more could be done to improve IC production to alleviate poverty and hunger and create wealth in the study area. However, even though village chicken production is indeed taking place in the Ncera Villages, the producers of these birds are plagued by constraints such as wild animals, dogs, hawks, theft, lack of capital, shortage of feed, high incidence of mortality of chicks and absence of extension services. Despite the prevailing impediments to the production of ICs there is a great potential for villagers to expand VC production due to high unemployment and owing to the fact that presently almost every family keeps these birds. Moreover, VC production requires little investment in terms of human resources, capital, and it is easy to care of. It requires basic poultry husbandry skills to start chicken production and one can depend on neighbours knowledge in raising VCs. Despite the contribution that VC production has to the rural poor communities it does not receive the recognition it deserves when it comes to development and policy-makers and non-government institutions.

## CONCLUSIONS

This study has revealed that VCs play a significant role in households' well-being by providing food (meat and eggs) and income although eggs are consumed to a lesser extent than meat. It was further discovered that despite the role played by the production of these birds in resource-poor rural communities they are not used to the maximum. This is shown by the number each household keeps. The study findings also revealed that women were in the majority in VC rearing. Additionally, producers of these birds in Ncera villages encounter constraints in the form of predators, theft, lack of capital, lack of decent housing for the birds. Hawks and the extreme weather conditions are blamed for the loss in chicks. These can be curbed by using meaningful management strategies. It was also found that none of the VC producers had undergone training in chicken production and there was therefore a great need for capacity building in poultry production in Ncera villages.

## RECOMMENDATIONS

Based on the finding that village chicken production in Ncera Villages is predominantly practised by women, it is recommended that the Department of Agriculture in the Eastern Cape province together with the Buffalo City Municipality should provide a capacity building programme that will target women. The suggested programme should be aimed at improving the management of village chicken production in the study area. It is further recommended that government should support village chicken production in Ncera villages by providing chicken producers with funding for the construction of proper shelters for their flocks to keep them safe and protected from thieves and predators. It is believed this will also lead to improvement in village chicken productivity which will create an opportunity for the development of the poor community.

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# EXPLORING CUSTOMER PERCEPTIONS OF ARTIFICIAL INTELLIGENCE AND SERVICE FAILURE RECOVERY

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## ABSTRACT

*For some time, debate has been taking place around consumer behaviour and actions in relation to AI agent service failure vs human agents service failure and how organisations design appropriate recovery and response strategies to counteract these challenges. Artificial intelligence (AI) is a growing contemporary issue that is heavily leveraged by organisations as part of their marketing strategies. Drawing on existing literature and a number of relevant concepts from the field of AI agent service failure and service failure recovery strategies, the current study utilises expectation discrepancy theory and frustration aggression theory to develop a conceptual framework to explore the perceptions of various customer segments when it comes to AI agent manipulation ‘behind the scenes’ by humans. We explore the impact of such perceptions on the perceived fairness of offer (AI agent vs human agent failure). The findings reveal the complexity of AI agent vs human agent preferences by various customer segments and factors which shape customer expectations and their impact on perceived fairness of price offer.*

**Keywords:** AI service failure, recovery strategy, expectation discrepancy, frustration aggression.

## INTRODUCTION AND BACKGROUND

According to Mishra *et al.* (2022) artificial intelligence (AI) will deliver an economic output of approximately \$13 trillion by 2030. A recent survey by PWC indicates that some 86% of business leaders see AI as a strategic imperative (Bonetti *et al.*, 2022). Despite this positive outlook, the rate of AI adoption across businesses remains slow due to a lack of expertise and a lack of the organisational capabilities that are necessary to deliver change (Balakrishnan & Dwivedi, 2021). Kim and Duhachek (2020) highlighted that despite the growing number of individuals depending on information from non-human service agents like AI, very little research has been conducted to understand issues such as interactions between these AI and human consumers. Customers are rapidly adopting AI into their daily lives with various applications like Amazon’s Alexa, Apple’s Siri, Google Assistant, and many others (Steinhoff *et al.*, 2019). Customers are already interacting with organisations through diverse social media platforms like Facebook, TikTok and Twitter. Online brand communities and customers degree of involvement and participation are also driving and shaping their evaluation of services received from organisations (Ozuem, 2021b).

Organisations have introduced chatbots to improve service management, reduce service failure, reduce labour costs, and offer customers a more standardised service which is consistent, and meets certain quality standards (Ozuem *et al.*, 2021a; Yu *et al.*, 2022). In a study carried out by Research and Markets (2021) and cited in Yu *et al.*, (2022), the chatbot market in 2020 was valued at US\$17.17 billion and is expected to grow to US\$102.29 billion by 2026. The key driver of this growth is the increase in demand for AI customer support services arising from the significant

reduction of the workforce due to the increased use of chatbots by organisations to reduce costs (Brain, 2018). AI has long been forecasted to be a game changer with wide implications across various fields such as education (Nautiyal *et al.*, 2023). For example, the arrival of ChatGPT (developed by Open AI), which can generate conversational text, has raised significant issues across the globe and raised further discussions in the field of AI (Nautiyal *et al.*, 2023). Whilst the benefits of using AI have long been acknowledged, there have also been concerns raised around job security. Agrawal *et al.* (2022) commented that advanced and improved AI tools, such as ChatGPT, have the potential to take over certain roles traditionally held by humans, like customer services inquiries and report writing. Despite the increasing use of chatbots to improve customer services, experiences and journeys, service failure of any sort has a negative impact to both customers and organisations. These impacts include financial losses and negative word of mouth (You *et al.*, 2020). In 2016 for example, US companies lost \$1.6 trillion from customers switching because of poor service quality (You *et al.*, 2020). It is therefore important for organisations to design recovery strategies which are not only cost effective but also efficient and quick to implement.

The current research draws on Expectation Discrepancy Theory (EDT) and Frustration Aggression Theory (FAT) to examine the customer's perception of AI manipulation by humans behind the scenes within the organisation, and to establish whether the perceived fairness of offer is affected by the type of agent across contexts (i.e., AI or human). To date a comprehensive study of these issues has not yet been conducted, and limited studies have been undertaken to develop a conceptual framework for these antecedents. Very little attention has been paid to the issue of customer perceptions of AI being shaped by beliefs about manipulation and the fairness of offers in service failure between the two different types of agents (AI vs human). Azemi *et al.* (2020) applied FAT to understand customers' online negative word of mouth (WOM) following a service failure and how organisations could set an appropriate recovery strategy. When customers experience a service failure, they sometimes express emotions through various complaints and negative WOM. The current study therefore asserts that because certain customer segments perceive an AI agent to be manipulated by human agents within the organisation, a service failure arising from the AI agent leads to greater frustration and aggression from the customer. FAT in this study therefore allows the description and testing of the effects of frustration.

The first section of the paper discusses the theoretical underpinning of consumer AI perceptions and service failure. The second section discusses AI and its applications and links to service failure. The final section outlines the key theoretical contributions and managerial implications of this conceptual study.

## THEORETICAL CONTEXT

Perceptions of customer experiences at each stage of the customer journey are important to both retailers and service providers (Grewal & Roggeveen, 2020). When customers interact with organisations providing services, they place a premium on quality encounters with service employees to build rapport, engagement, and trust with the organisation (Wirtz *et al.*, 2018). Building on the work of Davis (1989), Wirtz *et al.* (2018) highlighted that according to the technology acceptance model, the way customers cognitively evaluate the perceived usefulness and ease of use of a new technology influences the way they use or engage with new technologies. Puntoni *et al.* (2021) conceptualises AI as an ecosystem which is made up of three basic layers: 1) data collection and storage, 2) statistical and computational techniques, and 3) output systems. These elements are responsible for the capabilities which AI systems have, such as listening, predictive capabilities, and producing and communications capabilities.

Customers interact with AI daily through various shapes and forms from Fitbit trackers to Google Photos (with attendant editing suggestions), Spotify's music play list, Alibaba's Tmall Genie smart speakers and Amazon's Alexa (Puntoni *et al.*, 2021). Customers need to interact with businesses and their systems to be able to make judgements in terms of the level of service received from the organisation. These customer interactions and online reviews serve as an opportunity to verify if the customers expectations are being met by the promises made by the business (Ozuem *et al.*, 2023). Unexpected poor services received by customers could also be described as service failure. Examples include issues like product failure, poor after sales, and poor customer services and business practices (Zhu *et al.*, 2021). Sands *et al.* (2022) describes service failure as occurring when the customer's experience falls below expectations. Service failures are inevitable, and even a minor failure could have a significant consequence for the business if not properly addressed (Zhu *et al.*, 2021). Service failure can take place following the customer-business interaction and could occur via humans or via digital agents (Choi *et al.*, 2021). When organisations encounter such negative feedback arising from service failure from the customer, they can choose to respond to these complaints

or to ignore them, especially if the reviews are significantly damaging (Zhu *et al.*, 2021). Zhu *et al.*, argued that due to the share volume of information generated online from negative customer experiences, business analytics like AI can be used to extract meaningful insights from the data, and through the gathering of novel ideas and solutions from customers to gain competitive advantage. Choi *et al.* (2021) in their studies of human reactions to service failure arising from robots argued that humans could easily recover from a self-initiated service failure through the offer of genuine apology. They suggest that consumers are more dissatisfied when service failures arise from humans compared to from non-humans.

Despite the rise in AI technology, customer feedback to these virtual service agents have received limited attention in the marketing and service literature (Sands *et al.* 2022). Sands *et al.* (2022) looked at how customers responded to different service failures when interacting with virtual assistants in comparison to human beings. Several studies have therefore indicated that customers responded positively to service failure from AI agents compared to human agents (Garvey *et al.* 2023; Sands *et al.* 2022). In another recent study by Yu *et al.* (2022), they argued that when consumers were faced with a rejection of their service request from chatbot agents, they turned to evaluate the service less negatively compared to the case in which a similar response was received from a human agent.

## **ARTIFICIAL INTELLIGENCE, APPLICATIONS, AND SERVICE FAILURE**

AI, as the name suggests, commonly refers to programs, systems, tools, machines, and algorithms which demonstrate intelligence and which can mimic human behaviour (Davenport *et al.*, 2020; Mishra *et al.*, 2022). Huang and Rust (2021) describe AI as computational machines capable of emulating inherent human capabilities like doing physical tasks, as well as feeling and thinking like humans. Huang and Rust (2021) comment that AIs can be designed to possess various intelligences like humans possess for different tasks. These include mechanical movements, as well as thinking and feeling AI intelligences. Mechanical AI can help standardise tasks due to their ability to be consistent. Thinking AI is useful for personalisation due to the ability of the AI to identify patterns from data. Feeling AI is useful for managing relationships due to their ability to identify and respond to emotions (Huang and Rust, 2021).

AI relies on several key technologies like machine learning (ML), natural language processing (NLP), neural networks (NN), deep learning (DL), rule-based expert systems, robotic process automation (RPA) and robots (Davenport *et al.*, 2020). Lee *et al.* (2022) describes AI as a broad set of computing techniques with the capability to perform human-like intelligence tasks. The key feature of AI is its ability to adapt AI predictions by humans with some degree of adjustments into the organisational decision-making process (Lee *et al.* 2022). AI algorithms can be trained to self-improve their predictive power and perform highly cognitive tasks.

Several organisations have applied AI in various capacities. For example, pharmaceutical companies have used AI in the early stages of R&D, whilst banks have used it to better manage risk through fraud predictions. Lee *et al.* (2022) argued that AI can improve productivity in three important areas: a) removing routine tasks, b) reducing human errors and biases, and c) assisting in the discovery of new opportunities through the processing of large complex datasets. AI is also able to discover patterns from structured and unstructured data. Within the area of marketing, AI is increasingly being used by organisations to provide personalised product recommendations. The increase in the application of AI within the marketing domain has occurred due to the rapid increase in computer power, the lower cost of computing, big data, and advanced algorithms (Huang, & Rust, 2021). AI has been applied to various areas of marketing such as Amazon's use of drones to automate and ship deliveries. Dominos has experimented with the use of robots and autonomous cars to deliver pizza to its customers (Huang, & Rust, 2021). Organisations use AI to carry out specific tasks and functions which are compatible with AI capabilities (Acemoglu *et al.*, 2020).

Marketers now work in organisations which are extensively driven by a technological culture, and hence their goals of providing better customer experience may not necessarily align with those of software developers when it comes to creating technical excellence (Puntoni *et al.*, 2021). Marketing managers are now caught in a period of technological transition in which AI agents are now viable replacements for humans in the administration of products and services to customers (Garvey *et al.* 2023). According to Davenport *et al.* (2020), AI has a great influence on marketing strategies, business models, sales processes, and customer service operations as well as customer behaviours. For example, examining the impact of AI on the current online business models used by retailers, online retailers will have the capability to predict the customer's needs and assuming that these predictions are accurate, they

will be able to ship directly to the customers without a formal order from the customer and the customer having the option to return what they do not need (Agrawal et al., 2018).

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

This paper set out to explore the customer's perception of AI manipulation by humans within the organisation and the impact on the perceived fairness of offer received from either an AI agent or a human agent. First, it provided a definition of AI, before it described the key attributes of AI and examples of some AI technologies. It also provided a definition of service failure. Secondly, this conceptual paper explored the customers perception on AI agent's vs human agent service rejection, highlighting the implications of the customers evaluation of the service received. Thirdly, it explored the role of AI in marketing and the AI capabilities driving these actions.

This paper makes several contributions to the literature on service failure by highlighting the customers perception on the services received from an AI agent vs a human agent. When customers receive services, they will tend to evaluate the quality of such services be it from an AI agent or a human agent. In the case of a poor quality of service received from an AI agent, the organisation can improve the AI agent design features to gain customer trust and a more positive customer experience which should reduce the degree of frustration-aggression from the customer. The research also adds to the growing literature on the use of AI agents as frontline employees to provide services to customers and hence reduce labour costs for organisations (Yu *et al.*, 2022). This paper also highlights that customers are more likely to show a preference and a positive perception towards human agents, as they still belief that the anthropomorphization of AI agents as very low (Choi *et al.*, 2021; Granulo *et al.*, 2021).

This conceptual paper also contributes to the frustration-aggression stream by showing that customer perception of AI agent manipulation by humans within the organisation can influence the degree of frustration customers experience. The more negative the perception, the greater the degree of frustration will be towards any perceived offer leading to retaliation from the customer through a negative word of mouth (Azemi *et al.*, 2020).

Finally, the study advances knowledge in the field of online interactions between customers and the organisation (Steinhoff *et al.*, 2019) by highlighting the role of AI chatbots to enhance the customer experience and journey. The paper adds further contribution to this online interaction experience by highlighting how this online interaction between the customer and the organisation could change based on the customers perception of AI manipulation by the organisation. With the increasing availability of the internet for commercial purposes, organisations have quickly acknowledged and learned the importance of managing the customer online relationship and user experiences (Steinhoff *et al.*, 2019).

## MANAGERIAL IMPLICATIONS

This conceptual paper highlights significant practical implications for organisations that plan to use AI chatbots. As organisations move to providing more services through online platforms, AI chatbot agents are increasingly being used as front-line employees (Söderlund & Oikarinen, 2021). This paper highlights the importance of customer perceptions of AI chatbot offers vs humans based. Managers should understand these determinants and consider this in their decision-making process to create effective and efficient recovery strategies.

With more organisations transitioning to the provision of online services (Steinhoff *et al.*, 2019) and the use of AI chatbots to act like front line employees representing the company and responding to customer queries, the customers encounter, and experiences are increasing with this human to machine interactions. Customers must now deal with AI chatbots as the initial point of contact with organisations and then the human. The customers experience with these AI chatbot is therefore crucial not only in their evaluation of the service received but their overall perception on anything AI or machine interaction. Hence the customers' expectations could therefore be enhanced through the design of these chatbots with more humanness which should also improve the customer satisfaction and user experience journey. As already mentioned by Steinhoff *et al.*, (2019), a key challenge with AI chatbots is they struggle to mimic human behaviour realistically. Hence improving the design of these chatbots to make them almost perfectly behave like humans should reverse the negative perception held by customers (Steinhoff *et al.*, 2019). Improving the AI design on its own addresses the issue of customer trust but other factors such as privacy and ethical considerations remains to be addressed as a future direction.



Future research could examine an empirical approach using the ideas and concepts discussed in the paper to see if the findings yield consistent or new insights. They could also examine the extent of AI manipulation within an organisational context and specific industry.

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# UNPACKING THE COMPLEXITY OF PUBLIC SERVICE RECOVERY STRATEGIES IN THE AIRLINE INDUSTRY

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## ABSTRACT

*This study explores public service recovery (SR) strategies in the airline industry by analyzing the factors that influence effective SR, including customer perception, joint experience of the failure-recovery process, and organizational factors. A qualitative approach was deployed, consisting of in-depth interviews with 28 customers representing primary users and beneficiaries of public services with first-hand experience of SR processes. The major findings of the study suggest that effective SR involves identifying and resolving service failures promptly and fairly, considering customer perceptions, cultural norms, values, and losses. The joint experience of the failure-recovery process is crucial in ensuring effective SR, and necessitates active communication, transparency, and shared responsibility between the service provider and the customer to find the best possible solution to various issues. The implications of the study suggest that public airlines must balance the need for customer satisfaction with operational efficiency, which can present further challenges in the SR process.*

**Keywords:** SR strategies, technology, airline industry, customer perception, organizational factors.

## INTRODUCTION AND CONTEXT

The importance of service recovery (SR) in customer service departments cannot be overstated, as customer dissatisfaction resulting from service provider failure can elicit negative feedback (Obeidat et al., 2017). SR refers to the measures taken to restore service after a customer complaint (Chen & Wu, 2023). Despite the abundance of literature on SR, companies still face challenges in the SR process, particularly in the public services sector where research is limited (Borah et al., 2020; Mathew et al., 2020). Unlike tangible products, services are inherently imperfect, and failures are common (Wirtz & Lovelock, 2021). These conditions can lead to customer dissatisfaction and can negatively impact consumer views and experiences, ultimately harming businesses (Wei et al., 2020). Effective SR strategies depend heavily on customer feedback, which should be regularly solicited by managers (Ma & Wang, 2021; Zhang et al., 2021; Ozuem et al. 2021a). Customer perceptions of SR initiatives can be influenced by compensation and service delivery methods, such as staff-consumer interaction (Anwar & Ozuem, 2022). Recent research highlights the importance of adopting a systematic approach to SR, which is critical to the success of any business with SR aspirations (Anwar & Ozuem, 2022; Van Vaerenbergh et al., 2019). It is essential for organizations to adhere to a well-defined and systematic SR procedure, with research emphasizing the importance of comprehending initial steps for successful SR strategy implementation (Harrison-Walker, 2019). Preventing errors and focusing on long-term approaches to consumer complaints is preferable to resolving customer concerns and restoring services (Borah et al., 2020). However, there is no single method that can meet all corporate objectives or prevent dissatisfied customers from switching to competitors without filing a formal complaint with support staff (Agarwal, 2019). To address dissatisfied customers who may not communicate their dissatisfaction, it is necessary to establish and describe SR at the organizational level (Van Vaerenbergh et al., 2019). Customer views on service failure are often based on their own investigations (Koc, 2019).

The service marketing literature has extensively studied the concept of service failure and the subsequent SR strategies implemented to achieve customer satisfaction (Fouroudi et al., 2020). However, previous research has not provided a detailed examination of the contextual perspectives of service failure and SR strategies (Azemi et al., 2019; Mathew et al., 2020). This limited understanding of individual characteristics of online consumers and their evaluation of recovery experiences has resulted in a discrepancy between customer failure and recovery experiences, and the company's recovery provisions (Bagherzadeh et al., 2020). Although some studies have explored how service failures negatively impact customer satisfaction, and how successful recovery actions positively affect it (Bagherzadeh et al., 2020; Shams et al., 2020; Ozuem et al 2021b), most have not examined the distinctions amongst various attributes of service failures and recovery procedures (Azemi et al., 2019; Koc, 2019). Recent research has focused on online service failures, recovery provision, failure occurrence, post-recovery behavior, recovery evaluation, and recovery expectation (Azemi et al., 2019; Mathew et al., 2020). However, there are conflicting findings regarding the effectiveness of recovery strategies. While some researchers acknowledge co-creation as an effective recovery strategy for creating customer satisfaction (Moghadam & Saghih, 2023), others have found that co-creation can lead to increased customer dissatisfaction when they perceive that the firm has involuntarily involved them in recovery activities (Chen et al., 2022).

The extant literature on service failure and recovery strategies in the airline industry lacks a comprehensive construct that can achieve mutual customer and provider satisfaction. The frequent occurrence of airline service failures and the subsequent recovery attempts have gained widespread media attention in recent years, leading to public relations crises that have negatively affected the financial performance of airlines by eroding customer trust and loyalty. To address this gap, this study aims to propose a detailed construct of service failure and recovery strategies by investigating how airline consumers perceive their experiences of service failure and recovery, and analyzing how these perceptions influence their attitudes and behaviors. The study also explores the role of the company in shaping customers' perceptions of failure and recovery strategies. The airline industry was chosen as the research context due to the importance of online service failures and recovery strategies in shaping airline customers' service experiences. The study investigates the impact of service failure and recovery attributes on customer emotions, satisfaction, and recommendation behaviors, as well as the influence of organizational contextual factors on service failure and recovery strategies.

## METHODOLOGY

The research methodology employed in this study is grounded in a relativist ontological perspective, which aims to provide a detailed account of the experiences of both customers and management in public SR procedures in the airline industry. To achieve this objective, the researcher conducted interviews with customers using semi-structured interviews. The sample selection utilized purposeful sampling, which restricts the pool of participants to individuals who possess prior knowledge or expertise in the topic of interest. The participants in this study were customers with experience in the airline industry. The qualitative methods utilized in this investigation included semi-structured interviews to gather information about service outages and SR procedures from the perspectives of individual customers. Semi-structured interviews provided specific information about the SR process currently available, and the types of questions that should be asked.

The sample size for the study was determined by a saturation point, which was reached when ideas began to repeat themselves. Accordingly, thirty customers in the airline industry were surveyed about their experiences with different SR procedures. The data collected from these customers were analyzed using thematic analysis, which involved identifying patterns that emerged repeatedly in the data and grouping those patterns into themes and sub-themes. The coding method employed using thematic analysis was vital for extracting key textual information. The author explained the process by which they initially noticed the pattern (Ozuem and Willis, 2022). Moreover, the author generated a list of keywords, topics, and sub-themes that were integrated into the larger framework. The identification of patterns and themes in the dataset directed the development of the conclusions and their application to the research questions. This study employed a comprehensive and well-structured research methodology to explore the experiences of customers and management in public SR procedures in the airline industry (Ozuem et al 2021c). The qualitative method, purposeful sampling, and thematic analysis enabled the collection of detailed and comprehensive data, which were analyzed to generate insights into the factors that influence effective SR, including customer perception, joint experience of failure-recovery process, and organizational factors.

# FINDINGS AND DISCUSSION

## Main Theme 1: Public SR Strategies

Public service recovery (SR) strategies are the actions taken by service providers to address service failures and restore customer satisfaction. Effective SR strategies should take into account customer perceptions, cultural norms, values, and losses, and aim to provide fair treatment to customers. This involves identifying and resolving the root cause of the service failure, as well as communicating effectively with customers to provide timely and effective solutions to their issues. Joint experience and collaboration between the customer and the service provider are crucial in ensuring effective SR, which can involve active communication, transparency, and shared responsibility to find the best possible solution. 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 refer 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. Empowering frontline employees to make decisions and take action to resolve issues on the spot can also be an effective initiative in SR. “Any service failure can have severe consequences, including lost revenue and customer loyalty. So public airlines need to have effective SR strategies in place that address customer complaints and issues promptly and efficiently to minimize the impact on the customer and the organization's reputation” (Interviewee, P16). By giving employees the authority to address customer complaints and issues promptly, airlines can demonstrate their commitment to providing excellent customer service.

## **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). Customers have different perceptions of what constitutes fair compensation for service failure. One participant noted, “Some people are happy with a small gesture, such as a voucher or a free meal, while others expect a more significant compensation, such as a full refund or an upgrade. This can make it challenging for airlines to come up with a one-size-fits-all SR strategy” (Interviewee, P13). Understanding customer perceptions can also help airlines to identify areas for improvement in their service delivery processes and proactively address potential service failures. Gathering feedback from different customer groups can provide airlines with valuable insights into the effectiveness of their SR strategies and help them to make informed decisions about how to improve these strategies.

### **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. They should gather customer feedback and evaluate SR strategies regularly to ensure that they meet customer expectations. By investing in these organizational factors, the airline can provide effective SR and maintain customer satisfaction and loyalty (Interviewee, P13). The findings highlight the importance of these factors in designing and implementing SR strategies that meet the varying expectations of customers. Organizational culture is an important factor that can influence the SR strategies of airlines.

Resources and technology are also essential factors that can influence the effectiveness of SR strategies. Airlines must have adequate resources, such as personnel, technology, and financial resources, to provide effective SR. Technology can also play a vital role in facilitating communication with customers and streamlining the SR process. “Adequate resources and technology are essential to effective SR. Airlines must invest in the necessary personnel, technology, and financial resources to provide effective SR” (Interviewee, P25). Customer expectations are another critical factor that airlines must take into account when designing SR strategies. Customer expectations can vary depending on the nature of the service failure, the customer's past experiences with the airline, and other external factors. Airlines must gather customer feedback and continuously evaluate their SR strategies to ensure that they meet customer expectations.

## **CONTRIBUTIONS AND IMPLICATIONS**

The study contributes significantly to the existing literature on SR processes in the airline industry. Firstly, the paper highlights the significance of joint experience in the failure-recovery process, which involves collaboration between the airline and the customer to find the best possible solution to the issue at hand. The study emphasizes the importance of active communication, transparency, shared responsibility, and customer engagement in the SR process. Effective joint experience requires airlines to invest in employee training and development to ensure that frontline employees can provide prompt and effective solutions. Secondly, the paper identifies organizational factors such as leadership, resources, technology, and customer expectations as critical determinants of SR strategies in public airlines. Effective leadership that emphasizes customer service and provides the necessary resources can lead to more successful SR processes. Airlines must also invest in cost-effective technology to streamline the SR process while balancing the need for resources and technology with budget constraints.

This study's implications are significant for the airline industry, particularly in the area of SR processes. By involving customers in the recovery process, airlines can better understand their needs and expectations, which can help in providing a more satisfactory resolution. The study emphasizes the need for airlines to be transparent about the issue and keep the customer informed about the progress of the recovery process. The findings also highlight the importance of investing in employee training and development to empower frontline employees to take ownership of SR issues and provide effective solutions promptly. Airlines must continuously evaluate their SR strategies to ensure that they meet customer expectations. These findings have important implications for airline managers, who can use them to design and implement effective SR strategies that meet customer expectations and maintain the airline's competitive edge in the market.

## **Limitations and Future Directions**

One key limitation of the present study is the sample selection method employed. Although purposeful sampling was used, which aimed to limit the pool of respondents to those who possessed expertise or were knowledgeable about the subject matter, the sample size was relatively small, and the focus was solely on the airline industry. Consequently, the generalizability of the findings to other industries or contexts may be restricted. Additionally, the study relied solely on self-reported data collected from customers and business representatives, which could be influenced by social desirability bias and memory recall issues. Future research could address these limitations by broadening the sample size and adopting additional research methods to incorporate, for example, direct observation or secondary data sources. This could enhance the validity and credibility of the results. Another limitation of the study is its focus on online service failures and recovery strategies, which overlooks the impact of offline failures and recoveries. Future studies could examine the similarities and differences between online and offline service failures and recoveries, and could explore how these might influence customer perceptions and behaviors. A promising future direction for this research would be to investigate the role of technology in service failures and recovery strategies. As technology, such as chatbots and virtual assistants is increasingly used in customer service, it is important to comprehend how these technologies affect customer perceptions and experiences of service failures and recoveries. Additionally, while this study was conducted in the airline industry, the effectiveness of certain recovery strategies may be influenced by cultural differences and varying customer expectations across different regions and industries.



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# THE IMPACT OF SMALL AND MEDIUM ENTERPRISES (SMEs) ON ECONOMIC GROWTH IN AMERICA

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## ABSTRACT

*SMEs play a critical role in the economic growth of every nation, such as generating work opportunities, income and wealth creation, and poverty reduction. These enterprises are very important in less developed economies. SMEs have become preferred economic entities and have an easy and quick adaptation. The existence of SMEs helps inefficient consumption of nearby assets and boosts economies all over the world. SMEs constitute an integral part of developing economies through imports and commodities prices, which generates global economic success. In the worldwide economy, they assume a vital role through their critical commitment to GDP (Gross Domestic Product) and boosting the comfort of societies. It also provides more employment to people in various economies as compared to larger organisations and therefore leads to poverty alleviation. Generally, advanced nations have 90 percent of their enterprises in the SME sector, and it's one of the remarkable reasons for their financial development. In developing nations, the SME sector plays an essential role in achieving Sustainable Development Goals (SDGs) by creating job opportunities, alleviating poverty, promoting innovation and fostering sustainable industrialisation, and reducing income inequalities. Qualitative research was used in this study. An extensive literature review regarding the importance of SMEs in the American economy was explored. This study aimed to investigate the impact of SMEs on economic growth in America. This aim was achieved by an extensive literature review which revealed that SMEs have a positive impact on economic growth in America. The study concludes that SMEs have a positive impact on economic growth in America. 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 government of America should establish a new support agency for SMEs. The American government should improve the public's view of SMEs. It is further recommended that the American education system should reform in order to provide SMEs with the skills they need to thrive.*

**Keywords:** SMEs, economic growth, gross domestic product, wealth creation, work opportunities.

## INTRODUCTION

SMEs play a critical role in the economic growth of every nation, such as generating work opportunities, income and wealth creation, and poverty reduction. These enterprises are very important in less developed economies. SMEs have become preferred economic entities and have an easy and quick adaptation (Bauchet & Morduch, 2013; Savlovski & Robu, 2011). The existence of SMEs helps inefficient consumption of nearby assets and boosts economies all over the world. SMEs constitute an integral part of developing economies through imports and commodities prices, which generates global economic success. In the worldwide economy, they assume a vital role through their critical commitment to GDP (Gross Domestic Product) and boosting the comfort of societies. It also provides more employment to people in various economies as compared to larger organizations and therefore leads to poverty alleviation (Oba & Onuoha, 2013). Generally, advanced nations have 90 percent of their enterprises in the SME sector, and it's one of the remarkable reasons for their financial development (De Giorgi & Rahman, 2013). In developing nations, the SME sector plays an essential role in achieving Sustainable Development Goals (SDGs) by creating job opportunities, alleviating poverty, promoting innovation and fostering sustainable industrialization, and reducing income inequalities (Littlewood & Holt, 2018).

Entrepreneurs are the potential future designers of any economy. The development of entrepreneurship is one of the sources of economic development. The concept of entrepreneurial development is to prepare a person with essential knowledge and information that are required for building the enterprise and shining his entrepreneurial skills. The development of entrepreneurs and enterprise is a vital part of entrepreneurship development through the entrepreneurship process (Melwani, 2018). Entrepreneurship has been assessed as a driving force of decentralisation, economic restructuring, and movement in the direction of the market economy. Small and Medium Enterprises have been discovered to be key drivers for a country's economic growth of any country (Muthuraman, Al Hazi, Veerasamy & Al Yahya, 2020). Small and Medium Enterprises occupy a place of pride in virtually every country or state. Because of their significant roles in the development and growth of various economies, they have aptly been referred to as "the engine of growth" and "catalysts for the socio-economic transformation of any country". SMEs represent a veritable vehicle for the achievement of national economic objectives of employment generation and poverty reduction at low investment costs as well as the development of entrepreneurial capabilities including indigenous technology (Nwachukwu, 2012). According to Muthuraman, Al Hazi, Veerasamy & Al Yahya, (2020), the United States of America (USA) ranks first in terms of supporting its entrepreneurs with respect to business formation, expansion, and growth followed by Canada and Australia. In terms of government support, financing, and policy formulation, Japan ranks as the top entrepreneurship country followed by Germany and the USA. The economic growth of a country depends on the number of entrepreneurs present in that country as well as on the favourable social-economic environment of that country (Kumar & Raj, 2019).

## **LITERATURE REVIEW**

### **Definitions of Small and Medium Enterprises in America**

The Inter-American Development Bank describes SMEs as having a maximum of 100 employees and less than 3 million USD (United States Dollars) in revenue (Dalberg, 2011). In America, small enterprises have fewer than 100 employees and medium enterprises have fewer than 500 employees (D'Imperio, 2012). SMEs in the United States comprises firms with fewer than 500 employees (Gwangwava, Manuere, Kudakwashe, Tough, & Rangarirai, (2010). Companies from 1 to 500 employees are defined as small to medium-sized enterprises (SMEs) and represent the vast majority of United States businesses (Ghosh, Lucy & Lepage, 2012).

### **Contributions of Small and Medium Enterprises in America**

SMEs play a major role in the USA (United States of America), accounting for 98 percent of all enterprises and employing 50 percent of the workforce (Al Maimani & Johari, 2015). There are more than 2000 million SMEs, accounting for 98 percent of the total number of enterprises, although America is famous for its large enterprises (Liu, Li & Zhang, 2012). The SME sector is the backbone of the economy in high-income countries. Researchers and practitioners agree that SMEs are crucial contributors to job creation and economic growth in both high and low-income countries (Dalberg, 2011).

SMEs represent 50 percent of the jobs in the United States (excluding the non-farm private sector). These non-farm sector SMEs with fewer than 100 employees totaled 36 percent of non-farm employment in the USA and 71 percent of total SME employment. Consequently, the vast majority of jobs are generated by SMEs (Ghosh, Lucy & 2012). Small firms employ half of the private sector workforce, about 120 million people. Since 1995, small employers have created about two out of every three net new jobs – 65 percent of total net job creation. Small businesses in the US (United States) are also instrumental to its innovation economy; produce 13 times more patents per employee than larger firms produce and employ more than 40 percent of high-technology workers (Mills & McCarthy, 2014:10).

Entrepreneurs in the US are respected for their role in creating new jobs, providing competition to existing businesses, improving product quality, reducing prices, and introducing new goods and services through innovation and technological advancement (Katua, 2014). Small businesses represent more than 99 percent of all employees, engaging 52 percent of private sector employees (Inyang, 2013). This history of the explosion of job creation by SMEs is directly linked to important initiatives taken to promote entrepreneurship in the US. Creating jobs and fighting

unemployment was a direct result of the promotion of centers and institutions of entrepreneurship, and ultimately the training of entrepreneurs (Ndedi, 2009).

According to Smit (2012), in Latin America, SME performance over the next two decades will be crucial to improve the current economic performance. The importance of the SME sector in Latin America is due to:

- The high-income inequality in most of the countries in Latin America coupled with a disproportionate share of capital invested in the large-scale sector with minimum employment created by this sector, while the rest of the labour force has a lower capital labour ratio to work with.
- Slow economic growth that has characterised the economy over the last few years.
- Greater market openness and a greater role for the market in the allocation of resources.
- A higher degree of fiscal prudence to keep inflation within target levels.

A higher degree of similarity exists between South Africa and Latin America, and as a result, the same level of importance can be attributed to South African SMEs in the local economy (Smit, 2012). In the United States of America (USA), SMEs have introduced innovative products and services, created new jobs, opened foreign markets, and in the process given the USA's economy a competitive edge in the global economy (Aigbavboa & Thwala, 2014). The Obama administration singled out the promotion of high growth and innovative entrepreneurship as the key elements of the USA's Innovation Strategy for achieving sustainable growth and quality jobs (Tustin, 2015). A recent study of SMEs in the US reports a growing number of SMEs are exporting, along with a rising interest in doing so on the part of many that are not (SBP Alert, 2013).

## **Challenges Faced by Small and Medium Enterprises in America**

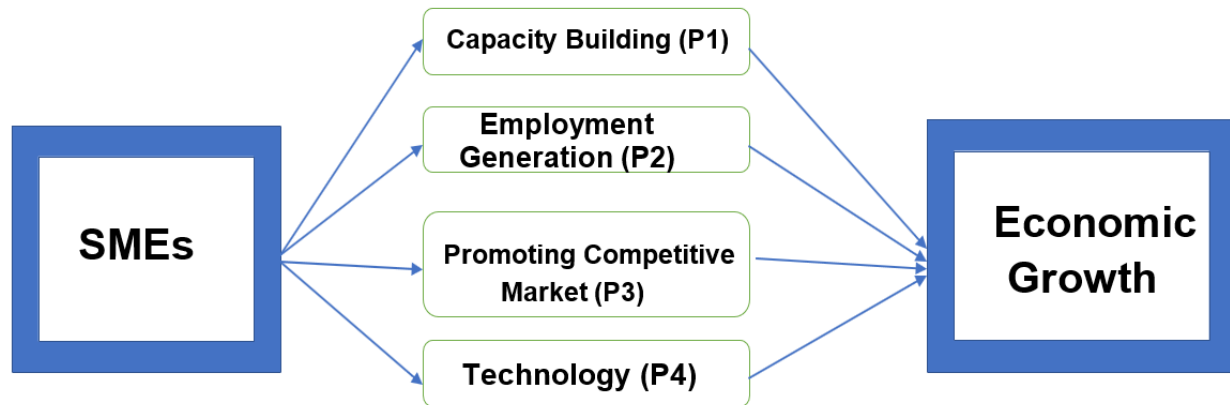
Ghosh *et al.* (2012) indicate that SMEs in the US face key export barriers when conducting business with BRIC (Brazil, Russia, India & China) countries. Expanding the US SME international business, in general, is impeded by a number of variables. The most frequently reported barriers to US SMEs exporting to foreign markets relate to:

- Inadequate national policies and bureaucracies, both US and export countries.
- Trade agreements and treaties to promote international trade.
- Long-term capital financing and investment.
- Lack of intellectual property rights protection.
- Lack of international trade knowledge and experience.
- Bribery and corruption.
- Inadequate technology and e-commerce knowledge.
- Lack of or ineffective local partnerships.
- Misconception that international markets are suited for existing products and services, rather than re-engineering, distributing, and packaging to fit the various cultural settings of the emerging markets.

Trade and investment policies can affect the internalisation of SMEs both directly and indirectly. SME exporters suffer from relatively higher costs and challenges than larger exporters due to less human resources and capital. These barriers include tariffs, quotas, and stringent rules of origin (Cernat, Norman-Lopez & T-Figueras, 2014). Differences in standard-related measures remain one of the main obstacles to deepening the participation of SMEs in international trade in the United States. In addition, the costs of meeting technical regulations and other requirements are often very high because in many cases they are required to perform extra tests, which are more time-consuming for SMEs (Cernat *et al.*, 2014). Bank loans have historically been critical for small businesses. Unlike large firms, small businesses lack access to public institutional debt and equity capital markets and the vicissitudes of small business profits make retained earnings a necessarily less stable source of capital (Mills & McCarthy, 2014).

# CONCEPTUAL FRAMEWORK

Figure 1: Conceptual framework for SMEs and economic growth



Source: Muthuraman, Al Haziati, Veerasamy & Al Yahyaei (2020)

## SMEs & Economic Growth

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 helped in economic growth. Toma, Grigore, & Marinescu (2014) studied the interconnectivity of economic growth and entrepreneurship. The paper developed a theoretical model that showed some of the main factors which were connected with the association of entrepreneurship and economic growth.

## Capacity Building

Researchers have made significant efforts to deal with the problem of measurement difficulties as well by constructing measures of capacity building. The research has put 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 (Muthuraman *et al.*, 2020). 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 Muthuraman *et al.* (2020), one of the SME's potentials is to generate employment and thus reduce unemployment in the economy. The employment contribution of small businesses has been the main focus of policymakers at all levels of the economy. Ayyagari, Demircuc-Kunt, & Maksimovic, (2011), in a unique cross-country database of 99 countries analysis, 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.

## Promoting Competitive Market

Market orientation is depicted 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, and enhance innovation success and organisations' competitive advantages. Understanding the present and future needs of customers is crucial for an organisation to spur the culture of innovation in the organisation so as to

continuously improve and develop products and services that meet customer wants and needs (Muthuraman *et al.*, 2020). On the other hand, competitor orientation involves active monitoring of all existing and potential competitors in the marketplace and collecting competitive intelligence to differentiate the competitors' approaches (Muthuraman *et al.*, 2020). The key objective of market-oriented organisations is to be attentive to competitors' 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 *et al.*, 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, and their low risk and receptivity are the essential features facilitating them to be innovative (Muthuraman *et al.*, 2020). Research has shown that the introduction of new technology in SMEs has a major impact on the structure and functioning of those businesses (Muthuraman *et al.*, 2020). 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).

## **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).

## **PROBLEM INVESTIGATED**

The impact of SMEs on economic growth in America was investigated.

## **RESEARCH OBJECTIVES**

The following theoretical objectives were formulated:

1. To carry out a literature study on SMEs in America
2. To carry out a literature study on economic growth in America.

## **RESEARCH METHODOLOGY**

### **Research Design**

The research design refers to a framework for conducting a research project. It specifies the details of the procedures necessary for obtaining the information needed to structure and solve research problems (Hove, 2012). A research design is defined as a blueprint for the collection, measurement, and analysis of data, based on the research questions of the study (Sekeran & Bougie, 2010). It can initiate the information needed, the conceptual model, selected method, sampling method, sample size, measurement procedure, and data analysis process, which plans, and links collected data to the initial research question in the research study (Al-Ansari, 2014).

A qualitative research method was used in this study. Busetto, Wick and Gumbinger (2020) define qualitative research as the study of the nature of phenomena, including their quality, different manifestations, the context in which they appear or the perspective from which they can be perceived, but excluding their range, frequency, and place in

an objectively determined chain of cause and effect. Qualitative research generally includes data in the form of words rather than numbers.

## Data Collection

This investigation used a document study to collect data on SMEs and economic growth. Data was collected from articles, dissertations, the internet, theses, and textbooks. Electronic databases such as Emerald, Science Direct, EBSCO-Host, Nexus, Sabinet, and Sage were used as sources of data. Keywords were used to search for the relevant data in this document study.

## Data Analysis

To analyse means to break down a whole into its components or constituent parts. Through the assembly of the parts, one comes to understand the integrity of the whole (Onwuegbuzie, Leech & Collins, 2012). Analysis of literature takes one of two forms: within-study literature analysis or a between-study literature analysis. A within-study literature analysis involves analysing the contents of a specific work. In its most rigorous and comprehensive form, a within-study literature analysis does not merely involve analysing the findings of a study or the major premise used in a non-empirical work. Rather, optimally, it involves analysing every component of the work, including the title, literature review section, conceptual framework/theoretical framework, procedures used, results section, and discussion section (Onwuegbuzie, Leech & Collins, 2012). A within-study literature analysis was employed in this study to analyse the data collected. Keywords were also utilised to analyse the data in this document study.

# RESULTS

This study examined the relationship between SMEs and economic growth in America. 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 impact 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 first 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 impact on economic growth. Ayyagari, Demircuc-Kunt, & Maksimovic, (2011), in a unique cross-country database of 99 countries analysis, 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 first 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 impact on economic growth. The key objective of market-oriented organisations is to be attentive to competitors' 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 *et al.*, 2016).

The first premise (P4) suggests a significant positive relationship between technology and economic growth. The results of the study show that technology has a positive impact 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 benefit 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 impact of SMEs on economic growth in America. This aim was achieved by an extensive literature review which revealed that SMEs have a positive impact on economic growth in America.



The Obama administration singled out the promotion of high growth and innovative entrepreneurship as the key elements of the USA's Innovation Strategy for achieving sustainable growth and quality jobs (Tustin, 2015).

Despite the availability of previous research studies focusing on small enterprises in America, 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 America. Few empirical studies that are available focus on specific matters regarding SMEs in America 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 America.

## **CONCLUSIONS**

The study concludes that SMEs have a positive impact on economic growth in America. SMEs are vital to the economic growth of any country. The successful establishment of SMEs leads to employment opportunities and growth in all economies. America represents both strong opportunities and barriers for local SMEs. It is evident from the EY G20 Entrepreneurship Barometer report that America 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, 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. 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.

## **RECOMMENDATIONS**

SMEs are important in terms of job creation, GDP contribution, and poverty alleviation. The government, through its various departments and agencies, should work to support and encourage their development. The government 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 South 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. The government 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 of South Africa. SME owners must address the overwhelming challenges faced by small businesses in South Africa in order 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 impact on South Africa's economic growth, it must expand and be sustainable.

In view of the study results, it is thus recommended that the government of America should establish a new support agency for SMEs. The American government should improve the public's view of SMEs. It is further recommended that the American education system 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 American education system should promote and support entrepreneurial education and training.

## **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. The study provides information to society regarding the impact of SMEs on economic growth. It emphasises that economic conditions can be improved by enhancing SMEs' conditions considered in this study.

## **IMPLICATIONS OF THE STUDY**

SME owners/managers and all relevant stakeholders, including the American government, must have clear knowledge and understanding of related theories which may be useful to the survival and growth. New theoretical discoveries with regard to SME economic benefits should be developed and implemented. The importance of theoretical frameworks and models for SME economic growth in America is lacking and needs more attention. This means that American SMEs owner/managers need to understand and acknowledge the importance of the SME industry in the American economy.

## **FUTURE STUDY**

The future study should include similar research covering both urban and rural areas in America. In-depth, qualitative research should help to better understand the nature of challenges facing the survival and growth of SMEs in America. The future study should provide a direction for the development of new SMEs and the expected role of SME entrepreneurs in contributing to economic growth in America. The future study should provide recommendations to the American 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 America.

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# THE IMPACT OF SMALL AND MEDIUM ENTERPRISES (SMEs) ON ECONOMIC GROWTH IN SOUTH AFRICA

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## ABSTRACT

*Small and medium enterprises (SMEs) perform a strategic role in the economic performance of any country. This strategic role in the economy revolves around the production of products and services, innovation, the aiding of big business, and job creation. SMEs have a high labour absorption capacity, as they account for between 60 to 70 percent of employment in most developing countries. Economic development can be directly attributed to the level of entrepreneurial activity in a country, which is indexed by the number of operational SMEs. SMEs have been responsible for most of the innovation throughout the world, with statistics showing that many scientific breakthroughs originated with small organisations and not in the laboratories of large businesses. SMEs are also viewed as a mechanism to narrow the gap between rich and poor and to reduce the backlog of the previously disadvantaged. SMEs can play a significant role in the economy of a country by introducing ground-breaking products and services, thereby improving the quality of life of the people. Therefore, SMEs have become an important driver of economic growth in most countries throughout the world. Qualitative research was used in this study. An extensive literature review regarding the importance of SMEs in the South African economy was explored. This study aimed to investigate the impact of SMEs on economic growth in South Africa. This aim was achieved by an extensive literature review which revealed that SMEs have a positive impact on economic growth in South Africa. The study concludes that SMEs have a positive impact on economic growth in South 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 government of South Africa should establish a new support agency for SMEs. The South African government should improve the public's view of SMEs. It is further recommended that the South African education system should reform in order to provide SMEs with the skills they need to thrive.*

**Keywords:** SMEs, entrepreneurial activity, economic growth, economic performance, employment opportunities.

## INTRODUCTION

Small and medium enterprises (SMEs) perform a strategic role in the economic performance of any country. This strategic role in the economy revolves around the production of products and services, innovation, the aiding of big business, and job creation (Bosch, Tait & Venter, 2006). According to the World Bank (2005), SMEs have a high labour absorption capacity, as they account for between 60 to 70 percent of employment in most developing countries. Nieman and Niewenhuizen (2009) acknowledge that economic development can be directly attributed to the level of entrepreneurial activity in a country, which is indexed by the number of operational SMEs. SMEs have been responsible for most of the innovation throughout the world, with statistics showing that many scientific breakthroughs originated with small organisations and not in the laboratories of large businesses (Erasmus, Strydom & Rudansky-Klopper, 2013). SMEs are also viewed as a mechanism to narrow the gap between rich and poor and to reduce the backlog of the previously disadvantaged (Bolton, 2006). SMEs can play a significant role in the economy of a country by introducing ground-breaking products and services, thereby improving the quality of life of the people (Mbedzi, 2011). Therefore, SMEs have become an important driver of economic growth in most countries throughout the world.

In the South African economy, SMEs perform four critical roles: 1) accounting for 98 percent of all businesses; 2) generating up to 35 percent of the gross domestic product; 3) contributing to 43 percent of the total salaries and wages paid; and 4) employing at least 55 percent of all formal private sector employees (Nieman &

Niewenhuizen, 2009; Strydom, 2011). Mutezo (2005) opines that South African SMEs minimise income inequality, encourage competition between firms, ensure innovation in new product and service development, contribute to black economic empowerment (BEE), and provide employees with comprehensive learning experiences and higher levels of job satisfaction (Megginson, Byrd & Megginson, 2006). The importance of SMEs within South Africa becomes even more critical for the achievement of social stability by creating jobs to solve the high unemployment rate, which was purportedly at 24 percent by January 2015 (StatsOnline, 2015). Thus, the South African economy, like any other, is largely driven by the SME sector.

There is no single, universally accepted definition of what constitutes SMEs, since numerous definitions exist, and each one is valid in its own environment (Anderson, 2011). The differences in defining the term are sometimes attributed to different levels of development between countries (Mahadea & Pillay, 2008). According to Abor and Quartey (2010), the European Commission (EC) defines small enterprises as firms employing between 10 and 99 employees whilst medium enterprises are those that employ between 100 and 499 employees. In contrast, within South Africa, small enterprises are businesses that have an upper limit of 50 employees, are generally more established, and exhibit more complex business practices (DTI, 2008). Medium enterprises are those that employ between 100 or 200 employees and are often characterised by the decentralisation of power to an additional management layer (Chalera, 2007). A notable view is that compared to developed country standards, South African thresholds on SMEs are lower, such that many businesses, which Americans or Europeans regard as small or medium enterprises would be regarded as large enterprises in South Africa (DTI, 2008).

SMEs are the brainchild of entrepreneurs. Entrepreneurship can be defined as the process of creating and building something of value from practically nothing in the midst of uncertainty and risk and having the determination to succeed at all odds (Erasmus *et al.*, 2013). Van Aardt and Bezuidenhout (2014) argue that entrepreneurs who successfully start their own businesses are vital to economic well-being as well as the technological growth of any economy, which makes entrepreneurship the root of national development. Moreover, Erasmus *et al.* (2013) acknowledge that in most economies, the entrepreneur is recognised as a key factor in the process of economic development. In South Africa, entrepreneurship ensures economic growth as entrepreneurs intend to grow their businesses and are responsible for job creation in the economy. In the same country, the overall entrepreneurial activity is 7 percent, indicating the percentage of economically active adults who are entrepreneurs (Erasmus *et al.*, 2013). Strydom (2011) adds that in South Africa, SMEs are one of the ways in which promising entrepreneurs can fulfil their dreams of being independent and creating wealth. Abor and Quartey (2010) are of the view that developing countries such as South Africa could achieve the goals of improving economic growth, development, creation of wealth and employment if the SME sector is adequately prepared to improve business performance. Therefore, entrepreneurship has the ability to reduce unemployment and poverty through job creation and to improve economic growth and income creation.

## LITERATURE REVIEW

### Definitions of Small and Medium Enterprises in South Africa

The Small Business Act of South Africa of 1995 and the National Small Business Amendment Act of 2003 set out criteria according to business size in each sector of industry. Businesses are defined as micro-businesses if they have five or fewer employees and a turnover of up to R100 000 per year. Very small businesses employ between six (6) and 20 employees, and small businesses employ between 21 and 50 employees (Strydom, 2011). The upper limit for turnover in a small business varies from R1 million in the agricultural sector to R32 million in the wholesale-trade sector. Medium-sized businesses usually employ up to 200 people (100 in the agricultural sector), and the maximum turnover varies from R5 million in the agricultural sector to R51 million in the manufacturing sector and R64 million in the “wholesale trade, commercial agents and allied services” sector (Strydom, 2011).

A comprehensive definition of an SME and a small, micro, and medium-sized enterprise (SMME) in South Africa is therefore any enterprise with one or more of the following characteristics (Erasmus *et al.*, 2013):

- fewer than 200 employees;
- an annual turnover of less than R64 million;
- capital assets of less than R23 million; and
- direct managerial involvement by owners.

In South Africa, a ‘small business’ is officially defined in section one (1) of the National Small Business Act of 1996 as amended by the National Small Business Amendment Act of 2003 and 2004 (NSB Act) as: “... a separate and distinct business entity, including co-operative enterprises and non-governmental organisations, managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub-sector of the economy mentioned in Column 1 of the Schedule ...” (Mahembe, 2011). Small enterprises comprise between five (5) and 100 formally employed persons. Employees are employed on a full-time basis. According to the Department of Trade and Industry, a small business is owner managed, registered with local authorities and business activities are conducted from fixed premises (Dlodlo & Dhurup, 2010).

The National Small Business Act, Act 102 of 1996 amended by Act 29 of 2004, classifies small organisations into four categories, namely: micro-enterprises, including survivalist enterprises; very small enterprises; small enterprises; and medium enterprises. The differentiating factor between these categories, excluding micro-enterprises, is the number of employees. For micro-enterprises, the criterion is turnover level (Smit 2012). According to Abor and Quartey (2010), the most widely used framework in South Africa is the definition of the National Small Business Act 102 of 1996, which defines five categories of businesses in South Africa. The definition uses the number of employees per enterprise size category combined with the annual turnover categories and the gross assets excluding fixed property. The definitions for the various enterprise categories are given as follows:

- **Survivalist enterprise:** the income generated is less than the minimum income standard or the poverty line. This category is considered pre-entrepreneurial, and includes hawkers, vendors and subsistence farmers. In practice, survivalist enterprises are often categorised as part of the micro-enterprise sector.
- **Micro enterprise:** the turnover is less than the VAT (Value Added Tax) registration limit (that is R150 000 per year). These enterprises usually lack formality in terms of registration. They include, for example, spaza shops, mini-bus taxis and household industries. They employ not more than five (5) people.
- **Very small enterprise:** These are enterprises employing fewer than ten (10) paid employees, except mining, electricity, manufacturing and construction sectors, in which the figure is 20 employees. These enterprises operate in the formal market and have access to technology.
- **Small enterprise:** The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practices.
- **Medium enterprise:** The maximum number of employees is 100, or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterised by the decentralisation of power to an additional management layer.

The National Small Business Act’s definitions of the different categories of business may be summarised as set out in the table below (Abor & Quartey, 2010):

**Table 1: Enterprise size, number of employees, annual turnover and gross assets**

Enterprise size	Number of employees	Annual turnover	Gross assets, excluding fixed property
Medium	<100-200	< R4m-R50m	<R2m-R18m
Small	<50	<R2m-R25m	<R2m-R4.5m
Very small	<10 to 20	<R200k-R500k	<R150k-R500k
Micro	<5	<R150k	<R100k

*Source: Abor and Quartey (2010)*

As shown in Table 1, a medium enterprise is one with between 100 and 200 employees, has an annual turnover of between R4m and R50m, and has gross assets totalling between R2m and R18m. The table also shows that a small enterprise has less than 50 employees, has an annual turnover of between R2m and R25m, and has gross assets totalling between R2m and R4.5m. A very small enterprise has employees between 10 and 20, has an annual turnover of between R200k and R500k, and has gross assets totalling between R150k and R500k while a micro enterprise has less than five employees, has an annual turnover of under R150k, and has gross assets totalling R100k.

Table 2 further illustrates the classification of SMEs in South Africa in terms of the number of employees, turnover, and balance sheet.

**Table 2: Type of entity, number of employees, turnover and balance sheet**

Type of entity	Number of employees	turnover	balance sheet
Small	1 – 50	Maximum R13m	Maximum R5m
Medium	51 – 200	Maximum R51m	Maximum R19m

*Source: Cant, Erdis and Sephapo (2014)*

As revealed in Table 2, small enterprises in South Africa can be classified as those with employees between 1 and 50 with a maximum turnover of R13m and a maximum balance sheet of R5m. Medium enterprises are those with employees between 51 and 200 with a maximum turnover of R51m and a maximum balance sheet of R19m.

In a closer exploration of the meaning of small firms in particular, it was evident that there is no single, uniformly accepted definition for a ‘small’ firm. A further complicating factor is that both the terms ‘small business’ and ‘SMME’ are frequently used synonymously (Tustin, 2015). The use of the term ‘SMME’ in South Africa has become a common descriptor for small, medium, and micro-enterprises, with the term ‘SME’, used interchangeably. Elsewhere in Africa, the acronym MSME is used for micro, small, and medium enterprises (Tustin, 2015).

## Contributions of Small and Medium Enterprises in South Africa

In South Africa, there are an estimated 2.8 million SMEs contributing to the GDP (Gross Domestic Product) and providing nearly 61 percent of employment. In light of the current unemployment crisis, poverty, and inequality, an SME sector that contributes substantially to growth and employment in the country could play a significant role in alleviating these problems (Ryan, 2012). In the South African context, the social impact of SME hiring is underappreciated. This is because small firms employ people whose labour market characteristics make them most likely to be unemployed and marginalised (Ramukumba, 2014). It is estimated that the small business undertaking creates about 80 percent of all new job opportunities and more than 70 percent of all South Africans are employed in the small business sector. The government has identified small businesses as the way forward to create jobs and stimulate economic growth in order to combat the huge number of unemployed youths in the country (Cant, 2012).

Given South Africa’s legacy of big business domination, constrained competition, and unequal distribution of income and wealth, the smaller business sector is seen as important in generating employment and more equitable income distribution. It is also important in activating competition, exploiting both local and international niche markets, and enhancing productivity and technical change (Masocha & Charamba, 2014). SMEs account for about 91 percent of the formal business entities in South Africa, contributing to between 52 percent and 57 percent of the GDP and providing about 61 percent of employment (Abor & Quartey, 2010). SMEs are considered the “lifeblood of modern economies”, creating far more jobs than those created by large businesses, contributing 37 percent to employment in South Africa. SMEs provide personalised services and make a positive contribution to wealth creation in the South African economy (Dlodlo & Dhurup, 2010).

In 1995, SMEs contributed 33 percent to the South African GDP and 44 percent to employment. This increased to a 36 percent GDP contribution in 2001, and a 54 percent employment contribution. The SME is not only seen as an employment creator but also acts as an absorbent of retrenched people coming from the private and public sectors (Smit, 2012). In South Africa, SMEs account for about 91 percent of formal business entities, contributing to about 57 percent of the GDP and providing 60 percent of employment (Inyang, 2013). A study by World Wide Worx in 2012 observed that SMEs in South Africa create around 7.8 million jobs and play a vital role in reducing wealth inequalities and improving economic growth (Ngek, 2014).

The contribution of the SME sector cannot be sustained without the creation and subsistence of new SMEs. New SMEs are seen as a significant component of the solution to South Africa’s development issues, which include poverty, income inequality, and unemployment (Fatoki & Odeyemi, 2010). It has been greatly debated that SMEs are



pivotal to employment creation and economic growth, particularly in countries such as South Africa that have a high rate of unemployment. The SME sector has an estimated 5.6 million SMEs operating in South Africa, creating a total of 11.6 million employment opportunities (Cant *et al.*, 2014). According to Cant *et al.* (2014), the importance of SMEs from a South African perspective includes that:

- SMEs are the engine of growth of the economy;
- SMEs are essential for a competitive market which will contribute to more competitive prices;
- SMEs are critical for poverty reduction; and
- SMEs play a particularly important role in developing countries as mainstream businesses can create only a certain number of jobs in selected sectors.

The promotion of entrepreneurship and small business development was seen by the new South African government in 1994 as a way of addressing the following generic development goals in the country: job or employment creation, poverty alleviation, equity and participation, social stability, economic growth and development, contribution of SMEs to sustainable development, contribution of SMEs to economic growth, and contribution of SMEs to employment (Chimucheka, 2013). Other potential benefits directly accruing to local governments because of the activities of the SME sector, include the empowerment of local citizens, competition among developing businesses in tandem with the positive benefits of quality by the suppliers as well as providing a broader base and choice for the consumer. The benefits also include a reduction in crime (Chimucheka, 2013).

In South Africa, SMEs account for nearly 91 percent of formal business entities and 61 percent of employment. It is also estimated that SMEs provide 90 percent of jobs created between 1998 and 2005. This prominent role of SMEs has been recognised in the National Development Plan, which sets out the long-term vision for the country (Vivier, 2013). SMEs are an important source of employment and economic growth in most countries and South Africa is lagging on this front. In South Africa, SMEs employ 47 percent of the economically active population and constitute close to 45 percent of the GDP (Luiz & Mariotti, 2011).

SMEs are essential for improving the standard of living in a society and the stability of a country. More specifically, this sector is believed to contribute to economic development. It is generally accepted that the small business sector serves as an incubator for growth and employment (Tustin, 2015). SMEs are viewed as the lynchpin of successful employment strategies. They tend to be labour rather than capital-intensive. In fact, in the South African context, the social impact of SME hiring is underappreciated. This is because small firms employ people whose labour market characteristics make them most likely to be unemployed and marginalised (SBP Alert, 2013).

## **Challenges Faced by Small and Medium Enterprises in South Africa**

Although democracy has long been established in South Africa and despite vast improvements in the extension of infrastructure and basic services to poor and marginalised communities, socio-economic and spatial inequalities remain (Vivier, 2013). The SME sector is routinely hailed as an indispensable ingredient for addressing these challenges. This is not only true for South Africa, but for much of the developing world, where unemployment, corruption, and poverty persist (Vivier, 2013). The challenges faced by SMEs in South Africa include lack of training and education, limited access to financial resources, inaccessibility to markets, lack of support structures, inaccessibility of appropriate technology, and lack of access to other resources like human resources (Chimucheka, 2013).

The inaccessibility of bank finances is a serious constraint during the formation of new ventures as well as at later stages, as the business requires additional inflows of capital to support expansion and growth. Inadequate bookkeeping and lack of financial management knowledge are also challenges that have negative impacts on SMEs (Chimucheka & Rungani, 2011). Small firms face problems in getting access to funding due to their peculiar characteristics, which are being relatively young, lacking credit histories, lack of adequate information, and having high-risk perceptions, among others. Lenders may be reluctant to fund small firms, especially those with new and innovative products, which are most likely difficult to evaluate (Manzani & Fatoki, 2012). In South Africa, SMEs have constrained access to external funds, more importantly as a result of the perceived risk and information asymmetries between the providers of funds and the SME economy (Manzani & Fatoki, 2012).

SMEs across the whole world and in South Africa in particular, are still faced with numerous challenges that inhibit entrepreneurial growth. Apart from SME funding and access to finance, the Global Entrepreneurship Monitor (GEM) Reports (2001-2010) noted that South African SMEs also suffer from poor management skills, which is a result of a lack of adequate training and education (Mahembe, 2011). The South African Government has identified the SME sector as the means to achieve accelerated economic growth. As SME growth depends to a larger extent on macroeconomic growth, the obvious analogy can be drawn that the limited micro-economic growth of the past few years has inhibited SMEs from developing to their full growth potential (Smit, 2012). SME owner-managers believe that the primary obstacles to their survival are external to the enterprise. In contrast to these beliefs, research on the technology upgrading of SMEs in South Africa suggest that SMEs should devote more attention to internal weaknesses by improving their internal operations (Smit, 2012).

SMEs face numerous challenges in terms of access to finance, market access, skills and networks, and the enabling environment. Many businesses face financial constraints and cash flow uncertainty. They often lack the collateral and financial records required for loans from commercial banks. Application processes tend to be bureaucratic. There are high transaction costs and a lack of awareness about the procedures involved in gaining financing (Qureshi, Mwangi, Oshry & Addae, 2012). The creation of successful SMEs in South Africa is one of the lowest in the world, as most do not move from the first stage of growth to other stages such as survival, success, take-off and resource maturity. The number of SME failures in year five varies between 50 percent and 95 percent and about 75 percent of new SMEs do not become established firms (Ngek, 2014).

The creation rate of new SMEs in South Africa as measured by the total early-stage entrepreneurial activity is one of the lowest in the world. In addition, 75 percent of new SMEs created in South Africa fail within the first two years of operation (Fatoki & Odeyemi, 2010). The probability of a new SME surviving beyond 24 months and becoming an established firm is less likely in South Africa than in any other GEM participating country. Various challenges and impediments prevent the creation of new SMEs as well as cause high failure rates of new enterprises in South Africa. One of these is the non-availability of formal sector financing (Fatoki & Odeyemi, 2010).

There are many factors that hinder the achievement of success by small businesses. The lack of managerial skills places significant constraints on SME development while regulatory constraints also pose serious challenges to their development. Moreover, the high start-up costs for firms, including licensing and registration requirements, can impose excessive unnecessary burdens on them (Cant *et al.*, 2014). SMEs frequently lack the collateral and financial records, such as financial statements that are mandatory for loan applications from commercial banks or financial services providers, thereby affecting their ability to obtain funding (Cant *et al.*, 2014).

SMEs in South Africa face a number of challenges, the most important of which have been reported by a number of organisations to be: a lack of managerial skills, finance and obtaining credit, access to markets and developing relationships with customers, appropriate technology, and low production capacity, quality products, and support for the role that they play in economic development (Ramukumba, 2014). Even with the recognition that SMEs are vital to stimulating entrepreneurship and thus economic growth, a number of obstacles inhibit them from realising their full potential (Snyman, Kennon, Schutte & Von Leipzig, 2014). Implementing marketing activities is a challenge for SMEs due to the high costs of establishing and running a business. Due to these factors, SMEs are bound to experience marketing skills shortages and often fail to implement marketing in their businesses, which poses a risk to the survival of the business in the future (Hlatshwayo, 2015).

The SME sector continues to confront a difficult economic and labour environment, including policies that favour large corporations, financial constraints, and burdensome labour legislation. Furthermore, South African SMEs must also negotiate the legacies of apartheid, notably high levels of inequality and skewed ownership and control, as well as the oversupply of a largely unskilled, under-utilised, and alienated labour force (Vivier, 2013). Numerous SMEs within the informal settlements of South Africa struggle to obtain capital and a guaranteed income. These SMEs end up with poor credit records, which leads to poor cash flow, often resulting in the SME entrepreneur not receiving the financing needed to start the business in the first place. Crime and theft are ranked as the third-highest obstacle to growth for business owners (Cant *et al.*, 2014).

Reliable and comprehensive knowledge accumulation on the state of the SME sector of South Africa is widespread but mostly uncoordinated and unparalleled. These limitations pose serious barriers to efficient policy formulation and support initiatives aimed at developing SMEs (Tustin, 2015). A heavy regulatory burden weighs on

SMEs more than on their larger counterparts. For this reason, an environment nurturing SMEs will be one in which regulations are prudently thought through with regard to their impact on business performance, and in which they are administered competently (SBP Alert, 2013).

This section discussed literature on SMEs from a South African perspective. The literature revealed that in South Africa, SMEs are those businesses that are categorised in terms of their employment provision. The literature also showed that in South Africa there are an estimated 2.8 million SMEs contributing to GDP and providing nearly 61 percent of employment opportunities. SMEs in South Africa face a number of challenges, the most important of which have been reported by a number of organisations to be: a lack of managerial skills, finance and obtaining credit, access to markets and developing relationships with customers, appropriate technology, and low production capacity.

## **Legislation of SMEs in South Africa**

For the past number of years, the South African Government has invested in a plethora of initiatives aimed at supporting and growing the SME sector. South Africa's small business policy was principally informed by the 1995 "White Paper on national strategy on the development and promotion of small business in South Africa" (Mahembe, 2011). The 1995 White Paper outlined, among other things, the need for the government to create an enabling legal framework, facilitate access to information and advice, boost procurement from small firms, and to improve access to finance and affordable physical infrastructure (Mahembe, 2011).

The role of government in South Africa appears to be of critical importance in shaping the present and future of the SME sector. There has been a shift, since 1994, in the national policy environment surrounding small enterprises in South Africa. Post-apartheid South Africa has seen the emergence of a changed institutional and policy context, which governs the operations of the SME sector (Manzani & Fatoki, 2012). Enterprise Development (ED), which is the support and growth of SMEs, has been introduced as a component of the broad-based black economic empowerment (BBBEE) policy in South Africa. Since 2007, the compliance target in the area of BBBEE ED for large companies has been to spend three (3) percent of net profits after tax on establishing and growing sustainable SMEs. This entails the public and private sectors supporting SME development, financially and non-financially. BEE policy invariably guides the private sector's engagement with SME development in South Africa (Ryan, 2012).

The 2008 GEM report notes that South Africa's restrictive employment laws are seen as one of the biggest regulatory obstacles to business growth. Policies not directly related to the business sector, but which have a marked impact on business efficiency were also mentioned (Herrington, Kew & Kew, 2010). The government's key focus with regard to small business has been on supporting black entrepreneurs, which the 1995 White Paper pointed out were the most marginalised group during apartheid (Timm, 2011).

Two policies aimed at helping more black people to become active in the economy and to aid small business owners have been developed: the 2000 Preferential Procurement Policy Framework Act and the Black Economic Empowerment (BEE) codes of good conduct (Timm, 2011). The BEE codes, which came into effect in 2008, award points to businesses based on seven elements, namely, the percentage of black ownership, black management, black staff, black staff trained, procurement from black suppliers, business or financial assistance to small black businesses, and corporate business investment. Companies with high BEE scores can win business with the government (Timm, 2011).

Upgrading the role of the SME sector in the South African economy to improve growth through increasing competitiveness, generating employment and redistributing income has been the focus of new development policies since the democratic transition (Smit, 2012). The South African Government tabled the National Small Business Act of 1996, amended by the Act of 2004, to provide equal standing for SME enterprises in South Africa's economy. The vital role played by the SME sector in the South African economy in addressing sustainable development, was highlighted by the 2003 Human Development Report for South Africa (Smit, 2012). Support from the government is important through legislation although other incentives are often preferred by governments, researchers, and SMEs over legislation. Researchers support education, information initiatives, and technical assistance, while SMEs generally support education and local initiatives over legislation (Walker, Redmond, Sheridan, Wang & Goef, 2008).

The South African post-apartheid government, being fully aware of the significance of SMEs in its economic growth, has since produced a framework for SMEs' support and growth in the country (Aigbavboa & Thwala, 2014). The SME sector of South Africa is actively promoted by a number of initiatives such as the National Small Business Act of 1996, which defines SME activities in the country and likewise provides for the establishment of the National Small Business Council and the Ntsika Enterprise Promotion Agency (Aigbavboa & Thwala, 2014).

Also, bodies like Khula Enterprise Finance were set up with a mandate to improve the SME sector's access to finance, primarily through the provision of 'wholesale finance' or guarantees to retail financial intermediaries, which, in turn, finance the SME sector (Aigbavboa & Thwala, 2014). Another initiative of the post-apartheid government is the creation of the Skills Development Programme, which was launched by the government in 1998. Through this initiative, SMEs are able to obtain assistance with two of the challenges that they face most, i.e., "a lack of management skills" and "developing relationships with customers" (Aigbavboa & Thwala, 2014).

In 2011, Finance Minister Pravin Gordhan stated that government support to businesses would include R600 million for enterprise investment incentives. Support for small businesses would be provided through the South African Micro-Finance Apex Fund and Khula Enterprise (Qureshi *et al.*, 2012). Political support for SMEs has set the tone for legislation, policy, and strategic direction and has resulted in South Africa's legislation setting forth the national objectives for the SME economy. Various pieces of legislation give evidence of the South African government's commitment to creating a supportive environment within which SMEs can prosper (Malefane, 2013). Institutional infrastructure support for SME development has been articulated in legislative, policy, and strategy pronouncements through the reconfiguration of public sector institutions' mandates to enable them to deliver on their new SME mandate (Maia, 2006).

The Companies and Intellectual Property Registration Office (CIPRO), supports the DTI (Department of Trade and Industry) in keeping abreast of the gradual development of SMEs and their ownership (Biekpe, 2006). The National Development Agency (NDA), the Centre for Small Business Promotion (CSBP) in the Department of Trade and Industry (DTI), Ntsika Enterprise Promotion Agency, Khula, the Land and Agricultural Development Bank of South Africa, and the Industrial Development Corporation (IDC) all play a crucial role as development financing institutions (DFIs) for SME development countrywide (Biekpe, 2006).

In addition, support sourced from national departments, government agencies, and provincially-based economic development corporations also provide resources and support for SME development (Malefane, 2011). The primary focus of these corporations is to promote investment, and project facilitation and assist local businesses within their province to diversify and become exporters of goods and services; they also improve competitiveness and assist exporters to access new international markets (Malefane, 2011).

Law reform and affirmative action measures established since the transition to democracy aim to protect and uplift the disempowered, as well as address some of these more 'intangible' and even ethical challenges (Vivier, 2013). These law reforms include, among others, the Labour Relations Act of 1995, the Basic Conditions of Employment Act of 1997, the Employment Equity Act of 1999, the Skills Development Act of 1998, and the Broad-Based Black Economic Empowerment Act of 2003. Together, these aim "to achieve greater social justice and equality and to redress past unfair discrimination and unearned privilege" (Vivier, 2013).

South Africa's regulatory environment has been a matter of concern for years. In 1994, the RDP White Paper promised "favourable amendments to legislative and regulatory conditions" for SMEs' development. This has not transpired. Some years ago, Minister Gordhan described South Africa's effort to assist SMEs as "pathetic" (SBP Alert, 2013). However, the South African government has recognised the valuable contribution made by SMEs to the economy and thus established the Small Business Development Ministry in 2014 to focus on SMEs and centralise the tools that may be used to develop SMEs (Hlatshwayo, 2015).

## Cultural and Social Norms

Cultural and Social Norms positively impact the GDP per capita and economic growth of countries in innovation-driven and transition-driven economies (Gomes, Ferreira, Lopez & Farinha, 2022). According to Liñán, Serrano, and Luna (2013), Cultural and Social Norms are relevant for entrepreneurship levels, and consequently for economic

growth. Cultural and Social Norms can be defined as the extent to which Cultural and Social Norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income (Global Entrepreneurship Monitor, 2023).

## **Internal Market Dynamics**

It is in less developed or less competitive countries that Government Policies and Internal Market Dynamics are more impactful. 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 more relevant in less competitive countries (Martinez-Fierro, Biedma-Ferrer & Ruiz-Navarro, 2015). Internal Market Dynamics are usually facilitators of entrepreneurship in innovation-oriented countries (Farinha, Lopes, Bagchi-Sen, Sebastião & Oliveira, 2020). Internal Market Dynamics refer to the level of change in markets from year to year (Global Entrepreneurship Monitor, 2023).

## **Physical and Services Infrastructure, and Research & Development (R&D) Transfer**

Physical and Services Infrastructure has a positive impact on economic growth in innovation-driven countries (Gomes, Ferreira, Lopez & Farinha, 2022). Entrepreneurship Training and Education positively affect the relationship between Government Programs and R&D Transfer to growing and new firms (Sa & Pinho, 2019). Physical and Services Infrastructure refers to the ease of access to physical resources, communication, utilities, transportation, land, or space, at a price that does not discriminate against SMEs. R&D Transfer is the extent to which national research and development will lead to new commercial opportunities and is available to SMEs (Global Entrepreneurship Monitor, 2023).

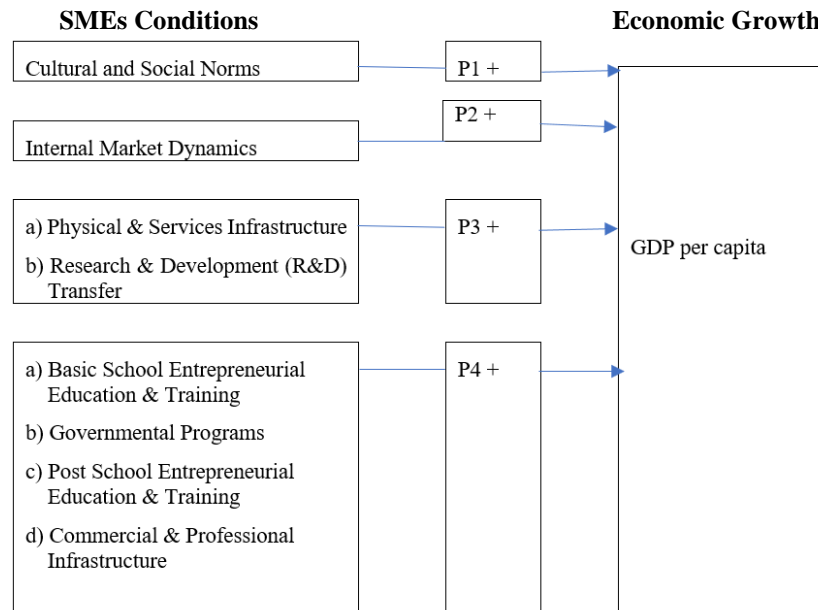
## **Basic School Entrepreneurial Education and Training, Governmental Programs, Post-School Entrepreneurial Education and Training, and Commercial and Professional Infrastructure**

According to Marques, Ferreira, Rodrigues and Ferreira (2011) and Sommarström, Oikkonen and Pihkala (2020), school-business cooperation allows for achieving more ambitious goals of entrepreneurial learning, having positive effects on the level of economic development of the economy. Governmental Programs aim to foster an innovative spirit, promote entrepreneurship, and give rise to new companies and new business models with added value in the market (Martinez-Fierro *et al.*, 2015; Medrano, Cornejo-Cañamares & Olarte-Pascual, 2020). Various studies on entrepreneurship have pointed out that Commercial and Professional Infrastructures are crucial for the success of the entrepreneurial activity, and henceforth, for countries' economic growth (Peris-Ortiz, Ferreira & Fernandes, 2018; Li, Ahmed, Qalati, Khan, & Naz, 2020). According to Sun, Pofoura, Mensah, Li and Mohsin (2020). and Bertoni and Tykvová (2015), government funding and support for entrepreneurial activity stimulate the development of entrepreneurial activity and the growth of an economy. Governmental Programs refer to the presence and quality of programs directly assisting SMEs at all levels of government. Commercial and Professional Infrastructure: The presence of property rights, commercial, accounting, and other legal and assessment services and institutions that support or promote SMEs (Global Entrepreneurship Monitor, 2023).

## **CONCEPTUAL FRAMEWORK AND SUMMARY OF PREMISES**

The study tested the conceptual framework illustrated in Figure 1 which shows that SMEs have a positive impact on economic growth in South Africa.

**Figure 1: Conceptual Framework for SMEs 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 programs, 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 explore the extent to which SMEs have an impact on economic growth in South Africa.

## PROBLEM INVESTIGATED

The impact of SMEs on economic growth in South 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

### Research Design

The research design refers to a framework for conducting a research project. It specifies the details of the procedures necessary for obtaining the information needed to structure and solve research problems (Hove, 2012). A research design is defined as a blueprint for the collection, measurement, and analysis of data, based on the research questions of the study (Sekeran & Bougie, 2010). It can initiate the information needed, the conceptual model, selected method, sampling method, sample size, measurement procedure, and data analysis process, which plans, and links collected data to the initial research question in the research study (Al-Ansari, 2014).

A qualitative research method was used in this study. Busetto, Wick and Gumbinger (2020) define qualitative research as the study of the nature of phenomena, including their quality, different manifestations, the context in which they appear or the perspective from which they can be perceived, but excluding their range, frequency, and place in an objectively determined chain of cause and effect. Qualitative research generally includes data in the form of words rather than numbers.

## **Data Collection**

This investigation used a document study to collect data on SMEs and economic growth. Data was collected from articles, dissertations, the internet, theses, and textbooks. Electronic databases such as Emerald, Science Direct, EBSCO-Host, Nexus, Sabinet, and Sage were used as sources of data. Keywords were used to search for the relevant data in this document study. Interviews were also administered to collect data for this study. The research participants for this qualitative study were 80 small business owners and managers. This is because saturation was attained after this number of participants was interviewed. At this stage, most of their responses to the interview questions were the same. The 80 interviewees were chosen using a simple random sampling method. Via open-ended interview questions, participants were given the opportunity to share their thoughts on the impact of SMEs on South Africa's economic growth.

Johnson and Christensen (2008) contend that qualitative data comprises responses from open-ended questions by interviewing participants, which permits them to answer in their own words and express their opinions about an intricate situation. The most important advantage of this technique is that it gives the researcher the opportunity to interact directly on a one-on-one basis with the research participants. This also gives an opportunity for the researcher to ask more in-depth and detailed questions to get every bit of information needed for the study. The opportunity to interact on a one-on-one basis with the research participants in this qualitative study gave leeway for the researcher to determine the contribution of SMEs to South Africa's economic growth. The interview questions were formulated to capture the contribution of SMEs to poverty alleviation as an element of economic development as discussed in the literature review.

## **Data Analysis**

To analyse means to break down a whole into its components or constituent parts. Through the assembly of the parts, one comes to understand the integrity of the whole (Onwuegbuzie, Leech & Collins, 2012). Analysis of literature takes one of two forms: within-study literature analysis or a between-study literature analysis. A within-study literature analysis involves analysing the contents of a specific work. In its most rigorous and comprehensive form, a within-study literature analysis does not merely involve analysing the findings of a study or the major premise used in a non-empirical work. Rather, optimally, it involves analysing every component of the work, including the title, literature review section, conceptual framework/theoretical framework, procedures used, results section, and discussion section (Onwuegbuzie, Leech & Collins, 2012). A within-study literature analysis was employed in this study to analyse the data collected. Keywords were also utilised to analyse the data in this document 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 and 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 and 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 on the economic growth of a country. In innovation-driven economies, Entrepreneurship Education and Training are relevant in the context of Governmental Programs for the effectiveness of R&D Transfer. Thus, Entrepreneurship Training and Education positively affect the relationship between Governmental Programs 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 Programs, 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 have a positive impact on economic growth. Whenever Basic School Entrepreneurial Education and Training present 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 Programs positively impact economic growth. Governmental Programs 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 Programs facilitate the creation of an industry focused on the current needs of cities, that is, on the creation of increasingly intelligent cities. Governmental Programs 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 have a positive impact on economic growth. Post-School Entrepreneurial Education and Training mean 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 affect 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 Infrastructure and Professional Infrastructure are the drivers 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 and Farinha, 2022).

This study aimed to investigate the impact of SMEs on economic growth in South Africa. This aim was achieved by an extensive literature review which revealed that SMEs have a positive impact on economic growth in South Africa.



## CONCLUSIONS

SMEs continue to play a significant role in South Africa's economic growth. South Africa should have been a refuge for SMEs, with nearly 60 million inhabitants, rich mineral deposits, ample fertile farmland, and other natural resources. Based on the results of this study, SMEs in South Africa have been shown to contribute to the development of jobs and the growth of the economy, and poverty reduction, all of which contribute to the country's economic growth and development. The SME sector would undoubtedly be an important tool for the rapid industrialisation of the South 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 government should promote the sector's growth.

The study concludes that SMEs have a positive impact on economic growth in South 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. South Africa represents both strong opportunities and barriers for local SMEs. It is evident from the EY G20 Entrepreneurship Barometer report that South 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 government, through its various departments and agencies, should work to support and encourage their development. The government 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 South 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. The government 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 of South Africa. SME owners must address the overwhelming challenges faced by small businesses in South Africa in order 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 impact on South Africa's economic growth, it must expand and be sustainable.

In view of the study results, it is thus recommended that the government of South Africa should establish a new support agency for SMEs. The South African government should improve the public's view of SMEs. It is further recommended that the South African education system 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 South African education system should promote and support entrepreneurial education and training.

## CONTRIBUTIONS OF THE STUDY

Despite the availability of previous research studies focusing on small enterprises in South 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 South Africa. Few empirical studies that are available focus on specific matters regarding SMEs in South 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 South 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 SMEs' conditions considered in this study.

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# EXAMINING PODCAST MARKETING SUCCESS – PERSPECTIVES OF THE IS SUCCESS MODEL

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## ABSTRACT

*Research on podcast marketing success is limited, particularly from a developing economy perspective. This study examined podcast marketing success from a developing economy perspective, specifically, through investigating the factors that influence user satisfaction and, ultimately, their use behaviour of a podcast. The research was theoretically grounded in the Information System Success Model. Data was obtained from 382 respondents who had previously listened to a company's podcast. The validity of the measurement model and hypothesis testing was done using a structural equation technique. The findings suggest that the use behaviour of a podcast is determined by system quality. However, information quality was found not to be a predictor of the users' use behaviour in podcasting. By the same token, the service quality of a podcast was also found not to be a predictor of use behaviour. The findings of the study further suggest that system quality determines user satisfaction significantly. Information quality was also found to be a significant predictor of user satisfaction. Service quality, as well, was found to be having a significant and positive relationship with user satisfaction. In conclusion, the findings of the study also suggest that user satisfaction with a podcast has a significant and positive relationship with the user's use behaviour. The study highlights, both, the theoretical and managerial implications of these findings to marketers who are interested in increasing user satisfaction and use behaviour of a podcast. Increasing user satisfaction will successfully help to improve use behaviour or even continued intention to use their podcasts, thereby enhancing podcast marketing success in South Africa. Also, the study identifies possible challenges and opportunities for future research within this domain of podcast marketing.*

**Keywords:** podcast, system quality, service quality, user satisfaction, use behaviour.

## INTRODUCTION

The advancement and extensive adoption of internet technologies have revolutionized how individuals communicate in their personal and work lives (Szymkowiak, Melović, Dabić, Jeganathan & Kundi, 2021). Evidence of this transformation is the introduction of novel communication instruments, commonly referred to as "digital communication tools," that have emerged alongside the development of internet technologies (Melović, Jocović, Dabić, Vulić & Dudic, 2020). Subsequently, the emergence of various digital communication tools such as social media platforms, blogs, wikis, video conferencing and instant messaging has broadened the avenues that marketers can use to reach out and connect with their intended audience (Bala & Verma, 2018). These new digital media options have created unprecedented opportunities for marketers. A significant advantage of digital media is its capacity to facilitate interaction, feedback, and response, which can offer crucial insights into customers and potential clients.

This information can be utilized to improve communications and make them more effective (Nuseir, 2016). Therefore, digital marketing refers to a wide range of techniques used to market products or services through digital technologies. Its main goal is to attract potential customers, convert them into buyers, and retain them by using targeted and measurable approaches. The ultimate aim is to promote brands, influence customer preferences, and increase sales through various digital marketing strategies (Todor, 2016). There are a variety of channels that are used in digital marketing. They include, amongst others, wireless text messaging, electronic billboards, mobile instant messaging, mobile applications, digital television, radio channels and podcasts (Tilak, 2018). The current study focuses on podcasts as a digital tool that marketers use to communicate with their customers.

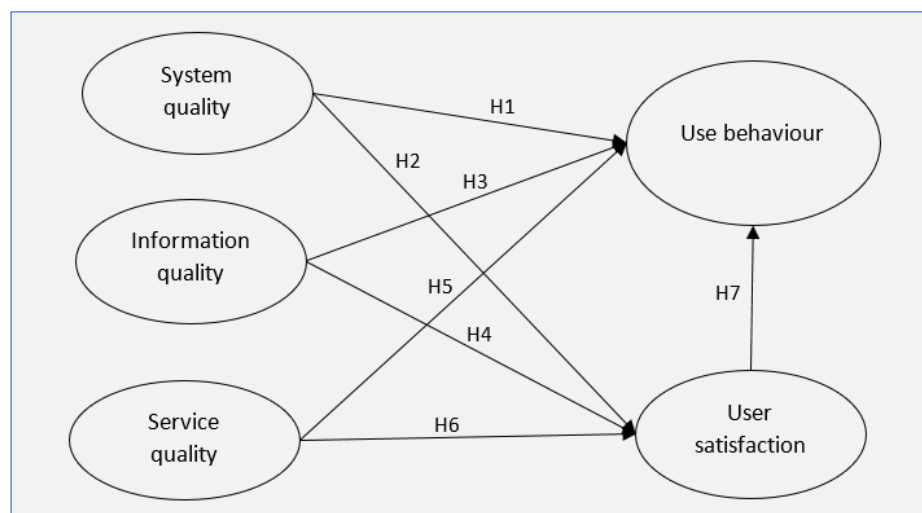
Podcasting has its origins in the well-known iPod produced by Apple. The concept involves people being able to obtain audio files, also known as podcasts, or video files, also known as vodcasts, via the internet and then storing them on a hand-held device such as an iPod. This enables individuals to listen to or watch the files whenever and wherever they please (Jackson & Ahuja, 2016). Makrinova, Matuzenko, Zaitseva, Larionova, Eliseeva, Mysova, and Nagai (2020), defined a podcast as an audio form of a blog that distinguishes itself from traditional radio broadcasts by not being live. This means that the content is pre-recorded and can be accessed by users at any time that suits them. Unlike audiobooks, podcasts are more affordable and easier to produce. Therefore, businesses are increasingly utilizing podcasts as part of their digital media strategy. Tranova and Veneti (2021) contend that there is a gradual increase in the number of podcast listeners as the popularity of this medium rises, particularly among younger consumers.

Many studies have been carried out on podcasting in various fields of expertise. For instance, Bezbaruah and Brahmabhatt (2022) investigated the effectiveness of podcast adverts by applying the advertising value framework to analyze their impact on various factors including attitudes towards advertisements, attitudes towards the brand being advertised, formation of intent to purchase, and the creation of electronic word-of-mouth about the brand. On the other hand, Rohden and Tassinari (2023) evaluated the antecedents of engagement in podcasting while Tranová and Veneti (2021) evaluated the use of podcasting in the political relationship marketing theory. Furthermore, Brinson and Lemon (2022) analysed the effects of host trust, credibility and authenticity in podcast advertising. In addition, Nelson (2021) investigated the use of podcast services in academic libraries. However, available studies have not examined podcast marketing success from a developing economy perspective. Therefore, the aim of this study is to evaluate the factors that influence user satisfaction and, ultimately, their use behaviour on podcasts in South Africa. The findings of the study will provide a crucial understanding to podcast marketers on how to improve the elements that impact user satisfaction and their use behaviour of podcast content, in South African and comparable contexts.

## THEORETICAL BACKGROUND AND RESEARCH HYPOTHESIS

The theoretical background of this study is rooted in the Information System Success Model (Delone & Mcleone, 1992). This model suggests that system quality, information quality and service quality, all influence the user's satisfaction and their use behaviour. According to the model, user satisfaction precedes the use behaviour of a system. This means that user satisfaction will influence the user's use behaviour or the user's intention to continue to use an information system. Based on this theory, we proposed a conceptual model (Figure 1) which posits that the system quality of the podcast, its information quality and its service quality will influence user satisfaction with the podcast and the use behaviour or intention to continue using the podcast. The model further posits that user satisfaction will influence their use behaviour of the podcast. The relationships presented in the model are discussed as follows:

**Figure 1: Proposed research model**



The relationships between these constructs are discussed in the hypotheses presented below.

## **System Quality and Use Behaviour**

Li and Wang (2021) defined system quality as the ability of a system to be reliable, responsive and flexible to maintain the user's operations. Additionally, system quality has been investigated in LMS studies as technical factors such as system reliability, response time, ease of access to materials, design of navigation systems, and network speed (Koh & Kahn, 2020). Numerous studies have consistently shown that system quality influences a user's intention to continue to use a system (Li & Wang, 2021; Al-Hattami, Abdullah & Khamis, 2021; Almaiah & Al Mulhem, 2019; Wang, Wang, Lin & Tsai, 2019). Consequently, Mailizar, Burg and Maulina (2021) established that the intention to continue using a system is significantly influenced by its system quality. A study by Sharma and Sharma (2019) among Omani mobile banking system users found system quality to be significant and positively related to usage intention. Therefore, the following hypothesis is proposed:

**H1:** There will be a significant positive relationship between system quality and use behaviour.

## **System Quality and User Satisfaction**

System quality is considered one of the most influential factors in user satisfaction with information systems (Nirwanto & Andarwati, 2019). According to Widiastuti, Haryono and Said (2019), the quality of a system will influence its user satisfaction. Researchers have consistently demonstrated that high quality in a system leads to user satisfaction (Koh & Kan, 2020; Al Mulhem, 2020; Behnamifard, Ahmady & Shokri, 2021; Kumar & Lata, 2021). Accordingly, follow-up studies (Kurniawan, Ardianto & Hidayatullah, 2021; Nuryanti, Hutagalung, Nadeak, Abadiyah & Novitasari, 2021; Pratama, Hidayatullah, Alvianna, Astuti & Krisnanda, 2021) observed a significant positive relationship between system quality and user satisfaction. Lastly, a study by Pratiwi and Mujadilah (2021) among users of mobile banking-based applications in Indonesia found system quality to be significant and positively related to user satisfaction. Hence the following hypothesis is proposed:

**H2:** There will be a significant positive relationship between system quality and user satisfaction

## **Information Quality and Use Behaviour**

Information quality relates to how pleased users are with the information presented by a system. When evaluating information quality, consumers typically consider how consistent the information is with objective reality, including factors such as authenticity, accuracy, timeliness, and integrity. Typically, consumers aim to acquire high-quality information to minimize the potential risks associated with making a purchase (Yu, Zhang, Lin & Wu, 2020). Furthermore, Yu, Zhang, Lin and Wu (2020) posit that information quality increases the consumers' click-through intention (use behaviour). Various studies have established a positive but not significant relationship between information quality and the intention to continue to use (Zhang & Xi, 2022; Rouibah, Dihani & Al-Qirim, 2020; Zhu, Li, Wang, He & Tian, 2020; Widiastuti, Haryono & Said, 2019). However, a study by Hussain, Mani and Chauhan (2022) on retailers of FMCG from the B2B E-commerce in India found information quality to be significant and positively related to the intention to continue to use. Therefore, the following hypothesis is proposed:

**H3:** There will be a significant positive relationship between information quality and use behaviour.

## **Information Quality and User Satisfaction**

Ma (2021) posits that the information quality of a system is a vital antecedent of user satisfaction. Supporting this argument is the study of Kuo and Hsu (2022), which maintains that information quality is an important influencer of satisfaction. Numerous studies establish a significant and positive relationship between information quality and satisfaction (Um, Fang & Seo, 2021; Xu & Du, 2021; Zhu, Li, Wang, He & Tian, 2020; Muda & Ade Afrina, 2019). Supporting these findings is the study of Dangaiso, Makudza and Hogo (2022). Research by Gesell, Glas and Essig (2022) among buyers and suppliers in the German automotive industry found information quality to be significant and positively related to satisfaction. Hence the following hypothesis is proposed:

**H4:** There will be a significant positive relationship between information quality and user satisfaction.



## Service Quality and Use Behaviour

Service quality refers to the overall evaluation or attitude that a consumer has about a service, which is based on their comparisons between what they expected to receive and what they actually experienced (Choudhury, 2013; Dapas, Sitorus, Purwanto & Ihalaaw, 2019). According to Ahmad, & Zhang (2020), users are likely to demonstrate an intention to continue using a system if its service quality is high. Accordingly, various studies have established a significant positive relationship between service quality and continuous intention to use (Habibi & Rasoolimanesh, 2021; Xue, Rasool, Khan, Khan, Khan, Khan & Ali, 2021; Rahi & Abd. Ghani, 2019; Wilson, Keni & Tan, 2019). A study by Jain, Dixit and Shukla (2022) on Indian customers with mobile shopping experiences found service quality to be significant and positively related to use behaviour. Therefore, the following hypothesis is proposed:

**H5:** There will be a significant positive relationship between service quality and use behaviour.

## Service Quality and User Satisfaction

Service quality is considered one of the key antecedents of user satisfaction with information systems (Twum, Adams, Budu & Budu, 2022). Based on the research by Supriyanto, Wiyono and Burhanuddin (2021), service quality was found to have direct effects on customer satisfaction. Supporting this notion is the study of Satti, Babar and Ahmad (2021), who similarly found service quality as being one of the most essential components affecting the satisfaction of customers. Researchers have consistently demonstrated that high service quality leads to user satisfaction (Saut & Song, 2022; Marcos & Coelho, 2022; Ghosh & Jhamb, 2021; Zarei, Asgarnezhad Nuri & Noroozi, 2019). A study by Padlee, Thaw and Zulkiffli, (2019), among hotel customers in Temerloh, a Malaysian municipality, found service quality to be significant and positively related to user satisfaction. Hence the following hypothesis is proposed:

**H6:** There will be a significant positive relationship between service quality and user satisfaction.

## User Satisfaction and Use Behaviour

User satisfaction refers to the feeling that a system has met or exceeded the user's expectations. Widiastuti, Haryono and Said (2019) posit that user satisfaction refers to the user's reaction to the use of information system output. According to Ali, Sherwani, Ali, Ali and Sherwani, (2021), users are likely to demonstrate an intention to continue to use if they are satisfied with the system. Previous studies have shown that a satisfied user will demonstrate an intention to continue to use the system (An, Choi & Lee, 2021; Cheng, 2020; Viacava & Baptista, 2020; Zhu, Li, Wang, He & Tian, 2020). This is consistent with research performed by Handayani, Gelshirani, Azzahro, Pinem and Hidayanto (2020), which noted that if users are confident that a system is efficient, they are likely to continue using that system. A study by Shanshan & Wenfei (2022) among Chinese University online students found user satisfaction to be significant and positively related to use behaviour. Therefore, the following hypothesis is proposed:

**H7:** There will be a significant positive relationship between user satisfaction and use behaviour.

# RESEARCH METHODS

## Measurement

The main instrument used in this study was a self-administered printed questionnaire. The questionnaire consisted of two sections. The first section contained questions on the demographic profile of the respondents including age, level of education, income and podcast use. These variables were measured on nominal and interval scales. The second section of the questionnaire consisted of multi-item scales for measuring the constructs of interest in the study. All the scales were adapted from the study of Delone & Mcleone (1992). The items were measured on a seven-point Likert scale with anchors ranging from 1 "Strongly disagree" to 7 "Strongly agree". The questionnaire was piloted on a convenient sample of 45 respondents in order to check the clarity of instructions and the wording of the statements/questions. The pilot test results confirmed that the respondents generally understood the instructions and the wording of the questionnaire. Reliability analysis was conducted with the pilot sample to determine the internal consistency of the items in measuring each construct. The results of this analysis show that Cronbach's alpha of all the constructs was above the 0.7 thresholds, thus indicating that the measurement items for the constructs were internally reliable. Upon obtaining this positive feedback, the questionnaire was finalised for data gathering.

## Sampling and Data Gathering

The target population of the study was defined as South African consumers aged 18 years old and above, living in the Gauteng Province at the time of the survey and had previously listened to a company's podcast. The participants were selected using a non-probability convenience sampling technique. Trained research assistants contacted potential participants at various locations such as their homes, public parks, and workplaces. The research assistants first introduced themselves and explained the purpose of the study and the ethical measures in place to protect participants' anonymity, confidentiality, and right to participate. They also informed the participants about their rights, including the option to withdraw from the study without any negative consequences. Interested participants were given a questionnaire to complete. Of the questionnaires collected, 382 usable responses were realised.

## DATA ANALYSIS AND RESULTS

The primary method of data analysis used in this study was the Partial List Squares (PLS) technique, which was performed using the Smart PLS 3 software. To ensure the validity of the measurement instrument, the measurement model was evaluated as recommended by Anderson and Gerbing (1988), before testing the hypotheses through analysis of the structural model.

### Measurement Model Analysis

The validity of the measurement model was assessed to determine its convergent validity and discriminant validity. In assessing the former, the standardised factor loadings, Cronbach's alpha, composite reliability and the average variants extracted (AVE) were observed. According to Hair et.al. (2020) to achieve convergent validity, the recommended range for factor loadings should exceed 0.50, the Cronbach's alpha and the composite reliability should be greater than 0.7 and the AVE should exceed 0.5. The results of the convergent validity of the scale are presented in Table 1 below. The factor loadings ranged from a minimum of 0.686 to a maximum of 0.957. These values were greater than the acceptable range of 0.5 thresholds. Similarly, the minimum estimated value for Cronbach's alpha and the composite reliability were 0.740 and 0.817, respectively. These estimates were equally above the 0.7 cut-off points. Lastly, the AVEs ranged from a minimum of 0.576 to a maximum of 0.889. These values were also above the recommended threshold of 0.5. The results thus generally confirmed the convergent validity of the measurement model.

**Table 1: Results of the convergent validity of the measurement model**

		<b>Factor loading</b>	<b>Cronbach's alpha</b>	<b>Composite reliability</b>	<b>AVE</b>
<b>Information quality</b>			0.897	0.928	0.764
	IQ1	0.868			
	IQ2	0.869			
	IQ3	0.907			
	IQ4	0.851			
<b>System quality</b>			0.875	0.941	0.889
	SQ1	0.856			
	SQ2	0.873			
	SQ3	0.922			
	SQ4	0.930			
	SQ5	0.912			
<b>Service quality</b>			0.875	0.941	0.889
	SSQ1	0.937			
	SSQ2	0.948			
<b>Satisfaction</b>			0.953	0.964	0.844
	ST1	0.920			
	ST2	0.940			
	ST3	0.957			

	ST4	0.936			
	ST5	0.836			
<b>Use</b>			0.740	0.817	0.576
	UB1	0.809			
	UB2	0.561			
	UB3	0.737			
	UB4	0.632			
	UB5	0.686			

Following the confirmation of the convergent validity of the measurement model, its discriminant validity was assessed using the Fornell-Larcker (1981) technique. According to this technique, discriminant validity is attained when the square root of the AVEs is greater than the inter-construct correlations. The results of the discriminant validity analysis are presented in Table 2 below.

**Table 2: Results of the discriminant validity of the measurement model**

		1	2	3	4	5
<b>1</b>	System quality	<b>0.899</b>				
<b>2</b>	Information quality	0.234	<b>0.874</b>			
<b>3</b>	Satisfaction	0.274	0.399	<b>0.919</b>		
<b>4</b>	Service quality	0.246	0.268	0.263	<b>0.943</b>	
<b>5</b>	Use	0.301	0.081	0.167	-0.15	<b>0.690</b>

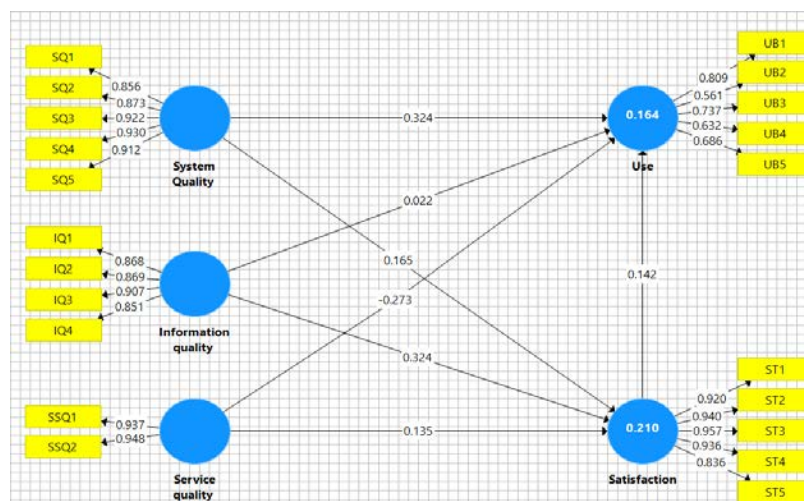
\* *Bold diagonal values are square roots of the AVEs; the values beneath them are the inter-construct correlations.*

The results in Table 2 show that the lowest square root of the AVE estimate is 0.690. This estimate is higher than the highest inter-factor correlation, which is 0.399, thus confirming the discriminant validity of the measurement model. Given that the measurement model is confirmed for its validity, the structural model is subsequently assessed to test the hypotheses.

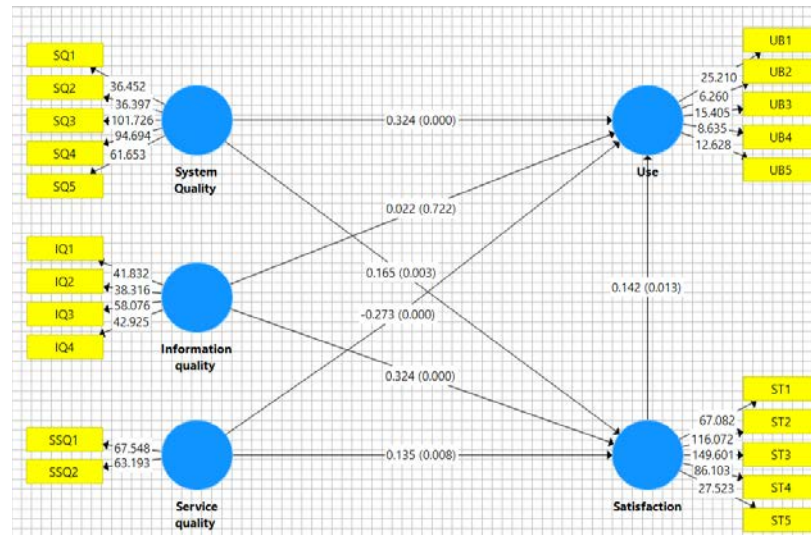
## Structural Model Analysis

The structural model was also analysed using Smart PLS 3. A bootstrapping technique using 5 000 resamples was used to determine the significance of the path estimate. The results of the structural model analysis are presented in Figures 2 and 3 and Table 3.

**Figure 2: PLS model estimation with path coefficients and R<sup>2</sup>**



**Figure 3: Results of PLS model estimation of bootstrapping for path significance**



**Table 3: Results of hypotheses testing**

		Standardized path beta	T Statistics	P Values	Decision	f <sup>2</sup>
<b>H1</b>	System quality -> Use	0.324	6.248	0.000	Supported	0.110
<b>H2</b>	System quality -> Satisfaction	0.165	2.970	0.003	Supported	0.031
<b>H3</b>	Information quality -> Use	0.022	0.356	0.722	Not supported	0.000
<b>H4</b>	Information quality -> Satisfaction	0.324	5.954	0.000	Supported	0.119
<b>H5</b>	Service quality -> Use	-0.273	4.759	0.000	Not supported	0.078
<b>H6</b>	Service quality -> Satisfaction	0.135	2.643	0.008	Supported	0.021
<b>H7</b>	Satisfaction -> Use	0.142	2.473	0.013	Supported	0.019

The results of the analysis reflect that system quality has a significant positive relationship with use behaviour ( $\beta = 0.324$ ,  $t = 6.248$ ,  $p < 0.001$ ), therefore Hypothesis 1 is supported. Similarly, the results suggest that system quality has a significant positive impact on satisfaction ( $\beta = 0.165$ ,  $t = 2.970$ ,  $p < 0.01$ ), and as a result, statistical support is provided for Hypothesis 2. Regarding Hypothesis 3, information quality has no significant relationship with use behaviour ( $\beta = 0.022$ ,  $t = 0.356$ ,  $p > 0.05$ ), therefore Hypothesis 3 is not supported. Furthermore, the results show that information quality significantly and positively predicts user satisfaction with a podcast ( $\beta = 0.324$ ,  $t = 5.954$ ,  $p < 0.001$ ), consequently, Hypothesis 4 is supported. Pertaining to Hypothesis 5, the results show that service quality is statistically not significantly associated with use behaviour ( $\beta = -0.273$ ,  $t = 4.759$ ,  $p < 0.001$ ), thus Hypothesis 5 is not supported. The results also show that service quality has a significant positive relationship with satisfaction ( $\beta = 0.135$ ,  $t = 2.643$ ,  $p < 0.01$ ), resulting in Hypothesis 6 being supported. Lastly, Hypothesis 7 is supported because the results show that satisfaction is statistically significant and positively predicts the use behaviour ( $\beta = 0.142$ ,  $t = 2.473$ ,  $p < 0.05$ ).

## DISCUSSION AND IMPLICATIONS

The overarching aim of the study is to investigate the factors that influence user satisfaction and, ultimately, their use behaviour of, or their continued intention to use, a podcast in South Africa. The findings of the study show that the system quality is positively associated with the user's use behaviour of a podcast. This finding is consistent with prior research (Li & Wang, 2021; Al-Hattami, et.al., 2021; Almaiah & Al Mulhem, 2019; Wang, et.al., 2019) which found

a significant positive association between the system quality of technology and the intention to continue to use it. The results of this study thus suggest that a good system quality of podcast will lead to the user's use behaviour of a podcast. Therefore, it is imperative to invest in system quality improvements by making sure the system is technologically updated and user-friendly.

Similarly, the study's findings show that user satisfaction with a podcast is positively predicted by the level of its system quality. This finding corroborates those of earlier studies (Koh & Kan, 2020; Al Mulhem, 2020; Behnamifard, et.al., 2021; Kumar & Lata, 2021) which found a significant positive relationship between system quality and user satisfaction. This result, therefore, suggests that high system quality will lead a user to be satisfied with a podcast. The findings further indicate that use behaviour has no significant relationship with the information quality of a podcast. This finding is supported by previous studies (Kuo & Hsu, 2022; Rouibah, et.al., 2020; Zhu, et.al., 2020; Widiastuti, et.al., 2019) which found no significant association between the information quality of a system and use behaviour. Based on the findings of this study, although information quality influences users' use behaviour of other digital technologies, it may not have the same effect on podcasting. One of the possible reasons is that, in contrast to other digital technologies, podcasts are often used for leisure and entertainment rather than for information-seeking. Thus, information quality may not be the primary factor driving users' intentions to continue listening to podcasts. Another possible explanation may be the fact that when listening to podcasts, many people develop a personal connection with the hosts, making the quality of information less important than the personality, humour, or style of the hosts. By the same token, the results of the study revealed that information quality positively influences podcast user satisfaction. This finding endorses those of previous scholars (Um, et.al., 2021; Xu & Du, 2021; Zhu, et.al., 2020; Muda & Ade Afrina, 2019) who have found a significant positive association between the information quality of a system and satisfaction by its users. The results of this study, consequently, suggest that a podcast which has high information quality will lead to satisfaction by podcast users.

Furthermore, the findings of the study suggest that service quality has no significant effect on the use behaviour of a podcast. Although this finding is unexpected, it validates those of earlier studies (Habibi & Rasoolimanesh, 2021; Xue, et.al., 2021; Rahi & Abd. Ghani, 2019; Wilson, et.al., 2019) which found a non-significant relationship between service quality and use behaviour of a system. There may be several possible reasons for service quality not predicting the use behaviour. One of the reasons may be the fact that most podcasts are typically free of charge. As a result, whether a user decides to listen to a podcast may not be as strongly influenced by the service quality of that podcast. Users could be willing to put up with lesser levels of service quality in the absence of a direct financial penalty. Another reason may be the fact that podcast success depends primarily on the quality of its content. Even if the service quality is not perfect, the listener is more likely to listen to interesting, engaging, and relevant content.

The findings also reveal that service quality significantly and positively influences user satisfaction with a podcast. This finding supports those of previous research (Saut & Song, 2022; Marcos & Coelho, 2022; Ghosh & Jhamb, 2021; Zarei, et.al., 2019) which found that user satisfaction with a system is significantly and positively influenced by service quality of that system. The results of this study thus suggest that users who find the service quality to be high will be satisfied with the podcast.

Lastly, the findings reveal that the satisfaction of users with a podcast positively influences the users' use behaviour on that podcast. This finding concurs with those of earlier studies which established a significant positive relationship between user satisfaction and intention to continue to use (An, et.al., 2021; Cheng, 2020; Viacava & Baptista, 2020; Zhu, et.al., 2020). Accordingly, this result confirms that potential users who are satisfied with a podcast will demonstrate favourable use behaviour towards it.

## **CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH**

This study evaluated the factors that influence user satisfaction and, ultimately, their use behaviour with a podcast. The study was theoretically grounded in the IS Success Model. On one hand, the findings suggest that the user's use behaviour of a podcast is determined by system quality. Information quality, on another hand, has been found not to be a predictor of users' use behaviour in a podcast. On the same breadth, the findings propound that there is no significant association between the service quality of a podcast and the user's use behaviour. However, system quality,

information quality and service quality of a podcast have been found to be significantly related to user satisfaction. Lastly, the results further suggest that the user's use behaviour is also predicted by user satisfaction with the podcast. The findings of this study add value to the literature by addressing the sparsity of research on the success of podcast marketing in the context of digital media users in an emerging market. The study also provides empirical validation of the IS Success Model in the digital marketing innovation domain from the perspective of a developing economy. The IS Success Model originated, within developed economies, using both theoretical and practical research on information systems conducted by multiple researchers in the 1970s and 1980s. Since then, the function of the information system has evolved and improved. In parallel, the academic investigation into measuring IS effectiveness has also advanced during the same period. Given this background, this validation in a digital marketing innovation domain within the context of an emerging African country is significant in validating the IS Success Model beyond its original context.

Additionally, the findings of the study may be of practical interest to podcast marketers who wish to improve their podcast marketing efforts. Based on these findings, podcast marketers should create podcasts that are useful, easy to use, and enjoyable in order to increase listener engagement and loyalty. As a result, marketers can assess the success of their podcast marketing campaigns and adjust their strategies accordingly. Lastly, by integrating these findings into podcast platforms, podcast creators may be able to create podcasts that are engaging and enjoyable to listen to.

Even though this study addresses several critical managerial implications for enhancing podcast marketing success in South Africa, two potential limitations remain. First, the study sample is limited to podcast listeners in one geographic region, which may not represent the broader podcast-listening population. A more diverse sample may be considered in future studies to maximize generalizability. Finally, a limited number of variables were considered in the study, which may not have captured all the factors that contribute to podcast marketing success. Future studies may consider including additional variables, such as podcast quality, podcast length, and host personality, to provide a more comprehensive understanding of podcast marketing success.

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# ENVIRONMENTAL FACTORS IMPACTING FEMALE STUDENTS' ENTREPRENEURIAL INTENTION

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## ABSTRACT

*Entrepreneurship has been a topic of interest for over a century. Worldwide, the phenomenon is acknowledged as a source for economic growth and development. Since the late nineteenth century countries perceive female entrepreneurs as forces of economic growth and development through new product or service development and stimulation of employment. Female entrepreneurship, in developing countries is regarded as a solution to unemployment and poverty among the youth, specifically where graduates cannot find employment. However, the emergence of entrepreneurial intention amongst these females are not spontaneous but impacted by various task and general environmental factors. As such, the aim of this study was to determine the environmental factors impacting South African and Netherlands female students' intention towards entrepreneurship. And to investigate whether these impacting factors differ between female students of different countries and Higher Education Institutions (HEIs). A descriptive research design approach was followed. A self-administered questionnaire was used to obtain the data from a convenience sample of 578 female students. The collected data were analysed using reliability and validity analysis, descriptive statistics analysis and one-way ANOVA. The results indicated significant differences between the environmental impact factors of the two countries. The findings make an important contribution in that it will help national and local governments and Higher Education Institutions (HEIs) on implementing initiatives to alleviate environmental impacts on these looming entrepreneurial ventures. The study recommend that government and Higher Education Institutions (HEIs) should create a favourable environment for female students and to assist them to be employment creators, rather than employment seekers. Ultimately, contributing to economic growth and development by reducing high unemployment and poverty.*

**Keywords:** entrepreneurial intention, environmental factors, females, South Africa, Netherlands.

## INTRODUCTION

For over a century entrepreneurship has been a topic of interest for researchers and economists since the phenomenon is valued as a source for economic growth and development (Schumpeter, 1912; Meyer & Synodinos, 2019). Entrepreneurs are known as the drivers that guide economic growth and development through new businesses, job opportunities and innovative ideas (Doran et al., 2018). Particularly, female entrepreneurs, as females worldwide take a keen interest in entrepreneurship (Meyer & Hamilton, 2020). Ultimately, economic growth and development may be espoused by more female individuals considering entrepreneurship as a livelihood (Bullough et al., 2022). Furthermore, in many countries the emergence of entrepreneurial intention amongst females are not spontaneous and impacted by various environmental factors (Güven, 2019).

## LITERATURE REVIEW

### Entrepreneurship in South Africa and the Netherlands

When deeming entrepreneurship in South Africa, strategies to encourage entrepreneurship continues to be a crucial topic for government and policymakers (Statistics SA, 2020). The concern stems from the country's high unemployment rate, recorded at 32.9 percent, one of the highest unemployment rates in the world (Statistics SA, 2022). Moreover, the South African government also identified the importance of female entrepreneurship as mechanism for economic development in the country (UN women, 2022). On the contrary, the unemployment rate of

South African females has been greater than that of males, standing at 35.5 percent in the second quarter of 2022 (Statistics SA, 2022). Ominously, South Africa has a serious problem of unemployed youth which was recorded at 62.1 percent in the first quarter of 2023 (Statistics SA, 2023). Additionally, a large portion of young South Africans consist of university students who makes a fundamental contribution to economic development owing to their potential high future incomes (Case et al., 2018). Furthermore, when South African females consider entrepreneurship, they are confronted with more difficulties, such as unemployment, poverty, lack of training and skills than their acquaintances in the developed countries (Mulaudzi & Schachtebeck, 2022).

Comparing the Netherlands to other European countries, it is noticeable that the country is one of the robust economies in Europe (World data, 2021). Entrepreneurship is considered as an essential tool for economic prosperity of the country (GEM, 2021). Since 1997, the Netherlands Ministry of Economic Affairs and EIM Business & Policy Research started investigating entrepreneurship. Subsequently, yearly a special aspect of entrepreneurship is investigated more in-depth (Verheul & van Mil, 2014). As a result, the Dutch government ensures an encouraging entrepreneurial spirit and a promising environment for entrepreneurs (GEM, 2021). Consequently, the country's unemployment rate stands at 3.0 percent in April 2023 (Statista, 2023), female unemployment at 3.8 percent (Trading Economics, 2023) and youth unemployment standing at 7.9 percent (Trading Economics, 2023). Although, the country has a strong entrepreneurial climate, Dutch females are confronted with certain gender-related obstacles when entering the business environment (Holthof, 2022).

## **Environmental Factors Impacting Entrepreneurial Intention**

Entrepreneurial intention is defined as the deliberate behaviour to start a business and become an entrepreneur (Kusumawijaya, 2020). However, an individual's intention to take part in entrepreneurial activity is impacted by different factors (Valdez-Juárez, 2020). Consequently, numerous researchers (Al-Mamary et al. 2020; Ali et al., 2022) have investigated the antecedents that influence entrepreneurial intention. According to Bird, (1988) these factors can be divided into personal factors, such as knowledge, experience and ability and environmental factors. Other researchers (Karabulut, 2016; Lee et al. 2022) suggested that personality factors namely need to achieve, self-confidence and risk-taking may affect entrepreneurial intention. Pertaining to environmental factors, Dubey & Sahu, (2022) state that environmental factors are regarded as the “gap filter” between personality characteristics of an entrepreneur and entrepreneurial intention. As such, entrepreneurial behaviour is influenced by an individual's environment they reside in (Al Ayyubi et al. 2018). Furthermore, Khuong & An, (2016) state that environmental factors specifically relating to organizations support the understanding of entrepreneurial intention. An organizational environment consists of two major environments, namely task environment and general environment (Daft et al. 2020). The task environment is described as matters that directly impact the entrepreneur's ability to do business, such as competitors, customers and supply of materials (Robbins et al. 2017). Whereas the general environment comprises of the economic, political and legal segments that may influence entrepreneurial behaviour (Daft & Marcic, 2015). Lucky & Minai, (2011) acknowledge that these environmental factors play an essential role in determining the likelihood of an individual becoming an entrepreneur.

Although various studies have been performed on the impact of personal, environmental and personality factors on student entrepreneurial intentions (Bird, 1988; Heydari et al., 2013; Al Bati et al. 2022). A vast search of literature revealed no similar competitive study relating to environmental factors impacting female students' entrepreneurial intention. Gaining insights into these perceived environmental factors from both South Africa and the Netherlands will contribute towards employing strategies to encourage young females to become actively involved in entrepreneurial activities. Therefore, the aim of this study is to determine the environmental factors impacting South African and Dutch female students' entrepreneurial intention and to determine whether differences exist between these two countries perceived environmental factors.

## **RESEARCH METHODOLOGY**

### **Research Design and Approach**

For this study a descriptive research design approach, following a single cross-sectional approach was employed. The research was quantitative of nature.

## Sample

The target population of this study consisted of young female undergraduate students enrolled at a South African and Netherland public Higher Education Institution (HEI). These females were aged between 18 and 24 years. From the sampling frame, two HEIs from the Gauteng Province in South Africa and two HEIs from the North-easternmost province in the Netherlands, by means of judgment sampling were chosen. Thereafter, a single cross-sectional non-probability convenience sample of 800 students, 400 students per country, 200 students per campus, was selected.

## Research Instrument and Data Collection Procedure

To collect the data concerning the environmental factors impacting female students' entrepreneurial intention a self-administered, structured questionnaire was utilized. The questionnaire comprised of a cover letter explaining the purpose of the research. The South African and Dutch students were requested to complete a questionnaire consisting of two sections. The first section gathered the female students' demographic information and section two gauged the perceived environmental factors impacting the female students' intention towards entrepreneurship. This section included two variables, namely task and general environment barriers. A five-point Likert scale varying between disagree (1) and agree (5) was used to determine the female students' rate of agreement or disagreement with the items to the perceived factors impacting entrepreneurial intention.

## Data Analysis

The gathered data was investigated by means of reliability and validity analysis, descriptive statistics analysis and one-way ANOVA. The recorded data was analyzed using the Statistical Package for Social Sciences (IBM SPSS), Version 28 for Windows.

# EMPIRICAL RESULTS AND DISCUSSION

## Sample Description

Of the 800 questionnaires that were disseminated, 578 questionnaires were done in full and were considered appropriate for data analysis. Resulting in a 72 percent response rate. The sample showed more participants from South Africa (SA) than the Netherlands (NL). Most of the South African sample signified being 19 years of age (29.7%), followed by those being 18 years (21.4%) and 20 years (21.4) old. The largest portion of the Dutch sample indicated being 18 years of age (37.2%), followed by students being 19 years (18.4%) and 21 years (12.8%) of age. Considering female students' current year of study, majority of the South African sample revealed being in their first year of study (34.7%). Likewise, a greater number of the Dutch sample denoted being in their first year of study (56.3%).

**Table 1: Sample description**

Country	%	SA Age	%	NL Age	%	Year of study SA	%	Year of study NL	%
SA	56.7	18	21.4	18	37.2	1 <sup>st</sup>	34.7	1 <sup>st</sup>	56.3
NL	43.3	19	29.7	19	18.4	2 <sup>nd</sup>	30.4	2 <sup>nd</sup>	21.9
		20	21.4	20	11.2	3 <sup>rd</sup>	28.2	3 <sup>rd</sup>	12.1
		21	14.4	21	12.8	4 <sup>th</sup>	6.7	4 <sup>th</sup>	9.7
		22	6.1	22	10.8				
		23	3.0	23	3.6				
		24	4.0	24	6.0				

## Reliability and Validity Analysis

The Cronbach alpha values for the three constructs ranged from 0.750 to 0.836, which exceeds the advised value of 0.70 (Malhotra, 2010), thereby indicating internal-consistency reliability. Moreover, the average inter-item correlation for the three constructs varied between 0.500 and 0.554 which was within the recommended range of 0.10 to 0.50 (Pallant, 2011). Thus, verifying convergent and discriminant validity of the scale.

## Descriptive Statistics Analysis

Descriptive statistics, comprising of means and standard deviations, were calculated per country for each construct. Table 2 explains the means and standard deviations and Cronbach alpha values.

**Table 2: Descriptive statistics per construct – Per sample**

Constructs	South Africa (SA)			Netherlands (NL)		
	Valid N	Mean	Standard deviation	Valid N	Mean	Standard deviation
Task environment	328	3.205	1.012	250	2.712	0.828
Economic environment	328	3.427	1.103	250	3.307	0.814
Political-Legal environment	328	3.679	1.037	250	2.401	0.789

From table 2 it is distinct that the highest mean for South African females was recorded for political-legal environment barriers (mean = 3.679), followed by economic environment barriers (mean = 3.427) and task environment barriers (mean = 3.205). These findings suggests that South African females perceive that the local infrastructure, crime, and corruption play an essential role in influencing their entrepreneurial intention. For the Netherlands females the highest mean was captured for economic environment barriers (mean = 3.307), followed by task environment barriers (mean = 2.712) and political-legal environment (mean = 2.401). These results proposes that Dutch females perceive that lack of own financial resources mostly influence their intention to become entrepreneurial. Moreover, the South African sample scored higher means on all the perceived environmental barriers. These findings infer that prospective South African entrepreneurs have considerable higher perceived environmental barriers when considering becoming entrepreneurs than their Dutch counterparts. A possible reason for this result may be due to South African females are bombard with unique challenges such as high unemployment, poverty and education and training.

## One-way ANOVA

To determine whether there is a significant difference between the two sample groups concerning the three constructs, namely task environment barriers, economic environment barriers and political-legal environment barriers one-way ANOVA was applied.

**Table 3: Differences in perceived environmental barriers impacting entrepreneurial intention**

<b>Environmental barriers</b>		<b>Sum of squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig</b>
Task environment	Between groups	34.458	1	34.485	39.29	0.001*
	Within groups	505.538	576	0.878		
	<b>Total</b>	<b>540.023</b>	<b>577</b>			
Economic environment	Between groups	2.048	1	2.048	2.098	0.148
	Within groups	562.511	576	0.977		
	<b>Total</b>	<b>564.559</b>	<b>577</b>			
Political-Legal environment	Between groups	231.754	1	231.754	263.280	0.001*
	Within groups	507.027	576	0.880		
	<b>Total</b>	<b>738.780</b>	<b>577</b>			

*\*Statistically significant at  $p < 0.05$*

As shown in Table 3, there was no statistically significant difference found between the perceived economic environment barriers ( $p=0.148 > 0.05$ ). However, there were statistically significant differences found in perceived task environment barriers ( $p=0.001 < 0.05$ ) and political-legal environment barriers ( $p=0.001 < 0.05$ ). This suggests that the two countries have different perceptions on the level of impact of elements such as, obtaining a business premise, tough competition, registering the prospective business, legislation, crime and taxation on their entrepreneurial intention.

## CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to determine the environmental factors impacting South African and Dutch female students' entrepreneurial intention and to determine whether differences exist between these two countries perceived environmental factors. The study noticed that environmental factors, namely task- and general environment factors have a significant impact on female students' entrepreneurial intention. South African females perceive that the local infrastructure, crime, and corruption impact their entrepreneurial intention. While Dutch females perceive that lack of own financial resources mostly influence their intention to take part in entrepreneurial activity. Moreover, the two countries have different perceptions on the level of influence of obtaining a business premise, tough competition, registering the prospective business, legislation, crime and taxation on their entrepreneurial intention. A possible reason might be the different entrepreneurial climates established in the countries and the fact that South African females are confronted with greater constraints, such as high unemployment and poverty than their Dutch counterparts. This study suggests that HEIs and governments should offer subject specific training sessions or workshops to help prospective entrepreneurs gain the knowledge they need, for example a workshop on legislation, obtaining a business premise, etc. Furthermore, even though the South African and Netherland government initiated several initiatives in the past, these governments need to provide tax incentive programs, grants or loans that can assist female students to start a business-friendly environment.

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# SOUTH AFRICAN YOUTH ENTREPRENEURIAL INTENTION: MEDIATING ROLE OF ATTITUDE

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## ABSTRACT

*Worldwide, entrepreneurship portrays an influential role in the economic growth and development of a country. Entrepreneurs play an essential role in any economy through business start-ups and employment creation. However, entrepreneurs need entrepreneurial intention to contribute to a robust economy. As such, Entrepreneurial Intention (EI) has become a create matter of concern to policymakers, academics, and researchers. More specifically youth entrepreneurial intention (EI) as these individuals' decision to become entrepreneurial are influenced by various barriers, posing a significant concern for students and graduates. Therefore, the aim of this study was to determine the mediating effect of attitudes on the influence of barriers on students Entrepreneurial Intention (EI). A descriptive research design approach was followed. A self-administered questionnaire was used to obtain the data from a convenience sample of 338 South African students. The collected data were analysed using reliability and validity analysis, descriptive statistics analysis, regression analysis and mediation analysis. The results indicated that both paths of barriers and attitudes have a significant influence on students Entrepreneurial Intention (EI). The findings of the study provide empirical evidence of the mediating effects of barriers on attitudes on Entrepreneurial Intention (EI), a field under-researched within the South African context. The findings make an important contribution in that it will assist the South African government and Higher Education Institutions (HEIs) on developing strategies lessening the barriers young individuals may face.*

**Keywords:** entrepreneurial intention, attitudes, barriers, youth, South Africa.

## INTRODUCTION

Entrepreneurship has a critical role in the economic success and social stability of nations with developed economies. Furthermore, entrepreneurship is widely acknowledged as an essential driver of socioeconomic growth (Coulibaly et al., 2018; Jena, 2020). Entrepreneurs are critical to economic advancement since they contribute significantly to total economic growth (Mahfud et al., 2020). As a result, governments worldwide recognize the positive impacts of new business creation, which immediately affects job creation and employment (Abdullah & Othman, 2021). Modern business trends include embracing entrepreneurship and promoting entrepreneurial skills, hence boosting progress, innovation, and creativity (Boldureanu et al., 2020). South Africa faces chronic economic concerns such as inequality, poverty, and unemployment, with unemployment as a fundamental issue that underpins the other two issues (Marire, 2022). The current rate of youth unemployment in South Africa, which refers to those aged 15 to 24, reached 62.1% in the first quarter of 2023, the highest recorded over the past year and an increase from 61% in the earlier three-month period (STATSSA, 2023). The fundamental reason for the current unemployment issue is a lack of entrepreneurship skills and knowledge among young individuals (Jena, 2020). Offering employment possibilities to such a large population remains daunting (Jena, 2020).

The importance of having an entrepreneurial attitude for entrepreneurs has been acknowledged as a driver of success or failure (Aima et al., 2020; Belousova et al., 2020). Cui et al. (2019) found that the entrepreneurial mindset is linked to a deeper cognitive process that indicate various forms of involvement in entrepreneurial activities. Furthermore, cognitive versatility is the cornerstone of entrepreneurial intention and is critical in generating beneficial

results through entrepreneurial activity (Haynie et al., 2010). Lack of success in business endeavors in certain developing nations can be ascribed to a lack of an entrepreneurial attitude (Wardana et al., 2020). As a result, numerous supporting elements, such as attitudes toward entrepreneurship, come into play when cultivating a mentality appropriate for starting and sustaining a business (Ayalew & Zeleke, 2018; Wardana et al., 2020). Personal experience and environment are two aspects that influence an entrepreneurial mindset and attitudes toward entrepreneurship (Wardana et al., 2020). "Entrepreneurial attitude" relates to an individual's reaction to knowledge about occurrences and judgment about present opportunities (Wardana et al., 2020). Furthermore, entrepreneurial intention is essential in forming new enterprises (Mahfud et al., 2020).

## **LITERATURE REVIEW**

### **Entrepreneurial Intention (EI) and Attitude**

The primary determinant of actual behavior is intention, as Ajzen noted in 1991. As a result, understanding the systematic process involved in the formation of entrepreneurial intention (EI) becomes critical in encouraging individuals' desires to become entrepreneurs (Liu et al., 2019; Tan et al., 2020). According to Ajzen (1991), intention further serves as a motivating element that significantly influences behavior, making it a reliable assessment of an individual's dedication and preparedness to engage in specific tasks. As a result, entrepreneurs see a robust entrepreneurial intention as a condition for starting a new business (Liu et al., 2019). According to Krueger et al. (2000), "entrepreneurial intention" refers to an individual's steadfast commitment to undertake the required preparations and diligently work toward the aim of launching a new business.

According to research, individuals' perceptions of their capability and control in managing a business significantly improve their attitude toward this goal, hence favorably influencing their entrepreneurial intention. According to Liu et al. (2019), attitude relates to how people view and judge themselves, others, circumstances, activities, and events, and it substantially impacts their responses and behaviors. As such, an individual's attitude toward entrepreneurship is closely related to their past entrepreneurial experience and intent to engage in entrepreneurial activities (Liu et al., 2019). Furthermore, a deeper understanding of one's ability to manage a business indirectly improves entrepreneurial intention by developing a proactive mindset (Barba-Sánchez et al., 2022; Prabhu et al., 2012; Zhao et al., 2015). According to Ajzen's (1980) Theory of Planned Behavior, individuals' attitude influences their eventual behavioral intention. Furthermore, attitude predicts intention, explaining more than 50% of the variability in behavioral intentions (Petty & Briol, 2010; Prodan & Drnovsek, 2010). Furthermore, research conducted by Cavazos-Arroyo et al. (2017) confirmed that attitudes significantly influence the intention to engage in entrepreneurial activity and/or start a business.

### **Entrepreneurial Barriers**

There is a dearth of important studies on the influence of perceived barriers on entrepreneurial intention (EI) (Lián & Fayolle, 2015; Dölarslan et al., 2020). Existing research indicates that youth entrepreneurs frequently hesitate to engage in entrepreneurial activities owing to various barriers they perceive and experience (Mwange, 2018). As such, youth entrepreneurs may be motivated to establish a business but may have difficulties overcoming perceived barriers (Arranz et al., 2019). Furthermore, the perception of entrepreneurial barriers plays a role in shaping entrepreneurial attitudes (Nowiński et al., 2020). The presence of perceived barriers can impede the translation of entrepreneurial intention into action, as entrepreneurs may face obstacles that prevent them from pursuing business ventures, even if they have a positive intention towards it (Eroglu & Rashid, 2022; Sharma, 2018). The barriers to entrepreneurship vary depending on the circumstance. The literature shows that they can differ amongst people or groups, have diverse degrees of intensity, and are present in various combinations (Katundu & Gabagambi, 2016; Kebaili et al., 2017; Sharma, 2018).

Barriers to entrepreneurship include difficulties in obtaining support from institutions for prospective entrepreneurs, acquiring support from relatives, acquiring funding from financiers, setting up connections with suppliers, inadequate access to technological resources, having a lack of knowledge about the entrepreneurial realm, inadequate a novel or creative idea, confronting negative societal attitudes toward entrepreneurship as a career choice (Achchuthan & Nimalathan, 2012; Shahverdi et al., 2018, and Sivarajah & Achchuthan, 2013). Based on the

information presented thus far, it is critical to recognize that the ability and desire to take decisive steps in establishing a business depend on an environment that provides favorable opportunities and allows entrepreneurs to overcome perceived barriers by acquiring the necessary resources (Eroglu & Rashid, 2018). As such, it seems reasonable to assert that attitude and barriers influence entrepreneurial intention (EI). Therefore, the aim of this study is to determine the mediating effect of attitude on barriers on entrepreneurial intention.

## **RESEARCH METHODOLOGY**

For this study, the descriptive research design, following the single cross-sectional approach was used.

### **Sampling Method**

The target population consisted of full-time students registered at a South African Higher Education Institution (HEI) based in the Gauteng province of the country. A non-probability convenience sample of 328 undergraduate students was implemented to conduct the main study.

### **Research Instrument and Data Collection**

The required data was collected using a self-administered survey questionnaire. The questionnaire comprised of a cover letter and consisted of two sections. The first section requested demographic information and included screening questions to ensure that participants were part of the target population. The second section determined the mediating effect of attitude on the participant's entrepreneurial intention. Barriers were measured using 27 items, intention 22 items and attitude 32 items. A four-point Likert-type scale, ranging from completely disagree (1) to completely agree (4) was used to ascertain all scaled responses. After permission was granted by lecturers, the questionnaires were disseminated to their students.

### **Data Analysis**

The collected data was analyzed using reliability and validity analysis, descriptive statistics analysis, regression analysis and mediation analysis. The recorded data were analyzed using the Statistical Package for Social Sciences (IBM SPSS), Version 28 for Windows. To test the effects of a mediating variable the study followed the Baron and Kenny (1986) approach. This approach denotes that mediation occurs when the strength of the relationship between the independent variable and a dependent variable are influenced by a third variable, known as the mediator. To evaluate the significance of the mediation effect, the study used the suggested framework of MacKinnon et al. (2002).

## **EMPIRICAL RESULTS AND DISCUSSION**

### **Sample Description**

From the sample, 338 questionnaires were disseminated, and 319 usable questionnaires were returned, denoting a 94 percent response rate. The largest portion of participants indicated being female (62%) than male participants (38.0%). A greater number of participants acknowledge being 20 years (28.3%) of age, followed by those stipulated being 19 years (20.6%) of age and 21 years (18.6%) of age. Pertaining to the participants race the majority of participants indicated being African (83.5%), followed by participants being White (12.9%) and Coloured (3.0%). Most of the participants verified being in their first year of study (77.4%), followed by students in their second year of study (11.3%) and those in their third year of study (8.5%). Table 1 displays a description of the sample.

**Table 1: Sample description**

<b>Gender</b>	<b>%</b>	<b>Age</b>	<b>%</b>	<b>Race</b>	<b>%</b>	<b>Year of study</b>	<b>%</b>
<b>Male</b>	38.0	<b>18</b>	4.8	<b>African</b>	83.5	<b>1<sup>st</sup></b>	77.4
<b>Female</b>	62.0	<b>19</b>	20.6	<b>White</b>	12.9	<b>2<sup>nd</sup></b>	11.3
		<b>20</b>	28.1	<b>Coloured</b>	3.0	<b>3<sup>rd</sup></b>	8.5
		<b>21</b>	20.3	<b>Asian</b>	0.6	<b>4<sup>th</sup></b>	0.9
		<b>22</b>	12.6			<b>Post grad</b>	1.9
		<b>23</b>	4.5				
		<b>24</b>	4.2				
		<b>&gt;25</b>	4.9				

## Reliability and Validity

A Cronbach alpha value of 0.90 was calculated for the entire scale, which surpasses the recommended value of 0.70, suggesting internal-consistency reliability (Tavakol & Dennick, 2011). Furthermore, the average inter-item correlation was 0.20, which was within the suggested range of 0.15 to 0.50 (Clark & Watson, 1995). As a result, confirming convergent and discriminant validity of the scale.

## Descriptive Statistics

Descriptive statistics, containing means and standard deviations were computed for each construct. Table 2 states the means and standard deviations.

**Table 2: Descriptive statistics**

<b>Constructs</b>	<b>Mean</b>	<b>Standard Deviation</b>
Barriers	3.035	0.463
Attitude	3.090	0.460
Intention	2.290	0.327

As shown in Table 2, the highest mean was recorded for attitude (mean=3.090), followed by barriers (mean=3.035). This proposes that South African students agree that certain factors influence their entrepreneurial intention and that they have thoughts of starting a business. However, participants have not seriously considered entrepreneurship as a career option.

## Regression Analysis

Multivariate regression analysis was performed to investigate the influence of the independent variable, namely barriers on the dependent variable, namely intention. The regression model summary and ANOVA results are delineated in Table 3.

**Table 3: Regression model summary and ANOVA results**

<b>Regression model</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>F</b>	<b>p-value</b>
Model 1 (without mediation)	0.155	0.024	0.015	7,941	0.005

The significant F-ratio proposes that the regression model predicts entrepreneurial intention. The adjusted R<sup>2</sup> value implies that nearly 2% of the variance of South African students' entrepreneurial intention is explained by the independent variable. The influence that the independent variable has on the prediction of entrepreneurial intention was then evaluated, as summarized in Table 4.

**Table 4: Contribution of independent variables to predict entrepreneurial intention**

Model 1 (without mediation)			
Independent variable	Unstandardized Beta coefficient	t-value	Sig
Barriers	0.154	2.818	0.051*
Intention	2.618	15.592	0.000*

\*Statistically significant at  $p < 0.05$

As evident from Table 4, barriers ( $\beta = 0.154$ ,  $p < 0.05$ ) was found to have an influence on students' entrepreneurial intention. A previous study of Valdez-Juárez et al., (2020) also found that barriers are a predictor of entrepreneurial intention.

## Mediation Analysis

As previously mentioned, this study followed the Baron and Kenny (1986) approach for measuring the effects of a mediating variable. Firstly, the independent variables were regressed with the dependent variable. The regression model, Model 1 (without mediation), was investigated and summarized in Table 3. Next, the independent variable was regressed with the mediating variable, namely attitude. Corresponding to the study of Maheshwari et al., (2022) the results of this study indicate that barriers have a significant influence (adjusted  $R^2 = 0.015$ ,  $p = 0.005$ ) on entrepreneurial intention. Subsequently, the influence of the mediating variable on the dependent variable was tested. Unswerving with the literature, the results show that attitude has a significant influence (adjusted  $R^2 = 0.039$ ,  $p = 0.000$ ) on entrepreneurial intention. To conclude the analysis, multivariate regression analysis was conducted to test the influence of the independent variable, as well as the mediating variable, on the dependent variable. Table 5 outlines the regression model summary and ANOVA results of the model.

**Table 5: Regression model summary and ANOVA results**

Regression model	R	$R^2$	Adjusted $R^2$	F	p-value
Model 2 (with mediation)	0.218	0.048	0.039	7,992	0.000

Likewise, to Model 1 (without mediation), the significant F-ratio in Table 6 implies that the model predicts entrepreneurial intention. The adjusted  $R^2$  value suggests that approximately 4 percent of the variance of South African students' entrepreneurial intention is explained by the independent variable and the mediating variable. The contribution that the independent variable and mediating variable have to the prediction of entrepreneurial intention was assessed, as shown in Table 6.

**Table 6: Contribution of independent variables to predict entrepreneurial intention**

Model 1 (without mediation)			
Independent variable	Unstandardized Beta coefficient	t-value	Sig
Attitude	0.137	3.605	0.000*
Barriers	-0.086	-2.269	0.024*
Intention	2.122	13.956	0.000*

\*Statistically significant at  $p < 0.05$

From Table 6, it is evident that, attitude ( $\beta = 0.137$ ,  $p < 0.05$ ) was found to have the strongest influence on South African students' entrepreneurial intention. Compared to the results of Model 1 (without mediation) as indicated in Table 4, the introduction of attitude as the mediating variable decreased the unstandardized Beta coefficient of both barriers and intention which supports partial mediation. In addition, all independent variables, namely barriers and attitude have a positive significant influence on South African students' entrepreneurial intention. Furthermore, a statistical significance test was performed through the bootstrapping method as suggested by Mackinnon et al. (2002). The outcomes show that mediation analyses were significant. The 95 percent confidence interval of the indirect effect was obtained from 5000 bootstrap resamples, as suggested.

## CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to investigate the mediating effect of attitude on the influence of barriers on South African students' entrepreneurial intention. The study discovered that barriers and attitude are imperative determinants of South African students' entrepreneurial intention. Moreover, the study delivered empirical evidence of the mediating effect of attitude on the influence of barriers on students' entrepreneurial intention. The evidence suggested that attitude play a partial mediating role on entrepreneurial intention and that both variables, namely barriers and attitude have a positive influence on South African students' entrepreneurial intention. This study recommends that HEIs need to investigate the current curriculums of entrepreneurship courses, to ensure an entrepreneurial mindset amongst students. Ultimately, promoting entrepreneurship as a career option in future. Moreover, HEIs should not only focus on business startup but also equip students with the means to succeed. Conversely, even though the South African government initiated several initiatives in the past, the South African government need to find concentrated solutions on dwindling barriers young individuals may face.



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# EMPLOYING BILLBOARD MARKETING AS A TOBACCO DE-MARKETING STRATEGY FOR YOUNG ADULTS

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## ABSTRACT

*The current study examined the influence of billboard marketing (independent variable /Color & Size, Celebrity Images, Brand Image & Logo, and Texture and Message; dependent variable / young adults' attention) as a de-marketing strategy for tobacco consumption among young adults. Quantitative approach was used, and an online questionnaire was distributed to a sample of (438) consumers in Jordan. Results of study indicated that billboard de-marketing could influence young adults' attention towards consuming tobacco, as well as, respondents had a good level of awareness regarding billboard marketing as they were able to respond to the questionnaire with minimum help. All sub-hypotheses were also accepted, and it was seen that the highest influential sub-variable was texture and message, with a variance of 38.8%, meaning that the messages held within billboards can influence how young adults view tobacco consumption. Study concluded that billboard marketing is sufficient to provide a competitive advantage for the organization by referring to the chosen location, the size of the advertisement, and the way it is presented. However, they are forced to see it because it is on crowded roads and public places, so the "Skip the ad" option is usually unavailable in this type of marketing strategy, which increases the brand's chances of reaching a larger number of consumers. The study recommended the need to define marketing objectives as a first step before choosing the strategy to be adopted for marketing in a manner that is compatible with the available financial resources. Further recommendations were presented in the study.*

**Keywords:** billboard marketing, marketing strategy, de-marketing strategy, young adults' attention, advertisement.

## INTRODUCTION

Adopting marketing strategies has an active role in the success rate of marketing plans and thus reaching a higher sales rate. Organizations usually adopt marketing strategies and plans in order to achieve long- and short-term organizational goals, reach consumers and potential customers, and turn them into real customers for the organization (Kingsnorth, 2022). Adopting marketing strategies is also a way to identify and analyze the characteristics of the market in which the organization is located in order to create sales opportunities, display brand values and messages, as well as communicate and position the product or service to the target market through the right channels (Rosário and Raimundo, 2022). According to Evans (2020), many marketing strategies appeared as a way to influence consumers and increase their awareness of the brand as a way of marketing. Evans (2020) found out that billboard marketing influenced consumers' awareness of the brand given that the size, texture and colors grab consumers' attention and support the brand's existence in their minds. Gebreselassie and Bougie (2018) argued with the same idea and confirmed that the messages in billboard marketing help in supporting the primary goal of the organization in marketing for a certain product or service, in addition to that, the idea of billboard marketing is a strategy of marketing that individuals can't avoid as it is an out of home marketing, this increases the chances of being viewed by many individuals, and they can't skip it. Fortenberry and McGoldrick (2019) supported the same idea and confirmed the influence of billboard marketing in delivering a certain message that an organization want. This can change consumers' orientation towards accepting or rejecting a certain brand or product based on the message that the billboard is trying to deliver.

Launching from the argument above, the current study aimed at examining the role of billboard marketing (Color & Size, Celebrity Images, Brand Image & Logo, and Texture and Message) on de-marketing efforts of tobacco among young adults' attention.

# LITERATURE REVIEW

## Marketing Strategies

Tong et al. (2020) refer to marketing strategy as a comprehensive plan for all marketing activities and practices to be adopted to reach consumers, potential consumers, or target markets. The idea of marketing strategy includes ideas and offers capable of clarifying the product or service provided by the organization, in addition to implicit or explicit messages that can attract the attention of customers, direct their interest, and increase the level of awareness of the brand (Morgan et al., 2018). Sloodweg and Rowson (2018) argued that the marketing strategy covers various marketing elements that include the product, price, place, and promotion. However, Al-Surmi et al. (2020) have indicated that the marketing strategy is based on the idea that marketing business management conveys the image of the organization and the nature of the services or products it provides in addition to the foundations which demonstrate its competitiveness in front of other organizations.

From another perspective, Li et al. (2020) believe that many marketers and researchers confuse the marketing strategy with the marketing plan. However, there is a clear difference between them, as the marketing plan is only a small part of the marketing strategy and includes schedules, activities, and practices that the organization must carry out to complete its marketing strategy. Agzamov et al. (2021) indicate that the process of selecting a marketing strategy starts by looking at the results of analyzing the needs of existing and targeted customers, in addition to the nature of the products and services provided by the organization in order to reach the ideal strategy that serves the organization and achieves its marketing goals despite the opinion of Ferrell et al. (2021) who emphasize that there is no perfect marketing strategy for any organization.

In general, the marketing strategy refers to the plan that the organization wants to adopt in order to market its services and products based on marketing strategies to achieve a wide range of goals, including educating the target audience, improving awareness of it, encouraging participation, or getting consumers to buy, or change the public's perception of a product or service (Kingsnorth, 2022). Specific marketing strategies focus on leading the old generation, which works to improve the servers' score for customers and improve customer loyalty through marketing methods that may be eye-catching or able to focus in the minds of customers and thus achieve the desired goals (Suleiman et al., 2020).

## Billboard Marketing

Wang and Yao (2020) and Mehta (2020) defined billboard marketing as the use of large-sized, colorful, and eye-catching print ads that are hung on high platforms or large-sized panels in open spaces to market a specific product or brand. As for Kyala (2020), it was argued that billboard marketing is the use of large spaces for marketing and promoting a specific product colorfully and attractively in an open place that draws the attention of passers-by, given that the best place for these advertisements is crowded places in large cities and highways. Billboard marketing is seen as Out of Home (OOH) advertising; advertising reaches the consumer outside the home, and its cost is usually determined based on location, total congestion, and traffic (Minkoff & Mann, 2020; Hashem et al., 2021; Hashem, 2017).

## De-Marketing

Demarketing is one of type of counter-marketing, in which the organization develops strategies to reduce the consumption of a particular product, in contrast to regular marketing which encourages the consumption of a product (Hall & Wood, 2021; Hashem, 2011). Salem et al. (2021) indicate that demarketing is used in cases where the organization wants to control the level of consumption of a particular product, the demand for it, and its price. Usually, the reason for demarketing is to preserve resources, increase demand in a way that is not commensurate with production, or even have a negative impact for this product or service to the community.

Demarketing has several types, including general demarketing, which the organization carries out in order to control consumption on a specific product as a result of a lack of resources or shortages, or even marketing a developed

product and determining the demand for the old product in order to stop its manufacture (Sekhon & Armstrong Soule, 2021; Hashem, 2021).

Selective demarketing is one of the types of demarketing that is based on reducing the demand for a specific product or service within a specific group or category of customers in order to avoid the negative effects of the product - if any - or increase the consumption of the same product by another target group (Chaudhry et al., 2019; Hashem, 2021). As for the last type of demarketing, it is ostensible demarketing, which is based on determining the demand for the product and pretending to lack resources to increase the market demand for it and thus raise its price (Hesse & Rünz, 2020; Hashem, 2021).

## Tobacco De-Marketing

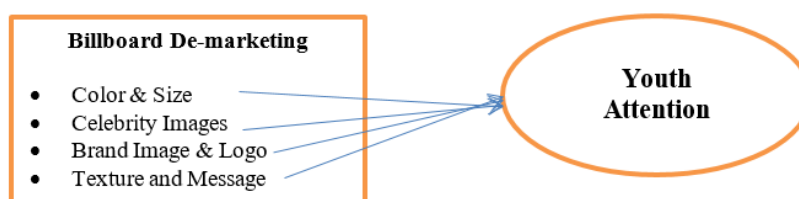
Baporikar and Fotlela (2017) consider that demarketing has proven effective as a strategy aimed at reducing the demand for and consumption of tobacco, and many marketing strategies have contributed to reducing the demand for tobacco. They have been allocated among the youth category as it is a harmful product to health and leads to death. Salem et al. (2022) found that billboard demarketing contributed to reducing the demand for harmful products. Although these products may be beneficial on the economic level of the state, such as alcohol, tobacco, cigars, and many others, on the health level, the consumption of these products negatively affects the state's resources in terms of health, and thus increasing the burden on the health sector in providing medical services and materials in order to treat the negative effects of these products such as cancer, cirrhosis of the liver, and cardiovascular diseases that usually accompany the consumption of these products.

## Hypotheses Development

Evans study (2020) tried to identify the importance of billboard advertising on the brand and how to influence brand awareness and communicate it to the largest number of consumers. The study concluded that the presence of this type of advertisement in crowded places increases the chances of reaching potential consumers. It also establishes the brand in the minds of current consumers due to the lack of specific viewing times as ads on the Internet. However, the opportunities to view the advertisement are endless as it is located in crowded places. The study confirmed that there is a trace of the location, the size of the billboard and the way it is displayed, in addition to the presence of a trace of the message that the brand transmits through this type of marketing. Gebreselassie and Bougie (2018) studied the impact of billboard marketing on brand awareness in developing countries and took Ethiopia as a case. The study concluded that billboard marketing is one of the most used advertising methods in developing countries due to the low cost, location, and congestion in these countries. Organizations also adopt it to increase consumers' awareness of the brand by focusing on size, location, and the message included. In which. In addition, the study demonstrated that the most influencing factors on the success of billboard marketing were clarity, billboard location, readability, message, physical aspects and integrated marketing communications.

Fortenberry and McGoldrick (2019) studied the role of billboard marketing in generating brand awareness and enhancing people's awareness of the brand as a primary attraction factor through its impact on various factors such as attention, interest, and desire. In addition, the study found that billboard marketing is effective. However, it may be costly due to the impact of the site, the extent of its crowding, and the multiplicity of types of billboards, including regular and three-dimensional ones. Based on the literature review and hypotheses development, the following model was built by the researcher in order to highlight the relationship between the variable and extract the hypotheses of study:

**Figure 1: Study Model**



From the model above, the following set of hypotheses was extracted:

### **Main Hypothesis**

**H1:** Billboards as a de-marketing strategy influence youth attention towards consuming tobacco

### **Sub-Hypotheses:**

**H1:** Color and size of billboards influence youth attention towards consuming tobacco

**H2:** Celebrity images on billboards influence youth attention towards consuming tobacco

**H3:** Brand image and logo on billboards influence youth attention towards consuming tobacco

**H4:** Texture and message of billboards influence youth attention towards consuming tobacco

## **METHODS**

### **Methodological Approach**

The current study is based on the quantitative approach, which starts from the digital primary data, which is later translated into clear information and ideas that serve the hypotheses of the study and explain the phenomenon being studied.

### **Study Tool**

The questionnaire was relied upon as a tool for the study, and the questionnaire consisted of three parts, the first dealt with the demographic information of the respondents (gender, age, profession, smoking habit), while the second part dealt with paragraphs dealing with the study variables (independent variable /Color & Size, Celebrity Images, Brand Image & Logo, and Texture and Message; dependent variable / youth attention) based on the five-point Likert scale (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree). As for the third part, a group of pictures were presented and the respondents' reaction to them was measured (funny, emotional, repulsive and informative).

The questionnaire was built based on the relevant previous study, and then the questionnaire was presented to a group of arbitrators in order to indicate the suitability of the paragraphs with the objectives and hypotheses of the study. After arbitration, the paragraphs were modified according to the opinions of the arbitrators and the final version of the questionnaire was reached, which consisted of (42) paragraphs according to the table below:

**Table 1: Statements Distribution**

Variable	# of Statements	Reference
<b>Billboard De-marketing</b>		
Color & Size	10	(Khan et al, 2016; Shanmugathas Shivany, 2018; Blakeman, 2022)
Celebrity Images	8	
Brand Image & Logo	8	
Texture and Message	8	
<b>Youth Attention</b>	8	Al-Shibly (2019)

In line with the laws of COVID 19, which focused on social distancing, the questionnaire was uploaded to Google Forms in order to collect initial data for a period of 4 consecutive weeks.

## Population and Sampling

The study population consisted of consumers, and a convenient sample consisting of (500) was adopted. After withdrawing the Excel file from the website, (438) questionnaires valid for statistical analysis were obtained, which indicated a response rate of up to 87.6% as being statistically acceptable.

## Data Analysis

Statistical Package for Social Sciences (SPSS) v. 26<sup>th</sup> was adopted to analyze the primary data that was reached. Cronbach's Alpha was used in order to test reliability and consistency of study too an Alpha = 0.882 higher than 0.70 referring to the tool as reliable and consistent. Other statistical tests used included:

- Frequency and percentage
- Mean and standard deviation
- Multiple regression
- Linear regression

## RESULTS AND DISCUSSION

### Demographic Results

Reaching demographic results – table 2 – indicated that majority of respondents were males forming 53.4% of total sample who were within age range of 18-28 years old forming 31.5% who were employees forming 54.1% and who were non-smokers forming 65.1% of total sample compared to those who were smokers forming 24.7% of total sample.

**Table 2: Statistics of Demographics**

		f	%
<b>Gender</b>			
	Female	204	46.6
	Male	234	53.4
<b>Age</b>			
	+ 51	102	23.3
	18-28	138	31.5
	29-39	84	19.2
	40-50	114	26.0
<b>Occupation</b>			
	Other	57	13.0
	Student	105	24.0
	No Job	39	8.9
	Employee	237	54.1
<b>Are You a Smoker?</b>			
	Sometimes	45	10.3
	No	285	65.1
	Yes	108	24.7
	<b>Total</b>	<b>438</b>	<b>100.0</b>

### Questionnaire Analysis

Analyzing the questionnaire of study – table 3 – indicated that not all statements were well-received by respondents as statements "3, 12, 13, 17, 31, 33, 34, 39, and 41" scored lower than mean of scale 3.00. On the other hand,



respondents held favorable opinions regarding the remaining questions since their respective means were higher than the scale's mean. The highest mean was scored by "The brighter the colors are the more attracted I am to an advertisements" scoring 4.32/5.00, compared to the least mean, which was scored by "Billboards are the reason I hate smoking" which scored lower than mean of scale 2.52/5.00.

**Table 3: Questionnaire Statistics**

Statement	Mean	Std. Deviation
1. Bright colors give a nice gesture even if it was for warning and health issues	4.07	.89
2. The brighter the colors are the more attracted I am to an advertisements	4.32	.80
3. I don't care about the colors, the content attracts me more	2.98	1.03
4. Dark colors gives me a feeling terror and panic	3.38	1.07
5. A gloomy ad may deviate me from using the product	3.68	.97
6. A unified colored ad gives a feeling of seriousness	3.55	.93
7. It isn't about the colors, a billboard has to be smart	3.61	1.13
8. When I don't like the ad I transcend my feeling to the product	3.77	.99
9. Big-font ads gives me a feeling of prohibition and banning	3.23	1.11
10. Huge ads gives a feeling of seriousness	3.65	1.06
<b>Color and Size</b>	<b>3.62</b>	<b>.48</b>
11. Important celebrities gives more value to the ad	3.60	1.23
12. I don't use the product if I didn't like the celebrity advertising for it	2.83	1.17
13. When a celebrity advertises for a product I immediately connects my desire to the product with the celebrity	2.64	1.14
14. It isn't about celebrity images, it is about the message	3.91	.88
15. Worldwide celebrities are more influential on ads than local ones	3.65	1.12
16. Athletic celebrities give more importance to the ad	3.62	1.05
17. I won't use the product if an athletic celebrity is advertising it as bad	2.85	1.08
18. I pay more attention to specialized celebrities posing for a billboard	3.23	1.00
<b>Celebrity Images</b>	<b>3.29</b>	<b>.66</b>
19. I always look at the brand marketing for the product	4.00	.88
20. I don't care about the billboard as much as I care about its source	3.60	1.02
21. Ministry of health's ads always attracts my attention	3.51	1.12
22. I read all ads as soon as I see ministry of health logo	3.40	1.09
23. World health organizations' logo on billboards means danger to me	3.13	1.03
24. When I see a logo of a healthcare institution I assume it is something beneficial for my health	3.89	.82
25. If I had an issue with the brand I don't their ads seriously	3.68	.94
26. Many health ministry ads helped avoid many bad products and activities	3.47	1.02
<b>Brand Image &amp; Logo</b>	<b>3.58</b>	<b>.58</b>
27. When I see the 'death' on a billboard I immediately get abhorred	3.62	1.05
28. I don't like seeing blood and death on billboards I prefer messages	3.99	.92
29. Short clips are way better than messages in delivering an idea	4.12	.86
30. Black lungs on smoking billboards sickens me	3.67	1.18
31. I don't smoke because most ads are repulsive	2.86	1.16
32. It hurts me when I see a baby's image on a smoking ad	4.16	1.01
33. Athletic celebrities posing for ads is what prevented me from smoking	2.64	.99
34. I always pay attention to billboards when it is about smoking	2.98	1.08
<b>Texture &amp; Message</b>	<b>3.51</b>	<b>.60</b>
35. All kinds of billboards attract young peoples' attention	3.08	1.09
36. I don't think billboards and other tools may help in protecting young people from using a product	3.36	1.19

37. Repulsive ads is a smart marketing idea to help protect young people	3.34	1.08
38. I don't thing making ads for a smoking brand qualifies as a good thing	3.71	1.10
39. I have never known a cigarette brand until I saw a billboard	2.88	1.16
40. I was introduced to many smoking brands due to billboards	3.10	1.19
41. Billboards are the reason I hate smoking	2.52	1.08
42. Nothing can prevent me from smoking unless I want to	4.12	1.02
<b>Youth Attention</b>	<b>3.26</b>	<b>.53</b>

## Hypotheses Testing

**H: Billboards as a de-marketing strategy influence youth attention towards consuming tobacco**

**Table 4: Main Hypothesis Testing**

Model		Unstandardized Coefficients		Coefficients	t	Sig.	R	R Square
		B	Std. Error	Standardized Coefficients Beta				
1	(Constant)	.710	.159		4.475	.000	.665 <sup>a</sup>	.443
	color	.118	.051	.106	2.305	.022		
	Celebrity	.010	.035	.012	.291	.771		
	Image	.214	.040	.233	5.287	.000		
	Texture	.378	.043	.430	8.829	.000		

In order to evaluate the main hypothesis, multiple regression analysis was carried out, results of testing showed that the estimated F value of 85.983 was significant because Sig was lower than 0.05. In addition, it was found that the strength of the correlation was 0.665, and the independent variables were responsible for explaining 44.3% of the change in the dependent variable. That means "Billboards as a de-marketing strategy influence youth attention towards consuming tobacco"

## Sub-Hypotheses

Sub-hypotheses were tested depending on linear regression, and results indicated the following:

- In the 1<sup>st</sup> sub-hypothesis, the estimated F value of 119.998 was significant because Sig was lower than 0.05. In addition, it was found that the strength of the correlation was 0.465, and the independent variable was responsible for explaining **21.6%** of the change in the dependent variable. That means *Color and size of billboards influence youth attention towards consuming tobacco*
- 2<sup>nd</sup> hypothesis indicated that F value of 67.027 was significant because Sig was lower than 0.05. In addition, it was found that the strength of the correlation was 0.365, and the independent variable was responsible for explaining **13.3%** of the change in the dependent variable. That means *Celebrity images on billboards influence youth attention towards consuming tobacco*
- 3<sup>rd</sup> hypothesis indicated that F value of 159.757 was significant because Sig was lower than 0.05. In addition, it was found that the strength of the correlation was 0.518, and the independent variable was responsible for explaining **26.8%** of the change in the dependent variable. That means *bran image and logo on billboards influence youth attention towards consuming tobacco*
- The final 4<sup>th</sup> sub-hypothesis indicated that F value of 276.651 was significant because Sig was lower than 0.05. In addition, it was found that the strength of the correlation was 0.623, and the independent variable was responsible for explaining **38.8%** of the change in the dependent variable and agreed on the fact that "Texture and message of billboards influence youth attention towards consuming tobacco".

**Table 5: Sub-Hypotheses Testing**

		Coefficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R
		B	Std. Error	Beta			R Square
1	(Constant)	1.388	.172		8.050	.000	.465 <sup>a</sup>
	color	.517	.047	.465	10.954	.000	.216
<b>H1: Color and size of billboards influence youth attention towards consuming tobacco</b>							
		Coefficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R
		B	Std. Error	Beta			R Square
1	(Constant)	2.293	.121		18.999	.000	.365 <sup>a</sup>
	Celebrity	.294	.036	.365	8.187	.000	.133
<b>H2: Celebrity images on billboards influence youth attention towards consuming tobacco</b>							
		Coefficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R
		B	Std. Error	Beta			R Square
1	(Constant)	1.561	.136		11.454	.000	.518 <sup>a</sup>
	Image	.474	.038	.518	12.639	.000	.268
<b>H3: Brand image and logo on billboards influence youth attention towards consuming tobacco</b>							
		Coefficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R
		B	Std. Error	Beta			R Square
1	(Constant)	1.342	.117		11.461	.000	.623 <sup>a</sup>
	Texture	.547	.033	.623	16.633	.000	.388
<b>H4: Texture and message of billboards influence youth attention towards consuming tobacco</b>							

## DISCUSSION

The current study aimed at examining the role of billboard marketing in supporting tobacco de-marketing strategies for young adults in Jordan. Dimensions of billboard marketing chosen were (Color & Size, Celebrity Images, Brand Image & Logo, and Texture and Message). Quantitative methodology was used, and an online questionnaire was distributed on a convenient sample of (438) consumers in Jordan. SPSS was used in order to screen and analyze primary data; results of study indicated the following:

- Respondents had a good level of awareness regarding billboard marketing as they were able to respond to the questionnaire with minimum help
- The main hypothesis of study was accepted with  $F = 85.983$  and variance of 44.3% which indicated that "Billboards as a de-marketing strategy influence youth attention towards consuming tobacco"
- Among dimensions of billboard marketing adopted in current study it was seen that "Texture and message of billboards influence youth attention towards consuming tobacco" as the highest in influence with variance of 38.8%
- In the 2<sup>nd</sup> rank came Celebrity images which scored variance of 26.8% and indicating that brand image and logo on billboards influence youth attention towards consuming tobacco
- The 3<sup>rd</sup> rank was with a variance of 21.6% and accepting the fact that Color and size of billboards influence youth attention towards consuming tobacco
- In the least rank of influence it appeared that celebrity images which scored a variance of 13.3% and indicating that celebrity images on billboards influence youth attention towards consuming tobacco

The study concluded that billboard marketing is sufficient to provide a competitive advantage for the organization regardless of its field of interest by referring to the chosen location, the size of the advertisement and the way it is presented. It also helps to build the brand in the minds of consumers because they do not have a choice in seeing the advertisement, meaning that the advertisement can't be skipped or closed, it is already there in front of them and they come across it regardless of their will. However, rather they are forced to see it because it is present in crowded roads and public places, so the "skip the ad" option is usually not available in this type of marketing strategy, which increases the brand's chances of reaching a larger number of consumers.

In addition, the study found that billboard marketing is able to achieve continuous sales through the organization's ability to create an organizational plan to meet customers' needs, aspirations, and desires. As for the variables related to billboard marketing, the study concluded that all the variables adopted by Fortenberry and McGoldrick (2019) impacted billboard marketing. The strongest of them was texture and message, as the message included in the advertisement had the strongest impact on how consumers accept advertising in terms of their feeling towards the product or service. In the case of the current study, the texture and message affected individuals in terms of advertisements outside the home, which increases the chances of seeing these advertisements.

The study also found that the message included in the billboards had an impact on leaving an unforgettable impression on the individuals, especially if these ads were emotionally provocative, such as including the faces of children, or a person coughing strongly, or even a person on respirators. That is, the effect of billboard demarketing was somewhat emotional, or we can say that it is emotionally provocative, so it had the effect of drawing the attention of individuals towards the concept of smoking and its negative effects and creating an unforgettable impression very quickly, which leaves the reader thinking about the advertisement after passing it. Such results agreed with Evans (2020) and Gebreselassie and Bougie (2018).

## **PRACTICAL CONTRIBUTIONS OF STUDY**

Increased awareness: Billboard advertising can create awareness among young adults about the harmful effects of tobacco use. By displaying anti-tobacco messages or images, it can encourage young adults to quit or never start smoking.

- Targeted marketing: Billboards can be placed in areas where young adults are more likely to be, such as college campuses or areas with high foot traffic. This targeted marketing approach can increase the effectiveness of the de-marketing strategy.
- Cost-effective: Billboard advertising can be a cost-effective strategy compared to other forms of advertising, such as television or radio. It can reach a large audience with minimal costs.
- Visible and memorable: Billboard advertising is highly visible and can be memorable. This can increase the chances of the message sticking in the minds of young adults and influencing their behavior towards tobacco use.

## **THEORETICAL CONTRIBUTIONS OF STUDY**

- Social cognitive theory: Social cognitive theory suggests that individuals learn and develop behaviors through observation and modeling. Billboard advertising can provide a model for non-tobacco use, which can influence young adults' behavior towards tobacco use.
- Health belief model: The health belief model suggests that an individual's perception of the threat of a health condition can influence their behavior towards that condition. Billboard advertising can increase young adults' perception of the threat of tobacco use, which can lead to behavior change.
- Message framing theory: Message framing theory suggests that the way a message is presented can influence its effectiveness. By framing anti-tobacco messages in a positive light, such as emphasizing the benefits of not smoking, billboard advertising can increase the effectiveness of the de-marketing strategy.

## **CONCLUSION AND RECOMMENDATIONS**

The study proved, through analysis and discussion, that billboard marketing is one of the most influential marketing methods on the promotion of brands based on its existence and the way it is presented, as it can be said that these advertisements impose themselves on consumers because they are in an open place, and therefore the consumer is forced to confront them, unlike About smartphones, magazines and TV ads that consumers can easily avoid. On the other hand, the study concluded that this type of advertisement cannot be described as financially effective because its cost is not clear. That is, the cost of billboard marketing depends on many factors, the most important of which is the “location”, as the presence of a huge billboard on an external highway is less expensive than its presence in a place such as Times Square in New York City, for example. In conclusion, employing billboard marketing as a tobacco de-marketing strategy for young adults can have practical and theoretical contributions. It can increase awareness, be a cost-effective strategy, and provide a model for non-tobacco use. It can also influence young adults' behavior towards tobacco use through theories such as social cognitive theory, health belief model, and message framing theory.

## **IMPLICATION FOR POLICY MAKERS**

Current study contributed in highlighting that policy makers can regulate the content and placement of anti-tobacco billboard advertisements. They can also consider imposing additional taxes or fees on tobacco companies to fund anti-tobacco campaigns; also, policy makers can collaborate with public health organizations and advocacy groups to develop effective anti-tobacco campaigns. They can also work with advertising agencies to develop creative and impactful anti-tobacco messages. Study also supported the idea that policy makers should monitor and evaluate the effectiveness of the de-marketing strategy to determine if it is achieving its intended goals. They can also use data to inform future anti-tobacco campaigns.

## **IMPLICATION FOR ENHANCING ITS INTERNATIONAL APPROACH**

- Billboard advertising should be culturally sensitive and appropriate for the target audience. This requires a thorough understanding of cultural norms and values.
- The de-marketing strategy should be localized to reflect the unique characteristics of the target country or region. This requires a deep understanding of the local market and consumer behavior.
- International partnerships with local organizations, government agencies, and advertising firms can help ensure the effectiveness of the de-marketing strategy.

## **IMPLICATIONS FOR MANAGERIAL ASPECTS**

The research should focus on developing creative and impactful anti-tobacco messages that resonate with young adults. This requires a deep understanding of their attitudes, beliefs, and behaviors. In addition to that, the research should focus on developing metrics to evaluate the effectiveness of the de-marketing strategy. This requires a clear understanding of the goals and objectives of the campaign. Current study should involve collaboration with advertising agencies, public health organizations, and advocacy groups to develop effective anti-tobacco campaigns.

In conclusion, the implications for policy makers, enhancing its international approach, and managerial aspects of the research are important considerations for employing billboard marketing as a tobacco de-marketing strategy for young adults. By taking into account these implications, policy makers, researchers, and managers can develop effective and impactful anti-tobacco campaigns that resonate with young adults and lead to behavior change. Based on the results and discussion, the study recommends the following:

- The need to define marketing objectives as a first step before choosing the strategy to be adopted for marketing in a manner that is compatible with the available financial resources
- Analyzing the needs of the target group of customers and determining their demographic variables
- Choose the appropriate marketing strategy that can match the objectives with the right medium.

- Evaluation, which is a step that helps to understand the quality and effectiveness of the adopted strategy, and to try to amend it in the event of any problem.

## **LIMITATIONS OF RESEARCH**

Current study was limited to the following:

- Generalizability: The effectiveness of the de-marketing strategy may vary based on the specific target audience, cultural context, and geographic location. The research may not be generalizable to other populations or regions.
- Long-term effectiveness: The long-term effectiveness of the de-marketing strategy is uncertain. While billboard advertising can increase awareness and influence behavior in the short-term, its impact on long-term behavior change is unclear.
- Ethical concerns: There may be ethical concerns with using advertising to promote behavior change, particularly when it comes to vulnerable populations such as young adults. It is important to consider the potential unintended consequences of the de-marketing strategy.

## **FUTURE RESEARCH DIRECTIONS**

- Longitudinal studies: Future research could investigate the long-term effectiveness of billboard advertising as a de-marketing strategy for tobacco use among young adults. Longitudinal studies could provide insight into the durability of behavior change.
- Comparative studies: Comparative studies could investigate the effectiveness of billboard advertising compared to other anti-tobacco strategies such as school-based programs, social media campaigns, or peer education programs.
- Qualitative studies: Qualitative studies could investigate the attitudes, beliefs, and experiences of young adults regarding anti-tobacco campaigns. This could help inform the development of more effective anti-tobacco campaigns.
- Cross-cultural studies: Cross-cultural studies could investigate the effectiveness of billboard advertising as a de-marketing strategy for tobacco use among young adults in different cultural contexts. This could provide insight into the role of culture in shaping attitudes and behavior towards tobacco use.
- Innovative approaches: Future research could investigate innovative approaches to billboard advertising, such as incorporating technology or interactive features. This could increase the effectiveness of the de-marketing strategy and enhance engagement among young adults.

In conclusion, while employing billboard marketing as a tobacco de-marketing strategy for young adults has practical and theoretical contributions, there are also limitations to the research. Future research could address these limitations and provide insight into the long-term effectiveness of the de-marketing strategy, as well as explore alternative and innovative approaches.

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# LEVERAGING AI-DRIVEN DIGITAL MARKETING STRATEGIES TO AUTOMATE THE LEAD GENERATION MECHANISM OF THE REAL ESTATE INDUSTRY IN THE UNITED STATES

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## ABSTRACT

*This paper examines the use of AI and digital strategies for lead generation in the United States real estate industry. Traditional methods of lead generation are labour-intensive and time-consuming in the real estate industry. They also produce low-quality leads. The paper highlights how AI technologies can automate lead generation while enhancing customer engagement and providing personalized experiences. The paper examines real-world cases, assesses AI technology comprehensively, and discusses both the benefits and challenges that AI can bring to digital marketing in real estate. This study provides valuable insights to digital marketers and agents. It lays the foundation for future research on AI-assisted leads generation and proposes practical guidelines for integrating AI into digital real estate marketing. The paper explores the limitations and inefficiency of traditional methods for lead generation and the need to innovate and efficiently approach the fast-growing real estate industry. The paper emphasizes AI-powered creative ad generation as a way to produce engaging and effective ads on a large scale. It also highlights the benefits of AI chatbots in customer support and lead qualification. The paper also discusses how to integrate AI platforms with automation software like Zapier to improve lead generation, and lead qualification and streamline data transfers. Combining AI with Zapier provides scalable solutions to reduce errors and manual tasks, which makes it ideal for real estate businesses of any size.*

**Keywords:** Artificial Intelligence (AI), digital marketing, lead generation, lead nurturing, real estate.

## INTRODUCTION

This research paper dive into the technical aspects of leveraging AI and digital marketing strategies to generate leads and lead nurturing in the real estate industry in the United States. Artificial Intelligence and digital marketing are revolutionizing the traditional approaches and processes in many industries. The real estate industry is growing at a rapid pace, making it more important than ever to have innovative, efficient, and effective lead-generation methods (Liu & Chen, 2011). The traditional methods are time-consuming and labor-intensive (Keillor, 2007). They also produce a large number of leads that are low quality (Tuzovic, 2008). AI-driven strategies for digital marketing offer a solution that is transformative to these problems. This paper examines how AI technologies, such as AI-based AD creative generation, AI-driven chatbots for customer support, and business process automation technologies like (AI integrated Zapier) can be used to enhance digital marketing strategies in the real estate sector. It examines how they can automate lead generation, improve customer engagement and offer personalized customer experiences.

This paper examines real-world cases and conducts a comprehensive assessment of AI technologies. It also explores the potential benefits and challenges of AI in digital marketing strategies for the real estate industry. It also provides insights into how AI can best be used to improve lead conversion rates and drive growth in real estate businesses. This study adds to the larger discourse on AI and digital marketing by providing valuable insights for digital marketers & real estate agents. This paper provides a solid foundation for future research in the field of AI-assisted leads generation by proposing practical guidelines on how to integrate AI into digital real estate marketing strategies.

## **The Current State of Real Estate Lead Generation USA: Challenges with Traditional Methods**

In the United States, lead generation has always been a time-tested method. Cold calling, direct mailing, and attending networking meetings have been the main methods of lead generation in the real estate industry for decades. As the industry evolved, traditional methods began to have significant limitations. The amount of work and time required to generate real estate leads is one of the biggest challenges. Cold calling involves, for example, manually dialling clients to pitch the real estate services available. Cold calling is time-consuming and can have a low return on investment, as the vast majority of calls don't result in a successful conversion (Amr Yassin, 2022). Direct mail is another method for generating leads. It involves mailing printed materials to a large audience. This can include entire zip codes or neighbourhoods. This method is time-consuming, expensive, and results in a very low response rate. Many recipients simply throw away the materials before reading them.

Even networking events can be difficult. These events are valuable in forming connections but they also require significant time and financial investment. The effectiveness of these events is often hit or miss, depending on the quality and number of attendees. The quality of leads is another major issue with traditional methods for generating real estate leads. These methods tend to cast a large net and target a wider audience, rather than focus on qualified leads. The result is that a high number of the leads generated are of low quality and make the conversion more difficult (Tuzovic 2008). While traditional methods for generating real estate leads have their place, there are also significant limitations. They are time-consuming, expensive, labor-intensive, and generate a large number of low-quality leads. There is an increasing need for lead generation methods that are more effective, efficient, and innovative in the real estate industry.

The conventional mechanisms of lead generation in the United States real estate sector, encompassing cold calling, direct mailing, and networking events, have been increasingly viewed as arduous, costly, and inefficient, according to the current study. These traditional methods, while being instrumental in the industry for years, now exhibit significant shortcomings. They not only require substantial time and effort but also result in a considerable number of low-quality leads, negatively impacting the conversion process. Specifically, cold calling is noted for its low return on investment, whereas direct mailing often yields a low response rate. Networking events, though valuable for building connections, entail considerable time and financial investment, with their effectiveness fluctuating with the quantity and quality of attendees. The wide net these methods cast results in less focus on obtaining qualified leads. Therefore, there is an increasing impetus to develop innovative, efficient, and effective lead generation strategies in the real estate sector that overcome the limitations of traditional methods and aim to secure a higher quantity of high-quality leads.

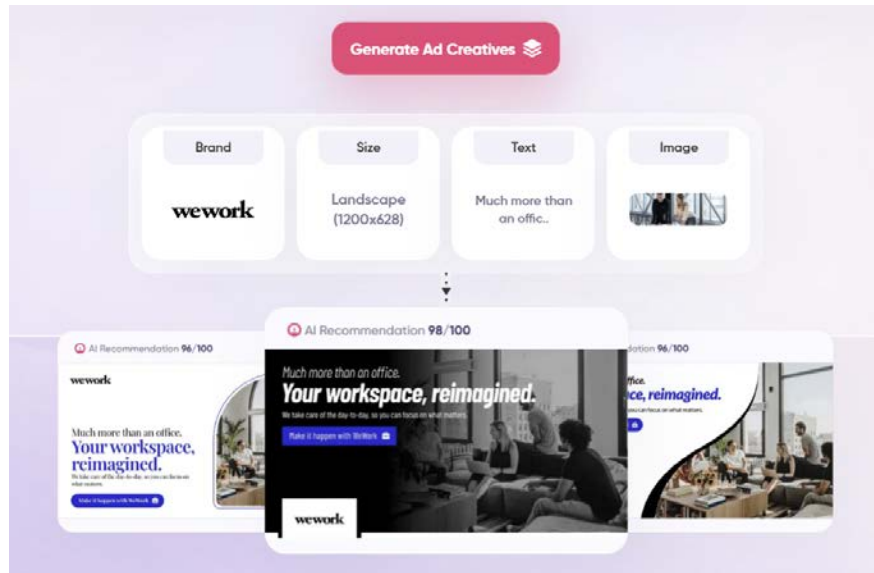
## **AI-Based Ad Creative Generation**

AI-powered creative ad generation is a new approach to real estate marketing. This approach uses advanced machine learning algorithms, vast data sets, and other tools to create engaging and effective ads. This is a departure from traditional advertising, which involves time-consuming manual processes that require creativity and human input.

AI can be used by real estate companies to automate manual processes and produce high-quality, tailored ads at an unprecedented scale. These advanced technologies can analyze data from a variety of sources, including demographics, consumer behavior patterns, and past responses to various ad creatives. AI can then create personalized ads that are more effective with certain audiences. AI should be incorporated into the creative programming of artists to help them create new art forms and enhance their skills (Aili, 2020).

As an example, AI-driven AD creative generation software like *adcreative.ai* has been a game changer in the digital marketing industry. Rather than spending hours on highly expensive software, now these kinds of tools can be easily utilized to generate hundreds of AD creative variations to generate attention-capturing AD creatives for social media marketing purposes. The process is extremely easy and only the user has to upload the company logo and a core image, then the software does the rest using the power of machine learning and artificial intelligence. According to Aili (2020), this will allow graphic designers to save a lot of time and creative thinking. Also, when real estate agents design AD creatives for social media marketing purposes, these techniques and tools can be applied to save time.

**Figure 1: Ad Creative AI Web App (Source: adcreative.ai)**

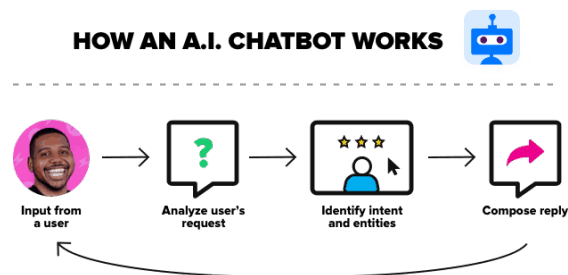


The emergence of AI-powered creative ad generation signifies a transformative approach to real estate marketing, as it utilizes advanced machine learning algorithms and large data sets to automate the production of engaging and effective ads, as opposed to the labor-intensive, traditional advertising methods. By analyzing diverse data points such as demographics, consumer behavior, and historical responses to different ad creatives, AI technologies can generate personalized and optimally targeted ads at an unparalleled scale. This new method, embodied in AI-driven software such as adcreative.ai, not only saves time for graphic designers and real estate agents but also amplifies their creative capabilities and effectiveness in social media marketing. The adoption of these AI tools therefore portends a paradigm shift in advertising practices, with the promise of greater efficiency, personalized engagement, and enhanced creativity. The continued integration of AI in the creative processes of professionals is likely to bring about a new epoch of innovation in digital advertising and real estate marketing.

## AI-driven Chatbots for Customer Support

The real estate sector, particularly in the US, has to operate beyond normal business hours. Chatbots can be extremely useful in this situation, as they are available 24/7. Chatbots allow customers to get answers at any time (Nuruzzaman & Hussain, 2018), highlighting a customer-centric strategy. Chatbots can provide immediate answers, which enhances the customer-centric approach. In a highly competitive market, where information is needed quickly and efficiently, reduced waiting times and rapid communication can make all the difference. Chatbots are also excellent at qualifying leads. Chatbots can interact with clients and gather data about real estate requirements. They also evaluate lead quality. Chatbots are a cost-effective and time-saving solution for sales teams. This feature reduces the requirement for an extensive customer service staff, which results in significant savings (Følstad & Skjuve, 2019).

**Figure 2: How chatbots work (Source: marketingaiinstitute.com)**



US real estate caters to diverse clients with an array of property options. Personalization is therefore a key factor. AI-enabled chatbots can provide recommendations that are personalized based on the customer's previous interactions, preferences, and needs. They can also analyze data from customers to gain insights into their behavior and preferences. This capability of data analysis leads to more targeted and effective marketing strategies (Følstad & Skjuve, 2019). Customer service is made more efficient with chatbots. Chatbots can automate routine tasks such as scheduling real estate agent appointments or booking viewings of the property. These tools can be easily integrated into other digital platforms, such as Customer Relationship Management systems (CRM), email marketing software, and social media platforms. The seamless support provided by this integration is essential in today's fast-paced US Real Estate market. Managing multiple listings, interactions with clients, and appointment scheduling is part of the daily routine.

The adaptation of chatbots within the U.S. real estate sector represents a paradigm shift towards more efficient and customer-centric operations. Available round-the-clock, chatbots furnish immediate responses to customer queries and effectively qualify leads, thereby reducing wait times and enhancing rapid communication—critical attributes in the fast-paced real estate market. In addition to being a cost-effective and time-saving solution that negates the need for large customer service teams, chatbots excel in personalizing recommendations based on clients' historical interactions, preferences, and requirements. This use of AI in data analysis cultivates targeted and effective marketing strategies, leading to improved customer service. Beyond this, chatbots' ability to automate routine tasks like scheduling appointments and integrating with other digital platforms, such as CRM systems, email marketing software, and social media, provides seamless support crucial in managing the high-velocity real estate market in the U.S. Therefore, the deployment of chatbots signifies a strategic move towards greater efficiency, personalization, and customer satisfaction in real estate practices.

## **Utilization of Business Process Automation Tools with AI**

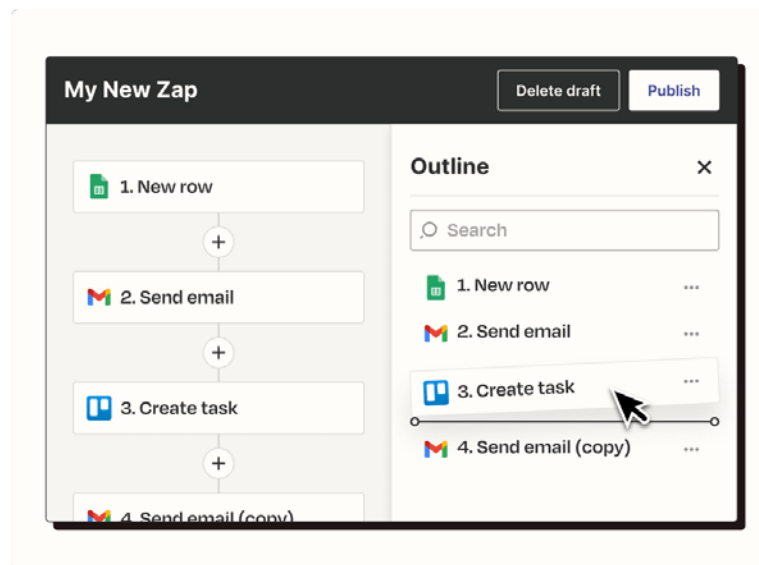
Effective lead generation in the highly competitive realty industry is essential for growth and sustainability. The integration of AI platforms with automation platforms like Zapier, which has been advancing in technology, offers significant opportunities for optimizing this process. This section examines the practical benefits of this integration and highlights its potential in improving lead generation for real estate.

This begins with selecting the AI tools that are most appropriate for the lead generation strategy. AI chatbots such as ChatGPT can be used to engage visitors on websites and collect contact information. Other sophisticated estimation tools, like Zillow Zestimate, provide estimates of property values.

Chat GPT allows businesses to automate the lead generation process by generating and evaluating leads using natural language interactions. Chat GPT allows companies to create virtual assistants or conversational chatbots that interact with potential customers and gather relevant information (Deng and Lin, 2023). They can also determine the likelihood of conversion. Automating these tasks allows businesses to reduce the manual effort required for lead generation and save time. According to Deng and Lin, (2023), this allows sales and marketing teams more time and energy to concentrate on strategic activities.

Integration of Chat GPT into existing CRM platforms (High-level, Salesforce, Clickfunnels, etc.) and systems is essential for effective lead generation. The seamless data exchange between the CRM system and the language model ensures that leads generated by Chat GPT will be properly tracked and nurtured through the sales pipeline (Aljanabi & ChatGPT, 2023). Integrating Chat GPT with marketing automation tools allows businesses to create lead management workflows that are end-to-end, improving efficiency and effectiveness. Both real estate agents and digital marketing agencies can benefit from this AI-based workflow automation.

**Figure 3: Zapier workflow (Source: Zapier)**



Zapier is the next step after the AI tools have been operationalized on the platforms of choice, such as an estate website. Zapier's first step is to create an automated workflow called a "Zap". The AI tool of choice, such as an AI chatbot is chosen as the "trigger app" with a trigger action like "New Lead Collected".

The next step is to choose an "action" application, which will be the destination of the data coming from the trigger app. It could be a CRM system such as HubSpot, or Salesforce, or an email marketing tool, MailChimp. Or it could even be a spreadsheet on Google Sheets, Excel, or Google Sheets.

Next, map the fields of data from the AI app to the active application. The "Email Address", for example, could be mapped from the AI chatbot to the "Email" in the CRM system.

The final step is to test the Zap with a lead sample from the AI tool. This will ensure that the workflow works. After successful testing, Zap will be activated to automate the transfer of data from the AI app to the active application.

Zapier's synergy with AI offers several benefits for lead generation in real estate. AI tools improve lead qualification and engagement, while Zapier provides efficient data storage and transfer. This reduces manual tasks and errors. The combination is scalable, so it can be used by businesses of all sizes (Shidaganti et al., 2021).

The integration of AI platforms with business process automation tools such as Zapier presents substantial potential for enhancing lead generation within the highly competitive real estate industry. This synergy allows for effective automation of critical functions, including engagement with potential customers, lead generation and evaluation, as well as seamless data exchange with CRM systems. Specific AI tools, such as Chat GPT, contribute to process efficiency by reducing the manual effort required for lead generation and allowing sales and marketing teams to devote their resources to more strategic activities. Meanwhile, automation platforms like Zapier facilitate the smooth transfer of data from AI tools to various applications, ensuring efficient data storage and reducing manual errors. As a scalable solution, the combined use of AI tools and automation platforms is beneficial for businesses of all sizes. Therefore, this integrated approach represents a significant opportunity for real estate businesses to optimize their lead generation strategies, contributing to their overall growth and sustainability in an increasingly competitive market.

## **Contribution to the Literature**

In the United States, the real estate sector is sizable and expanding. Over \$4 trillion was spent on real estate transactions in the United States in 2022. Real estate companies must be able to generate leads and convert them into sales in order to succeed. Cold calling and direct mail are two common traditional lead generation techniques, both of which can be

time-consuming and expensive with low conversion rates. The use of artificial intelligence (AI) to enhance lead creation and lead nurturing in the real estate market has gained popularity in recent years.

The application of AI in real estate lead generation and lead nurturing is the subject of a growing corpus of study. According to a 2023 study by Nuruzzaman and Hussain, chatbots powered by AI can raise customer satisfaction levels by 20%. Additionally, a 2023 study by Flstad and Skjuve discovered that technologies for automating business processes powered by AI can save the cost of lead creation by as much as 50%. According to Gonzalez (2021), the optimum social media marketing budget would be \$1000 per month (the ideal amount would be \$40K per year on AD spend) and more than 50% of the leads get lost due to not having an automated follow-up system & nurturing mechanism with those digital marketing approaches.

The application of AI in real estate lead generation and lead nurturing may have some potential detractors. The cost of implementing AI-powered technologies is one issue. The expense of AI-powered solutions, however, is frequently covered by the growth in leads and revenue. The fact that AI-powered products may be challenging to use is another issue. However, the majority of AI-powered technologies are made to be simple to use and quick to pick up. According to Hussain and Nuruzzaman (2018), when AI chatbots involved in customer handling and follow up process, there could be some significant privacy issues for the customer's end. But this issue could be fixed by programming those chatbots, not to record the consumer data and disabling their ability to reasoning using past data inputs. According to another study (Schlögl et al., 2019), AI enabled systems would be still in the early stage for B2B activities and business process automations. However, as Archana Bai (2011) mentions these AI technologies are now in an optimum level to utilize the business decision making by reducing the latency of managerial decision-making speed.

This conceptual paper contributes to the existing literature by providing insightful & practical approach to utilize AI-driven business automations for lead nurturing in the real estate industry in the United States. There was no particular research done in this specific area and this paper address that gap by providing practical was to utilize lead generation and lead nurturing in the real estate space in US. Furthermore, this paper has demonstrated how to use and implement AI-Driven tools like Zapier and that will add more value to the real estate agents who are reading this. This paper provides practical insights into the use of AI in real estate, particularly focusing on AI-driven business automation tools like Zapier for lead nurturing. This insight will prove invaluable for real estate agents and digital marketers who are looking to leverage AI to improve their lead generation and nurturing strategies. Further studies in this area are needed to provide more comprehensive and in-depth knowledge.

## **MANAGERIAL IMPLICATIONS & RECOMMENDATIONS**

Artificial Intelligence and digital marketing strategies in the real estate industry have profound implications for management practice. The enhancement of resource allocation efficiency is one significant impact (Korhonen & Syrjänen, 2004). AI reduces time and labor costs associated with lead generation and nurturing (Webb, 2019). Managers can then better manage resources, focusing human capital on strategic and more complex tasks, like nurturing relationships with high-quality leads or developing innovative marketing strategies. A further benefit is enhanced customer engagement. AI-driven chatbots are a great way to increase customer engagement and deliver personalized experiences, which can improve lead conversion rates. Managers must ensure that their teams are properly trained to integrate chatbots into the customer journey and provide seamless, superior service (Jenneboer et al., 2022). AI technologies will also lead to a paradigm shift in decision-making that is more data-driven (Efthymiou et al., 2020). Managers can use AI insights to improve marketing strategies, increase lead conversion rates and boost growth. Understanding and interpreting the data is crucial, so managers must ensure that they or their teams possess the necessary skills (Stein et al., 2017).

When it comes to process improvement, tools like AI-integrated Zapier are a great way to streamline operations. Managers must identify opportunities for automation in their lead generation and nurture processes and implement these technologies judiciously to reap the benefits (Adler, 1988). According to Elliott and Soifer (2022), the advent of AI technologies can also bring about potential risks. These include over-reliance on technology and privacy concerns. Managers should ensure that appropriate safeguards and contingency plans have been implemented in case of technological failure (Moreau, 2001). The new technological landscape requires that both operational and managerial personnel be trained and up-skilled. The managers are responsible for overseeing the process and ensuring

all team members understand how to use novel tools (Adler, 1986). The integration of AI tools and automation in the lead generation processes facilitates the easy scaling of operations. Managers can plan more effectively for growth, knowing that the lead-generation process is scalable (Nielsen & Lund, 2015). Understanding these implications will help managers in the real-estate industry harness the power of AI to transform their lead generation and nurturing process and drive growth.

The implementation of Artificial Intelligence and digital marketing strategies within the real estate industry implies profound shifts in managerial practice, with potential impacts spanning from resource allocation to decision-making and process improvement. AI technologies facilitate efficiency in resource utilization by alleviating the time and labor costs linked with lead generation and nurturing, thereby enabling managers to concentrate human capital on strategic and intricate tasks. In enhancing customer engagement through AI-driven chatbots, managers are urged to ensure their teams' competency in seamlessly integrating these technologies into the customer journey. Further, AI's propensity to prompt a data-driven paradigm shift in decision-making necessitates that managers and their teams possess the requisite skills for data comprehension and interpretation. Process enhancement can be achieved through the judicious deployment of tools like AI-integrated Zapier, which streamline operations. However, the potential risks accompanying AI technologies, including over-reliance on technology and privacy issues, call for safeguards and contingency plans to be put in place. In this evolving technological landscape, training and up-skilling of operational and managerial personnel is essential. The scalability of operations facilitated by AI tools and automation paves the way for more effective growth planning. By understanding these implications, managers in the real estate sector can harness the transformative power of AI to optimize their lead generation and nurturing processes, thereby driving industry growth.

It is essential to incorporate AI-powered lead generation tools into business practices. These tools leverage data from multiple sources such as social media platforms, public records, and previous customer interactions to automate the process of identifying and qualifying potential leads. These prospective clients are deemed to be most likely to require the services based on the data analysis. Hence, the utilisation of such technology could result in improved efficiency and a broader customer base.

With the advancement in AI technology, chatbots are becoming an indispensable tool in customer service. They provide continuous support to potential and existing clients by addressing queries regarding your services, presenting property listings, and scheduling appointments. Thus, the adoption of AI-powered chatbots is highly recommended for offering comprehensive, around-the-clock customer service.

These tools can automate the procedure of disseminating marketing materials like emails and social media posts to potential leads. They utilise data from Customer Relationship Management (CRM) systems to personalise marketing messages, thereby ensuring that they reach the right audience at the opportune moment. Therefore, it is advisable to leverage AI-powered marketing automation tools for more personalised and effective marketing campaigns.

## CONCLUSION

This comprehensive study has highlighted the transformative power of Artificial Intelligence in conjunction with digital strategies to redefine lead generation and nurture within the United States Real Estate Industry. The research has highlighted the limitations of the traditional methods of lead generation, including their labor-intensive nature and low-quality leads. In contrast, the integration of AI technologies - namely AI-based AD creation, AI-driven customer support chatbots, and business processes automation platforms such as AI-integrated Zapier - presents a robust solution that significantly increases the efficiency and effectiveness of digital marketing strategies in the real estate industry. These technologies automate lead generation and enhance customer engagement. They also personalize the customer experience.

This research also provides practical guidelines on how to integrate AI into digital marketing within the real estate sector. It offers actionable insights about the advantages and challenges that may arise. This study has important implications for management practices, especially concerning resource allocation, customer engagement, and data-driven decisions. It also impacts process improvement and scaling operations. The industry must leverage these technologies to improve its lead generation and nurture processes while also addressing the associated challenges.



## **LIMITATIONS AND FUTURE RESEARCH**

The use of secondary sources of data made it difficult to collect information across multiple platforms. This paper focused on a very narrow area, while the issue under discussion is much broader and more complex. The scope of digital marketing and artificial intelligence is very wide and future research in many different areas can be conducted. Digital marketing and AI algorithms introduce new options and features to their users each day. Future research on these new features can help to keep up with the latest data.

AI and digital strategies for lead generation in real estate have certain limitations, despite their potential. The need for large, relevant, and clean datasets is a major challenge. Not all real estate companies have this access. AI platforms and tools can also require technical expertise, which is not always present in all real estate businesses.

Future research could address these limitations, and optimize the integration of AI with digital marketing strategies. These studies could cover the impact of AI on the real estate industry over the long term, the ethical implications of AI in real estate, and the development and implementation of AI technology that includes emotional intelligence and personalization. It is important to continue research to stay abreast of the rapid changes that AI has undergone and how these can benefit the real estate industry.

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# KNOWLEDGE SHARING AND BEHAVIOUR FACTORS FOR THE CAPACITY BUILDING OF SMALL AND MEDIUM ENTERPRISES (SMEs)

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## ABSTRACT

*The study aims to investigate the relationship between behaviour factors and the resultant knowledge sharing to capacitate SMEs. The study was quantitative and used a cross-sectional survey design. Questionnaire was administered to 200 senior personnel of SMEs in South Africa. Findings show that there is a significant relationship between self-learning knowledge sharing and the selected behaviour factors such as facilitation, conduct and ability. The study recommends managers and owners to instil and encourage self-learning among employees and to cultivate a knowledge sharing culture to ensure sustainability in SMEs.*

**Keywords:** individual knowledge sharing, self-learning, experience, behaviour factors, capacity building.

## INTRODUCTION

Knowledge sharing is a problem in many businesses, and this limits their competitiveness. The absence or limited presence of knowledge ability is felt more in small firms where there is generally a scarcity of resources (Wong & Aspinwall, 2004) especially human resources. This becomes even more critical in today's business environment that is driven by information technology (London & London, 2018). According to the International Trade Centre (2018), small firms require knowledgeable and productive employees to access knowledge resources, and to be able to build capacity. In addition, knowing that knowledge sharing in small businesses is centred on individualism contrary to larger businesses that endow with large pool of personnel and other resources to facilitate the sharing of knowledge (Desouza & Awazu, 2006). In this context, the limited number of personnel is likely to bring challenges and opportunities for knowledge sharing in a small firm. Nieman (2006) points out that the situation is complicated for small businesses as both business practices and knowledge sharing mechanisms are inefficient to improve their performance. Knowledge must be nurtured and leveraged by sharing it in the workplace by personnel to respond to challenges facing SMEs (Jeon & Kim, 2012). In this context, Laudon and Laudon (2018) indicate that knowledge has to be used and shared throughout the firm to serve the purpose of the business. Arguably, the structural inadequacy translates in SME's knowledge capacity and its management are not construed as a preoccupation of most small business owners. Johanson and Adams (2004) opine that SME's sector should address the importance of the investments in skills development. However, because of resource constraints, SMEs depend on internal network to build capacity. Building capacity is a process of equipping individuals with knowledge that enables them to improve organisational performance (Tachiki, 2005). All members in small firms should be regarded as a source of knowledge because of resource constraints. As a result, the importance of knowledge and its transfer in business may result in conflict as knowledge and individual attitude of employees are not aligned to support a business (Cope, Kempster & Parry, 2011). The study therefore established how knowledge sharing among personnel shaped the performance behaviour for SMEs.

The knowledge sharing approaches point to the behaviours exhibited by the individuals involved. Whenever there is human interaction, there is potential for conflict. Counter-productive behaviour factors that inhibit knowledge

sharing is likely to result from the conflict, and on the other hand, productive behaviour is likely to facilitate individual interactions that promote knowledge sharing. It is the aim of this paper to establish the relationship between behaviour factors and the resultant knowledge sharing. In this context, Anand and Walsh (2020) recognise that the process of knowledge sharing in SMEs remains understudied. For developed countries, knowledge sharing relates to business operations and competitiveness of SMEs, but this study attempts to address the process of knowledge sharing and resultant behaviours. A study in the United Kingdom by Farrukh, Athanassopoulou and Ilevbare (2019) confirm that an effective transfer process requires an SME-friendly environment, especially as SMEs have a limited time to engage in knowledge exchange activities. In recognising the importance of the tools used to facilitate knowledge sharing in SMEs such as web-based and social networking, (Mohsam & Brakel, 2011) emphasise the need for further research in terms of new approach to knowledge sharing in SMEs. This study addresses the “behaviour” factors of individual and brings more insight into the knowledge exchange activity as complementary to prior studies. Furthermore, although the importance of technological tools to facilitate better knowledge sharing in SMEs cannot be over-emphasised, the fact that tacit (individual) and explicit knowledge cannot be shared in the same context poses a problem for a small sized enterprise. Aptly, the behavioural predisposition and the nature of SMEs require a different perspective to sharing individual knowledge. Furthermore, SMEs may use technological tools to promote individual knowledge sharing, the behaviour factors of individual source still apply.

## **LITERATURE REVIEW**

### **Conceptualising Tacit Knowledge**

Previous studies, Little, Quintas and Ray (2002); Nonaka (2007); Desouza and Paquette (2011); and Farrukh, et al., (2019) defined and explained tacit or individual knowledge as a result of an action, commitment, and involvement in a specified environment. Consequently, less permissible to be shared in an explicit form. Edvardsson and Durst (2013) reiterate that SMEs appeared to place more emphasis on individual knowledge due to easy communication channels. This section will review the literature about the knowledge acquisition approach and inherent personnel behaviours in the context of small and medium enterprises.

### **Knowledge Sharing in Small and Medium Enterprises (SMEs)**

The structural challenges facing the SME’s sector make it complex to gain knowledge, retain a skilled workforce, or even to facilitate knowledge sharing (Nel, 2017). In some cases, employees lose interest in the process of sharing their tacit knowledge and they dis-activate any knowledge activity in the firms although SMEs could not afford this situation due to various underlining issues that faced the SME’s sector (Anand & Walsh, 2020). Knowledge sharing process requires the willingness and commitment of employees (Susanty, Handayani & Henrawan, 2012). In this context, He and Li (2010) described individual knowledge as being tacit and acquired with little support or resources of other people having direct relevance to individual goals. As such, Fu, Li and Johnson (2011) stated that the acquisition and use of individual knowledge was dependent on (1) strong “self-study” or self-learning measured formal or informal education, and (2) learning-by-doing, realised through “work experience” and interpersonal interactions.

#### **Self-learning and experience**

Fu, et al. (2011) confirmed that strong self-learning characterised the individual effort and ability to obtain individual knowledge over time. This individual knowledge was unlikely to be codified or articulated as it was acquired through practising or repeat activities during a long period (Edvardsson & Durst, 2013). In this context, Anužienė, Zubrickienė and Tolutienė (2021) opined that there was an insufficient empirical information about self-learning, thus a need to have an insight into the competences acquired by employees through self-learning opportunities offered by the workplace. This individual knowledge acquisition refers to what is normally termed ‘work experience’ of employees in the business. Desouza and Paquette, (2011) indicated that individual knowledge could not be separated from the knowledge source. In this context, acquiring knowledge, skills, problem solving abilities and self-confidence increase the possibilities of success in SMEs (Peters & Brijlal, 2011). Learning by doing appears a very important source of individual knowledge as learning experience enhances the capacity of an entrepreneur / owner and employees to succeed. How knowledge is acquired and shared applies or fails to apply because of behaviour exhibits by employees (Argote & Igram, 2000). To this note, individual behaviour dynamics becomes crucial in building knowledge capacity (Iceland et al., 2012). Given the nature of tacit or individual knowledge, Fu, et al. (2011) confirmed that the sources

and mechanisms for learning and acquisition of individual knowledge were different and included (1) strong self-learning, and (2) learning-by-doing (experiences) in a sustained interpersonal interaction environment. The behaviours factors influencing individual knowledge acquisition and sharing are critically discussed in the next section.

### **Workplace behaviour factors**

The business size was likely to be a fundamental variable in explaining firms' behaviour factors and outcomes (Paik, 2011; and Evans, 2011). According to McShane and Glinow (2018), five types of individual behaviours (IB) were found in organisational behaviour (OB) research. These behaviours included task performance behaviours (TPB), organisational citizenship behaviours (OCB); productive or counter-productive behaviours; work attendance behaviours (WAB); joining and staying behaviours (JSB). Moorhead and Griffin (2010) reaffirmed that these workplace behaviour model could be observed through the actions of members of the business, and which directly or indirectly influenced organisational capacity. This model acknowledged that individuals' interaction should take place in the organisation for employees acquire and share knowledge, especially as behaviour was a function of individual decisions in firms (Renuka & Frederick, 2014). With specific focus on McShane and Glinow (2014)'s study, the above identified individual work-related behaviours different categories of behaviour are briefly discussed next.

### **Task performance behaviours as ability**

McShane and Glinow (2018) opined that task performance behaviour referred to a behaviour that employees show to achieve organisational goals. Whoever practices self-developing or self-learning, that person is likely to have a positive or constructive attitude where he would want to transfer knowledge to colleagues. This person could be owner or employee (Peters & Brijlal 2011). Leibold et al., (2005) stated that in improving professional knowledge and skills, personnel attitude represented behaviour should be addressed. To this note, a person acquiring experience or more experience as opposed to one who has less experience, is likely to have a positive behaviour and the reason why this would be the case. McShane and Glinow, (2018) referred to expertise as a double-edged sword. As people acquire experience about a specific topic, their mental models tend to become more rigid. They are less adaptable to new information or rules about that knowledge domain. In this context, the study hypothesises self-study and experience positively correlate with ability in SMEs.

### **Organisational citizenship behaviours as facilitation**

Moorhead and Griffin, (2010) stated that organisational citizenship was the facilitation predisposition of employees to contribute to the organisational performance. Singh (2019) confirmed that co-workers were dependent on one another knowledge and expertise to perform in an organisation. People who experience conflict also tend to reduce their information sharing and other forms of coordination with each other (McShane & Glinow, 2018). In the perspective of Gin Choi, Kwon and Kim (2012)'s study, facilitation behaviour correlated with job cognition. The experienced employees acquired sufficient knowledge that could facilitate to expand firm's capacity (Centre for Research into the older workforce, 2018). This will also be viewed as a favourable behaviour and the study hypothesises that the individual knowledge transfer factors, self-study, and experience positively correlate with organisational citizenship (facilitation) behaviour of employees in SMEs.

### **Functional or dysfunctional behaviours as conduct**

Longenecker, et al. (2008); and Goetsch and Davis, (2010) reiterated in the process of avoiding harm, a small sized firm was likely to improve knowledge sharing in an organisation. Training improved ethical conduct to some extent and could facilitate to establish a set of shared values that reinforced ethical conduct (McShane & Glinow, 2018). These shared values could also refer to knowledge transfer in firms. The same authors indicated that learning processes was the result the sharing values to enhance knowledge transfer. Singh & Twalo, (2015) suggested that expertise reinforces the "mindless behaviour" because expertise reduces the tendency to question why things happen willingness and commitment from both the transferor (skilled employees) and receiver (co-workers) to share and learn business technical knowledge to support business development (Gottschalk, 2010). In this context, the study hypothesises self-study and experience positively correlate with conduct in SMEs.

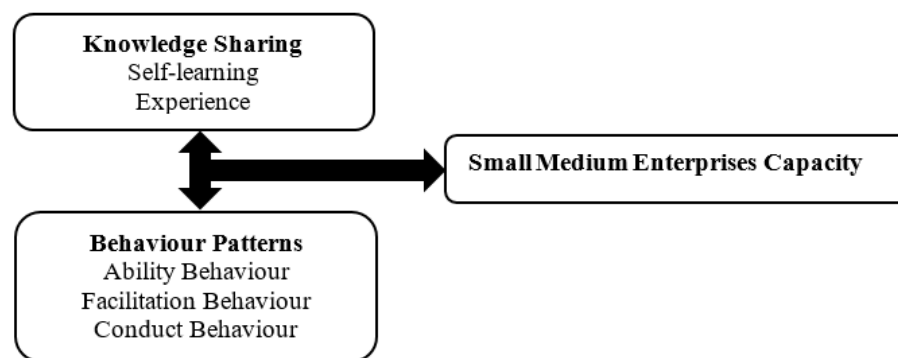
The above discussed behaviours were likely to either reinforce or reduce the capacity of SMEs to operate effectively. As indicated by Durst and Edvardsson (2012), the characteristics of SMEs were likely to shape individual behaviour and provide advantages or disadvantages for knowledge transfer. Building capacity through knowledge transfer in SMEs was likely to be achieved through quality relationships among employees. The embeddedness of knowledge in humans and how it is commonly transferred by employees of the organisation should consider the

chronic shortage of human resources characterising SMEs (Cerchione, Esposito, & Spadaro, 2015). Tchawe (2017) echoed that capacity building as the use and transfer of knowledge and skills among individuals. The challenge of knowledge about capacity building of SMEs may also be the result of size disadvantages such as resource constraints and lack of structural support. To build productive capacity of firms, employees should develop themselves through self-training in different areas of business (Ikupolati, Medubi, & Obafunmi, 2017). In this context, if knowledge transfer does not take place, the sustainability of the SME is compromised. For example, if a person acquires or increases his / her self-study knowledge in an SME environment, he / she is likely to leave the organisation (SME) with his / her knowledge for possible greener pastures or likely to be poached by bigger businesses. The knowledge is therefore likely to be lost and not transferred to colleagues. Given the “flexibility” or “smallness” of the SME, if any individual decides to “misbehave” how is this likely to affect other “employees”. To this note, the personality and outlook of personnel may impede the transfer of knowledge as culture and behaviour within the small firms (Wong & Aspinwall, 2004).

These empirical results allowed to assume the following research hypotheses:

- H1:** There is a statistically significant relationship between work experience and each of the following behaviour patterns of employees: H1a Facilitation, H1b Conduct and H1c Ability.
- H2:** There is a statistically significant relationship between self-study and each of the following behaviour patterns of employees: H2a Facilitation, H2b Conduct and H2c Ability.

**Figure 1: Relationship between individual knowledge sharing and behaviour factors in SMEs**



*Source: own elaboration*

The potential for the adoption of a knowledge management system (KMS) and knowledge sharing is becoming a crucial matter in SMEs (Shrafat, 2017) however, there is a scarcity of studies related to Knowledge sharing in SMEs. Therefore, the purpose of this paper is to investigate the relationship between behaviour factors and the resultant knowledge sharing to capacitate SMEs.

## METHODOLOGY

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. There are three types of research method namely Qualitative, Quantitative, and Mixed. The qualitative research framework is geared toward creating a complete and detailed description of researcher observation. Its aim is to get the meaning, feeling and describe the situation. This kind of method is used to assess knowledge's, attitudes, behaviours, and opinions of people depending on the topic of the researchers. Quantitative methods allow a researcher to systematically measure variables and test hypothesis. It focuses on collecting, testing, and measuring numerical data, usually from a large sample of participants. This method seeks to quantify data and generalize results from a sample of a target population. Under a mixed method, both qualitative and quantitative data collection and analysis methods will be used to answer research questions to provide additional perspectives, create a richer picture and present multiple findings. The existence of the mixed methods approach stemmed from its potential to help researchers view social relations and their intricacies clearer by fusing together the quantitative and qualitative methods of research while recognizing the limitations of both at the same time. This study therefore used quantitative

method because of its ability to produce causality statements, using controlled experiments, its replicability, easy to summarise numerical data using statistical analysis tools that provide a holistic summary of respondent answers and its objective in nature and it is easy to establish standardised answers that have low room for variability. As stated by Welman, Kruger and Mitchell, (2007), the quantitative method and survey design could be used to examine the relationship between two or more variables without any planned intervention or manipulation. Thus, the quantitative analysis was conducted, and the interpretation of results focused on descriptive and correlation measurement to test the hypotheses.

## **Sample and Data Collection**

The sample was drawn from the Durban Chamber of Commerce and Industry (DCCI) membership directory of SMEs. The DCCI represents businesses in the Durban Metropolitan area, the third largest city in South Africa with the largest and busiest shipping terminal in sub-Saharan Africa and with a population of approximately 3.5 million (Stats SA, 2019). This data source was more reliable and inclusive because it included information from a spectrum of data sources. The database contained a population of 1620 small and medium enterprises operating in formal various sectors. The primary data collected from 50 SMEs that were selected randomly allowing equal opportunity for each element of the population to be included. All sectors were represented in the targeted population and based on the above procedure the sample error was reduced. From the 50 organisations (SMEs) in the selected sample, this study therefore used expert sampling whereby the researchers sought consent of those who were expert or known expert. Four most senior people from 50 organisations in a total number of 200 respondents which included both owners-managers and employees (personnel) who can answer the questions about their behaviour during the knowledge transfer were selected. The questionnaire, which comprised of twenty-five questions, was then administered to the 200 members of SMEs, delivered face-to-face then collected immediately. The researchers had to verify with the owners/managers that the business met the requirements of this study, that the SME, should have at least five employees (not a micro enterprise according to Small Business Amendment Act 102 of 1996, South Africa). Furthermore, the business should have been operational for at least two years to ensure that knowledge transfer had taken place since the organisation would have existed for a relatively reasonable period. The response rate was 100%. The reason for the high return rate was that the researchers delivered the questionnaires face-to-face and collected personally.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics**

Based on the sample of 200 respondents, 109 (54.5%) were male respondents and 91 (45.5%) female respondents. Demographic results show that male participants surpass females in small business sector in the Durban area as far as gender is concerned. This slight difference of (9%) between (54.5%) and (45.5%) in gender participation reiterates that male still dominating the formal SME's sector and for the purpose of this study the sample is representative. The education distribution was as follows, 3.5% post-graduate degree, 13.5%-degree, 29% diploma, 21% post-matric (but not Diploma / Degree), 27% matric, 3.5% pre-matric and only 2.5% unspecified. Matric = High school. In terms of respondents' work experience, this ranged from 21% from 6 months to 1 year, 39.50% from 2 to 5 years, 19% from 6 to 10 years, 14.50% from 11 to 15 years, 4% from 16 to 20 years, and 2% from 21 to 25%. As noticed, about 70% of respondents were qualified higher than matriculation (school level) whereas 79% of respondents have worked more than two years in SMEs. This proves that the respondents were knowledgeable as shown by their high educational qualifications and periods of work experience.

### **Reliability Test**

Middleton (2019) stated that reliability measured the consistency of the measuring method if the same method on a different sample was used under the same conditions Validity measures the accuracy of the measuring method, testing if it is measuring what it supposed to measure, and that the results closely correspond. Cronbach's Alpha. Welman et al., (2007) reiterate that Cronbach's Alpha determines the degree to which the items of a research instrument or questionnaire measure the same attributes and the coefficient of 0.60 and higher is considered acceptable for reliability purposes as the closer the coefficient to 1 the higher the consistency reliability. Cronbach's Alpha test of reliability



coefficient was conducted and showed an alpha coefficient of 0.701 that was higher than the acceptable 0.60. The study data structure is therefore reliable.

## Hypotheses Test

The study hypotheses were tested using Pearson correlation measure. The results are presented in Table 1 and analysed.

**H1** stated that there was a statistically significant relationship between work experience and each of the following behaviour factors of employees H1a Facilitation, H1b Conduct and H1c Ability.

**H2** stated that there was a statistically significant relationship between self-learning and each of the following behaviour factors of employees H2a Facilitation, H2b Conduct and H2c Ability.

It is important to indicate that the analysis considers the 0.01 significance (a statistically higher-level test) only and so limited comment will be made on the 0.05 level. There is a statistically significant relationship between work experience and facilitation behaviour of employees in SMEs (**H1a**).

**Table 1: Pearson Correlation Coefficients**

		Experience	Self-study	Facilitation	Conduct	Ability
<b>Experience</b>	Pearson Correlation	1	.097	.115	-.113	.154*
	Sig. (2-tailed)		.173	.106	.112	.030
	N	200	200	200	200	200
<b>Self-study</b>	Pearson Correlation	.097	1	.183**	.296**	.345**
	Sig. (2-tailed)	.173		.010	.000	.000
	N	200	200	200	200	200
<b>Facilitation</b>	Pearson Correlation	.115	.183**	1	.374**	.511**
	Sig. (2-tailed)	.106	.010		.000	.000
	N	200	200	200	200	200
<b>Conduct</b>	Pearson Correlation	-.113	.296**	.374**	1	.636**
	Sig. (2-tailed)	.112	.000	.000		.000
	N	200	200	200	200	200
<b>Ability</b>	Pearson Correlation	.154*	.345**	.511**	.636**	1
	Sig. (2-tailed)	.030	.000	.000	.000	
	N	200	200	200	200	200

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The study finds that there is a positive but insignificant relationship between work experience and facilitation's behaviour of employees in SMEs as shown by a coefficient  $r = 0.115$  at  $p$  value  $0.106 > 0.01$  (Table 1). The results indicate that there is not enough evidence to confirm that the long or short length of services in SMEs will facilitate the transfer of individual knowledge in a significant way. The hypothesis is rejected as no significant correlation is found between work-experience and facilitation behaviour of employees. It was assumed that the more the experience the worker has, the more likely he or she will facilitate individual knowledge transfer. Assumption that the experienced employees acquired sufficient knowledge that could facilitate to expand firm's capacity (Centre for Research into the older workforce, 2018), is not in line with the study empirical findings. Experienced employees are likely to know better the functioning of the business through accumulated business skills. It can be argued that positive weak correlation between work experience and facilitation behaviour proves that senior employees of SMEs do transfer knowledge though not in a significant way. To this note, this study confirms that there is no evidence to prove above reasonable doubt that work experience significantly enhances the facilitation behaviour of employees in SMEs. However, the results were underpinned by Smit, Botha, and Vrba (2016) who indicated that experienced personnel

were sensitive to culture change, new processes, new education training and team-building that could facilitate the transfer of knowledge. This is more detrimental in SMEs environment where knowledge resource is too limited and should raise concern for SMEs because workers who gain knowledge through experience do not significantly facilitate transfer of skills. H1a is therefore rejected.

There is a statistically significant relationship between work experience and conduct of employees in SMEs (**H1b**). Results show that there was negative and insignificant relationship between work experience and conduct as shown by a coefficient  $r = -0.113$  at a  $p$  value of  $0.112 > 0.01$  (Table 1). The results mean that the length of services of employees in SMEs negatively correlates with conduct behaviour though not in a significant way. It implies that the work experience of employees in SMEs cannot justify the conduct in sharing of skills to achieve business objectives and goals. There is evidence though to confirm that work experience can decrease ethical conduct in transferring individual knowledge in SMEs, but in an insignificant way. Robbins, Odendaal and Roodt, (2004) and McShane and Glinow (2002) stated that an expert power acquired through experience improved the effectiveness of employees in the functioning of a business organisation. Nevertheless, according to Goetsch and Davis, (2010) the territorial behaviour and dependency portrayed by expert power was likely to harm the transfer of individual knowledge and could negatively affect the capacity of SMEs to deliver. This observation is in line with the study results and pre-study expectation of a significant correlation between work experience and conduct. As indicated by Leibold et al., (2005), to improve professional knowledge and skills, personnel attitude should be addressed. Although the relationship is insignificant, the negative relationship should be a concern to SMEs because it implies that senior employees may take advantage of their seniority to break rules and regulations, deliberately refusal to integrate new employees, or misuse power, to the detriment of the organisation. McShane and Glinow, (2002) stated that an expert power acquired through experience and voluntary ethical behaviours, improved the effectiveness of employees in the functioning of a business organisation. In contrast and in line with this study, Smit, et al., (2016) emphasised that the more the experience personnel were likely to show complacency and enhance resistance to change, which might negatively affect knowledge transfer. In some cases, the expertise also increases “mindless behaviour” because expertise reduces the tendency to question why things happen (Singh & Twalo, 2015). To this note, the hypothesis H1b is rejected.

There is a statistically significant relationship between work experience and ability of employees to perform different tasks in SMEs (**H1c**). Another positive and weak relationship is observed between work experience and ability as indicated by a correlation coefficient of  $r = 0.154$  at a  $p$  value  $0.03 < 0.01$  (Table 1) insignificant at 99% level of confidence (though significant at the 95% significance level). The hypothesis (H1c) is therefore rejected. The result shows a positive and insignificant relationship between work experience and ability. There is no evidence to imply that experienced personnel may transfer knowledge through critical tasks in SMEs. The implication of these results could be that the long length of services in the SMEs may only allow employees to do the routine operational activities in the business without taking business to another level. The results may also justify the lack of adapting business strategies to changes in business environment of SMEs. There is evidence though to confirm that seniority may vary with employees’ abilities to perform complex tasks in SMEs but in an insignificant way. Although the literature confirming that the extensive personal experience of personnel including the owner in areas of business was a major factor in knowledge sharing (Peters & Brijlal, 2011), the results prove otherwise. The individual knowledge has to be shaped and adapted to business context and environment in order to be useful in SMEs. The nature of the SMEs (simplicity) may not require or demand a variety of skills from the experienced worker. As indicated by Solek-Borowska (2017) process of knowledge creation within an organisation was executed through experience accumulation for innovations to take place. In conclusion, new development in a business environment may justify inability of experienced employees to perform certain tasks. Certain technical knowledge such as strategic planning may require more than routine business activities in SMEs. The nature of activities may force experienced employees to update their business knowledge to share it and initiate innovations in SMEs.

There is a statistically significant relationship between self-learning and facilitation behaviour of employees in SMEs (**H2a**). Results reveals that there is a positive and significant relationship between self-learning and facilitation at coefficient  $r = 0.184$  at  $p$  value of  $0.010 \leq 0.01$  (Table 1). Hypothesis H2a is therefore accepted. It can be argued that the informal or formal qualification and special skills of employees enhance their facilitation’s behaviour to knowledge sharing in SMEs in a significant way. Levy, Loebbecke and Powell, (2000) confirmed that SMEs could benefit from synergy and leverage individual knowledge through co-operation. The results of this study show that SMEs have the potential to reach synergy and leverage operations of the business through knowledge transfer. Furthermore, these significant correlations can also be interpreted in terms of what Gottschalk, (2010) indicated as the sufficient willingness and commitment from both the transferor (skilled employees) and receiver (co-workers) to share

and learn business technical knowledge to improve business capacity. In addition, this study also supports Gin Choi, Kwon and Kim (2012)'s findings that facilitation behaviour of employees correlates with job cognition. In summary, the skilled personnel do contribute significantly to the capacity building of SMEs. In this context, the uncontrollability of individual knowledge transfer may be difficult to deal with in SMEs and requires employees to willingly facilitate and share knowledge with co-workers. In conclusion, self-learner employees are proven good facilitators of knowledge transfer in SMEs.

There is a statistically significant relationship between self-learning and conduct of employees in SMEs (**H2b**). Results show that there is a positive and significant relationship between self-learning and conduct of employees as shown by a p value of 0.000 and correlation coefficient  $r = 0.296$  (Table 1). The research hypothesis is therefore accepted. This positive significant relationship proves that individual knowledge acquired through self-learning is likely to improve the positive conduct of employees to share knowledge and support the capacity of the enterprise. McShane and von Glinow, (2014) found that qualified employees were likely to leave the business for other opportunities elsewhere. The literature also stated that skilled employees might decide to stay in the business because it was the right thing to do, due to their attachment to the personality of owner and due to the unifying culture of SMEs. The results prove that SMEs are likely to benefit if qualified employees make a positive impact through their ethical conduct on co-workers in sharing their knowledge (Desouze & Awazu, 2006). The significant relationship between the two variables confirms that the ethical conduct is likely to play a critical role when skilled personnel interact face-to-face with co-workers in SMEs environment where there is lack of rules and regulations regarding the transfer of skills and knowledge (Robbins et al., 2004). Results also align with the fact that training improved ethical conduct to some extent and could facilitate to establish a set of shared values that reinforced ethical conduct (McShane & Glinow, 2018).

There is a statistically significant relationship between self-learning and ability of employees to perform different tasks in SMEs (**H2c**). The results prove there is a positive and significant relationship between self-learning and ability at correlation coefficient  $r = 0.345$  and p value of  $0.000 < 0.01$  (Table 1). This leads the researcher to accept the research hypothesis that there is a statistically significant correlation between self-study and ability of employees to perform different tasks in SMEs. The literature review found that talented and qualified employees show strong task performance behaviour. However, the unsophisticated processes as stated in literature may prove that knowledge is applied to general or routine tasks leading to slow innovation in SMEs. Desouze and Awazu (2006) and Wong and Aspinwal (2004) also confirmed that SMEs were sources of innovations, but in the context of this study, unskilled employees hardly attempt challenging tasks or contribute to innovative initiatives, and this hampers business development. The education training of personnel in SMEs is improving of about (70%) are above matric / high school, compared to (50%) in 2015 (Stats SA, 2015). In this context, the high failure rate of SMEs of between 70%-80% in South Africa (Stats SA, 2018) could no more be attributed to a shortage of business skills, but the uniqueness of knowledge capabilities and its application or use in SMEs. In addition, another challenge of the sector may face with regards to the results of the study is likely to relate to the effective and efficient use of business technical knowledge of employees. In summary, highly qualified employees are likely to depict significantly ethical conduct in sharing their individual knowledge or skills in SMEs. These results show that while experience tends to have a negative effect (though weak) on conduct, education has a positive and significant effect on conduct. Education might therefore be a more desirable or effective way than experience in the knowledge transfer and capacity building of SMEs. Conclusion of the study is presented next.

## CONCLUSION AND RECOMMENDATIONS

The study finds that there is a positive significant relationship between the individual knowledge sharing “self-study or self-learning” and productive behaviours factors “facilitation, conduct and ability” in SMEs. This study also shows that there is positive and significant relationship between work experience and behaviour factors “facilitation, and ability”. In contrast, there is a negative but insignificant relationship between experience and conduct. Self-learning seems to be a more effective way of knowledge sharing method compared with experience. This is in line with Anužienė, et al., (2021)'s study that stated most employees seemed to favour more self-learning practice of employees. Knowledge sharing remains critical for SMEs capacity, as indicated by Peters and Brijlal (2011), self-learning and experience empower human resources to become more efficient and successful. Insights of how this contributes to capacity building in SMEs were also investigated as part of the research gaps identified in previous studies. Despite the contribution of small enterprises in giving the marginalised individuals access to the mainstream of the economy

and policy interventions from governments, the sector still faces tremendous resource capacity building challenges. The significant relationship between self-learning and behaviour factors constitutes an opportunity for SMEs to capitalise on their limited resources, but the insignificant relationship between experience and behaviour factor conduct should raise concern for survival of SMEs. Based on the above conclusion, the recommendations of this study are as follows:

Members of small firms should optimally use individual knowledge through understanding of productive behaviours and building a learning environment of knowledge to utilise the scarce “skills” resources efficiently and effectively. SMEs should initiate tasks that allow improved communication thereby allowing employees to share their individual knowledge with co-workers willingly without persuasion and constraints. This is to emphasise the necessity to fully use individual knowledge for innovations in SMEs through talent management and ethical business practices. Furthermore, managers and owners should instil and encourage employees to cultivate a knowledge sharing culture, self-learning, and teamwork to ensure smooth succession and sustainability in SMEs. To avoid overstatement of the results of this study, it is important to address its limitations. Small and medium enterprises located within the metropolitan area in South Africa was studied and although the results may apply to other geographical areas, the cultural dynamics of those areas should be considered. The results should not be generalised to other settings. The study suggests that further research is crucial to establish how the relationship between individual knowledge and behaviour could affect the recruitment process in SMEs. Lastly, the focus on one sector may provide more insight on the topic.

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# THE INFLUENCE OF EASE OF USE, USEFULNESS, AND INFORMATION QUALITY ON CONSUMERS' SATISFACTION WITH PURCHASING FROM SOCIAL MEDIA GROUPS

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## ABSTRACT

*Social media platforms were initially encouraged as a means for socially interacting with family and friends. However, with the rapid advancements in the commerce environment, social media platforms have soon become known for conducting business transactions, which prompted the formation of social commerce as an extension to electronic commerce. Worldwide, Facebook and WhatsApp are two of the most popular and widely used social media platforms. Both Facebook and WhatsApp offer an array of functions that are perceived to be valuable for business transactions, including the ability to create virtual groups. Virtual groups are not only used for the purpose of socialising, but also for marketing products and services. In particular, it offers businesses and individual sellers the advantage of creating a niche environment in which consumers who share similar needs and interests can collaborate. Despite the benefits of these virtual groups, businesses and individual sellers should continuously monitor whether their social media groups are satisfying consumers' needs. Dissatisfied consumers might resort to supporting competitors, which will influence customer retention and loyalty, and ultimately the profitability and success of a business. The purpose of the study was to determine the influence of ease of use, usefulness and information quality on consumers' satisfaction with purchasing from Facebook and WhatsApp groups. An external international research company was utilised for the data collection of this study, which resulted in 412 participants who completed the electronic self-administered questionnaire. Descriptive statistics, reliability analysis, correlation analysis and regression analysis were the statistical techniques applied in the data analysis. The findings of this study indicate that the ease of use, usefulness and information quality of Facebook and WhatsApp groups have a statistically significant positive influence on customers' satisfaction with purchasing from these groups. Moreover, from the factors measured, usefulness is the strongest contributor towards the consumers' satisfaction with purchasing from Facebook and WhatsApp groups. As such, it is recommended that businesses and individual sellers on social media groups, such as Facebook and WhatsApp groups, concentrate on ensuring that the groups remain easy to use and that the information provided is of high quality so that the potential buyers perceive it to be useful for their needs. The results and recommendations emanating from this study contribute towards the limited literature available on social media groups and provide insight to maintaining consumers' satisfaction with purchasing from these groups.*

**Keywords:** satisfaction, ease of use, usefulness, information quality, social commerce.

## INTRODUCTION

Social media platforms, which were initially developed as platforms to socially interact with family and friends, have recently become popular as a means to conduct business transactions (Bhattacharyya & Bose, 2020). Zimaitis et al. (2020) highlight that consumers around the world are purchasing products and services from social media platforms on a daily basis. Social commerce, as an extension to electronic commerce, can be defined as an individual and/or business who is involved with conducting sales transactions or marketing products or services via various online social media platforms (Al-Adwan & Kokash, 2019). In comparison to traditional commerce, social commerce offers greater opportunities to individuals and businesses by improving their competitive position in the market and enhancing customer relationships (Lin et al., 2019). According to Vithayathil et al. (2020), social media platforms enhance

relationships by creating a channel for businesses and individuals to communicate with the society at large, consumers and the general market.

Various social media platforms, such as Facebook, Twitter, Instagram, WhatsApp, YouTube, amongst many others, are commonly used as a basis for social commerce (Hajli et al., 2017; Vinoth, 2022; Vithayathil et al., 2020). However, Facebook is recognised as one of the largest platforms amongst individuals and businesses (Bhattacharyya & Bose, 2020), while WhatsApp is the most popular and widely used messenger application in the world, with approximately two billion users (Statista, 2022). Both Facebook and WhatsApp offer an array of functions that are perceived to be valuable for business transactions, including the ability to create virtual groups (Conlin, 2022; Kottani & KM, 2021). Virtual groups are online groups that attract individuals with similar interests together so that they can collaborate, share information and knowledge on common topics, and the like. Ersöz (2018) differentiates between informal groups that are created amongst family and friends, and formal groups that are created with the intention to conduct business. Hsu et al. (2018) state that there has been a definite shift in the online shopping arena, whereby consumers are becoming more focused on the products and services offered through online group-buying channels that are created with the purpose of buying and selling. According to Delacroix et al. (2019), the number of buy and sell groups have increased on social media platforms, such as Facebook and WhatsApp. Buy and sell groups are virtual groups that generally consists of two parties, namely the seller, which is either an independent individual or business, and a buyer, which is the consumer (Chen et al., 2016). Dasgupta and Chatterjee (2021) emphasise that it is important for sellers to maintain the elements of a real-life, traditional shopping experience when interacting with potential sellers on virtual groups. Tandon et al. (2016) highlight that due to the intense competition experienced within the online shopping environment, customer satisfaction should be used as a mechanism to retain old customers while attracting new potential customers.

Customers develop expectations concerning a product or services performance before they conduct the transaction, then, once they purchase the product or service, they compare the expectations they had formed to the actual performance of the product or service. If the customers' expectations are met, or exceeded, they will be satisfied with the purchase, but if their expectations are not met, they will be dissatisfied (Suhaily & Soelasih, 2017; Wu & Tseng, 2015). Similarly, in relation to online shopping from social media platforms, customers will develop expectations before proceeding with a purchase transaction. However, the customer's expectations will not only be based on the performance of the product or service itself, but on the entire shopping experience (Hsu et al., 2018). The customer will be satisfied if they have a positive shopping experience, which will most likely lead to repeat purchases (Pham & Ahammad, 2017). According to Alzoubi et al. (2020), high levels of customer satisfaction not only increase the likeliness of repeat purchases, but also customer loyalty and retention. Moreover, customers who are satisfied, will promote the business or experience through positive word of mouth communications. As such, customer satisfaction can be used as an effective strategy to gain a competitive advantage in challenging market conditions (Wilson & Christella, 2019). However, Rasli et al. (2018) cautions that businesses should continuously monitor the level of customer satisfaction so that it can effectively be maintained and managed.

In relation to Facebook and WhatsApp buy and sell groups, the overall transaction procedures will shape the buyer's satisfaction (Bao & Volkovynska, 2016) and experiences with using Facebook and WhatsApp buy and sell groups. While several studies have focused on determining customer satisfaction with online shopping (Pham & Ahammad, 2017; Suhaily & Soelasih, 2017; Tandon et al., 2016; Wu & Tseng, 2015), minimal research has considered the consumer satisfaction experienced, and the factors affecting consumer satisfaction, with Facebook and WhatsApp buy and sell groups. As such, the purpose of this research was to determine the influence of ease of use, usefulness and information quality on consumers' satisfaction with purchasing from Facebook and WhatsApp groups.

## **LITERATURE REVIEW**

Due to the vast technological changes and transformations in shopping, it is much more difficult to satisfy the needs of customers within the 21<sup>st</sup> century (Shamsudin et al., 2020). Customer satisfaction is an essential element of many businesses and marketing practitioners should ensure that they are satisfying the needs of their customers (Nabila et al., 2023). According to Tandon et al. (2016), businesses can enhance the level of customer satisfaction if they have a clear understanding of the variables that influence the customers' satisfaction. While various variables can influence customer satisfaction, this study will explore the influence of perceived ease of use, usefulness and information quality on customers' satisfaction with purchasing from Facebook and WhatsApp groups.



Perceived ease of use refers to a situation whereby an individual will believe that the use of a particular technology, system or process will utilise minimal or no effort at all (Andarwati et al., 2020; Davis, 1989). Within an online shopping context, consumers will relate the system to how easy it is to use, and the level of difficulty required to learn how to use it. If the system is perceived to be easy to use then the consumers will show greater interest in shopping online and ultimately, this influences the consumers' satisfaction (Nabila et al., 2023). Lane and Coleman (2012) concur, indicating that consumers will be more engaged with a social media platform if it is easy to use and understand. As such, the following hypothesis was developed for this study:

H1: The perceived ease of use of Facebook and WhatsApp groups have a significant positive influence on customers' satisfaction with shopping on these groups.

Perceived usefulness refers to a situation whereby individuals believe that their performance will be enhanced through the use of a system or technology (Davis, 1989; Machdar, 2016). In other words, perceived usefulness is the assumption that a task can be completed at a faster rate, more effectively and without complications by using a particular system or technology (Andarwati et al., 2020). With regards to online shopping, a consumer would perceive the experience to be useful if the use of the internet improved their shopping experience (Cho & Sagynov, 2015). Likewise, if consumers feel that the use of social media heightened their shopping experience then they will perceive it to be useful. According to Tandon et al. (2016), perceived usefulness has a profound influence on a customer's level of satisfaction. Therefore, the following hypothesis was developed for this study:

H2: The usefulness of Facebook and WhatsApp groups have a significant positive influence on customers' satisfaction with shopping on these groups.

Hung and Cant (2017) state that information quality is a vital marketing tool utilised to make sure that the online shopping experience is effortless. Individuals and businesses should ensure that the information provided is accurate, informative, timely and reliable to enhance customer satisfaction and the profitability of the business. According to Fadhillah et al. (2021), the information needs of online customers can be satisfied if the information provided is up-to-date, consistent and clear. Moreover, customers will engage more with the product or service offerings if the information provided is of a high quality. Provided that information quality can influence customer satisfaction, the following hypothesis was developed for this study:

H3: The information quality of Facebook and WhatsApp groups have a significant positive influence on customers' satisfaction with shopping on these groups.

Figure 1 below presents the proposed model for this study. In line with the aim and hypotheses developed, this study proposes that the perceived ease of use, usefulness and information quality on Facebook and WhatsApp groups have a significant positive influence on customers' satisfaction with shopping on these groups.

**Figure 1: Proposed model**

*Source: Researcher's own compilation*

## RESEARCH METHODOLOGY

A single-cross-sectional sample approach was utilised for the purposes of this study, which was quantitative in nature and followed a descriptive research design. Male and female consumers, between the ages of 18 and 55 years, were considered to be the target population of this study. Moreover, in order to form part of the target population for this study, these consumers had to reside in South Africa and also had to have previously purchased a product or service from a Facebook or WhatsApp group. An external international research company was utilised to gather the data required for the study. The external international research company makes use of an online survey method, whereby the online survey was distributed to 500 consumers on their South African database. The researchers were provided with the data for data analysis after the data collection process was concluded.

The electronic self-administered questionnaire, which was utilised as the measurement instrument for this study, included a cover letter and two sections that requested the necessary information from the participants. The purpose and objectives of the study were included in the cover letter, which was followed by Section A that pertained to the participants' demographical information (age, gender, mother tongue language and monthly income per household). Moreover, a screening question was included to ascertain that the participant had previously purchased a product or service from a Facebook or WhatsApp group. Section B comprised of 17 scaled questions that were adapted from previously published studies. The participants were requested to indicate their perceived satisfaction (five items, Ibrahim et al., 2019; Rodríguez et al., 2020) and their perceived ease of use (three items, Koufaris & Hampton-Sosa, 2004; San Martín & Herrero, 2012) with shopping from Facebook and WhatsApp groups. In addition, the participants were requested to indicate the perceived usefulness (four items, Cha, 2009; Oeawpanich, 2018) of Facebook and WhatsApp groups, as well as the information quality (five items, Alalwan, 2018; Kim et al., 2008) provided by the Facebook and WhatsApp groups. A six-point Likert-type scale, which ranged from strongly disagree to strongly agree, was used to capture the participants' responses to the questions in Section B.

The data was analysed using IBM's Statistical Package for Social Sciences (SPSS) Version 28. The statistical methods that were utilised included frequencies, descriptive statistics, reliability analysis, correlation analysis, collinearity diagnostics and multiple regression analysis.

## RESULTS

From the 500 questionnaires that were distributed, 412 questionnaires were complete and met the sample requirement namely to have made a purchase from a Facebook or WhatsApp group before, and therefore were included for data analysis. While the sample included more participants that fell within the 18 to 34 years of age range than those that fell within the 35-to-55-year range, there was a relatively equal split between the genders. In terms of the participants' mother-tongue language, the largest group of participants indicated English as their mother-tongue language, followed by those that speak IsiZulu.

**Table 1: Sample description**

Age	Frequency	Language	Frequency	Gender	Frequency
18-34	299	Afrikaans	34	Male	198
35-55	113	English	159	Female	214
		IsiNdebele	7		
		IsiXhosa	35		
		IsiZulu	59		
		Sesotho	23		
		Sepedi	29		
		Setswana	30		
		SiSwati	12		
		Tshivenda	7		
		Xitsonga	14		
		Other	3		

To ascertain that the measurement scales employed in this study are reliable, the Cronbach alpha values were calculated for all the constructs. In addition, the descriptive statistics namely means and standard deviations were calculated, as well as, Pearson's product-moment correlation coefficients to establish whether statistically significant relationships exist between ease of use, usefulness, information quality and customer satisfaction and to establish nomological validity. The results of these analyses are presented in Table 2.

**Table 2: Descriptive statistics, Cronbach alpha, and correlation matrix**

Constructs	Means	Standard deviations	Cronbach alpha	F1	F2	F3
Ease of use (F1)	4.72	0.83	0.742			
Usefulness (F2)	4.68	0.87	0.849	0.634*		
Information quality (F3)	4.14	0.91	0.855	0.414*	0.497*	
Customer satisfaction (F4)	4.53	0.96	0.909	0.531*	0.664*	0.506*

\* Statistically significant at  $p \leq 0.01$  (2-tailed)

From Table 2 it is evident that the means for all four constructs exceed 3.5, which indicates that the participants' responses fell within the agreement range of the scale. This suggests that the participants perceive that purchasing from a Facebook or WhatsApp group is easy and useful, that the information provided on these groups is of good quality and that overall, they are satisfied with purchasing from these groups. The Cronbach alpha values ranged between 0.742 and 0.909, which exceed the recommended value of 0.7 (Malhotra, 2020) and imply internal consistency reliability. The correlation analysis revealed statistically significant positive relationships ( $p \leq 0.01$ ) between ease of use, usefulness, information quality and customer satisfaction, and thereby provides evidence of nomological validity. The relationship between usefulness and customer satisfaction ( $r = 0.664$ ) was the strongest relationship among all the relationships.

Prior to conducting regression analysis, collinearity diagnostics were performed to identify any possible multicollinearity problems. The collinearity diagnostics results are displayed in Table 3.

**Table 3: Collinearity diagnostics**

Constructs	Tolerance	VIF
Ease of use	0.570	1.754
Usefulness	0.434	2.304
Information quality	0.691	1.448
Customer satisfaction	0.505	1.980

Note: Constant = Dependent variable: Subject number

The results of the collinearity diagnostics revealed tolerance values that range from 0.434 to 0.691, exceeding the cut-off of 0.10. Furthermore, the variance inflation factor (VIF) values of all the constructs fell below 10 (Pallant, 2020) and as such, no serious multi-collinearity issues were detected, and the dataset was considered appropriate for regression analysis.

Multiple linear regression analysis was conducted to determine the influence of ease of use, usefulness and information quality on customer satisfaction. The regression model summary and the ANOVA results are displayed in Table 4.

**Table 4: Regression model summary and ANOVA results**

	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	p-value
Model 1	0.703	0.495	0.491	133.252	0.000

The statistically significant F-ratio of 133.252 ( $p \leq 0.01$ ) denotes that regression Model 1 predicts customers' satisfaction with purchasing from Facebook and WhatsApp groups. The R<sup>2</sup> value indicates that the three independent variables combined explain 49 percent of the variance in customers' satisfaction with purchasing from Facebook and

WhatsApp groups. The contribution of each of the three independent variables to the prediction of customers' satisfaction with purchasing from Facebook and WhatsApp groups is presented in Table 5.

**Table 5: Independent variables' contribution to predicting customers' satisfaction with purchasing from Facebook and WhatsApp groups**

Independent variables	Standardised beta coefficient	t- value	p-value	Hypothesis	Hypothesis testing result
Ease of use	0.149	3.241	0.001	H1	Supported
Usefulness	0.463	9.590	0.000	H2	Supported
Information quality	0.214	5.233	0.000	H3	Supported
Statistically significant at $p < 0.05$					

The findings presented in Table 5 indicate that the ease of use ( $\beta = 0.149$ ) and usefulness ( $\beta = 0.463$ ) of purchasing from Facebook and WhatsApp groups and the information quality ( $\beta = 0.214$ ) of Facebook and WhatsApp groups have a statistically significant ( $p \leq 0.01$ ) positive influence on customers' satisfaction with purchasing from these groups. Of the three variables, the usefulness of purchasing from Facebook and WhatsApp groups made the strongest contribution to customers' satisfaction with purchasing from these groups.

## DISCUSSION

The purpose of the study was to determine the influence of the perceived ease of use, usefulness and information quality of Facebook and WhatsApp groups on customers' satisfaction with purchasing from these groups. The results of the study revealed that the participants perceive purchasing from Facebook and WhatsApp groups as easy and useful, that the information provided on these groups is of good quality, and that in general, the participants are satisfied with purchasing from these groups. In addition, the findings revealed that the ease of use, usefulness and information quality of Facebook and WhatsApp groups have a statistically significant positive influence on customers' satisfaction with purchasing from these groups, of which usefulness makes the strongest contribution. These findings are in accordance with other studies conducted within a similar context who found that perceived ease of use (Nabila et al., 2023; Wilson et al., 2021), perceived usefulness (Tandon et al, 2016; Wilson et al., 2021) and information quality (Patma et al., 2021; Rasli et al., 2018) have a significant positive influence on satisfaction.

From a practical viewpoint, it is recommended that businesses and individual sellers on social media groups, such as Facebook and WhatsApp groups, concentrate on ensuring that the groups remain easy to use and that the information provided is of high quality so that the current and potential buyers perceive it to be useful for their needs. Customer satisfaction should be considered as a vital aspect and as a result, businesses and individual sellers should continuously monitor the levels of customer satisfaction and improve on their offerings to ensure that their existing customers will remain satisfied. Dissatisfied customers can effortlessly search for competitors if they feel that the business or individual seller is no longer meeting their needs. If the existing customers remain satisfied with the process and experience of purchasing products and services from the Facebook or WhatsApp groups, they will remain loyal and repurchase products and services from the business or individual seller and spread positive word of mouth communication, which could possibly attract potential buyers.

## CONCLUSION

Online shopping has become increasingly popular and as an extension to electronic commerce, social commerce has emerged. Facebook and WhatsApp are recognised as the most well know social media platforms worldwide and as such, consumers are using these social media platforms for social commerce transactions. Facebook and WhatsApp offer multiple functions, which include the ability to create virtual groups that can be used to group individuals who share similar interests and likes on particular topics. Virtual groups have led to the formation of Facebook and WhatsApp buy and sell groups, where businesses and individual sellers can present their products and services as an effective way to market their offerings and conduct sales transactions. However, with the increased competition in online shopping, these businesses and individual sellers should ensure that they are satisfying the needs of their buyers, or potential buyers. Therefore, the purpose of the study was to determine the influence of the perceived ease of use,

usefulness and information quality of Facebook and WhatsApp groups on customers' satisfaction with purchasing from these groups. A self-administered questionnaire was utilised to collect responses from 412 participants who had experience with purchasing from a Facebook or WhatsApp group. The main findings of this study suggest that the ease of use, usefulness and information quality of Facebook and WhatsApp groups have a statistically significant positive influence on customers' satisfaction with purchasing from these groups. From the findings, it is recommended that businesses and individual sellers continuously monitor the level of customer satisfaction so that they can remain successful in challenging market conditions.

This study is not without its limitations. The study was conducted with a focus on the South African context, whereas as future research can perhaps be extended to other contexts. Moreover, this study only examined the influence of perceived ease of use, usefulness and information quality of Facebook and WhatsApp groups on customers' satisfaction with purchasing from these groups. From the results of this study, it is evident that there could be other variables that influence customers' satisfaction with purchasing from Facebook and WhatsApp groups, which represents the potential for future research to explore. Another limitation is that this study only considered Facebook and WhatsApp as the social media platforms most commonly used. However, social commerce is based on various social media platforms. Future studies can possibly consider the influence of the variables used in this study in relation to customers' satisfaction with purchasing from alternative social media platforms.

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# PEOPLE, COMPLEX HEALTH ORGANIZATIONS AND THE TRAJECTORY OF THE ADMINISTRATION

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## ABSTRACT

*The objective of this study was to analyze the importance of complex health organizations and the trajectory of the administration, aiming at rescuing historic moments and the behavior of the people during the surveyed periods. It demonstrated the importance of efficient management, where there is a need for the manager to have a thorough knowledge of the organization and the people who work there, assessing possible impacts, seeking effective solutions, identifying threats as well as opportunities. It also demonstrated that when using management tools capable of providing strategic management information, one was able to create and reach a sustainable competitive advantage. The methodology employed was descriptive research, utilizing bibliographic research with both manual and electronic research in books, articles and scientific journals. A qualitative analysis completed the study. It is important to emphasize, more and more, in the programs for training and development of people, that everyone is responsible and is a significant in the patient's recovery ". We concluded that it is necessary for health organizations to adapt themselves to the constant transformations, reviewing processes and modernizing their management models, so they will be able to achieve results that ensure their continuity in the market.*

**Keywords:** people, health organization, administration, transformations, patient.

## INTRODUCTION

Organizations are found in a differentiated environment where their activities and interactions suffer influences or are defined by this differentiation, which is the external environment, or external system, characterized by the interrelationships of physical, technological, cultural or social factors. In this concept, the activities, feelings and interactions represent the basic variables. The degree of mutual influence between two or more individuals determines the positivity of the feelings, which in turn generates other standards, activities, and interactions, in a continuous process. The group reacts to the external environment, resulting in certain relationships, which bring about additional pertinent trends and, in response to stimuli, modify the adjustment already achieved. The insertion of the individual within the framework of organizations always creates an area of conflict, which appears inevitable, seeing that there is a mismatch between the needs and aspirations of the individual and the requirements of the formal organization. This consequent degree of mismatch, which needs to be defused, varies in direct proportion to the antagonism between these two elements present in companies. If individuals seek their personal satisfaction at work, the organizations also present certain productivity and profit needs. In this way, the interdependence of the needs of the person and the organization are profound, because the objectives and life of both are inseparable. One of the various sources of energy that the organization has is the psychological power of the people, which increases or decreases depending on the success or failure of the company. Three factors are essential to achieve a successful "psychological" state:

- (a) the aspiration of the achievement of a growing sense of competence and assessment of oneself, on the part of the employee.
- (b) an organization that provides working conditions so that the person can outline his/her immediate goals, choose his/her own ways of achieving these goals, seeing that the relationship between these and those of the organization are based on the personal efficiency of the employee and the growing degree of challenge that he/she finds in his/her work.

(c) the influence of society and culture, both on the individual as well as on the organization; this impact manifests itself through the process of acculturation in the sense of granting greater or lesser value to self-esteem and the efficiency of the person within the company (Argyris, 1975, p. 82).

It is not just a set of buildings, machinery, raw materials, labor, capital and processes; a company is also characterized as a "*socio-technical*" system, where the organization of human resources takes place around several "*technologies*". In other words, the human relations existing within the company are one of its features and not just organizational particularities. The existence, functioning and permanence of the system are connected to the "*motivated*" behavior of the people, being that the inputs, processes and outputs are influenced by their relationship and conduct. This occurs in all organizations, regardless of their purpose or type. The hospital has always been seen as a complex, bureaucratic and authoritarian organization, due to the large specialized division of activities. This concept is historical and is based on the very need for emergency and urgency within the emergency room itself. However, currently, the business point of view has helped to minimize the concept and thus interact in a more humane way with their employees and customers. The multidisciplinary team, focused on satisfying the needs of the patients (customers), is composed of highly qualified professionals and some semi-skilled ones. Attached to this group of people there is technology, which constantly renewed, **requires** the presence of employees prepared to receive training and continuous refresher courses. Currently, in addition, there is talk of permanent education, as the diversification of treatments has increased. The requirement of good health care obligates the institution to evaluate the performance of their workforce.

The vision of the hospital as an enterprise is equivalent to the same understanding one has of business management and, for this reason, the set of material, technological and human resources need to be available to the administration in an efficient and harmonious manner. The existing units in hospitals are interrelated and interdependent, a result of the required type of administrative processes deployed. Because of the interaction between people and the organization, the quality desired and offered is based on modern administration theories for the treatment of human resources. Viewed on the global aspect, on one side, companies offer incentives and, on the other, present contributions; the exchange between these depends on the equilibrium of the organization itself. The hospital type organization as well as all others should impose responsibilities on the individuals, some within their current capacity, implying others, in the medium and long term, an apprenticeship, but always as a challenge. In turn, the individual brings knowledge, skills and abilities. In this way, the interaction man/organization is complex and dynamic, with elements of reciprocity. The basis of this process is the "*psychological contract*", i.e. the expectation that exists between the two parties and that goes beyond the formal work contract by regulating the interaction and relationships governing the behavior of individuals and businesses.

This study aimed at analyzing the importance of good management practices in the decision making process of hospital organizations, emphasizing the advantages of strategically management of this organization. A management is effective when the manager thoroughly knows the organization in which he/she operates, as well as the environment, assessing possible impacts and seeking effective solutions, identifying threats and opportunities for managerial instruments capable of providing strategic management information. The methodology employed was the descriptive research, developed through qualitative method, with manual and electronic research in books, articles and scientific journals, according Vergara (2016).

## THEORETICAL FRAMEWORK

### Man in the Organizations

The administration always took the human element into consideration, that which moves it into action and makes it become efficient at work. When speaking of different business schools, it is not their dissenting views that stand out, but the similarities that present themselves concerning the human element in the organization. This is the case of the health institutions, where human behavior needs to be seen in its full, due to the complexity of the service that is provided. Working with the expectation of recovery, release, and "cures". The patient seeks, in this establishment, conditions that will return him/her to family life, society and work. The healthcare environment is very dynamic, and the tasks performed by employees of various sectors require balance, resourcefulness, speed, quality and agility. The

emergency room shifts demonstrate how much employees require training and continued education. In the public sphere, the investment suffers an interruption, because of some discontinuity problems in the administrative processes. And why is the health environment complex? For Morin (2002, p. 133), the organization is complex because "it is a chain of relationships between components or individuals which produces a complex or system unit, with unknown qualities as to its components or individuals". This is the case, therefore, of a health care institution, where various professionals work systematically and harmoniously, with the purpose of the recovery of a patient as in, for example, a surgical procedure.

## Prescriptive Approaches

The scientific administration conceived the human being as **homo economicus**, eminently rational and making decisions that maximize the results of his/her options. It was also considered able to refine his/her work, reaching an efficient standard production; and had the firm belief that the only incentive that propelled him/her was money; so, it tried to satisfy what it judged to be their main needs, considering it as an isolated being, moved by a pecuniary interest. When the results of the research of Hawthorne became known, individuals came to be regarded as **homo socius**, whose behavior is influenced by biological and social demands. In this way, they join in groups to satisfy their desire for affection, security, social approval, etc. The knowledge and/or participation in the decision of the generating function that must be performed, acts as motivation for better performance. The best work performance, as well as the development, occurs not only with hierarchical leadership, but also with effective leadership. As a result, the objectives to be achieved imbedded the propensity to satisfy individuals in their groups, stimulating cooperation between the members and prioritizing the concept of group work. We can exemplify, in this case, the support area workers, specifically, nutrition, laundry, cleaning, hygiene, gardening and maintenance. Currently, the work of the personnel management area encompasses the study of the base of the pyramid, or in other words, the workers included in the low-income bracket.

On the other hand, healthcare organizations need to prepare for the demands of the low-income population, since they are now taking part in the new directions for acquiring services. According to *Data Popular* consulting, classes C, D and E already account for half of the national consumption, since their income is designated only to fulfill the family's expenses" (Folha de São Paulo, 2008). To define class C, *"the Data Popular takes into account a range of family income ranging between five and 10 minimum salaries (in current values, from \$ 1,530 to \$ 5,100). Classes A and B are those with household income of more than ten minimum wages and the classes D and E match families with monthly earnings between one and three minimum wages. According to Data Popular, class C corresponds to 50% of the Brazilian population, while the classes A and B add up to 10.5% and the D and E, 39.5%. The Fundação Getúlio Vargas (FGV) shows similar numbers to illustrate the growth of class C: this population rose from 42.2% of Brazilians in 2004 to 51.8% in 2008-an increase of almost 10 percentage points in a period in which the "high class" grew four points "*. In this case, we included health services, which will be on a big rise over the next few years, be it in the public sphere, or be it in the private sector. The quest for formal employment in this class, will reach higher levels. Home care favors low-income members, too, once de-hospitalization is a resource of great value to the health system in Brazil, mainly because of the cost on hospitalization. For a long time, in the area of personnel management we have observed such behavior, especially in nursing units (auxiliary and technicians) and the supporting areas (laboratory, pharmacy, laundry, cleaning and hygiene). The expertise of these professionals in the areas of home care has grown a lot in recent times.

## Explanatory Approaches

Behaviorism is not an attempt at opposition, as was the School of Human Resources in relation to science, but an attempt to maximize the better of the two, arguing them from other aspects. The conception was the **administrative man**, one that weighs several alternatives for his/her actions, analyzing their consequences and rationally opting for those that lead to their goals; decision-making unfolds and with variable amplitude; the individual or the group hope that their orders are accepted, but primarily seeking both the authority as well as acceptance. Therefore, if the treatment of human resources is a rational attitude on one side, on the other hand it understands that the ranking of the options and their consequences involve complex cognitive and affective processes.

The Structuralist theory focuses its studies on organizations, analyzing their internal structure and its interaction with other organizations. Organizations are defined as *"social units"* or *"human groups"*, intentionally

constructed and reconstructed in order to achieve specific objectives. This same Structuralist theory characterizes the **organizational man** as the one who carries out roles in different organizations, and his/her personality is composed of flexibility, frustration tolerance, ability to defer rewards and a permanent desire for achievement.

In the Open Systems theory, which contrasts to the micro approach of the closed system, the focus is on the principle that each participant of the organization expects the personal benefits of his/her participation in an organization is greater than their personal costs. It is based on the concept of the **functional man**, in other words, that individual that carries out a **role** within the organizations; he/she interacts with the other individuals, in the same way as in an open system.

The current perspective shows the image of man as an organizational resource and investment return. Companies look for people in the expectation that they perform their tasks efficiently. People, in turn are seeking organizations where they can satisfy their needs. Thus arises, an interaction called "*reciprocity*". In this case, health institutions require professionals with this profile.

## New Trends in Approach to Behavior

The movements of Total Quality Control, ISO 9000, ISO 14000, accreditation and organizational development, the speed of change and the challenges of the globalized world are leading the new trends:

- (a) shorter chains of command.
- (b) less command units.
- (c) amplitudes of more comprehensive control.
- (d) greater delegation.
- (e) component reduction of staff.
- (f) substantial increase of work teams.

The values of workers have also changed: "*... the employees are changing, getting higher educational levels, placing greater emphasis on human values and putting authority in doubt*" (Hampton, 1990, p. 309).

The discussions cover topics on justice and sensitivity in decisions and administrative acts. New labor negotiations lead professionals into getting to know more about their protection against illegal and arbitrary treatment. In any case, they are seeking to improve the quality of the working environment. The values of the past and present are decisive for man. What one calls a work environment is a decisive factor in motivation. A workplace includes numerous situations, from the physical aspects, such as lighting and ventilation, up to the relationship with colleagues and a sense of importance of in the whole of the company. There is nothing more demotivating for the individual than feeling like a disposable piece, without value to the company where he works. It is the sense of a team that reigns, characterized by common results obtained through interactivity: "*people together offer their skills and combine their efforts to do things that are the responsibility of the entirety, even if there is a 'boss' who is accountable for the same*" (Boog, 1994, p. 416). From the point of view of the company, these "*are predominantly service-oriented*" (Mariotti, 1999, p. 123). Health institutions are constantly renovating buildings, machinery, and equipment, adding on or cutting down units, changing the names of the work positions, introducing new work methodologies. However, "*they are superficial changes, although striking and sensitive*" (Chiavenato, 2008, p. 245). People often feel uncomfortable with this situation because they were not prepared for these changes.

For the employees, the sense of change does not involve the separation of the group because the group begins with communication and continues with the social and emotional involvement. The contingency approach meets up with that line, comprising tasks, structure, people, technology, and the environment. This concept proposes the existence of a **complex man**, that is, man seen as a complex system of values, perceptions, personal characteristics and needs. We live this reality, for example, in humanization programs, where the individual needs to "like people", and have perception and sensitivity in welcoming people who are seeking recovery.

# QUALITY OF LIFE AT WORK: BACKGROUND

Studies on the quality of life at work are historical. The teachings of Euclid of Alexandria narrate:

*"... on the principles of geometry, 300 years BC, and which have been applied to improve the method of work of the farmers on the banks of the Nile, or Archimedes' ' Law of Levers ', which in 287 B.C., lessened the physical effort of many workers"* (Rodrigues, 1994, p. 76).

The Individual/Worker binomial was, initially, an object of study by liberal economists and afterwards, by Scientific Management and the School of Human Relations. The management of production means in the 18th and 19th centuries formalized, scientifically, studies on the quality of life of the worker, represented by moral production and by the forms of treatment of the dominant class towards the workers. In England, in the early 1950s, Eric Trist and his staff *"developed a series of studies that led to a socio-technical approach in relation to the organization of the work, based on the worker's satisfaction at work and in relation to it"* (Robinson, 1994, p. 76).

## Quality of Life at Work - Definitions

The year 1974 is considered a milestone in the development of the Quality of Life at Work, directing the researchers' concern towards the health, safety and satisfaction of the employees. In the United States, tasks were analyzed and restructured focusing on low productivity causes. There are several definitions about what quality of life at work is. Some authors consider it as *"... a set of conditions and organizational practices, such as fortified positions, employee participation in the decision-making process, safe working conditions and so on"* (Bowditch & Buono, 2002, p. 207). However, in this theory, consider the dimensions proposed by Richard Walfou that *"... taken together, give a general sense of what often is meant by QLW"* (Idem, ibidem):

- (a) fair and adequate compensation.
- (b) safe and healthy working conditions.
- (c) immediate opportunity for utilizing and developing human potential.
- (d) opportunity for continued growth and development.
- (e) social integration in the work organization.
- (f) constitutionalism in the work organization.
- (g) scope of work within life as a whole.
- (h) social relevance of life at work.

The goal of the quality of life at work, according to Gil (2006), is to create a more humane organization, increasing responsibility and autonomy at work, performance evaluation and, most importantly, emphasize the personal development of the individual. With this, one reaches the commitment of people, preparing them for quality and accreditation certification programs.

## Correlations between Motivation and Quality of Life at Work

The quality of life at work is related to the motivational factors through the concerns expressed by employees. In addition, in fact, *"the compatibility of individual expectations with organizational needs is a challenging process"* (Bom Sucesso, 1997, p. 23). People are looking for companies to carry out their basic needs. The organization, in turn, *has customers that require products and quality services, faces a more qualified competition, has cost structure that must always be optimized ... "* (Idem, ibidem). To meet their needs, the company expects loyalty, endeavor to cost reduction, increased productivity, engagement as well as commitment. The performance of the employees and the organizational climate are the variables that outline the determination of the quality of life.

*"If it is poor, it will lead to the alienation of the employee and dissatisfaction, the decline in productivity, counterproductive behaviors (absenteeism, sabotage, theft, trade union militancy etc.). If it is rich, it will lead to a climate of trust and mutual respect, in which the individual will tend to increase his/her opportunities for psychological success and the administration will tend to reduce rigid social control mechanisms"* (Chiavenato, 2002, p. 238).

The institutions need to invest in programs related to participatory resolution for problems, such as complaints and suggestions that are measured by treatment indicators; work restructuring, in the hypothesis of computerizing

patients records: innovations in the rewards system for tasks performed; improvement of the working environment. Currently, investment in hospitality has been an alternative for quality of life, both for the internal client as well as for the external one. Participation in decisions together with the leadership is a viable alternative, once it values the individual, rescues his/her citizenship, imposing an improvement in the development of tasks. In the management support units, the quality of working life is a very rich tool for measuring the employees' motivation. Sports activities have been a motivation, integration and quality of life alternative at work.

## MOTIVATIONS

The word motivation originates from the Latin "*movere*", meaning to move. "*The origin of this word ends the notion of dynamic or action, which is the main tonic in this particular role of psychic life*" (Bergamini, 2007, p. 31). Generically, motivation involves the causes or motives that encourage certain behaviors. Organizations seek to make a profound study of knowledge that decodes how people can be motivated. One of the most important factors in the relationship between work and worker is motivation. Much has been studied lately to understand what causes a person to find satisfaction in his/her work. For many decades, it people believed that it was only the remuneration, direct or indirect, that motivated the employee, causing him/her to be interested in his/her tasks, get quality in the results of his/her work and increase productivity. Studies that are more recent have shown that the question of motivation is more complicated than it sounds and involves many subjective and emotional elements.

There is a great diversity of interests between individuals, so that they can realize that "*people don't do things for the same reasons. (...) From birth, people bring their innate luggage consisting of their genetic code, in their intrauterine life experiences and the moment of delivery. (...)*". There are also the life stories of each one. "*Thus, each of these persons is dedicated to the pursuit of their own motivational satisfaction factors that are, however, unique*" (Bergamini, 1990, p. 19). That explains why some people are bold and others are cautious when facing situations of tension. Because some are perfectionists and others are, for example, open to social conviviality and interested in receiving consideration on the part of others. Motivational studies are abstract and deal with generalizations because they are the result of statistical studies. Although they are important for the understanding of the mechanisms of motivation, they cannot be applied by cancelling the individualities, which would bring very frustrating results. We must, therefore, know the motivational theories, but also know the characteristics of people with which we intend to work.

## Emotions

The emotions likewise associate with the sensations of pleasure and displeasure, and, consequently, to satisfaction and dissatisfaction. As well as physiological aspects, such as hunger, sleep, fatigue and others, emotions also seek satisfaction, proportioning a balance. First, you need to understand that "*emotions are reactions, at a physiological and psychological level, carrying out motivational effects on behaviors*" (Malanga, 1979, p. 76). Generally, emotions follow a sequence that starts with the perception of a fact, which is a neutral record of what is seen, heard or remembered. It follows with a judgment of values, during which it evaluates that the stimulus indicates something good or bad from the point of view of the body affected. Afterwards, it triggers the emotions, which are a pattern of organized physiological changes that lead to approach of the stimulus if it is judged positive (see a friend, for example) or to withdraw, if considered negative. This process triggers an action, unless another element should come to change it.

Emotions vary as to their intensity and, within certain parameters; certain emotions can be positive for the output of the group, and negative if they exceed certain limits. The best example is aggression or anger, which, on a high level, makes it infeasible to group life, but that, in small doses, can stimulate competitiveness. Another example is the anxiety generated by the fear of loss of prestige or self-concept. In bearable doses for the individual (which is an extremely personal and criterion means that he/she feels able to win the challenges proposed) serves as a stimulus but in very high doses, leads to disinterest. Less intense emotions are organizers and increase efficiency in the performance of tasks, but very intense emotions are disorganizers and harm the individual and group performance.

## Motivation and Emotions

For the psychoanalytic school, motivation has an unconscious character, resulting from the suppression of instinctive forces in confrontation with social impositions. Thus, most of what determines the behavior of a person, being in the unconscious, cannot be observed experimentally. Stemming from Freud, they sought to study human behavior in its natural life environment, and not from artificial situations. The Freudian theory of motivation bases itself on the principle of the pursuit of pleasure that results in the satisfaction of a need. The works influenced by the work of Freud enable an understanding of the value of instincts and emotions in human behavior. Also, if you understand the knowledge or register of past facts as a process that influences on emotional adjustment. The studies of Paul Diel provide important information about human behavior, because they take *"into account the data offered by the intellect considered as source of knowledge of the gathered information, not only from the outside world, as well as the inner reality of man"* (Bergamini, 1990, p. 48). This theory allows for an integrated vision of the human being and the understanding that his/her wishes are always changing.

## Motivation and Instinct

The concept of needs is linked to instinct. This can be *"understood as a behavior pattern inherent in the species, and that would be antagonistic to the stimulus, coming from the outside that makes for a certain behavioral reaction, but that, coming from the environment it acts on the human being from the outside in."* (Bergamini, 1990, p. 39-40).

Instinct is a form of pressure, from the inside out, which leads the body to achieve certain purposes. Therefore, instincts are at the origin of all activity. Freud often referred to those physical aspects of the instincts as *"needs"*.

*"Every instinct has four components: a source, a purpose, a pressure and an object. The source, when the need arises, can be a body part or all of it. The purpose is to reduce the need until no further action is necessary, is to give the body satisfaction that it, at the time, desires. The pressure is the amount of energy or force that is used to satisfy or gratify the instinct; it is determined by the intensity or urgency of the underlying need. The object of this instinct is anything, action or expression that allows for the satisfaction of original purpose"* (Fadiman & Fanger, 1979, p. 8).

For Konrad Lorenz, an expressive figure of the school of ethologists who studied human instincts from the observation of animal species, instinct systems increase the ability of both animals as well as humans, to adapt to the environment. Through experiments with animals, Lorenz identified the *"instinctive act"*, which is triggered by an inner deficiency, which can manifest when external elements are present. With that, *"Lorenz corrects the approach that considers instinct under its broad and generic aspect, introducing the concept that, that which occurs in behavioral terms is characterized by a chain of acts that are different from one another"* (Bergamini, 1990, p. 40).

Applying the concept of instinctive acts to the sphere of motivation, we have the concept of *"motivational acts"*, which leads to abandoning the generic concepts of motivation and start seeing it as something closer to human behavior:

*"Like the instinctive acts, conduct individual motivational is possessed of a State of grace that need addressing, which can only be achieved through the pursuit of satisfaction factor considered here, as its producer scheme. Thus, at a time when the date of need with its corresponding satisfaction factor, has been the 'motivational' Act. At this point, the internal deficiency is replaced by the State of satisfaction obtained by the satiation of necessity"* (Bergamini, 1990, p. 41).

When a need is satisfied, another comes up, in a continuous process. The problem with behaviorist studies is that they were made in laboratories, where the variables that influence the behavior can be isolated, which does not happen in real life. In addition, as it annuls the possibility of human freedom, it is believed that people simply react to environmental stimuli. This deterministic vision of the human being does not correspond exactly to reality, which is rather more complex. To see behavior as an almost mechanical reaction, *"these theories do not take into account aspects related to intentions of the people, masking, therefore, the understanding of the personal motives and their motivational energy potentials"* (Bergamini, 2007, p. 53).

## CONCLUSIONS

Behavior may result from environmental stimuli and individual acts according to what is offered in terms of stimuli. Organizations that offer incentives, benefits and quality of life programs, for sure, will get a greater commitment and a positive response in the investments that are made. In the health institutions, the programs require actions directed at teams, since the work involves the aspect of communication and integration. When the patient realizes that the team is not integrated, the family or person responsible for the patient, for sure, will notice. Reading the body language, slow movements and the distraction of the person who is caring for them, are the basic features observed.

The great failure of healthcare organizations has always been, in the past, the inability to see that the current administrative concepts of the era and the modern views of motivation have failed, as a theory and practice, in exactly motivating and improving the quality of work life of the components of the team. The vision of scientific management, where the figure of the "worker" was the focus, has gradually been replaced by the figure of the "collaborator", participant of the administrative process of the organization. It is important to emphasize, more and more, in the programs for training and development of people, that everyone is responsible and is a significant in the patient's recovery ".

We concluded that it is necessary for the organizations to adapt to the constant health changes, reviewing processes and modernizing their management models, so they are able to achieve results that ensure their continuity in the market.

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# INFLUENCING GENERATION Y CONSUMERS' PERCEIVED QUALITY OF FASHION BRANDS: A GENDER COMPARISON

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## ABSTRACT

*With the intense competition in the local and global fashion industry, fashion brands need to clearly understand their target market to remain competitive. Perceived quality plays a vital role in consumers' fashion brand decisions; however, the literature suggests differences between males and females in terms of quality perceptions. This study aims to determine whether the influence of fashion brand awareness and association on perceived quality differs between Generation Y male and female consumers. Following a descriptive research design, the data was collected from a convenience sample of 750 Generation Y consumers, using a self-administered questionnaire. This study provides an enhanced understanding of the role that gender plays in establishing the quality perceptions of fashion brands.*

**Keywords:** perceived quality, Generation Y, gender, brand awareness, brand association.

## INTRODUCTION

The fashion and textile industry in South Africa, like in many other countries, continues to be one of the key contributors to the country's economy (IOL, 2023). Despite the decline in sales in the fashion industry during the COVID-19 pandemic (Kim & Woo, 2021), sales within the global and South African fashion industries have recovered and are predicted to increase (Statista, 2022). The global fashion industry was estimated to be worth 0.99 trillion US dollars in 2023, while the South African fashion industry's worth is estimated at 1 138.00 million US dollars. The revenue generated from this industry in South Africa and globally is expected to grow by 14.49 percent (Statista, 2023a) and 9.99 percent (Statista, 2023b), respectively, by 2027. Included in this growth is the predicted increase in the fashion e-commerce market (Statista, 2023c). Since the COVID-19 pandemic, consumers have become more open to shopping online due to the lockdowns and the threat of the virus (Torkington, 2021), and as a result, are more content with and are increasingly engaging with digital platforms including online shopping (Statista, 2022). The growing interest in online shopping has led to a surge in e-commerce businesses (FashionUnited, 2021). The fashion industry is no exception, with the global e-commerce fashion market expected to reach a compound annual growth rate of 14.2 percent between 2017 and 2025 (Keenan, 2022). This movement poses a severe threat to fashion manufacturers and retailers as they compete with an increasing number of fashion manufacturers and retailers on a local and global level, which are available on more shopping channels than ever before (Bhatia, 2023). Because of this intensified competition in the fashion industry (IBISWorld, 2022), fashion manufacturers and retailers that manufacture and sell fashion products like apparel, footwear and accessories focus on building strong brands in an attempt to remain competitive and grow their businesses (Nguyen, 2023). The purpose of using a brand is to distinguish one's products from those of competitors (Sinha et al., 2011) and to position the brand in the fashion market. When done successfully, it provides a competitive advantage for a business (Neal & Strauss, 2008) as it influences consumers' decision-making (Creutz & Senning, 2006).

The extra value that a brand adds to a product is referred to as brand equity (Elliot et al., 2012). The stronger a brand, the higher the brand equity, and consequently the value of the brand (Healey, 2008). In 1991, Aaker developed a brand equity model that outlines the assets that represent brand equity. One of the key dimensions in this model is perceived quality (Aaker, 1991). According to Boulding et al. (1993), perceived quality represents a consumer's judgement of the quality of the brand, including the expected outcome of the actual service or product quality, which

is predictive of consumers' purchase decision-making. The influence of perceived quality on consumers' attitudes and purchase intentions has been validated in empirical studies (Chen et al., 2021; Jung & Seock, 2016) and as such, the higher the perceived quality is, the higher the likelihood that the consumer will have a positive attitude towards the brand and the higher their intention to purchase the brand will be. According to Gregory (2014), a high-quality brand will also attract consumers' attention, establish a good first impression, promote the products, and ultimately result in growing the brand. Singh (2012) also highlights the role of quality in strategies to export a product to other countries, as higher quality perceptions will lead to improved business globally. In light of this, it is evident that quality is a vital element in consumer decision-making, including fashion decision-making (D'Arpizio et al., 2022) and that it has the power to influence customers' satisfaction and loyalty (Nguyen, 2023). Sarkar (2012) warns that consumers who are quality conscious have a strong quality inspection system that they use to avoid purchasing low-quality products. In addition, Singh (2012) points out that quality expectations are dependent on the customer segment that is being targeted.

Gender has been studied extensively in consumer behaviour literature. That is because gender plays a profound role in the way that consumers think, form opinions, act and process information (Jaber & Hoogerhyde, 2019). Males' information processing is shorter and more selective as they consider only a few aspects of an item in decision-making. More specifically, they focus on aspects that are associated with a schema and then shape their responses to fit accordingly. On the other hand, females' information processing is more comprehensive as they invest more effort and consider all available information in their decision-making (Meyers-Levy, 1991). These differences spill over to a range of factors and cause differences in male and female consumers' perceptions, attitudes, behaviours and purchase decision-making processes (Lee & Workman, 2021). Kartajaya (2017) concurs and explains that men prefer to shop and make purchase decisions as quickly as possible, with as little effort as possible, while females will invest more time and effort to find the ideal product. Owing to these differences, gender has widely been used as a segmentation variable and, as a result, a large number of advertisements, retailers and products are designed to appeal to a specific gender (Jaber & Hoogerhyde, 2019), especially within the apparel sector (Meyers-Levy & Loken, 2015). While female consumers were traditionally considered knowledgeable fashion-conscious consumers (Kurtulus & Ertekin, 2015), male consumers are increasingly involved in fashion shopping (Janse van Rensburg, 2022). Quality is an important consideration for both male and female consumers' fashion shopping, particularly in the selection of fashion garments and brands (Workman & Cho, 2012). However, the literature suggests that gender affects consumers' perceived quality (Chen et al., 2021) and in the study conducted by Gitimu et al. (2013), it was found that the process of evaluating apparel quality has proven to be different across the gender segments as females use intrinsic, extrinsic, appearance, and performance cues more frequently.

The success of fashion brands and retailers is dependent on a clear understanding of their target market and the factors that influence their target market's decision-making, attitudes and perceptions (Rath et al., 2015). Given the importance of perceived quality in consumers' fashion purchase behaviour, it is vital that fashion brands and retailers understand the drivers of consumers' quality perceptions of fashion brands in order to remain competitive and maintain and grow their customer base.

## **LITERATURE REVIEW**

In 1991, Aaker developed a brand equity model that outlined a group of dimensions involved in building or enhancing brand equity, which includes brand awareness, brand association, perceived quality and brand loyalty (Aaker, 1991). In accordance with this model, the forefront of building a strong brand is consumers' awareness of and their association with a brand, its products or services, as well as their perceived quality thereof. These dimensions are interrelated and, as such, consumers' perceived quality will be dependent on their awareness of the brand and their associations with the brand. In this study, Generation Y consumers' perceived quality of fashion brands is investigated in relation to Aaker's brand equity theory.

Perceived quality is an individual's subjective evaluation of the quality of a particular product, service or brand (Su & Chang, 2018). While perceived quality differs from the actual quality of the product (Aaker & McLoughlin, 2010), the overall product quality plays a role in consumers' perceived quality of brands (Sivaram et al., 2019). In addition, an individual's quality evaluation is based on the individual's experience with the brand (Liu et al., 2017) and their evaluation of quality cues, namely intrinsic cues that directly relate to the product characteristics itself, and extrinsic cues that refer to aspects that indirectly relate to the product such as the price and brand (Aaker.

1991). Castelo and Cabral (2018) emphasise the importance of quality cues within the context of garments, given that consumers change their fashion purchase decision-making as a result of their quality perceptions. Brands that are considered to be of high quality stand out from their competitors (Yoo et al., 2000) and will likely have a positive influence on consumers' purchases (Liu et al., 2017) and loyalty (Buil et al., 2013), and, in turn, fashion organisations' competitive advantage and sustainability (Castelo & Cabral, 2018). In light of this, it is evident that consumers' perceived quality of fashion brands plays a paramount role in their decision-making and in businesses' success. As such, Aakko and Niinimäki (2022) highlight the importance of gaining a deeper insight into the factors that influence these quality perceptions, of which brand awareness and associations are likely to play a role (Yoo et al., 2000).

Brand awareness refers to a consumer's ability to retrieve a brand from their memory (Peter et al., 2018) and associate it with a particular product category (Aaker 1991). As such, brand awareness exists when an individual can recall a brand name when given a product category or identify a brand based on a cue such as a brand sign (Cheung et al., 2019). Brand awareness is important for decision-making since consumers are less likely to purchase a brand that they are unfamiliar with (Rantung, 2014) and tend to compare competing brands prior to decision-making (Valavi, 2014). Moreover, Buil et al. (2013) highlight that consumers' brand awareness could influence the perceived quality of the brand. This relationship has been validated in several studies. In the studies conducted by Astawa and Rahanatha (2021) and Purwoko and Sihombing (2018), it was reported that brand awareness influenced consumers' quality perceptions regarding the Nivea cosmetic brand and Nike-branded products, respectively. Similar findings were reported concerning the relationship between brand awareness and perceived quality within the context of Indonesian higher education institutions (Tammubua, 2021) and Mehr chain hotels (Nayebzadeh & Farmani, 2018).

Brand association represents the meaning of a brand to a consumer (Aaker, 1991). This meaning is formed based on the consumer's perceptions, thoughts and experiences with the brand (Kilei et al., 2016) or aspects that directly or indirectly link to the brand (Irwanti, 2016), such as the brand's personality, perceived value and organisational associations (Aaker, 1996). In addition, the target market of a brand also affects the associations linked to the brand (Jooste et al., 2012). Brand associations assist with information processing and consumer decision-making (Aaker, 1991). Furthermore, customers' associations with a brand can influence their perceptions concerning the superiority or inferiority of the brand, which translates to their quality perceptions of the brand (Kumar et al., 2013). Therefore, stronger brand associations will likely lead to higher quality perceptions (Falahat et al., 2018). Numerous previously published studies have investigated the relationship between brand association and perceived quality. Some of these include the studies conducted by Mensah et al. (2021), Kim et al. (2016) and Haxhialushi and Panajoti (2018), who reported a significant direct relationship between brand association and perceived quality. Furthermore, Falahat et al. (2018) and Kalhor et al. (2021), who focused on hardware retailers in Malaysia and patients in public hospitals, respectively, found that brand association has a significant positive influence on perceived quality.

The youth, which currently encompasses individuals of the Generation Y consumer segment, are known to be fashion-conscious (Chui et al., 2017) and are regarded as fashion trendsetters (Smith, 2017) who influence the success of fashion brands and retailers (Tangsupwattana & Liu, 2017). As such, their spending on clothing is a key expenditure (Ruha, 2022). The Generation Y consumer segment includes individuals who were born between 1986 and 2005 (Markert, 2004), who currently is the world's largest consumer segment (Tolani et al., 2020). In the year 2023, these individuals are between 18 and 37 years of age. In South Africa, approximately 34 percent of the population are Generation Y individuals (Stats SA, 2022). Compared to previous generations, these individuals have a higher income and, consequently, spend more money (Tolani et al., 2020). The Generation Y student segment, which includes individuals who typically range between 18 and 24 years of age (Tan et al., 2013), is of particular interest to marketers given their future earning potential (Bevan-Dye et al., 2009) and consequent disposable income and aggregate spending (Bevan-Dye, 2015). To these young consumers, the perceived quality of apparel in terms of style and actual quality is a key factor in their fashion purchase decision-making (Raza et al., 2021).

Based on the discussions above, it is evident that perceived quality plays a key role in consumers' fashion brand decisions, especially among the lucrative Generation Y segment; however, the literature suggests differences between males and females in terms of quality perceptions. To this end, it is unclear whether these differences apply to South African Generation Y consumers, whether they too follow different approaches to processing information, forming opinions and making decisions. Furthermore, little evidence exists that explains the contribution, nor the degree of significance, of brand awareness and association to quality perceptions, particularly from a gender difference lens. As such, the purpose of the study is to determine whether the influence of fashion brand awareness and associations on perceived quality differs between Generation Y male and female consumers. This study sought to fill

the gap in the literature and propose recommendations for fashion brand managers and marketers. The hypothesis for this study is:

H1: The influence of fashion brand awareness and association on perceived quality differs significantly between Generation Y male and female consumers.

## RESEARCH METHODOLOGY

The study followed a descriptive research design by means of a single-cross-sectional sample and used the quantitative research approach. The sample of the study was Generation Y students. The sample elements were selected from three higher education institution (HEI) campuses using the convenience sampling method. The HEIs campuses were selected from a list of 26 public HEIs by means of judgement sampling. The data required for the study was collected by means of a self-administered questionnaire that included a section requesting the participants' demographic information and included one screening question to ensure that the participants met the sample requirement of being classified as a Generation Y student, i.e. being between the ages of 18 and 24 years. The second section of the questionnaire included scaled items to determine the participants' perceptions regarding the perceived quality (four items), brand association (four items) and awareness (four items) of their preferred clothing brand. The items included in this section of the questionnaire were adapted from previously published scales. The participants' responses to these statements were measured using a six-point Likert scale. The data analysis included frequencies, descriptive statistics, internal consistency reliability, correlation analysis, collinearity diagnostics and multiple linear regression analysis, which was performed using the IBM Statistical Package for Social Sciences (SPSS), version 27.

## RESULTS

The study returned a response rate of 89 percent, since 625 out of the 700 questionnaires that were distributed were completed in full and met the sample requirement of being classified as a Generation Y student. Regarding the sample description, females (53.3%) were slightly more represented in the sample than male participants (46.7%). The age category of 20 years (24.6%) was represented the most, closely followed by the participants that indicated being 21 years (20.2%) of age. In terms of the participants' mother-tongue language, all 11 of the official South African languages were represented by the sample, with the most represented language being Sesotho (30.2%).

**Table 1: Sample description**

Gender	Percentage	Age	Percentage	Language	Percentage
Female	53.3	18 years	16.6	Afrikaans	0.2
Male	46.7	19 years	17.1	English	1.9
		20 years	24.6	isiNdebele	2.6
		21 years	20.2	isiXhosa	11.5
		22 years	11	isiZulu	20.6
		23 years	7.7	Sesotho	30.2
		24 years	2.7	Sepedi	9.4
				Setswana	10.7
				SiSwati	3.4
				Tshivenda	2.1
				Xitsonga	4.8
				Other	1.8
				Missing	0.8

The Cronbach alpha value of each variable was calculated to establish the internal consistency reliability of the scales used in this study. In addition, the descriptive statistics, specifically the mean and standard deviation, were calculated for each variable. To ascertain that there were statistically significant relationships between perceived quality, brand association and brand awareness, and to determine nomological validity, Pearson's product-moment correlation coefficients were calculated. In addition, to detect any potential multicollinearity concerns, collinearity diagnostics were performed. These results are represented in Table 2.

**Table 2: Descriptive statistics, Cronbach alpha, correlation matrix and collinearity diagnostics**

Variables	Means	Standard deviations	Cronbach alpha	F1	F2	Tolerance	VIF
Perceived quality (F1)	5.05	0.89	0.857			0.741	1.350
Brand association (F2)	4.78	0.78	0.773	0.441*		0.704	1.421
Brand awareness (F4)	5.13	0.78	0.777	0.434*	0.479*	0.709	1.411

Note: Constant = Dependent variable: Subject number

The descriptive statistics of the combined sample of male and female participants produced mean scores that range from 4.78 to 5.13, exceeding 3.5 and thereby indicating that the participants' responses to all three variables fell within the agreement range of the scale. Brand awareness ( $\bar{X} = 5.13$ ) obtained the highest mean score, which means that the participants are well aware of their preferred clothing brand. Furthermore, the participants perceive the quality ( $\bar{X} = 5.05$ ) of their preferred clothing brand to be high and have strong associations ( $\bar{X} = 4.78$ ) with their preferred clothing brand. Furthermore, the results revealed Cronbach alpha values that range between 0.773 and 0.857, which exceed the recommended 0.7 (Malhotra, 2020) and thereby suggest internal consistency reliability. The correlation matrix revealed statistically significant positive relationships ( $p \leq 0.01$ ) between each pair of variables, of which the strongest relationship was identified between brand awareness and brand association ( $r = 0.479$ ). As such, nomological validity was suggested. The results of the collinearity diagnostics revealed tolerance values ranging between 0.704 and 0.741, which are above the cut-off of 0.10. Furthermore, the variance inflation factor (VIF) values of the variables ranged between 1.350 and 1.421, which fell below the cut-off of 10 (Pallant, 2020). As such, no serious multi-collinearity issues were detected, and the dataset was deemed suitable for regression analysis. To determine the influence of brand association and brand awareness on Generation Y consumers' perceived quality of clothing brands, multiple linear regression analysis was performed. The regression model summary and the ANOVA results are presented in Table 3.

**Table 3: Regression model summary and ANOVA results**

	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	p-value
Model 1 (Male consumers)	0.607	0.369	0.364	84.334	0.000
Model 2 (Female consumers)	0.431	0.185	0.181	37.564	0.000

As per the results presented in Table 3, the statistically significant F-ratio of 84.334 ( $p \leq 0.01$ ) for model 1 and 37.564 for model 2 indicate that regression model 1 predicts Generation Y male consumers' perceived quality of their preferred clothing brand, while regression model 2 predicts Generation Y female consumers' perceived quality of their preferred clothing brand. The R<sup>2</sup> values of model 1 and model 2 suggest that the two independent variables combined explain 37 percent of the variance in Generation Y male consumers' perceived quality of clothing brands and 19 percent of the variance in Generation Y female consumers' perceived quality of clothing brands, respectively. The contribution of each of the independent variables to the prediction of Generation Y male and female consumers' perceived quality of clothing brands is outlined in Table 4 below.

**Table 4: Independent variables' contribution to predicting Generation Y male and female consumers' perceived quality of clothing brands**

Independent variables	Male			Female		
	Standardised beta coefficient	t- value	p-value	Standardised beta coefficient	t- value	p-value
Brand association	0.372	6.729	<b>0.000</b>	0.251	4.554	<b>0.000</b>
Brand awareness	0.321	5.797	<b>0.000</b>	0.258	4.679	<b>0.000</b>
Statistically significant at $p < 0.05$						

Regarding Generation Y male consumers' perceived quality of clothing brands, the result in Table 4 indicates that brand association ( $\beta = 0.372$ ) and brand awareness ( $\beta = 0.321$ ) have a statistically significant ( $p \leq 0.05$ ) positive influence on their quality perceptions of clothing brands, of which brand association makes the largest contribution.

For Generation Y female consumers, both brand association ( $\beta = 0.251$ ) and brand awareness ( $\beta = 0.258$ ) also have a statistically significant ( $p \leq 0.05$ ) positive influence on their quality perceptions of clothing brands. While brand awareness makes the largest contribution to Generation Y female consumers' quality perceptions, both brand association and awareness have a smaller impact on Generation Y female consumers' quality perceptions compared to their male counterparts. Based on these findings, H1 was accepted.

## CONCLUSION

Gender plays a significant role in the business strategies of fashion brands both locally and globally and understanding gender differences, in particular how male and female consumers' quality perceptions of fashion brands are developed, will assist fashion brands and retailers to more effectively reach their target market and establish high-quality perceptions among the targeted consumers. The purpose of the study was to determine whether the influence of fashion brand awareness and association on perceived quality differs between Generation Y male and female consumers. Following a descriptive research design and quantitative research approach, the data was collected from a convenience sample of 750 Generation Y consumers, using a self-administered questionnaire. The statistical analyses that were performed included frequencies, descriptive statistics, internal consistency reliability, correlation analysis, collinearity diagnostics and multiple linear regression analysis. In terms of the contribution of brand awareness and association to the perceived quality of fashion brands, the findings of the study revealed that both brand awareness and association have a statistically significant influence on Generation Y male and female consumers' perceived quality of fashion brands. Between fashion brand awareness and association, brand awareness had a stronger influence on the quality perceptions of Generation Y female consumers, while fashion brand associations had a stronger influence on Generation Y male consumers' quality perceptions. However, fashion brand awareness and association play a more prominent role in male consumers' perceived quality of fashion brands than females. This could be because females are more knowledgeable about fashion quality (Workman & Cho, 2012), are usually more attentive to quality and therefore consider a broad range of information when evaluating quality (Gitimu et al., 2013), while males might depend more on the brand as a quality cue (Lee & Workman, 2021). Based on the findings of this study, it is recommended that fashion brands and retailers alter their business strategies to first enhance the awareness of and strengthen the associations that Generation Y male and female consumers have with their brand in order to enhance their quality perceptions of the fashion brand, and ultimately, increase business success. Given that the regression models only explained 37 percent and 19 percent of the variance in Generation Y male and female consumers' quality perceptions, respectively, more research should be conducted to determine the other factors that influence these consumers' quality perceptions of fashion brands. Moreover, additional research should be conducted to uncover the aspects that influence Generation Y consumers' fashion brand awareness and association.

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# CHANGING CHANGE IN GLOBAL ORGANIZATIONS: A POSITIVIST APPROACH TO IMPROVED BUSINESS OUTCOMES

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## ABSTRACT

*This article responds to calls for pragmatic context-driven scholarship and administration in regard to the strategic use of successful change management models in the corporate business environment. Specifically, this paper attempts to reconcile the disconnect between the need for change in global organizations and the ability to leverage effective change management approaches productively to obtain the desired results. The purpose of this paper is to evaluate what may have gone wrong with change management and explore an alternative approach to managing global change that is designed to bring a progressive, effective method to change across diverse organizations within a single, integrated methodology. Where today a singular approach is most commonly used in attempts to facilitate change to derive business goals and objectives, this comparative analysis presents a unified approach rooted in three well-known change models, while adding a new component – neuroscience – to the framework. The objective is to achieve sustainable, effective change management practices in global organizations with an appreciation for leveraging change as a means to better understanding and leveraging diverse people to create unique components of competitive advantage. This paper may offer a substantial contribution to the field of Change Management through the development of a theoretically sound approach to evolving the methodology to encompass a multidisciplinary approach to implementing change in organizations.*

**Keywords:** change, change management, mental models, neuroscience.

## INTRODUCTION

The purpose of this paper is to explore what may have gone wrong with change management from a global context and explore an alternative approach to managing inclusionary change in diverse environments. This brief study will compare and contrast three organizational change models that are well-known methods in global organizations, while also presenting a different approach that may enhance the effectiveness of change by leveraging the original three models, while integrating a new component not previously addressed – Sociocultural Neuroscience. This research is based on a review of literature and is designed to analyze and evaluate three well known change models for compare and contrast purposes, while building on the research to potentially optimize global change in organizations through a consolidated methodology. This paper suggests that perhaps an integrated model may create a useful framework from which to base important change initiatives in organizations.

The bottom line is that existing methods are clearly not working for the vast majority of organizations worldwide. In fact, 70% of all change initiatives fail to produce long term sustainable gains, and almost half of them do not produce any measurable results at all (Asperion Global, 2018). If approximately 70% of all change initiatives fail, what is the fallout of that failure? To highlight just a few impacts:

- Lost Revenue in the form of Reduced competitive advantage or supply chain failures
- Increased costs as a result of Rework and Budget Overruns
- Lost productivity from Missed deadlines and policy/procedure misalignment
- Loss of Business resulting from non-delivery or missed timelines
- Poor retention from the Decreased morale of our employees and a lack of confidence

Study after study indicates failure rates of change are high (Kotter, 2007; Carson, 2017; HBR, 2019). We also know the impact of failed change can be devastating to both individuals and the organization, so how can the problem be alleviated? What is missing and how should change be approached differently? What emerged was the application of a methodology that has the capacity to *change* the way we approach change management in organizations around the world. To improve success rates in global change management we need to amend:

1. How we think
2. How we communicate
3. How we act

What should be noted about the proposed approach is that it is not about process, policy or procedure. This is about PEOPLE. As such, consider human cognitive strategy (Barclay, 2006). How often does anyone pause and reflect on *how* diverse people think? Most simply do not. There are concerns regarding WHAT other people think, one may even reflect on WHY different people think what they think, but time is typically not spent on thinking about *HOW* people think (Herrmann, 1994). This becomes an important determiner of success or failure as we consider that, from a cultural and sociocognitive perspective, neuroscience has been proven that people from diverse backgrounds and worldviews do not think alike (Lin and Telzer, 2018).

## LITERATURE REVIEW

### Neuroscience

As change initiative continue to fail, it becomes increasingly important to understand the underlying foundations of how people think and the affect it may have on the workforce's ability to initiate and manage change. Neuroscience may provide a way to pave a foundation from which to build an aligned way forward. Emerging as an interdisciplinary field, socio-cultural neuroscience provides the opportunity to combine theories and methods from social psychology, anthropology, and sociocognitive neuroscience to investigate the interactions between change, psychological process, brain and gene adaptability (Chiao, et al., 2013; Han et al., 2013; Kim & Sasaki, 2014). It borrows from anthropology and cultural and social psychology by assuming that people's social and professional environments largely shape how they think and behave (Lin and Telzer, 2018). As many of the studies in the field of neuroscience have already shown, there are variations in psychological and neural processes between people from different backgrounds and experiences. Exploring this concept, we may be able to better align how people think, communicate and act throughout the change process.

Learning how change can influence perceptions and interactions at both behavioral and neural levels may lead to greater understanding (Chiao et al., 2013) as to how to approach change management from a foundational perspective. Integrating neuroscience as a foundational layer may increase understanding as to how explicit and implicit beliefs, values, and behaviors shape the neural mechanisms that underlie differences in psychological processes and behaviors when experiencing change (Lin and Telzer, 2018) and may ultimately impact long-term learning and retention throughout the process. In the interest of leveraging the fact that different people may experience change differently, sociocultural neuroscience indicates people from different backgrounds have a dominant way of thinking that is based on the four quadrants of the brain (Ochsner and Lieberman, 2001).

Herrmann's Brain Dominance Model (1994) indicates dominant brain function may be: 1) Analytical/results driven 2) Structural/task driven 3) Relational/feelings driven or 4) Experimental/opportunity driven. While individuals have secondary or tertiary functionality based on differing situations or experiences, it is also very likely one may have a dominant way of thinking that causes a certain affinity for specific ways of giving and receiving information (Iwata, 2019) based on past experience, social or cultural affiliation. If this is true, there may be a significant opportunity to adapt the change management process to align to specific attributes (Barclay, 2006), facilitating an enhanced ability to embrace and implement change across diverse organizations.

People have a dominant way of thinking that causes a certain affinity for specific ways of receiving information (Iwata, 2019). Fundamentally, monitoring the environment and gaining internal awareness is a function of the brain known as Default Mode Network (DMN) (Lin and Telzer, 2018). Research shows that humans default to a specific set of cognitive operations which may be culturally driven (Andrews-Hanna, 2012). Specifically, findings

from default-network studies suggest that DMN is involved in processing the more adaptive aspects of cognition (Goh, et al., 2013), thus due to the adaptive nature of change management, it is likely that DMN is inherently involved in these cognitive activities (Andrews-Hanna, 2012). As a result, it is possible that dominant brain function may be leveraged not only to understand and connect to how people receive information differently, but to enable change in organizations through a sociocultural neuroscience perspective.

To engage a *group* with multiple brain dominance characteristics in a change management initiative, Herrmann and Herrmann-Nehdi (2015) contend that it is possible to designate how people receive information to align to how others prefer to receive information. Barclay (2006) outlines a very simple process to engage individuals with different brain dominance typologies:

1. Start with Facts/Figures for analytical people: Talk about the bottom line, the goals and objectives, the logic behind the change.
2. For more relational individuals, Move into Telling a story everyone can identify with: remember when we were missing our KPI's and the customer was so mad. How that made you feel? How you felt helpless? Well, this change is going to fix that problem so you do not have those feelings and disappoint the customer in this space any more...
3. Next, offer the Big Picture to experimental folks: Give them the vision, how it is going to improve the situation and how you will do it together.
4. And Finally, provide for the structural people with a Call to Action: Tell them what needs to be done and call upon them to do it.

**Figure 1: Group Communication**



*Adapted from The Creative Brain (Herrmann, 1994)*

By leveraging neuroscience and following a communication *process*, it is possible to appeal to every brain function typology (Barclay, 2006). If we change cognitive strategies to reflect how people think, the likelihood of individuals and groups embracing change rises exponentially (Herrmann and Herrmann-Nehdi, 2015). However, addressing how we think and how we communicate is still not enough to significantly move the needle toward successful change. There is also the need to determine how to strategically guide the change initiative. In doing so, three predominant models of change in organizations were assessed for their individual strengths and how we might leverage each one for successful change.

## Change Management

Change management is a transformation process in strategy, processes and human resources (Bekmukhambetova, 2021). Despite its overwhelming popularity, international research by McKinsey (2018) indicates that 70% of corporate change initiatives fail. Thirty-nine percent of failures are explained by the resistance of employees to change,

33% by the lack of support for changes from managers, and only 14% by inadequate resources and other reasons. Thus, corporate culture is a crucial factor in successful change (Shapenko, 2017) – indicating that how individuals and teams in organization think, act and communicate will dictate the capacity for change to succeed. Change management is important for the sustainability and growth of organizations (Lozano, 2013). The aim of change within organizations is to progress from the existing state to a required state (Ragsdell, 2000). In this paper three well-known models are outlined: Kotter's Change Model (1996); Hiatt's ADKAR model (2006); and Senge's Change Model (2006). This section provides information on the three indicated change models and is based on the extensive literature in this area.

Kotter's Eight Stage Process for Creating Change is one of the most widely recognized models for Change Management (Pollack and Pollack, 2014), however the weight of research that references Kotter's work does not investigate how the process can be used, but instead discusses Kotter's writing in the context of the broader literature on Change Management, or uses the process as a framework for conducting a post-hoc analysis of a change (e.g. Casey et al., 2012; Nitta et al., 2009; Goede, 2011; Gupta, 2011). Kotter's Process emphasizes a top-down framework for change, with employees having little input or the ability to participate in the core stages of the process. As a result, Kotter's process may often result in resistance to change (Bekmukhambetova, 2021). Despite the challenges, Kotter's model remains one of the most highly referenced change models today (Pollack and Pollack, 2014).

Kotter's 8 Stages of Change (1996) is very procedural – it is a linear model focused on a top-down organizational approach (Gupta, 2011). Kotter argues that in order to produce sustainable change it is necessary to must follow an 8 stage sequence in order to elicit positive change: 1) Establish A Sense Of Urgency 2) Form A Powerful Guiding Coalition 3) Create A Vision 4) Communicate The Vision 5) Empower Others To Act On The Vision 6) Plan For And Create Short-Term Wins 7) Consolidate Improvements And Produce More Change 8) Institutionalize New Approaches (Kotter, 1996).

In creating a sense of urgency, Kotter recommends convincing managers and employees of the necessity for change with a "felt-need" – a sense of urgency. He states that it is critical to, "find ways to communicate information broadly and dramatically, especially with respect to crises, potential crises, or great opportunities that are very timely" (Kotter, 1996). If individuals do not have a reason to abandon the status quo, human nature dictates that they will not act with urgency unless they have leaders that motivate them to do things differently (Carson, 2017).

The next step is for senior leaders to create a powerful group of people who can work together to enact change. This group must have a varied member base – senior leadership, the customer base, and functional and social leaders to name a few. This guiding coalition can start with just a few leaders, but must grow rapidly (Pollack and Pollack, 2014). As such, the guiding coalition can start small, but ultimately their power will be a driving force in encouraging others to adopt change (Gupta, 2011).

The third and fourth components of Kotter's model go hand in hand: develop a vision that will guide the change effort and communicate it relentlessly. The vision should be a picture of the future that is easy to communicate and appeals to internal and external stakeholders alike (Kotter, 2007). It is important that the vision be communicated repeatedly, in as many venues, as possible.

Steps five through eight, as the remaining steps, are easier to delegate and/or decentralize as the guiding coalition grows and evolves (Kotter, 2007). In step five, empowerment spreads through the organization and people are encouraged to act on the vision. The only contingency is that their actions align to the broad parameters of the overall vision (Pollack and Pollack, 2014).

Step six involves creating short-term wins that equate to small improvements that should be recognized publicly (Gupta, 2011). Next, the current improvements are built upon with new projects and resources, however inherent in this idea is a warning not to celebrate too soon. Until change is deeply absorbed into the culture of the company, Kotter (2007) reminds us that new approaches are fragile and subject to rapid regression if not tended to appropriately. Finally, in step eight, the new approaches should become institutionalized.

While Kotter is focused on the mechanics of the organization, Senge brings a more organic approach to change management. He encourages leaders to think more like biologists when approaching organizational change to support change that is congruent with human nature (Zeeman, 2017). Senge (2006) asserts that to better understand

how organizations react to change, they should be viewed as systems connected by interrelated actions that affect one another over time. He is focused on how we can use an established body of work – biology - to better understand how organizations can create continuous growth (change) to out-perform the competition. The key with Senge is interconnectivity that informs itself and grows organically as it learns.

Senge (2006) developed a 5 step methodology to enact change in organizations centered around the creation of a “Learning Organization” that is organic in nature and does not interact in a linear way: 1) Shared Vision 2) Systems Thinking 3) Mental Models 4) Personal Mastery and 5) Team Learning.

Senge purports that a central task is to build a shared vision across the organization that involves input from multiple levels and functions across the organization, building consensus based on a compilation of individual visions to create a “master” vision. This shared vision creates a sense of commonality and purpose that permeates into an organization and provides a common purpose across disparate functions (Senge, 2006). Senge also focuses extensively on the central concept of Systems Thinking as a pervasive theme across everything he outlines. Similar to Bertalanffy (1969), Senge believes strongly that organizations should be systems that are interrelated and interdependent upon one another. Instead of focusing on individual functions, policies or procedures, systems thinking reflects the organization as an entire system (Hammond, 2005).

Mental models are also central to Senge’s (2006) change model. He contends that often new and innovative ideas fail to be implemented because they conflict with deeply held norms and ideas of how things “should” work (Zeeman, 2017). They also deeply affect Personal Mastery and Team Learning. Individual expertise, a clear picture of the goal and an accurate view of reality combine to create Personal Mastery (Zeeman, 2017). According to Senge (2006), the gap between vision and reality drives the development of the necessary knowledge and expertise to realize the vision that is based in the current reality. Finally, Team Learning constitutes the mechanism by which personal mastery and shared vision are brought together. Within team building, it is critical for employees to consider colleagues as team members, not rivals. This creates a safe working environment where true change can be experienced (Senge, 2006). The key point of understanding and applying the five disciplines of learning organizations is that they are all interrelated. Each discipline cannot stand independently (Hammond, 2005). Overall, the systems approach is inherent to the learning organization as it enables the organization to identify complexities and opportunities both internally and externally (Zeeman, 2017).

Hiatt, like Kotter, provides a linear approach to change management. However, he contends that the individual is at the center of success, not the organization – Hiatt (2006) believes change should not be done “to” or “by” people, but “with them”. Different from both Kotter and Senge, the ADKAR model developed by Jeff Hiatt (2006) is focused primarily on five tangible and concrete outcomes that individuals need to achieve lasting change, while Kotter and Senge are focused on the organization as a whole. Hiatt (2006) offers a 5 step process that individuals need to follow to achieve successful change: 1) Awareness 2) Desire 3) Knowledge 4) Ability and 5) Reinforcement.

Awareness, according to Hiatt (2006), represents an individual’s understanding of the nature of the change, why the change is being made and the risk of not changing. When considering change, the person being affected needs to understand and internalize the drivers for change, not simply that change is happening (Angtyan, 2019). Once Awareness is present, an individual needs to make the personal decision to participate in the change. For Desire to occur, a person needs to see value in participating in the change and identify his/her “WIIFM” (what’s in it for me?)(Leach, 2018). Organizational history, personal values and motivators, as well as context, also play a significant role in determining the desire to change (Angtyan, 2019).

The Knowledge that lives within individuals impacted by change enables change success... and is the next personal building block to change. Understanding how to change and how to operate in the future state is an essential precursor to adopting new processes, systems and job roles. Knowledge represents the information, training and education necessary to know how to change (Hiatt, 2006). However, there is a distinct difference between knowing how to do something and being able to do it. Hiatt (2006) ascertains that in addition to training that imparts knowledge, employees must also receive sufficient time and tools to develop their Abilities. In order to successfully build new skills and behaviors, most employees need a supportive environment where they can practice developing critical Abilities to thrive in the new environment (Angtyan, 2019). Finally, lasting change requires Reinforcement. Organizations tend to invest significant time and energy in building awareness, desire, knowledge and ability for a change to be successful - yet they often overlook Reinforcement. Hiatt (2006) contends that once change is complete,



Reinforcement efforts often fall short and expected results may never materialize. For a change to deliver the expected results over time, it must be actively sustained.

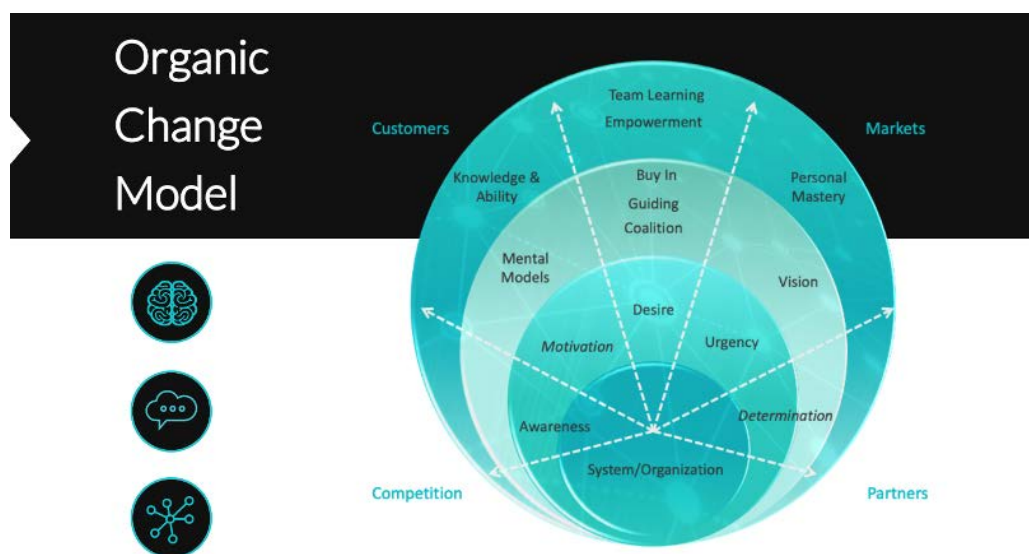
Although Kotter (1996), Senge (2006) and Hiatt (2006) all present valid change models for organizations, they vary considerably in their approach and methodology. Kotter's Eight Steps for Organizational Change is very linear and easy to follow. However, he approaches change as if leaders are outside of the process and that change can be initiated, directed and brought to conclusion without the consideration of individuals outside of senior leadership roles. While both Kotter and Senge approach change from an organizational perspective, Senge takes a different tactic completely by asserting that organizations are more organically oriented and non-linear. He believes that organizations have a dynamic complexity inherent in them that provides a framework to suggest that it is a connected system with interacting, interdependent parts. Both Kotter and Senge assert that teams, not individuals, are the fundamental components of an organization. Jeff Hiatt's ADKAR model, on the other hand, is driven by change as a mechanism that is triggered and managed at the individual level. While ADKAR is linear, like Kotter's model, it adheres to the principle that change should be done "with" or "by" individuals, not "to" them.

All three models have valuable components inherent in their make-up, however if specific components were extracted and combined in a different framework to form a new model – The Integrated Change Model - it is possible that change management initiatives could deliver significantly better success rates. The organic nature of Senge's model is less mechanistic than Kotter's model for organizational change. Implementation in a "systems" environment, where a single action may have impact across different teams and functions, could enable a multiplier effect as far as Kotter's Urgency and Hiatt's Awareness and Desire characteristics.

## FRAMEWORK

Senge's biology-based model is less mechanistic than Kotter and Hiatt's linear models, and ensures the spread and leverage of information across the organization. However it does not integrate some critical components of change. If we integrate sociocognitive neuroscience (how we think, communicate and act) within the change model to extract the most important aspects of both organizational and individual change, we can leverage the entire system – the organization – to pull the best from each model.

**Figure 2: Integrated Change Model**



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Adapting and aligning how people THINK (back to Hermann's Brain Dominance Model, 2015) and using it as a map to COMMUNICATE across the organization, it will fundamentally change the way individuals ACT – creating SYSTEMS THINKING (Senge, 2006), which is *first level change*. As we lay the foundation for a system driven approach, we create AWARENESS (Hiatt, 2006) to leverage the organic nature of the system to both pull in individual contributions across different levels and functions (driving overall MOTIVATION) while we consolidate the data and push back out a collaborative change plan (creating URGENCY - Kotter, 1996) that will capture the hearts and minds of the PEOPLE within the organization, (facilitating DETERMINATION) – *second level change*. Second level change leads to a change in MENTAL MODELS (Senge, 2006) – how people perceive their role and level of importance to the organization – which drives their DESIRE (Hiatt, 2006) to be part of a collaborative GUIDING COALITION (Kotter, 1996) that leads to BUY IN on both an organizational and an individual level. From the GUIDING COALITION, individual BUY IN is driven by motivation to contribute to the VISION (Kotter 1996; Senge, 2006) creating *third level change*. From this collaborative approach, a MASTER VISION for Change emerges, driving KNOWLEDGE & ABILITY (Hiatt, 2006) as everyone knows what they are to do, how to do it and where they fit. TEAM LEARNING (Senge, 2006) and EMPOWERMENT (Kotter, 1996) occur... and ultimately PERSONAL MASTERY (Senge, 2006) emerges to drive the organization forward, resulting in *fourth level change*.

Senge's (2006) organic approach could promote a much wider acceptance of a Vision (Kotter, 1997; Senge, 2006), developed and led by a Guiding Coalition (Kotter, 1997) to enable changing Mental Models (Senge, 2006) and Buy-In (Kotter, 1997). Hiatt's (2006) individual-based approach would lend itself well to organic organizational change by bringing in a more humanistic approach from Hiatt's ADKAR model (2006) to facilitate Empowerment (Kotter, 2007), Personal Mastery (Senge, 2006), Knowledge and Ability (Hiatt, 2006). These components all enable Team Learning (Senge, 2006), which consequently impacts markets, customers, partners and competition. By combining linear models (Kotter, 1997 and Hiatt, 2006) with a non-linear model (Senge, 2006) while also incorporating the individual into the corporate approach, it may be possible to develop a change model that works across the organization, at multiple levels for corporate, as well as individual, success.

## CONCLUSION

In order to *change* change management in a global context we need to change how we think, communicate and act - pulling the best components from each model to create an inclusionary model to address the needs of diverse global organizations.

The overarching goal of this initial research is to get people thinking about how to improve change management in organizations worldwide. We need to continue to explore meaningful change management with partnerships that span academia and business. We need to better understand the underlying implications of neuroscience, motivation and change management – from both an individual and a corporate perspective. We need to partner to form focus groups and test new methods in change management, so that we can actually *change* change management in organizations to achieve the improved business results we all need to achieve!

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# AN EXAMINATION OF REVERSE LOGISTICS BEST PRACTICES IN THE FAST-MOVING CONSUMER GOODS INDUSTRIES

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## ABSTRACT

*The Coronavirus pandemic has led to consumers being progressively demanding, with changing needs owing to increased product variety and globalisation, as well as cheaper substitutes for products from foreign markets. The fast-moving consumer goods industry is able to provide for such a demand, as it is one of the biggest industries globally. However, this industry has also been affected by reverse logistics, which has led to the industry in search of reverse logistics best practices to mitigate reverse logistics challenges. The main objective of this study was to examine reverse logistics best practices in the fast-moving consumer goods industry. This was achieved by employing a positivist research philosophy, and furthermore by employing the explanatory and descriptive research design. This study was quantitative in nature which promoted the use of a non-probability purposive method to further collect data through survey-monkey using online platforms. The study achieved an 80% response rate from the FMCG retail industry, where the descriptive results from the Statistical Package for the Social Sciences, version 27 revealed that RL best practices are moderately implemented.*

**Keywords:** reverse logistics (RL), best practices, fast-moving consumer goods (FMCG), retail sector, South Africa (SA), firm competitiveness.

## INTRODUCTION

The coronavirus (Covid-19) pandemic has led to consumers being progressively demanding, with changing needs owing to increased product variety and globalisation, as well as cheaper substitutes for products from foreign markets. On average 8% of total sales stem from retailers' reverse logistics (RL), and at the same time, tighter regulation and Omni-channel retail make RL more complex. The increasing number of regulations encouraging the recycling of packaging materials and containers has led to the fast-moving consumer goods (FMCG) retail industry implementing RL (Bowersox, Closs, Cooper & Bowersox (2020). This leads to the FMCG industry seeking RL best practices that can be employed to enhance RL and achieve firm competitiveness.

RL of FMCG in the retail industry can be defined as the backward flow of goods by returning damaged goods, unused goods, or defective goods from customers (distributors, retailers, end-users) to manufacturers for substitution, reuse, repackaging, recycling, remanufacturing, repair, resell, disposal, and incineration. According to Kussing and Pienaar (2016), there are three general stages in that RL can occur in the supply chain:

- (i) Manufacturing: RL due to production scrap, failed quality controls, and surplus raw materials.
- (ii) From the distributor: these include RL due to inventory adjustments, commercial returns, redistribution of products, and product recalls.
- (iii) From the customer: these include the RL of services, goods that have reached the end of use, and warranty returns.

In between the process of manufacturing and distribution RL best practices occurs. RL best practices are the mutual RL standards practiced in different industries and in this case, the FMCG. Omwenga, Ngacho and Muya (2019) posit that the ability of a firm to implement and handle RL best practices has rapidly become an important logistical process in nearly all industries of the economy. The RL best practices are implemented by industries through RL partners (Prakash & Barua, 2016); and will differ from industry to industry, and from country to country. Waqas,

Dong, Ahmad, Zhu and Nadeem (2018) opine that different practices have been recognised and established by different countries to encourage RL best practices. Furthermore, Mangla, Govindan and Luthra (2016) explain that the implementation of the RL best practices has received major attention among developed countries; and further highlight that a more thorough study is required in developing countries to receive the required benefits. However, Badenhorst (2016:10), mentions that “it is not practical to implement all best practices at once”. Consequently, it is essential to prioritise the RL best practices for gradual implementation (Prakash & Barua, 2015:559).

## LITERATURE REVIEW

Firms have started developing and utilising RL best practices to harness the benefits of effective RL implementation (Makaleng, 2017). Since RL best practices permit firms to benefit from added cost-saving prospects by recovering the costs of product materials and reusing them at a later stage (Arrieta, 2015). Moreover, implementing RL best practices can also allow firms to create clear RL policies. This is because inadequate policies are a key limitation in developing countries when compared to developed countries (Waqas *et al.*, 2018).

There are several reasons why firms decide to refrain from or implement RL best practices (Waqas *et al.*, 2018). These reasons include, but are not limited to increasing environmental concerns for society and rigid environmental regulations (Jindal & Sangwan, 2015), increasing customer satisfaction and service levels (Prakash & Barua, 2016). Some of the RL best practices which firms can prioritise in terms of implementation are establishing centralised return centres, establishing a gatekeeping function, and collaborating and sharing information with other FMCG retailers and supply chain partners. Moreover, using returns software, state-of-the-art technology, and RL information management systems, outsourcing reverse logistics to third parties.

Makaleng (2017); Waqas *et al.* (2018); and Omwenga *et al.* (2019) all discussed and examined the importance of RL best practices, the benefits of implementing the RL best practices in a firm, and its implementation. As mentioned previously, some of the benefits mentioned by the authors include, increasing customer satisfaction, cost savings, and service levels, amongst others.

Previous research did not necessarily focus on RL, and RL best practices in the FMCG sector. Mvubu's (2015:133) investigated Green supply chain management challenges in the South African fast-moving consumer goods industry: a case of Unilever. The study indicated that “FMCG companies are the link between suppliers and customers and are therefore in a position to play an essential role in driving green SC initiatives in the total SC. Thus, in order to establish a database of greening practices, firms including those in the local FMCG sector should be encouraged to participate in similar studies on a specific basis”. Agigi, Niemann & Kotzé (2016) examined the Supply chain design approaches for supply chain resilience: A qualitative study of South African fast-moving consumer goods grocery manufacturers. The results in Agigi *et al.* (2016:11) explained that “multi-sourcing and strategic stock are two of the main redundant design strategies used by San FMCG grocery manufacturers. The strategies allow firms to maintain continuity of operations. The firms currently follow a mixed distribution model allowing them the flexibility of having numerous facilities in case one of the facilities is affected by a disruption”.

Meyer, Niemann, Van Pletzen, & Smit (2019:8) studied Environmental initiatives: A study of dyadic buyer and supplier relationships in the South African Fast-Moving Consumer Goods industry. The study further indicates in their findings that “in SAs FMCG sector, buyer organisations now include environmental initiatives as a key requirement in their supplier selection criteria, while, buyer and supplier relationships are built on high standards of trust and quality”. In their study, Meyer *et al.* (2019) further suggest that quantitative research could be used in future studies since it will encourage participants to be more open when disclosing negative experiences.

Finally, a study conducted by Botha, Creaven and Mandy (2020) conducted research on, Conveniently healthy: The impact of health endorsements on brand trust, brand loyalty, and brand equity in Fast Moving Consumer Goods convenience versus shopping goods. The next sub-section will discuss the problem statement.

## Problem Statement

A review of the literature showed that there's a dearth of studies conducted on RL best practices, especially in the FMCG industry, hence the gap which resulted in this study being conducted. Hence the current study sought to examine reverse logistics best practices in the fast-moving consumer goods industries. Therefore, the current study's

RL best practices include: (i) the establishment of centralised return centres (Myerson, 2015; Saikiah, McRoberts & Thakur, 2016); (ii) the establishment of a gatekeeping function (Shukla, 2015; Kussing & Pienaar, 2016; Saikiah *et al.*, 2016; and Makaleng, 2017); (iii) collaborating and sharing information with other FMCG retailers and supply chain partners (Prakash & Barua, 2015; Morgan, Richey & Autry, 2016; and De Villiers Nieman & Niemann, 2022); (iv) utilising return software, state-of-the-art technology, and RL information management systems (Robinson, 2015; Samarasinhe & Wang, 2019; and Saikiah *et al.*, 2016); and (vi) outsourcing RL to third parties (Badenhorst & Van Zyl, 2015; Prakash & Barua, 2016; Badenhorst, 2016; Robinson, 2016; Samson, 2018; and Gu, Wang, Dai, Wei & Chiang, 2019). These RL best practices were found to be appropriate for the accomplishment of firm competitiveness in the FMCG retail industry.

## Research Objectives

### *Methodological objectives*

Following the problem statement, the study aimed to address the following methodological objectives:

- MO<sub>1</sub>* to review the literature on RL best practices implemented in the FMCG retail industry;
- MO<sub>2</sub>* to propose the most appropriate research design and methodology for this study;
- MO<sub>3</sub>* to gather and analyse primary data on RL best practices implemented in the FMCG retail industry.

### *Primary objectives*

The primary objective of this study was to examine the RL best practices in the FMCG retail industry in Pretoria, South Africa (SA). To achieve this objective, the study had the following sub-objective:

### *Secondary objective*

The secondary objective of this study was to:

- SO<sub>1</sub>* identify RL best practices implemented by the FMCG retail industry.

# RESEARCH DESIGN AND METHODOLOGY

A research methodology encompasses the research philosophy, research design, research approach, sampling design, and data collection analysis methods (Quinlan, Babin, Carr, Griffin & Zikmund, 2019). A positivist research philosophy worldview was followed in this study because of the following reasons as mentioned by Govender (2018:359); “assumes an objective world”; “searches for facts”; “generalises results”; “uses scientific methods” and “not interested in meaning, but only proven facts”. Moreover, the study employed descriptive and explanatory research. The descriptive research design aided the researcher to describe the FMCG retailers’ profile and identify the level of implementation of RL best practices in the FMCG retail industry. The outbreak of the Covid-19 pandemic led to the researcher’s use of a quantitative research approach since it ensured the safety of both the respondents and the researcher. A quantitative approach assisted in addressing the research aims, the research problem, and objectives. According to Quinlan *et al.* (2019:129), a quantitative research approach “addresses the research objectives through empirical assessments involving numerical measurements and analysis approaches”. Using a quantitative approach enabled the researcher to address the research problem through the quantitative results on the implementation of RL best practices in the FMCG retail industry that can better assist managers, supervisors, workers, and consumers in Pretoria to gain firm competitiveness through enhancing customer satisfaction.

## Sampling Design

The population for this study included FMCG retailers and consumers in Pretoria. This consisted of retail stores, such as Woolworths, Pick n Pay stores, Checkers, Spar, and Boxer stores because they are some of the biggest retailers involved in the reversal of FMCG. This population was inclusive of logistics managers/customer care managers, retail store managers, supervisors, third-party RL service providers, and shoppers or consumers of the FMCG. Any shoppers/ customers above the age of 18 in Pretoria, SA, formed part of the targeted population in this study. A non-probability purposive sampling method was employed to enrol the respondents since the researcher had a specific purpose in mind which was to examine the RL best practices for FMCG retailers in Pretoria. Additionally, the purposive sampling method was employed because the sampling population was to be selected on purpose. The researcher recruited the FMCG retailers through the retailer’s database and sent out personal emails with the link to

the required personnel who deals with RL. A link was further provided to consumers through social media platforms, such as emails and LinkedIn. The retailers and consumers addressed issues relating to the research objectives and questions and further provided information-rich cases. It proved difficult to track the number of logistics managers/customer care managers, retail store managers, supervisors, third-party RL service providers, and shoppers in Pretoria because of Covid-19. However, since the researcher used purposive sampling, a large number of completed questionnaires were obtained and all the targeted respondents in Pretoria, SA, had some degree of chance to be included in the sample of data collection.

The total population for this study was not known and therefore the scholar-practitioner determined the sample size of 520 respondents which comprised 500 FMCG consumers and 20 respondents from the FMCG retail employees was sufficient. This is because Gay, Mills and Airasian (2009), opine that where a population size ( $N$ )= 5000 or more, the population size is irrelevant, and therefore a sample size of 400 will suffice. Therefore, as per Gay *et al.* (2009), the sample size of 520 was sufficient.

## Data Collection and Analysis

Data collection was done through two closed-ended questionnaires. The questionnaires were converted into SurveyMonkey web-based research platform questionnaires and one questionnaire was used to collect data from the FMCG consumers while the other questionnaire was used by retailers because it is less expensive. The questionnaire consisted of a nominal scale based on the demographic information of the respondents, as well as multi-term measures on the RL best practices, and these measures were anchored on a five-point Likert ordinal scale. The questionnaire items were adapted from previous questions from other researchers and literature in this field to also ensure validity. The link to the participants was distributed through email, LinkedIn, and WhatsApp social media platforms. This allowed the researcher to gather data from a large group of FMCG customers and retailers while ensuring the safety of both the researcher and respondents given Covid-19.

The Statistical Package for the Social Sciences (SPSS) version 27 was employed to perform descriptive analysis on demographic information and RL best practices. The reliability test was also performed in SPSS version 27. Furthermore, the study conducted the confirmatory factor analysis (CFA), which confirmed already existing and tested questionnaire items, adopted and adapted from previous studies. Furthermore, frequency tables, diagrams, and charts were used to discuss the results (Bryman Bell, Hirschsohn, Dos Santos, Du Toit, Masenge, Van Aardt & Wagner, 2017).

## Data Quality Control

The researcher received ethical clearance to conduct the study (ethical clearance reference number: H21-BES-LOG-050) and conducted the study in an ethical manner. Also, a Cronbach's alpha coefficient test performed in SPSS version 27 was used to test reliability. To ensure the validity of the research questionnaire, the researcher conducted a pilot test to test the data collection instrument which measured face and content validity.

# RESULTS AND FINDINGS

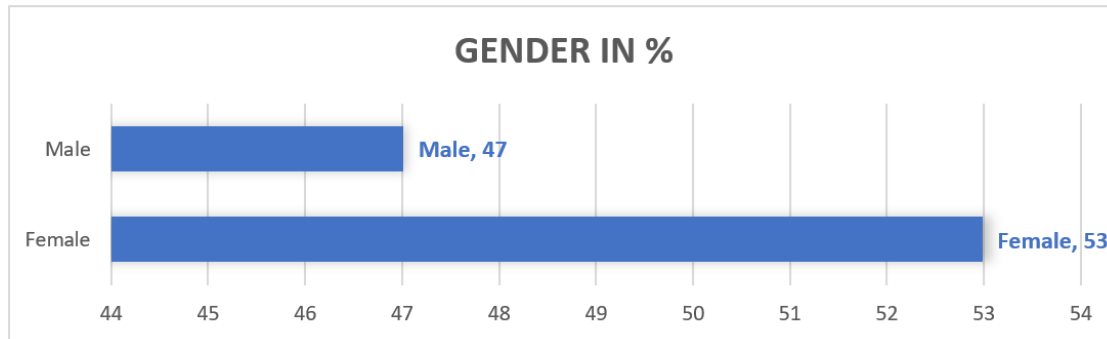
Out of the 520 (500 for the customer survey and 20 for the retailers' survey) initial targeted sample size, a total of 418 questionnaires (402 for the customer survey and 16 for the retailer's survey) were completed in full, thus yielding an 80.38% response rate. Mugenda and Mugenda (2003), opine that a 70% and above response rate is very good. Thus, based on this statement, the 80.38% response rate obtained in this current study is very good. The current study sought to examine the RL best practices in the fast-moving consumer goods industries, which also meant identifying the RL best practices implemented by the FMCG retail industry. The RL best practices are some of the most essential practices that firms follow towards achieving success of their firms. As stated previously in the literature review Jindal and Sangwan (2015) pointed out that RL best practices have been receiving increased attention in developing countries due to pressure from rigid environmental regulations, increasing environmental concerns of society, and the need to enjoy cost reduction benefits. The next sub-section discusses the results of the demographic information of the customers.



## Demographic information on customers

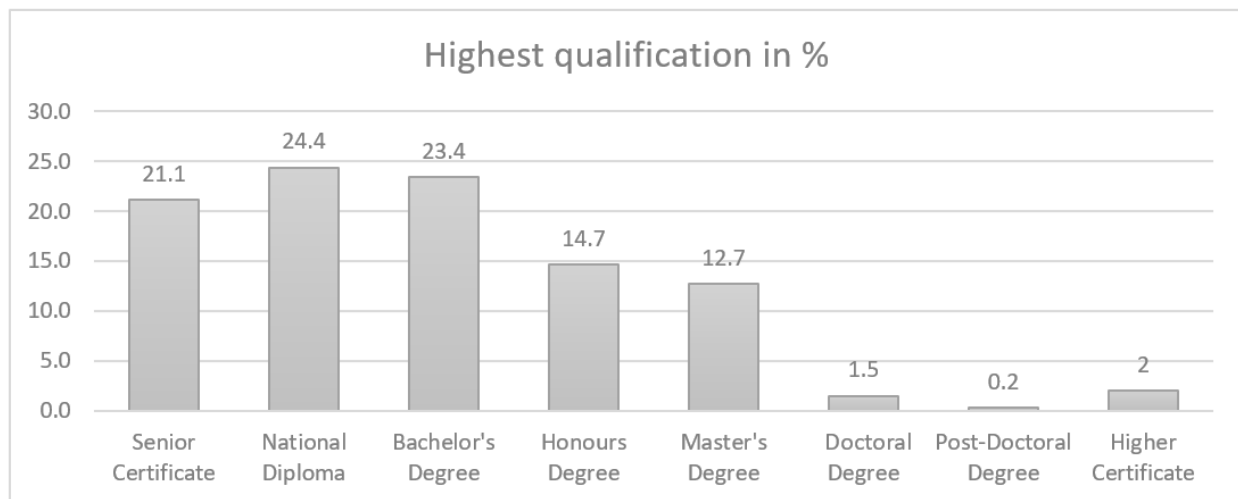
The study sought to gain insight into the surveyed customers' characteristics. Lakshmi, Niharika and Lahari (2017), explain that one of the major factors in purchasing behaviour is gender. As shown in Figure 1 below, female respondents were more than male respondents, and this could be because generally, females do more shopping than males.

Figure 1: Gender



According to the results in Figure 1, more than half of the surveyed respondents (53%) in this study were female and 47% were male. This is because females find pleasure and satisfaction when shopping (Greeshma, 2016). From these respondents, the majority of the respondents were between the ages of 18 and 30 years, which represents 47% of the respondents. This is mostly composed of youth. This is followed by respondents aged between 31 to 40 years (39%), while the remaining 14% was represented by respondents aged between 41 and 65 years. The reason for the decline in percentage for the older generation could be because of Covid-19, e-retailing, and because the youth could be buying for the older generation.

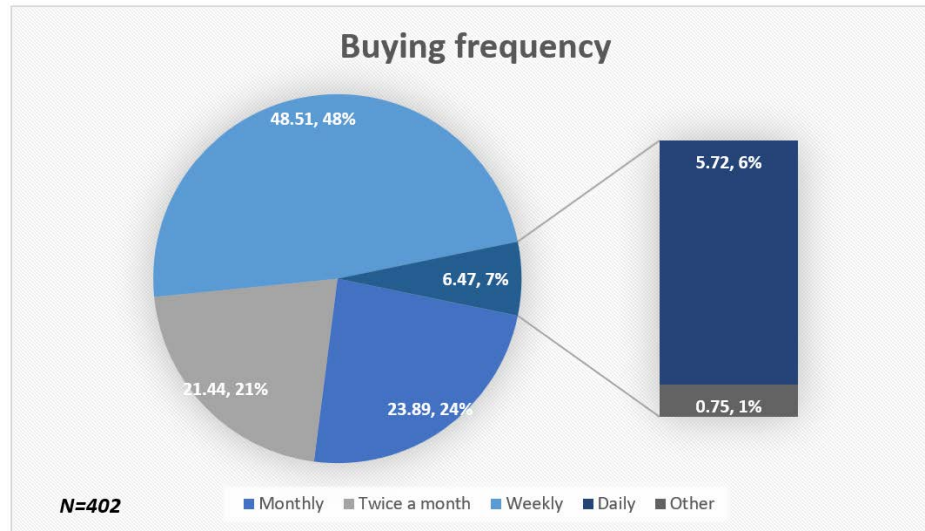
Figure 2: Highest qualification



As can be seen from the above results, a majority of the surveyed respondents in this current study had post-matric qualifications. As depicted in Figure 2 above, 24.39% of the surveyed customers held National Diplomas, followed by 23.38% with Bachelor's degrees, 21.1% of the respondents had a senior certificate, and 14.68% of the respondents held an honours degree. Only 12.69% of the respondents held a master's degree, with only 1.50% of the respondents having a doctoral degree, and 0.25% holding a post-doctoral qualification. Therefore, the remaining 1.99% belonged to the category *other*. Respondents in this category indicated that they had a higher certificate, and or advanced diploma.

Other descriptive questions were undertaken to understand the buying frequency of customers in this study and their understanding of RL. The results are illustrated in Figure 3 below. According to Figure 3, the majority of the respondents, which represented 48.51%, bought FMCG on a weekly basis from either Pick n Pay, Woolworths, Checkers, Spar, Boxer, and Makro, amongst others. This could be because the majority of the respondents, 47%+, were the youth who could be buying fresh produce because they are more health conscious. This is followed by 23.89% of the respondents buying on a monthly basis, and 21.44% of the respondents buying twice a month.

**Figure 3: Buying Frequency**



Moreover, the results reveal that 5.72% of the respondents bought FMCG on a daily basis, and 0.75% bought it once in a while, thrice a month, and once in six months (categorised under other). These results enabled the researcher to understand the profile of the respondents. The next section discusses the demographic information on retailers.

## Demographic Information on Retailers

The demographic information was an important tool in assisting the researcher to establish background information to further conceptualise and gain an understanding of the respondents' characteristics. The demographic results included gender, the highest level of education, job title, and work experience. Frequency tables were used to determine the demographic profile of the surveyed respondents from the retail firms. These are summarised in Table 1 below. The findings in Table 1 indicate that the FMCG retail industry in Pretoria is male-dominated (62.50%), while the females only constituted 37.50%. These findings indicate that women still lag behind men in logistics-related managerial jobs in the retail industry. The results are consistent with those of Meyer, Niemann, Mackenzie and Lombaard (2017) in whose study females constituted 33.33% of the large grocery retailers in SA. These results are concerning because the majority of the population in SA are women.

The findings in Table 1 further indicate that all the surveyed respondents in the study have formal qualifications. Moreover, the results also reveal that the majority of respondents (50%) have a National Diploma, while 37.50% of the respondents have a Bachelor's, Honours, and or Master's Degree. A total of 12.50% of the respondents indicated that they have a Senior Certificate. The high levels of qualifications among the retail staff meant that the surveyed respondents were qualified to answer the highly technical questions on RL asked in this study's survey. Although the surveyed respondents had a post-matric qualification, this does not indicate whether a respondent's schooling is in line with SC or logistics. The significance of SC or logistics education and education, in general, should not be disregarded because it can contribute to the success of retailers.

**Table 1: Demographic characteristics of the retail respondents**

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>	<b>Cumulative %</b>
<b>Gender</b>	Female	6	37.50	37.50
	Male	10	62.50	<b>100</b>
	<b>Total</b>	<b>16</b>	<b>100</b>	
<b>Highest level of qualification</b>	Senior Certificate	2	12.50	12.50
	National Diploma	8	50.00	62.50
	Bachelor's Degree	2	12.50	75
	Honours Degree	2	12.50	87.50
	Master's Degree	2	12.50	<b>100</b>
	<b>Total</b>	<b>16</b>	<b>100</b>	
<b>Job title</b>	Store manager	3	18.75	18.75
	Logistics/Customer care manager	2	12.50	31.25
	Supervisor	2	12.50	43.75
	Procurement manager	3	18.75	62.5
	Third-party RL personnel	1	6.25	68.75
	Other	5	31.25	<b>100</b>
	<b>Total</b>	<b>16</b>	<b>100</b>	
<b>Experience in current position</b>	2 to 5 years	3	18.75	18.75
	6 to 15 years	8	50.00	68.75
	16 to 21 years	2	12.50	81.25
	22 or more years	3	18.75	<b>100</b>
	<b>Total</b>	<b>16</b>	<b>100</b>	

The current study also sought to gain further insight into the job positions held by the respondents, and the results indicate that the majority of the respondents were store managers and procurement managers (18.75%), 12.5% were either logistics or customer care managers in retail firms, 12.5% of the respondents were supervisors of their retail firms, and only 6.25% of them were third-party RL personnel. The results further showed that the remaining 31.25% worked in the human resource department as administrative clerks and finance clerks. However, the results clearly indicate that 68.75% of the respondents were the targeted respondents and the researcher could assume that these respondents are able to understand SC, logistics, and RL.

These respondents further indicated the experience they had in their respective current position, and this was shown in Table 1. The majority of the respondents (50%) indicated that they had been in their respective job positions for six to 15 years. This was followed by 18.75% of the respondents who indicated that they had two to five years of experience in their positions, and another 18.75% who had been in their respective position for more than 22 years. A minority (12.50%) of respondents indicated that they had been in their job positions for 16 to 21 years. This revealed that the majority of the respondents had more than six years of work experience in their current positions and were more informed about RL's best practices implementation in their firms. This will further be discussed and tabulated in the next section.

## **RL best practices**

This section will be discussing the results tabulated in Table 2 from the survey questions on the level of implementation of the RL best practices by FMCG retail firms in Pretoria, SA.

**Table 2: Reverse logistics best practices**

Centralised return centres for returned products			
	Percentage	Mean	Std.Dev
Not implemented	6.3	3.19	0.911
Less implemented	12.5		
Moderately implemented	37.5		
Highly implemented	43.8		
Total	100		
Gatekeeping function that deals with returned products			
Less implemented	18.8	3.38	0.957
Moderately implemented	37.5		
Highly implemented	31.3		
Extremely implemented	12.5		
Total	100		
Collaboration with other FMCG retailers when transporting product waste to their final destination			
Not implemented	6.3	3.13	1.147
Less implemented	25		
Moderately implemented	31.3		
Highly implemented	25		
Extremely implemented	12.5		
Total	100		
Collaboration with consumers for effective recycling of used up products			
Not implemented	6.3	2.81	1.047
Less implemented	37.5		
Moderately implemented	31.3		
Highly implemented	18.8		
Extremely implemented	6.3		
Total	100		
Collaboration with suppliers for effective remanufacturing of our products that have reached their end of shelf life			
Not implemented	6.3	3.50	1.155
Less implemented	18.8		
Moderately implemented	6.3		
Highly implemented	56.3		
Extremely implemented	12.5		
Total	100		
Information sharing on products that have reached their end of life with our supply chain partners, to ensure responsibility towards the environment from everyone			
Less implemented	12.5	3.69	0.946
Moderately implemented	25		
Highly implemented	43.8		
Extremely implemented	18.8		
Total	100		
The use of advanced technologies and systems such as returns software, state-of-the-art technology, and RL information management systems, to enable the effective implementation of RL practices in the supply chain			
Not implemented	6.3	3.44	0.892
Less implemented	6.3		
Moderately implemented	25		
Highly implemented	62.5		
Total	100		

The use of third parties to effectively manage RL activities			
Not implemented	6.3	3.50	0.966
Moderately implemented	43.8		
Highly implemented	37.5		
Extremely implemented	12.5		
Total	100		
Mean: 3.33			
Std.Dev: 0.645			

As shown by the overall mean (M=3.33) presented in Table 2 above, a majority of the respondents in this study indicated that RL best practices are moderately implemented in their respective FMCG retail firms. It is also evident from Table 2 that 43.8% of the respondents indicated that they highly implement centralised returns centres for returned products. Centralised returns centres have become a common solution for providing centralised sorting and return disposition services for firms (Saikiah *et al.*, 2016:9). More so, 37.5% of the respondents revealed that their FMCG retail firms moderately implement a gatekeeping function that deals with returned products. Retail firms should highly implement the gatekeeping function because it “reduces the cost of products being returned to an inappropriate destination” (Kussing & Pienaar, 2016:501). Furthermore, 31.3% of the surveyed retail managers stated that their FMCG retail firms moderately implement collaboration with other FMCG retailers when transporting product waste to their final destination.

The results in the above table also show that the surveyed FMCG retailers collaborate less with their customers for the effective recycling of used products. Moreover, 56.3% of the respondents stated that their retail firms highly implement collaboration with suppliers for effective remanufacturing of their retail stores’ products once they have reached their end of shelf life. Also, 43.8% of the respondents stated that their FMCG retail firms highly implement information sharing with their SC partners. Information sharing in RL is important because it enables firms to collaborate effectively and efficiently with their supply chain partners in ways that generate RL-related value advantages, which will in turn improve the sustainable competitiveness and performance of the firm and its entire supply chain.

The results in Table 2 further indicate that advanced technology is highly implemented in most of the surveyed FMCG retail firms (62.5%). The respondents also said they believe that their FMCG retail firms have advanced in the use of technology systems, such as returns software, state-of-the-art technology, and RL information management systems are employed to allow the effective implementation of RL practices. This is good because excellent technological and information systems can help track and trace returned products and are useful when implementing standard RL activities (Samarasinhe & Wang, 2019).

Lastly, 43.8% of the respondents indicated that the use of third parties to effectively manage RL activities is less implemented in their FMCG retail firms. Highly implementing the use of 3PL RL service providers can enable FMCG retail firms to focus on their core business functions and enhance the use of advanced technology in a cost-efficient manner. This can also lead to inventory management improvement, increased visibility, cost reduction, and risk management enhancement, which also leads to greater controls over inspecting, testing, recovering, and disposing of returned products, ultimately improving the firm’s competitiveness of these retail firms (Robinson, 2016).

## Reliability

The reliability of the scale results is presented in this section. The tests were conducted to measure if the results are consistent and whether the concepts that should be related are indeed related. According to Taherdoost (2016), reliability is the extent to which the measurement of a phenomenon provides stable and consistent results. This is further supported by Pietersen and Maree (2020) who postulate that reliability is the extent to which a measuring instrument is consistent and repeatable. Field (2013) opines that Cronbach’s alpha and composite reliability are commonly employed to measure the scale’s reliability. The required cut-off value of both Cronbach’s alpha and composite reliability is 0.8 and above (Bryman *et al.*, 2017). However, Malhotra, Nunan and Birks (2017) suggest that 0.7 is acceptable, and 0.6 is sometimes also acceptable. The results suggested that Cronbach’s alpha ranged from 0.820 to 0.931, signifying an overall good level of internal consistency. More so, these Cronbach’s alpha results are

supported by composite reliability coefficients which extended from 0.821 to 0.929. Based on both Cronbach's alpha and the composite reliability, the constructs involved in this study are considered reliable.

## **IMPLICATIONS**

Upon completion of this research, this study indubitably contributed significantly to the theory development of future studies. The contributions of this study are as follows; (i) The study provided insight into previous research on RL best practices and the FMCG industry in SA. (ii) The study identified the RL best practices through a literature review for successful RL implementation that can lead a firm towards achieving the firm's competitiveness. (iii) The field of RL is dynamic and there is a dearth of research dealing with RL in the FMCG sector in SA, therefore, this study will play an essential role in the field by providing new insights and contributing to the body of knowledge. (iv) Many individuals can make a living through RL by recycling and selling recycled products from waste delivery. (v) It will also lead to an effective RL management system which will lead to the achievement of many goals, such as meeting the environmental protocols, increasing customer satisfaction, the decrease of operational costs, and the cumulative value of the brand. This current study will therefore unquestionably assist the FMCG retail industry, managers, and practitioners in the successful implementation of RL best practices – by enabling the FMCG retail managers in identifying the RL best practices which they need towards achieving the firm's competitiveness.

As mentioned previously, there is a dearth of literature on RL best practices in the FMCG retail industry. Undeniably, this current study contributes significantly to the literature for future studies. This study has thus created the theoretical groundwork for future studies in this country and globally. Thus, this study recommends the implementation and improvement of RL best practices in the FMCG retailers' industry to achieve the firm's competitiveness. However, they face RL challenges in effectively implementing RL best practices toward achieving the firm's competitiveness.

A critical part of this research was to recognise and highlight the RL best practices to the FMCG retail industry, managers, and 3PL service providers. Through the findings in this study, the FMCG managers can scan the FMCG retailers' environment by conducting a swot analysis that can best assist them in knowing their strengths, weaknesses, opportunities available (such as 4IR) as well as threats (such as Covid-19). Moreover, the managers should, conduct a risk assessment and manage it by implementing the RL best practices. Also, the FMCG retail managers can plan, prioritise & implement and improve RL best practices to achieve a competitive advantage. Finally, they should monitor, evaluate & improve for RL best practices implementation success.

## **RECOMMENDATIONS**

The recommendations of this study are expected to advise the FMCG retail firms of ways to improve their RL performance to achieve firm competitiveness. This was only plausible after the completion of this study. Following the results of this study, it is recommended that the FMCG retail industry increase customer awareness of RL best practices implemented by retail firms, and train and educate employees on RL and RL best practices. Also, they should enhance RL best practices to improve RL implementation success and enforce formal policies. It is thus recommended that FMCG retailers globally enforce formal policies through harnessing RL practices to achieve these benefits that lead to the firm's competitiveness.

## **LIMITATIONS AND FUTURE RESEARCH**

As prior stated, RL has been studied all over the world by many researchers; nevertheless, there's a dearth of literature on RL best practices in the FMCG retail industry in Pretoria, SA. Therefore, it proved difficult but not impossible for the researcher to find relevant literature. Thus, this current study undeniably contributes to both the FMCG retailers and the development of theory. The RL best practices can be used for RL implementation and improvement in other sectors globally. However, like any other study, this study is not without limitations. This study was conducted in Pretoria, SA, and could not cover SA as a whole due to time constraints. Hence, future studies may be carried out in other countries, provinces, and sectors. Similarly, further research can be conducted to improve the measurement of RL best practices.

This study employed a quantitative research method due to the 2020 outbreak of the Covid-19 pandemic, therefore the study only collected data through an online survey to ensure the safety of both the researcher and the respondents. That also became more challenging in July 2021 when the Protection of Personal Information (POPI) Act was implemented. Thus, future studies can consider using other research designs and methods of collecting data such as a qualitative research method and or a mixed method to get more insights on RL best practices that can lead to the firm's competitiveness to compare the results. Moreover, since this study only focused on RL best practices. Future research can also investigate other variables that can lead to the firm's competitiveness. Future studies can also increase the sample size when assessing the influence of RL best practices in the FMCG retail industry.

## CONCLUSIONS

The FMCG retail sector has been prone to a lot of RL due to recalls and to a large extent waste management. The importance of implementing RL best practices and improving them has been highlighted in this study, as well as the benefits of implementation which will lead to the achievement of the goals set and ultimately the firm's competitiveness. Thus, this study significantly to the literature for future studies. The primary objective, which was examining RL best practices in the FMCG industry was achieved and was the key contribution. Moreover, the achievement of the secondary objective made it possible to achieve the primary objective of the study. The study also discussed the findings that revealed that RL best practices are moderately implemented. The contributions from this study were also discussed. Also, the recommendations to the FMCG retail sector, implications, limitations, as well as future research for scholars was made. The study likewise encourages future researchers to investigate RL best practices in other countries, provinces, and sectors. Additionally, future researchers can employ alternative research designs and methods, such as qualitative and mixed-methods, as well as the use of probability methods. This study will have positive implications for the FMCG retail sector and theory.

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# IS HUAWEI THE CHINESE “TROJAN HORSE” IN THE US-CHINA POLITICAL TENSIONS?

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## ABSTRACT

*For more than a decade, Huawei, one of the largest providers of 5G equipment, has been caught up in a showdown between western allies headed by the US and the Chinese government. The United States, Australia, Japan etc have effectively banned Huawei from building their 5G networks claiming that Huawei is a threat to their national security. Huawei and other Chinese telecommunication providers are effectively blocked out these markets. The company has pursued strategies relying more on friendly markets and continued to develop its technology. Behind this tension is the fear of a rising China as result of China's economic prowess challenging the US economic and political supremacy like never before. This paper seeks to address this tension and ascertain the possible scenarios occurring and what will be the consequences of these tensions for Huawei, China and the West.*

**Keywords:** China, Huawei, US, technology, ideology, trade restrictions, telecommunications.

## INTRODUCTION

Huawei, the telecommunications giant was born in 1987 by founder Ren Zhengfei in Shenzhen, China with just fourteen employees. Ren worked in the civil engineering sector of PLA (People's Liberation Army), the Chinese military, in his earlier career and reached the rank of colonel. For conscripts this military experience was common. During his years in the army, Ren also worked on bridge building and civil constructions but ironically not telecoms. After the disbandment of PLA, Ren moved to the Shenzhen South Sea Oil Corporation (SSSOC), and in the late 1980s he left SSSOC to start Huawei Technologies (Ahrens 2013). It is this association which is the purported evidence of the link between Huawei and the Chinese military.

Huawei was primarily focused internally and only 1 per cent of its revenue was generated outside of China. In 2019 that figure exceeded 60 per cent (Yedrup 2019). Ren started Huawei with a model that all employees are shareholders which is now being referred to as the Huawei model. Ren himself held only 1.3 per cent of the shares however was hugely influential in the company. By 2023 the 180,000 employees hold the rest of the shares. Ren was aware that his previous association with the PLA could be interpreted as being close to the government. In early 2019 in a revealing interview in a round table to global media companies, he openly denied that the Chinese government had asked for help to spy using the firm's technology and went on to say "I love my country, I support the Communist Party. But I will not do anything to harm the world. I don't see a close connection between my personal political beliefs and the businesses of Huawei" (Magee 2019).

## EARLY ACCUSATIONS AGAINST HUAWEI

Huawei made significant advances from its early location in the Special Economic Zone of Shenzhen. Throughout the 1990s Huawei grew its commercial business across China (Chung & Mascitelli 2014). In the early years, Huawei engaged in reverse engineering in the telecommunications technology race by copying Cisco, Fujitsu and others to the extent that it was also known as the Cisco of China (Buderi & Huang 2006). In 1992, the Chinese government urged

China to become a leading player in global telecommunications. Huawei progressed from its position and sought to innovate itself investing profits into research and development. Huawei soon expanded to the foreign markets and was extended a US\$10 billion line of credit by the China Development Bank and a \$US600 million loan from China's Export-Import Bank (Wesley 2011). By 2005 Huawei's global sales had outperformed internal China sales making it one of the few telecommunications' multinational firms in China. This strong international presence continued and by 2012 two-thirds of Huawei's business was located outside of China, making Huawei the world's largest telecoms vendor by revenue. In 2018 Huawei surpassed Sweden's Ericsson AB to become the world's largest telecom equipment supplier, despite moves by the U.S. and Australia to limit official use of products from the Chinese tech giant (Tan 2018).

## **ORIGIN OF THE TENSIONS AND ALLEGATIONS AGAINST HUAWEI**

The concern and the pretence of a security threat felt by some western nations is largely due to the perceived "closeness" of Huawei to the Chinese State and leadership. The Huawei and ZTE (another large Chinese telecommunications company) produce lower cost telecommunication products which were being purchased across the world. The Huawei question has risen to become a global debate especially amongst some western nations with some falling in line with excluding Huawei while others proceeding with involving this Chinese company in their telecommunications rollout.

In 2012 a U.S. House Permanent Select Committee on Intelligence report concluded that using equipment made by Huawei and ZTE could "undermine core U.S. national security interests." In 2018, six U.S. intelligence chiefs, including the directors of the CIA and FBI, cautioned Americans against using Huawei products, warning that the company could conduct "undetected espionage."

Blocking Huawei's access to the US contracts took a notch up under Obama and was continued by the arrival of Trump in the White House in 2017. Prosecutors in New York had been investigating Huawei for the potential violation of US sanctions on Iran and concerned Huawei allegedly shipping products that originated in the USA to Iran, and therefore "a violation of US export and sanctions laws". In late 2018, Huawei's Chief Financial Officer (CFO) Meng Wanzhou, daughter of founder Ren Zhengfei, was arrested by the Canadian authority and she was threatened with extradition to the USA under the pretence of sanctions violations pertaining to Iran. The accusations appear to relate to Meng serving on the board of a Hong Kong business Skycom which is alleged to have worked with Iran between 2009 and 2014 (Corera 2021).

The arrest was happening ironically at the same moment that President Xi and President Trump were attending the G20 meeting in Argentina where they were agreeing on postponing a US-China trade war to help de-escalate the growing tensions between these two countries. In September 2021 Meng Wanzhou returned to China after nearly 3 years of home detention in Canada (Reuters, 2023). The US Department of Justice (DOJ) had reached a deferred prosecution agreement. This means that DOJ would hold off prosecuting on the condition that Meng complies with conditions set by court, the case would eventually be dropped. Canadian prosecutors had already withdrawn their extradition efforts and she was discharged from detention (BBC, 2021). The deal included releasing Canadians who had been arrested. Despite this "deal" Huawei would be placed on a US trade blacklist. As one observer noted:

*"It is natural to assume that the detentions and restrictions on Huawei's use in core infrastructure are due to the rupture in US-China trade relations. However, these actions can best be understood through the prism of two clashing meta-trends: hi-tech's strategic importance across the realms of defence, commerce and social organisation under the leadership of the United States, and China's emergence as a rising military power under the auspices of the Communist Party" (Friedlander 2018).*

## **CAUSE OF THE TENSION BETWEEN CHINA AND THE US**

Much literature has addressed the rise of China as the inescapable cause for the ideological and political tension and the US strategic mistrust it has for China. Shambaugh, along-time observer on the rise of China, has stated China is seen as a major competitive player alongside traditional western powers:

*“It’s mainly a competitive relationship [between China and the west] in all areas, economic, strategic, political, ideological even cultural.... So this is a new characteristic of the relationship and we have to get used to the fact that we are going to get a tense relationship, we cannot continue to naively hope that the two sides will love each other and get along” (Yan 2012).*

Former Trump national security advisor John Bolton, also national security advisor to George W. Bush, in March 2019 issued further warnings on Huawei about “Manchurian” chips in Huawei technology which can be used for espionage (Mitchell 2019). What further inflamed the US-China tensions, though momentarily sidelining the specific case of Huawei, was the COVID pandemic and the dependence of western medical systems on Chinese equipment and supplies. As part of the ongoing standoff between the US and China, in early 2019 Democrat and Republican congressman introduced bills that would require the President to ban the export of US components to any Chinese telecommunications company that violates US sanctions or export control laws (Mitchel 2019).

The tension has increased in the last 12 months over Ukraine, Taiwan and the more recent incident of Chinese weather balloons in US air space. One most discernible change has been the language of hostility and the use of the word “war” in the exchange on US-China. Other nations have joined the US in blocking Huawei from their telecommunication platforms including the UK, Sweden, Australia and Japan, while other countries such as France and India have adopted measures stopping short of an outright ban (Corera 2021). Not surprisingly though in less hostile language, European Union (EU)’s views towards China have also become tenser. The EUs External Action Service has revealed: “The EU continues to deal with China simultaneously as a partner for cooperation and negotiation, an economic competitor and a systemic rival” (EEAS 2023).

## US SANCTIONS AND SECURITY FEARS

The United States and several other countries have asserted that Huawei threatens their national security, suggesting it has violated international sanctions and stolen intellectual property, and that it could commit cyber espionage. U.S. intelligence agencies allege that the Chinese government could use Huawei to spy. According to Berman et al:

*“Congress began receiving warnings about Huawei as early as 2012, when a U.S. House Permanent Select Committee on Intelligence report concluded that using equipment made by Huawei and ZTE, another Chinese telecommunications company, could undermine core U.S. national security interests. (2023)”*

In 2018, the concern progressed to involving six U.S. intelligence chiefs, including the directors of the CIA and FBI, cautioning the US against using Huawei products, warning that the company could conduct ‘undetected espionage’ (Berman et al 2023).

Central to the US concern, besides the ideological and power factors, Berman et al (2023) suggested that “5G [technology] is a different type of risk versus 4G or 3G. It’s much harder to separate the core from the periphery... Once you have those risks, you have to trust the company much more. But it is difficult to trust Huawei, given the relationship between companies and the Communist Party”.

Officials, primarily in the United States but also in Australia and several other countries, point to vague Chinese intelligence laws that could be used to force Huawei to hand over data to the Chinese government. There are also concerns that Huawei’s 5G infrastructure could contain backdoors giving the Chinese government access to its inner workings and allowing Beijing to attack communications networks and public utilities. The much-touted concern from the US remains that Huawei would be forced by the Chinese government to spy, sabotage, or take other actions on its behalf. Washington has imposed sweeping restrictions on Huawei and is pressuring its allies to do the same as part of a larger crackdown on Chinese technology companies. Many observers note that these tensions between Washington and Beijing over technology could lead to a “digital iron curtain” (Berman et al 2023), which would compel foreign governments to decide between doing business with the United States or with China.

## USING EXPORT CONTROLS TO STARVE CHINA OF TECHNOLOGY

In 2019 US officials placed Huawei on a trade blacklist to restrict US suppliers from shipping goods and technology to the company unless they were granted licenses. Some US companies, for instance, Qualcomm Inc in 2020 received permission to sell 4G smartphone chips to Huawei. In January 2023 as a further tightening of anti-China measures the US stopped all approvals for licenses for US companies to export most items to Huawei (Freifeld et al 2023).

US officials continued to tighten the controls to cut off Huawei's ability to buy or design the semiconductor chips that drive many of its products (Freifeld et al 2023). Semiconductor chips are omnipresent and essential components of digital and digital products, devices and infrastructure from smartphones and automobiles to healthcare, energy, communications and industrial equipment (Businesswire 2023). The shortage was initially induced by the U.S. – China trade war under the Trump administration in 2018. The first round of U.S. tariffs hit Chinese imports in 2018 on raw materials. The continuation of tightening of trade restrictions plus Covid left the world with the shortage today which is not easing anytime sooner (James 2023). This has forced China's hand and lead to the development of their own semiconductor manufacturing ecosystem by certainly Huawei and the Chinese government (Ji 2023).

The world semiconductor chip shortage is one major sector which has been impacted by the trade war not just for Huawei but for the world. J.P. Morgan Research as well as other industry observers predict such shortage is unlikely to ease towards the end of 2024 (J.P. Morgan Research 2022).

## HUAWEI'S SURVIVAL IN THE POST US SANCTION AND POST-PANDEMIC ERA

August 2022, Ren warned the company that as a result of the US sanctions, Covid and a declining global and Chinese economy, survival of the multinational was on the agenda. He warned that the “the chill will be felt by everyone” (Ren cited in The Guardian 2022). With the pandemic, the Ukraine war and a “continued blockade” of Huawei, these events will hurt the viability of the company and that “the next decade will be a very painful historical period, as the global economy continues to decline” (Davidson 2022). In his own words, Ren observes:

*“Huawei must reduce any overly optimistic expectations for the future and until 2023 or even 2025, we must make survival the most important guideline, and not only survive but survive with quality” (Ren cited in The Guardian 2022).*

One of the strategies Huawei used was to step up development of network technology for autos, hospitals, mines and manufacturing. It says that focusing on these sectors Huawei is less vulnerable in these sectors to U.S. sanctions. By 2022, Eric Wu, a Huawei senior manager, indicated that “the decline in our device business continued to slow down, and our ICT infrastructure business maintained steady growth” (The Independent 2022). Huawei's auto venture has played a role in five models released by three Chinese automakers. Huawei supplies components and software for navigation, dashboard displays, managing vehicle systems and other services.

## FREE TRADE, EXPORT CONTROLS, AND ECONOMIC BLACKMAIL

The strategy being employed by the US and some of its allies is now turning to economic strategies to isolate and contain Huawei. During the Presidential debates between Obama and Romney in their exchange baiting of who was tougher in dealing with China. What was emerging was the expediency of free trade in the US discourse. They eloquently stated: “Both candidates are retreating from free trade in the name of free trade.” (Caldwell 2012).

Another observer of Chinese affairs, Tang makes the consideration that the “the US government's recent indictment on Huawei...[is] using trade sanctions over a Chinese corporation to shape the future of 5G technology?

The nature of this case is not much about bilateral trade disputes but, rather, the intensification of the geopolitics surrounding extraterritorial Internet infrastructure (Tang 2020)".

China did not take kindly to the US move and according to one Chinese spokesperson:

*"goes against the principles of the market economy and rules of international trade and finance, hurts the confidence the international community has in the U.S business environment and is blatant technological hegemony" (Freifeld et al 2023).*

Some experts warn that tensions between Washington and Beijing over technology could lead to a "digital iron curtain," which would compel foreign governments to decide between doing business with the United States or China (Berman et al 2023). A Huawei spokesperson said:

*"We oppose the US Commerce Department's decision to add another 46 Huawei affiliates to the Entity List. It's clear that this decision, made at this particular time, is politically motivated and has nothing to do with national security... These actions violate the basic principles of free market competition. They are in no one's interests, including US companies. Attempts to suppress Huawei's business won't help the United States achieve technological leadership. We call on the US government to put an end to this unjust treatment and remove Huawei from the Entity List (Scroton 2019)."*

## **THE IDEOLOGICAL NEXUS IN THE CURRENT STANDOFF WITH HUAWEI**

China's growth as a multinational has also coincided with the growth of China as a global economic and political power in the last two decades. For the purposes of 4G, followed by the 5G and soon to follow the 6G rollout, the music remains the same. Huawei must be isolated from the telecommunications infrastructures on the grounds of "national security".

The rise of China since 2001 with the added dimensions of the Belt and Road initiative as well as the COVID economic impact have all added to an even more pronounced global campaign to shut out Chinese firms and Chinese influence with an even more aggressive anti-China stance on trade. First while Europe tried to compete with China's Belt and Road initiative through its launch of the \$340 billion Global Gateway fund to boost global infrastructure, China has proceeded with its Belt and Road initiative which is inducing numerous governments along the route and outside to subscribe to this infrastructure investment producing large projects and greater connectedness between Asia, Europe and Africa. Second is the fact that the US once the bastion of free trade is resorting to protectionism and not just the Trump "America First" campaign which is unsettling the global trade environment. A third factor is that China has emerged as a global power which a decade ago it was not and possibly in another decade could have a bigger economy than that of the US. Finally, China is economically penetrating the globe including locations which the west has forgotten about and posing scenarios which are unsettling previous security arrangements and the global economic environment.

## **THE HUAWEI RESPONSE TO ITS DETRACTORS**

The much-cited security concerns over these Chinese companies were to some observers, "exaggerated". According to another scholar:

*"... the reaction to Huawei harks back to the fear in the 1980s of Japanese companies that were overtaking the U.S. auto industry and buying up iconic pieces of real estate, such as the Rockefeller building in New York... It was long thought that we were the number-one economy and China just supplied cheap labor... Now it is clear that China has a lot to offer in terms of innovation and industrial policy and state investment, and now people are scared" (Guthrie cited in Kang 2013).*

Huawei has made many gestures to reassure its audience and client governments of its credentials and security record. Besides having employee ownership of its company and having rotating managing directors, it has also been prepared to "...offer complete and unrestricted access to our software source code and equipment" (Lord 2012), Huawei even appointed as its global cyber-security chief, former chief information officer of the British government, John Suffolk (Hall 2011). This approach by Huawei to find reliable representatives of the country who

might be able to quash any concerns about security was adapted across a range of markets. Despite their efforts this strategy did not have its desired effects (Chung & Mascitelli 2014).

In February 2019, pressure was brought to bear on the UK for failing to ban Huawei with the threat of being excluded from the Five Eyes organisation, an Anglophone intelligence alliance comprising Australia, Canada, New Zealand, the UK and the US. The report stated:

*“Worries about security of UK networks following their exposure to Huawei may make the Five Eyes partners, and perhaps others such as France, Germany or Japan, less inclined to co-operate with the UK in the future” (Bourke 2019).*

Contrary to the Five Eye’s position, the rest of the world appeared to hold totally opposite opinions on Huawei and its 5G technology:

*“Even if the US and its allies in the Five Eyes intelligence network (the UK, Australia, Canada and New Zealand) completely opt out of dealing with Huawei, most countries in the world will adopt 5G networks based on Chinese technology” (Mahbubani 2019).*

Perhaps the rest of the world had been blind. After years of pressuring its allies, finally most of them have fallen in line. In line with the rise of China, Huawei has been the innovative public face of the economic rise of China. It is a company that remains at the forefront of change, innovation and possibly able to find technology solutions to the economic sanctions. Despite all of the fears of its closeness to the Communist Party it has always sought to push the technology boundaries and is even smug about its ability to not only beat the west at its own game but provide high level technology solutions.

## CONCLUSION

The sanctions on Huawei raise the ongoing state of affairs in relation to US and China tensions and Huawei is seen as the “trojan Horse” of the Chinese Communist Party. While the Trump approach may have shaken the US global order approach, especially in creating an uncertainty with US allies and rivals, the China tension remains as strong as ever under the stewardship of the Biden Democrat White House. One could suggest that the US-China tension is little different whether a Democrat or Republican occupies the White House as this political reality remains substantially bipartisan.

As the clash between these powers becomes more concrete, more global and regional groupings deliberately isolating Chinese companies, one can only note concern over these developments. Resorting to trade restrictions, export controls and seeking to contain China and Huawei is now an ongoing activity as evidenced by the latest agreement between the US, Japan and the Netherlands on new restrictions on exports of chipmaking tools to China. How Huawei and China respond will be decisive but in the short term there will be an attempt to diversify its technology and its markets as the only course of action it can take. US economic decline as a world power and the rise of China is forcing US allies to take sides and no longer ignore what is at stake by a “business as usual” approach. Whether all countries are prepared to follow this line of reasoning with its consequences still remains to be seen.

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# A CONSTRAINED SOUTH AFRICAN ELECTRICITY SUPPLY CHAIN: WHAT'S NEXT?

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## ABSTRACT

*The South Africa's over-reliance on fossil-fuels for electricity generation, has transformed the nation into a carbon economy, with a heavy carbon footprint, and is among the global top carbon emitters. The aging coal-fired power stations has coincided with the era of deteriorating climate change, while the fossil-fuels are targeted for discontinuation. This study explored the constraints of electricity supply chain that culminated into power outages since 2008 due to perpetual breakdown of the aged coal-fired power stations. The participants in the study were managers from the state-owned entity generating electricity from coal and independent power producers (IPPs) generating electricity from renewable sources of energy. Qualitative research methodology and constructivism research paradigm were pursued, and theories of competitive advantage and sustainable development underpinned the study. The conducted interviews were recorded, transcribed, and the emanating data was interpreted, coded and content analysis used for analysis. The results provided recommendations for urgent need in hiring maintenance expertise for the aged coal-fired power stations, expediting renewable sources of energy development, and reforming national energy policy under "Just Energy Transition" strategy.*

**Keywords:** carbon-emissions, coal, constraint, electricity-supply-chain, renewable-energy, sustainability.

## INTRODUCTION

Energy is the leading driver of global economy, as fossil-fuels has continued to dominate energy provisions since the first industrial revolution, with coal presently contributing 41% of the total global electricity production (World Bank Report, 2021). Coal has remained the primary source of energy in South Africa, contributing over 80% of the country's electricity generation and over 40% of the national liquid-fuels. The commodity use includes electricity generation at coal-fired power stations, as heat generating catalyst in heavy industries, space heating and cooking at homes (DMRE, 2018). The coal use in South Africa is mainly for domestic market that consumes 75% and export market 25%. The country has an estimated 53 billion tons of coal reserves which is estimated to last over 200 years at the current rate of exploitation (Eskom, 2020). Some of the world's largest coal mines and the largest coal terminal in the world at Richards Bay, are found in South Africa (DMRE, 2018).

The south African electricity supply chain has been constrained for nearly two decades due to aging coal-fired power plants and inadequate infrastructure, hitherto without concrete replacement plans implemented (Burkhardt, 2021). This has been exacerbated by poor management in coal logistics and coal plants maintenance, which culminated into regular power outages (Eskom, 2019). The overreliance on coal as a primary source of energy has coincided with the era of climate change or global warming and the global drive towards net-zero emissions by 2050. The climate change phenomenon was accelerated by greenhouse gases emissions from fossil-fuels, with coal combustion at power stations as the major contributor. Thus, the importance of energy provisions cannot be overemphasized, and the perpetual power outages for over a decade point to laxity in electricity policy implementations (SEIFSA, 2022).

## THEORETICAL GROUNDING

The study was grounded in theories of competitive advantage and sustainable development in the exploration of a constrained South African electricity supply chain. Porter's theory of competitive advantage explains that

competitiveness depends on long-run productivity, which in turn, requires a business environment that supports continual innovation in products, processes, and management (Porter, 2008). The theory emphasis on “lower costs and differentiation in providing business the ability to design, produce and market comparable product more efficiently than competitors. The constrained electricity supply chain in South Africa would require similar characteristics to remain competitive and sustainable.

‘Sustainable Development’ was defined in the Brundtland Report in 1987 at the United Nations World Commission on Environment and Development (UNWCED), as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (Brundtland, 1987). In energy perspective, the theory expressed dilemma created by dependence on fossil fuel-based energy sources as it culminated into the prevailing phenomenon of climate change or global warming. Apparently, this is the scenario that has constrained the South African electricity supply chain since 2008 (Eskom, 2019).

## **LITERATURE REVIEW**

The literature covers the background of coal mining and consumption in South Africa, electricity supply chain from coal-based generation, renewable sources of energy, clean coal technologies, and just energy transition.

### **Coal Mining and Consumption**

The bulk of South African coal is produced by five leading multinational companies which together produce 84% of the total coal production in the country. Those companies are Anglo Coal, Sasol, BHP Billiton, Glencore, and Exxaro. The remaining 16% is produced by junior miners, who are affiliated to the five multinationals (Oberholzer, 2014). The distribution of coal consumption is 75% for domestic market, and 25% for export. The electricity company of South Africa (Eskom) consumes 70% of the total domestic consumption for the generation of electricity, while South African synthetic oil company (Sasol) consumes 20% to produce liquid fuels and petrochemicals (Energy Research Centre, 2018).

### **Electricity Generation by Eskom from Coal**

Most of the coal-fired power stations are in Mpumalanga region, where most of the active coal mines are situated, and generate over 80% of total electricity production in the country. These power stations operate under ‘tied-colliery’ contracts, through which a designated coal mine supplies a specific power station through conveyor belts, for the ease of transportation costs. Presently, 10 out of a total of 15 power stations are approaching end of life, and they are designated for decommissioning by 2030 (Eskom, 2018). Electricity generation from coal produce waste in form of ash, gaseous and particulate emissions. The utility aims to align with the Paris Agreement on climate change by using cleaner energy sources and reducing its carbon footprint (DOE, 2017). Consequently, the government will streamline electricity supply chain by restructuring Eskom into three electricity entities comprising of generation, transmission, and distribution (BusinessTech, 2019).

### **Clean Coal Technology (Medupi and Kusile Power Stations)**

The two new coal-fired power stations - Medupi and Kusile utilize new coal technologies of super-critical and ultra-super-critical respectively, that reduce carbon emissions by 50% compared to a similar conventional coal-fired power station model. Both power stations were designed with generation capacity of about 9 600 MW, despite their inability to meet the capacity due to some technical issues discovered after commissioning (Eskom, 2018). Most of the existing coal-fired power stations are retrofitted with bag filters to control particulate and carbon emissions (IEA, 2014). By 2030, ten out of Eskom’s fifteen coal-fired power stations will be decommissioned, paving way for clean coal technologies, gas-fired power stations, and renewable sources of energy such as wind and solar (DOE, 2017).

### **Just Energy Transition (JET) in South Africa**

The South Africa’s Just Energy Transition (JET) plan paves for sustainable and fair transition away from coal and towards cleaner form of energy, that would build a foundation of a strong green economy (COP 26, 2021). JET is a

20-year decarbonization vehicle, that would transform from coal to renewable sources of energy, such as wind and solar power, green hydrogen, and electric vehicle (EV), and has a start-up pledge of USD 8.5 billion from West European nations (European Commission, 2022).

## **Renewable Sources of Energy**

Renewable energy is “energy derived from sources that are naturally replenishing, virtually inexhaustible in duration, but limited in the amount of energy that is available per unit of time” (IEA, 2014). The major types of renewable sources are biomass, hydropower, geothermal, wind and solar. In South Africa, wind and solar energy are the main renewable sources of energy, as the country has a warm coastal subtropics, hot deserts, and humid highlands, with 2 500 hours of sun per year that supports the two types of renewable sources (Alexander, 2022).

The South African Electricity Act of 2006 designated Eskom to produce 70% of the national electricity requirements mainly from coal and the independent power producers (IPPs) to produce 30% from renewable sources (DoE, 2006). The Act of 2006 was also supported by the National Development Plan (NDP 2011-2030), and Integrated Resource Planning (IRP) (IRP, 2018). The proposed restructuring of Eskom will also introduce “Microgrid” and battery energy storage system (BESS) in the electricity supply chain network, which will be ideal for the IPPs. A microgrid is “a network of electricity users within a local source of supply that is usually attached to a centralized national grid, but is able to function independently” (IEA, 2020). BESS is the emerging battery innovation for the storage of electricity. The electric vehicle development for sustainable transportation is also being fast-tracked (Moduray, 2022).

## **Carbon Emissions and Net-Zero Target**

In pursuit of Paris Accord in 2015 South Africa aims to decarbonize between 3.3% to 5% per annum, which translates to 398 MtCO<sub>2e</sub> (Million tons of carbon-dioxide equivalent) (COP21, 2015; & BP Energy Stats Review, 2020). The country is geared to meet the carbon emissions reduction target, as Eskom is scheduled for restructuring by decommissioning two-thirds of its fleet of the aged coal-fired power stations (Eskom SA, 2019). According to the Paris agreement “all parties will reduce carbon footprint by more than 50% by 2030 and eliminate by 2050” (COP21 & COP2015). The United Nation’s projection is a 6% yearly drop of fossil fuels consumption until 2030 to stabilize global warming at 1.5 degree Celsius. All these projections have culminated into the net-zero target by 2050 set up by nations including South Africa, leading the campaign against global warming or climate change phenomenon.

## **Sustainability**

The sustainability theory in business cautions on “organizations’ non-compliance with social norms and environmental requirements as it can be detrimental to their legitimacy and financial sustainability. As sustainability is the ability to endure, it is therefore, justifiable when organizations use environmental disclosure to certify society’s demands (Wei & Wang, 2016). Rezaee (2016: 48-64) posited that “the goal of a firm’s value creation can be achieved when management considers the interest of stakeholders and integrates all the five dimensions of sustainability: economic, governance, social, ethical, and environmental (EGSEE). This concurs with the theory of sustainable development (Brandtland 1987).

## **PROBLEM STATEMENT**

The South African electricity supply chain is constrained by perpetual loadshedding emanating from aged coal-fired power stations. Also, the heavy emissions from coal-fired power stations exacerbated environmental degradation increasing the danger of global warming or climate change phenomenon.

## **PRIMARY OBJECTIVE**

The primary objective was to explore the measures of reducing power outages or loadshedding and reduce emissions in the South African electricity supply chain.

## EMPIRICAL OBJECTIVES

The study pursued three empirical objectives as follows:

- Outsourcing maintenance expertise for South African coal-fired power stations to minimize loadshedding.
- Expediting development of renewable sources of energy to render sustainability of electricity supply chain.
- Utilizing clean coal technologies to reduce emissions.

## METHODOLOGY AND DESIGN

This study pursued a qualitative research methodology and constructivism research paradigm in exploring the measures for alleviating loadshedding, and reduction of greenhouse gases emissions by Eskom's coal-fired power stations to make South African electricity supply chain more competitive and sustainable. Both qualitative and constructivism paradigm rely on data collected from interviews with the participants (Lee & Lings 2008: 226). The exploration looked at hiring of maintenance expertise to properly maintain the aged coal-fired power stations to alleviate or minimize the loadshedding, as the country plans to increase energy mix with renewable sources to reduce emissions.

Research design comprises the framework of the study on generating empirical evidence through the examination of the research questions (Saunders, Lewis & Thornhill, 2016:291). The empirical evidence was provided by the primary data collected from the participants. The study was underpinned in theories of competitive advantage and sustainable development, and nonprobability sampling process was used. The participants were managers from the state utility company Eskom and the independent power producers (IPPs). These participants were assured of confidentiality and non-disclosure, and the interviews were conducted telephonically. The sample size was earmarked at 20, but interview saturation was achieved after the 13<sup>th</sup> participant. The interview duration was between 15-20 minutes and was recorded with a digital voice recorder to facilitate data analysis.

The recorded interviews were transcribed, interpreted, coded for themes, and analyzed via content analysis as prescribed in (Saunders *et al.* 2016:220). The themes that emerged were expressed as major themes and sub-themes, which were used in establishing the outcome of the study.

## RESULTS

The themes that emanated from the study determined the outcome. Eight major themes emerged, and they were complemented by several sub-themes. The major themes comprised: renewable sources of energy, sustainable electricity supply chain, maintenance of aged coal-fired power stations, clean coal technologies, coal heavy in emissions, decommissioning coal-fired power stations, repurposing coal power stations and just energy transition (JET). Some of the sub-themes included: energy legislations, IPPs, microgrid, battery energy storage systems (BESS), GHG emissions, solar/wind/green hydrogen power, Medupi/Kusile coal-fired power stations among others.

These themes comprehensively answered the three empirical objectives set for the study and they were achieved as stipulated hereunder:

### **Empirical Objective 1: “Outsourcing Maintenance Expertise for South African Coal-Fired Power Stations to Minimize Loadshedding”**

The loadshedding in South Africa commenced in 2008 and it has presently become a threat to the national economy and the entire population, as for instance, the rolling blackout was experienced for 205 days in 2022. At the present occurrence rate of the power outages, the national grid could easily collapse, if no immediate remedial actions were undertaken in the maintenance of the aged coal-fired power stations. Irrespective of the current nature of the coal power stations and the well documented managerial issues at Eskom, 14 years is a long period for continued fruitless maintenance! As stated by all the participants interviewed, it was understandable that most of the coal power stations are approaching end of life, but specialized maintenance ought to have been sought long ago to avoid the current situation. The participants also blamed the slow pace in the implementation of renewable sources of energy, due to cumbersome legislative processes. They were unanimous in their view that poor maintenance was the main cause of

the deteriorating situation and hoped to lobby the government's intervention in outsourcing external expertise for the maintenance of the coal-fired power stations. The remarks from participant 7 summed their respondents concerns as:

*“Loadshedding has been with us for over a decade and there is no end in sight! We feel let down by lack of decisive action by the government in sorting out the mess. There may be no funds for investing in new generation capacity, but expert maintenance could be afforded, as we continue paying heavy electricity tariffs”.*

## **Empirical Objective 2: “Expediting Development of Renewable Sources of Energy to Render Sustainability of Electricity Supply Chain”**

The South Africa's warm coastal subtropic climate, hot deserts and humid highlands are some of the conditions that support both solar and wind energy production (Alexander, 2022). Scientific research also indicates the viability of hydrogen power production in future, which would contribute towards emissions reduction in vehicles. The government's Just Energy Transition initiative has endorsed South Africa's migration from coal-based energy to cleaner renewable sources. The energy legislations and the Eskom's planned repurposing of the aged coal power stations on decommissioning, reaffirms this government's commitment to cleaner energy. However, what remains now is expediting the process to rescue the country from the current electricity supply chain constraints. This objective answered the “What's next?” of the constrained South African electricity supply chain.

The participant 10 summarized this objective objectively as follows:

*“As Eskom is a public electricity company, the government need to listen to the views of the tax-payers' and investors and outsource experts for the maintenance of the coal power stations to minimize loadshedding and expedite the development of renewable sources of energy. This would make the electricity supply chain sustainable”.*

## **Empirical Objective 3: “Utilizing Clean Coal Technologies to Reduce Emissions”**

The South Africa's Just Energy Transition (JET) initiative advocates the gradual movement towards lower carbon technologies. The development of the two new coal-fired power stations Medupi and Kusile with combined generation capacity of 9 600 MW utilizes the clean coal technologies of super-critical and ultra-super critical respectively. The proposed restructuring of Eskom will include repurposing of the old coal-fired power stations with renewable energy development, and a few of them to be gas-fired power stations, which is a cleaner fossil fuel compared to coal. Presently, Sasol owns the only and the largest natural gas-fired power plant in Africa at Sasolburg in Mpumalanga, South Africa which has a generation capacity of 140 MW (Power technology, 2013). Most of the participants supported the idea of clean coal technologies, as it would enable the use of the country's abundant coal reserves until the wind, solar and hydrogen power are fully developed. Gas would provide the baseload in the absence of coal, due to the intermittent nature of renewable sources. However, with the emergence of battery energy storage system (BESS) technology, renewable sources may also in future, provide the baseload for electricity supply. All the participants were unanimous that the use of clean coal technologies is environmentally friendly and would mitigate the global warming or climate change phenomenon through reduction of GHG emissions. The views of clean coal technologies were summarized by the remarks of participant 1 as follows:

*“The use of clean coal technologies would benefit from the South Africa's abundant coal reserves, as a cheaper raw material, but the renewable sources should be prioritized. Net-zero emissions can only be realized from the renewable sources”.*

## **LIMITATION TO THE STUDY**

Energy is a highly regulated industry and government controlled, which made access to information complicated and cumbersome. The current serious rolling electricity blackouts experienced almost daily in the country made the authority unwilling to diverge critical information, until justified it was for research purposes. However, understanding the government drive towards Just Energy Transition won the confidence of the gate keepers in gaining access to the participants.

## CONCLUSION AND RECOMMENDATIONS

An exploration of the constrained South African electricity supply chain was conducted regarding the severe electricity outages experienced in the country since 2008. The issue of the aged coal-fired power stations performing far below capacity, as most of them are approaching the end of life, which is a major factor for the perpetual load shedding experienced. The threat of climate change due to emissions from coal combustion at the power stations, and the slow development of renewable sources of energy were also covered. The literature reviewed covered the background of the coal mining and consumption in South Africa, electricity supply chain, coal-based generation, JET, renewable sources of energy, clean coal technologies and sustainability initiatives. The study pursued qualitative research methodology and it was underpinned in theories of competitive advantage and sustainable development.

Thirteen participants from the Eskom and the IPPs were interviewed, and eight major themes and several sub-themes emerged from the data analysis. The three empirical objectives set for the study were achieved as manifested in the main themes. To minimize the prevailing loadshedding, the participants were unanimous that the state should outsource expertise in the maintenance of the coal power stations. The study recommended expediting renewable energy development to reduce emissions, enhancing the use of clean coal technologies, and fast-tracking these recommendations, as mandatory national policy in the energy sector. These three measures would answer “What’s next?” of the constrained South African electricity supply chain. Three key recommendations preferred were as follows: Immediate outsourcing of expertise maintenance for South African coal-fired power stations; expediting development of renewable sources of energy; and streamlining the use of clean coal technologies to reduce emissions.

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# THE SOUTH AFRICAN GROCERY SMEs ABILITY TO ENDURE COMPETITION FROM LEADING RETAILERS AND REMAIN SUSTAINABLE

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## ABSTRACT

*The small and medium-sized enterprises (SMEs) are crucial players in the economy of nations, through their contributions to growth domestic product (GDP) and for social upliftment in job and wealth creation. The SMEs thrive under tough competition from larger retailers which has more vigorous marketing strategy and elaborate networks of stores spread nationally. Under the backdrop, this study explored the South African grocery SMEs ability to endure competition and remain sustainable. The resource-based view (RBV) theory underpinned the study, and the sample of the study was drawn from two towns from North West province of South Africa. Qualitative research methodology and constructivism research paradigm were pursued, and the data analysis indicated that transport optimization by third-party logistics (3PL) firms reduced transportation costs, and enhanced supplier-customer relationship, increased turnover. Consequently, the turnover improved profitability and, business endurance, rendering competitiveness and sustainability of the enterprises. A recommendation was made for the South African grocery SMEs to speed up technology applications, to enhance competitive advantage.*

**Keywords:** competitiveness, FMCGs, SMEs, sustainability, Third-party Logistics.

## INTRODUCTION

The SMEs and the fast-moving consumer goods (FMCGs) retailers are the main distribution channels for manufactured consumer products (OECD, 2022). Both channels have great socio-economic impact on the economy of nations through GDP contribution and societal upliftment through employment and wealth creation among other attributes (StatsSA, 2019). In South Africa, the SMEs contribution to GDP is about 34% and employs about 50% of the total employees in the country (Seda, 2022). As both channels have homogenous customers, the ability of SMEs to compete is facilitated by initiatives that reduced operating costs and improved supplier-customer relationship (Hänninen, Smedlund & Mitronen 2017). The supply chain management (SCM) practices enabled enterprises including grocery SMEs, to successfully operate and achieve improved competitive advantage by enhancing supplier-customer relationship. The practices comprise of activities, such as supply chain collaboration and integration, procurement, alignment of production, sales forecasting, and timely delivery to customers, which lead to cost reductions and enhanced competitive advantage in the market (Wisner, Tan & Leong, 2016). Competitive advantage is achieved by a firm's ability to differentiate itself from its competitors, and operating at the lowest cost, which lead to increased profitability. Sustainability of an enterprise is realised when there is profitability, which allows for continuity of business, or endurance, while complying with environmental issues (APICS, 2013).

The interviewed grocery SMEs met the South African SMEs quantitative definition, that classify them as enterprises with fewer than 200 employees; annual turnover of less than R64 million; capital assets of less than R10 million, and has direct managerial involvement by owners (Seda, 2022). The resource-based view (RBV) theory underpinned the study, as stipulated below.

## THEORETICAL FRAMEWORK

The study was underpinned in the resource-based view (RBV) theory. The RBV theory discusses businesses that find their future success in competitiveness on the development of unique and inimitable competencies, which may be

tangible or intangible in nature (Rothaermel, 2012). Tangible assets include everything that is physical such as land, buildings, machinery, equipment, and capital, while intangible assets cannot be seen or touched, such as trademark, brand reputation and intellectual property (Barney, Wright & Ketchen, 2001: 634). Physical resources can be purchased in the market so they provide advantage to the firms, while intangible assets are invisible, and can still be owned by the business.

The RBV was posited by Jurevicius (2013), as the resources of the firm, which was crucial to superior performance of the organisations, and exhibiting value, rare, inimitable, and having organisational (VRIO) attributes, that enable the firm to achieve and sustain competitive advantage. Rothaermel (2012:91), interpreted the phenomena as, value for valuable resources; rarity means availability to a small number of businesses; imitability meant valuable and rare resources; and organization denoting only businesses that has VRIO attributes can attain and sustain competitive advantage over its rivals.

## **LITERATURE REVIEW**

The literature covered the supply chain management and its components of logistics, reverse logistics and third-party logistics, supplier-customer relationship, supply chain collaboration and integration, competitiveness, grocery SMEs and sustainability among others.

### **Supply Chain Management (SCM)**

Supply chain management (SCM) is defined as “the integrated managing and control of the flow of information, materials, and services from the suppliers of the raw materials, through to the factories, warehouses, and retailers, to the end customer. 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, 2020).

Effective SCM ensures more accurate information along with the capability to perform improved operation’s forecasting, which results in establishing strong partnership and supplier networks, balancing supply and demand and enhance strategies to assist in forecasting transport requirements and day-to-day operations planning (Christopher, 2016:13).

### **Logistics Management**

Logistics is a business process that strategically manages procurement, movement and storage of materials, parts and finished good and related information flow through the firm and its marketing channels in such a way that both future profit is increased and cost-effectively fulfils customer orders (APICS, 2013). The logistics management activities include demand forecasting, order processing, transportation, warehousing, inventory management, materials handling, packaging, and communication, among others which are crucial in supply chain management.

### **Third-Party Logistics**

Third-party logistics (3PL) providers refer to service providers hired by a company to perform all a company’s logistics functions such as transportation and warehousing (Nataša, Nereida & Serdarić, 2020: 62). These were roles that were traditionally performed in-house by enterprises. The outsourced firms deliver the right product/service at the right time, at the right place and the right price. In grocery SMEs, third-party logistics are vital for cost-effectiveness and efficiency in the delivery of goods and services. The rationale behind this aspect is that disruptions in transportation, if not handled effectively, may result in failures to meet customer demand and spoilage of goods if they are perishable (Ali, Nagalingam & Gurd, 2017: 2).

### **Reverse Logistics**

Reverse logistics is defined as “a part of logistics that focusses on the flow and management of goods and resources after the sale and after delivery to the customer and includes product returns for repair and/or credit” (Pienaar & Vogt,

2016: 499). Reverse logistics is crucial for all business especially the SMEs for recovering value from replacement of damaged products, that improve their margins. The grocery SMEs like all other retailers operate on low margins, and any cost saving, as in replacement of damaged products is a value added (Nilsson, Gärling, Marell & Nordvall 2015: 43).

## **Supplier-Customer Relations**

The supplier-customer relationship refers to a business partnership in which one company participates in the supply chain and collaborates with another company to provide raw materials, components, products, or services (Carvalho, 2015:402). The supplier-customer relationship is strengthened by quality of service offered by grocery SMEs and supply chain partners (Dawson, Young, Murray & Wilkinson, 2017). Thus, service value is created in supplier-customer interactions, and it depends on the quality of the relationship between the partners involved. This relationship is crucial for grocery SMEs, as they strive to maintain the stock level that meet customer demand (Wang, Luo, Lee & Benitez, 2021: 3).

## **Fast-Moving Consumer Goods (FMCGs)**

Fast moving consumer goods (FMCGs) are typically inexpensive products that are sold quickly and at relatively low cost. These products include non-durable goods such as soft drinks, toiletries, and grocery items. These products are also referred to as "fast-moving" because customers frequently purchase them, which makes them quick to disappear from shelves of grocery stores (KPMG, 2016). The grocery SMEs in this study trade in FMCGs.

## **Supply Chain Collaboration (SCC)**

Supply chain collaboration (SCC) is an establishment of working relationships between customer and supplier firm, where the two firms act as one. Hence, SCC was defined by Wisner *et al.*, (2016: 152) as the: "coordination of internal departments and external partners to sustain an optimised flow through supply chain in order to efficiently meet demand and ensure on-time delivery". The SCC activities help enterprises, including grocery SMEs, to improve the performance of the members involved in a structured framework, with the aim of maximising profit through improved logistical services (Ramanathan, 2014).

## **Supply Chain Integration (SCI)**

Supply chain integration (SCI) involves technology linkages and is defined as "the alignment, linkages and coordination of processes, people, information, knowledge, strategies, and communication across the supply chain amongst all points of contact and making the efficient and effective movement of materials, information, money and knowledge as needed by the customer". (Mangan, Lalwani, Butcher & Javadpour, 2012: 47). SCI includes intra-organizational integration (internal integration) and inter-organizational process of integration with customers and suppliers (external integration). The advantages of SCI to grocery SMEs includes decreased transaction costs and enhanced operational or financial performance.

## **Competitiveness**

Competitiveness occurs when an organisation acquires or develops attributes to outperform its competitors. Competitiveness is the ability of a firm to produce goods or services that successfully match the market's needs. Competitiveness occurs when an organisation acquires or develops attributes to outperform its competitors (Badehorst-Weiss & Cilliers, 2014: 18-19). Hence, the grocery SMEs competitiveness is dependent on their ability to timeously deliver products and services to end-customers at affordable prices (Austin, 2017).

## **Sustainability**

Sustainability is the ability to withstand, hold-up, maintain, or prolong existence (Dictionary Definition). The actual definition of sustainability is, "development that meets the needs of the present without compromising the ability of

the future generations to meet their needs (Brundtland, 1987). In the context of this study, the sustainability of the grocery SMEs is their ability to withstand competition from the larger retailers, by being competitive to withstand or maintain their existence in business and adhering to environmental requirements. Logistics management has a role in mitigating damage to the environment in areas of sourcing, transportation, and warehousing. Hence, the sustainability of the grocery SMEs would be derived from ability of being profitable, competitive, and mitigating damage to the environmental (World Economic Forum, 2023).

## **Small and Medium-Sized Enterprises (SMEs)**

The small and medium-sized enterprises (SMEs) globally and in South Africa are major contributors to economic development through GDP, employment, and other factors that support societal upliftment (BER, 2016). The South African small and medium-sized enterprises (SMEs) are defined as enterprises with fewer than 200 employees, annual turnover not exceeding R64 million, capital assets of less than R10 million and has direct managerial involvement by owners (Seda, 2022).

The South African SMEs face serious competition from larger retailers, who benefit from volume discount prices, provide additional services, and more convenient shopping experience among others (Makhitha, 2019). The competition intensifies due to customers switching to larger retailers, where they get competitive reduced prices and a wider variety of products. To overcome this competition, grocery SMEs must establish long-lasting and collaborative relationships with their suppliers (Liedeman, Charman, Piper & Petersen 2013: 2). The grocery stores selected in North West province of South Africa are this category of SMEs.

## **Grocery Stores**

Grocery stores falls under the retail industry as they sell a range of both food and non-food items, which are fast-moving consumer goods (FMCGs). The FMCGs comprises of food items, toiletries, over-the-counter drugs, flowers, and other small items for the house (KPMG, 2016). These are goods that produce a quick turnover at a low cost, and they are the type of goods found in the South African grocery SMEs (Makhitha, 2019).

# **PROBLEM STATEMENT**

The advent of supply chain management and innovations in technology has tremendously transformed the conventional fast-moving consumer goods (FMCGs) retailers including grocery SMEs and rendered them more competitive and customer centric (APICS, 2013: 172). Despite this advance in technology, the grocery SMEs strive to compete with the leading retailers, as they are still stuck in the conventional trading process and have limited resources. Hence, it is crucial to establish how the South African grocery SMEs navigate through the competition from larger retailers and remain sustainable.

## **PRIMARY OBJECTIVE**

The primary objective was to explore how the grocery SMEs can continuously operate under the stiff competition from the larger retailers and manage to remain sustainable.

## **EMPIRICAL OBJECTIVES**

The study pursued the following empirical objectives:

- Exploring supply chain collaboration and integration as enablers of continuous flow of products from suppliers to grocery SMEs for business continuity.
- Ascertaining cost saving from transport optimization provided by 3PL firms by utilizing full-load consignments, shared amongst the grocery SMEs.
- Adhering to sustainable logistics processes rendered the sustainability of the grocery SMEs.

## RESEARCH METHODOLOGY AND DESIGN

The qualitative research methodology and constructivism research paradigm were pursued in exploration of the ability of the South African grocery SMEs ability to endure competition from the leading retailers and remain sustainable. Both qualitative research and constructivism research paradigm utilize data from interviews conducted with participants (Lee & Lings 2008: 226). Research design is the framework of a study for generating empirical evidence to examine the research questions (Saunders, Lewis & Thornhill, 2016: 291). The empirical evidence was derived from the data collected from the participants in the study, who were the owner/managers of grocery SMEs in Mahikeng and Rustenburg towns in North West province of South Africa, and also signed confidentiality and non-disclosure undertaking (Kumar, 2016: 220). The study was grounded in the resource-based view (RBV) theory, as the exploration of grocery SMEs involved both tangible and intangible attributes. A sample size of 24 grocery SMEs was identified from the two selected towns in North West province, but saturation was realized after 15 interviews. The recorded interviews were transcribed, interpreted, coded for themes, and analysed via content analysis, whereby the major themes and sub-themes that emanated, provided the outcome of the study.

## RESULTS AND DISCUSSIONS

The data analysis from the interviews produced nine major themes and several sub-themes that formed the outcome of the study. The nine major themes that emerged comprised of transport optimisation, supplier-customer relationship, 3PL, products replenishment, competitiveness, profitability, technology application, information sharing and sustainability. Some of the leading sub-themes that emerged included transportation cost, own transport, use of smaller trucks, sharing transport, overstocking, damaged products, communication, internet connectivity, and smart phones among others. The themes concurred with the views expressed by the participants and resonated with the primary and empirical objectives of the study. The technology application in form of internet connectivity and use of smart phones, enhanced supply chain integration and information flow, which improved the supply chain collaboration between the grocery SMEs, FMCGs and 3PL suppliers.

The three empirical objectives set for the study were achieved as stated:

### **Empirical Objective 1: “Exploring Supply Chain Collaboration and Integration as Enablers of Continuous Flow of Products from Suppliers to Grocery SMEs for Business Continuity”**

The supplier-customer relationship was found to be key to grocery SMEs sharing transportation, as it enabled timeous coordination of orders and transportation of goods by the 3PL transport service providers. The use of technology enhanced supply chain integration, which harmonised supplier-customer relationship or collaboration, that speeded the information and product flow. Small business requires constant supply of inventories to remain competitive, as they possess limited storage facilities. Thus, the grocery SMEs relationship with the FMCGs and 3PL suppliers is crucial to facilitate continuous operations. This is confirmed by the remarks from participant 11:

*“We try to establish good working relationship with manufacturers and wholesalers and outsourced transportation companies, who are our suppliers. As the delivery costs are very high, small businesses in our region share outsourced transportation to reduce cost. Transportation is one of the major cost components in our business, hence, we prefer sharing to make full load to reduce delivery time and costs.”*

### **Empirical Objective 2: “Ascertaining Cost Saving from Transport Optimization Provided by 3PL Firms by Utilizing Full-Load Consignments, Shared Amongst the Grocery SMEs”**

Transportation is one of the leading cost components of small and medium-sized enterprises. Traditionally, enterprises used their own or hired transportation, but the cost remained high, impacting on their margin. With the advent of SCM, SMEs has refocused on sharing transportation to reduce cost. SMEs in each geographical location share 3PL logistics

firms to utilise full-load transportation, which has cost reduction benefit. This optimised mode of transportation increases the SMEs profitability and makes them more competitive.

On shared transport, Participant 5 remarked:

*“Transportation cost kills our business. Some 3PL firms in our area approached us to share transportation with other businesses and increase delivery frequencies which would also reduce cost. At first it sounded unique, but after the initial trial, it is now over ten years and we haven’t looked back. We receive supplies on the second day after placing orders as opposed to weekly or longer time experienced in the past.”*

### **Empirical Objective 3: “Adhering to Sustainable Logistics Processes Rendered the Sustainability of the Grocery SMEs”**

The role of logistics in areas of procurement, transportation and warehousing has direct impacts on the environment. Hence, procuring from suppliers that adhere to environmental rules, and transportation by 3PL companies, that strive to reduce emissions in using biofuel or electric vehicles, where possible, are some prerequisites for sustainability of grocery SMEs. These SMEs practice reverse logistics by returning damaged products for replacement, remanufacturing, and recycling. They also use landfills for the disposal of goods damaged beyond rehabilitation. The benefits of reverse logistics were expressed by Participant 2 as:

*“Our damaged products are collected weekly, and we receive replacements the following week. This is good for our business, as our cash flow is not affected by long waiting and the replacements helps in optimizing our returns.”*

## **CONCLUSION**

The study explored the South African grocery SMEs ability to endure competition from the leading retailers and remain sustainable. The qualitative research methodology and constructivism research paradigm were pursued, while The RBV theory underpinned the study. The exploration covered the South African grocery stores, which are categorized as small and medium-sized enterprises (SMEs; supplier-customer relationship; and influence on turnover; and transport optimization contribution to cost saving. The grocery SMEs in North West province’s towns of Rustenburg and Mahikeng formed the sample of the study, which covered an in-depth exploration of SCM and the components of logistics, 3PL and other supportive roles such as technology, among others. The interviews were conducted with the owner/managers of the SMEs in the two towns and recorded with a data voice recorder, and the recorded data was then transcribed, translated, coded for themes and analysed via content analysis to establish the outcome of the study. Nine major themes and several sub-themes emerged from the study and their interpretation resonated with the three empirical objectives set up for the study.

## **MANAGERIAL IMPLICATIONS**

The management implications in grocery SMEs in South Africa were in the application of supply chain management strategy, logistics management, 3PL, and reverse logistics. The RBV theory, which underpinned the study stipulated how competitiveness and sustainability were achieved through management of product flow and transport optimization. Other management implications included managing supplier-customer relationship through supply chain collaboration and integration, managing the information, and product flows using technology.

## **RECOMMENDATIONS**

As the 4<sup>th</sup> Industrial Revolution (4IR) evolves, expediting technology application in business is paramount, to speed up their supply chain management, in order to remain relevant, and competitive. Thus, the South African grocery SMEs are recommended to intensify technology application, to enhance competitiveness and ability to endure competition from the leading retailers.

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# NEGLIGENT DRIVING AS A CAUSATIVE FACTOR TOWARDS ROAD TRAFFIC ACCIDENTS IN SOUTH AFRICA

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## ABSTRACT

*Every year the lives of approximately 1.3 million people are cut short because of a road traffic crash and this is according to World Health Organisation in 2022, between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability as a result of their injuries. Negligent driving is a global problem even in South Africa. The inability of motorists to adhere to the rules of the road is a major problem in South Africa and more should be done to counteract this problem as road users are losing their lives on the road due to negligent driving. This article focuses on negligent driving as a causative factor towards road traffic accidents in South Africa. This qualitative article adopts a systematic review under the non-empirical research design. This study is completely based on the secondary data. A systematic review was done in detail for the collected literature. The key findings indicated that motorists do not adhere to the rules of the road, speeding and driving while intoxicated have major consequences on road. The findings further indicated that corruption within law enforcement agencies compromise road safety. Based on the findings, the authors provided, possible recommendations such as strengthening road safety campaigns nationwide, increase visibility of law enforcement officials on the road and capacitate law enforcement agencies with resources to counteract corruption and contribute to road safety.*

**Keywords:** reckless and negligent driving, road traffic accidents, law enforcement, motorists, road safety, South Africa.

## INTRODUCTION

The United Nations General Assembly has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by 2030 (A/RES/74/299) and road traffic injuries are the leading cause of death for children and young adults aged 5-29 years (World Health Organisation, 2022). Furthermore, more than half of all road traffic deaths are among vulnerable road users: pedestrians, cyclists, and motorcyclists and about 93% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries have approximately 60% of the world's vehicles. A traditional approach taken in road safety research has been to view accidents as a failure to cope with the perceptual motor skills required for a safe journey and the task was therefore to increase driver's skills and to modify the environment (Forward, 2013). Furthermore, in recent years, it has been found that the problem does not always lie in what the driver can or cannot do but what he/she actually decides to do and the crucial issue is therefore to understand what motivates drivers to commit an act, which puts both themselves and others at risk. Road traffic accidents in South Africa is a major problem for road traffic authorities as they are mandated to ensure road safety but they are faced with mammoth task of ensuring that road users comply with the rules of the road. Road traffic fatalities happen as a result of negligent driving because road users do not pay attention when they are on the road and this contributed to high rate of fatalities on the road. Negligent driving can include distracted driving, speeding, driving or walking while impaired and fatigue. The young are particularly vulnerable on the world's roads and road traffic injuries are the leading cause of death for children and young adults aged 5–29 (World Health Organisation (2023). Furthermore, young males under 25 years are more likely to be involved in road traffic crashes than females, with 73% of all road traffic deaths occurring among young males in that age and developing economies record higher rates of road traffic injuries, with 93% of fatalities coming from low- and middle-income countries. In addition to the human suffering caused by road traffic injuries, they also incur a heavy economic burden on victims and their families, both through treatment costs for the injured and through loss of productivity of those killed or disabled. In order to effect a

lasting change in the current road safety situation, all of these issues should be vigorously addressed and improved however, also affect an improvement in the overall situation such as ensuring a meaningful reduction in the unacceptably high percentage of drivers exceeding the speed limit, distracted driving, driving while impaired and those driving at excessive speeds (Arrive Alive, 2023). This paper is aimed to explore negligent driving as a causative factor towards road traffic accidents in South Africa.

## **PROBLEM STATEMENT**

On 17 January 2023, Transport Minister Fikile Mbalula released the latest festive season road traffic statistics for the period between 1 December 2022 and 11 January this year and during this period 1,451 people lost their lives on South African roads, 40% of those deaths were pedestrians and most are as a result of being distracted on the road (SupaQuick, 2023). Road safety is a complex phenomenon depending on lots of different factors and interactions. The inability of road users to understand and interpret the rules of the road is a major problem for road traffic authorities as it contributes to high rate of fatalities on the road. Compliance to the rules of the road by the road users should be prioritised by road traffic authorities and ensure that road users are safe whenever they are on the road. It is a fact that road traffic fatalities in South Africa are unacceptably high and they place an enormous burden on families, society and the economy in terms of lost productivity capacity, lost skills, as well as pain and suffering of survivors, the next of kin and loved ones who are left without breadwinners. Statistics from the Road Traffic Management Corporation (RTMC) show that in 2017, 5339 pedestrians died on South African roads (Automobile Association, 2020). Over the last decade (2008 – 2017) 48 350 pedestrians have died on the country's roads-an incalculable number of families and lives which have been shattered and annually it amounts to 40 percent of pedestrian fatalities (Automobile Association, 2020). Road traffic crashes should be viewed as preventable incidents and that could be systematically eliminated (Bicycle Transportation Alliance, 2015).

## **METHODOLOGY**

The methodology utilised in this study was qualitative in nature. The collected data was sourced from relevant sources and also analysed contextually without necessarily involving any quantitative techniques. The researchers read an overview of the literature on this subject from September to May (nine months' projection), this was done to examine the following facets; to analyse negligent driving as a causative factor towards road traffic accidents. Predicated on the nature of data required in this study; the presented discourse relied mainly on secondary data sources in the process of gathering relevant information. In this process, documented and archival data were extracted from sources. Data generated from these sources were condensed and critically analysed through content and context analysis where germane and concrete information were distilled from the collections. The deductive synthesis was consequently applied in this process. Synthesised outputs from the analysis are presented as different sections in this study in accordance with the set-out objectives of the discourse.

## **LITERATURE**

### **FACTORS CONTRIBUTING TO NEGLIGENT DRIVING DISREGARDING TRAFFIC LAWS**

Road traffic accidents accounted for 1 617 fatalities during the 2019/2020 festive season in South Africa and this is as a result of not following the rules of the road other factors such as the environment and vehicle which contribute less percentage to RTA (Mitchley, 2020). The above statement is supported by the 2019/2020 road traffic accidents in which the majority of road users, who died on the roads consisted of pedestrians (40%), passengers (34%), drivers (25%) and cyclists (1%) (Arrive Alive, 2020). The problem in this country is that the streets were historically designed for speed, to help cars go as fast as possible in terms of delivering goods and fighting crime (Arrive Alive, 2014). Motorists are taking advantage of that and putting other road users, such as pedestrians, at risk of being involved in road traffic accidents, causing the streets to enable the vehicles to become death machines. This is why many cities around the world are lowering their speed limits in their most densely populated areas (Walker, 2018). South Africa should follow in their footsteps, as many pedestrians are killed on the road by motorists who are driving at a high speed, even in their own communities. Some even drive at a high speed and some take part in racing in unprotected environments. Speeding is one of the major contributory factors, as many motorists drive at high speed in residential

areas. They do not even follow the rules of the road. In cases where road signs indicate to motorists which speed is suitable in residential areas they do not follow the road traffic rules. In most cases road traffic accidents involving pedestrians; speeding and alcohol are the main contributory factor according to Arrive Alive (2014). Pedestrians are the ones who suffer a lot because of this behaviour, and it can be changed if relevant strategies are put in place, as this problem includes all road users. Road safety is a shared responsibility. Achieving lasting change in road safety will require the government, industry, and the broader community to work together. It will also require significant improvements in the way the government and other organisations manage the safety of the road transport system (Australian Transport Council, 2011: 32). Safety on the road is very important for every road user to pay attention and there are various kinds of traffic signs that are installed either on markings or on the road, all of which are intended to discipline road users, and are directly aimed at maintaining the safety of road users but in most cases these traffic signs are ignored by those who are not respecting the laws of the road (Tampubolon, 2021).

## **DRIVING AND WALKING UNDER THE INFLUENCE OF ALCOHOL**

Globally, alcohol intoxication has been shown to be significantly associated with increased risk for road traffic crash morbidity and mortality for all road users (drivers, passengers and pedestrians) and this association relates to the diminished capacity of drivers while intoxicated to operate motor vehicles and the increased propensity for risk-taking behaviours (Govender, Sukhai, Roux and Van Niekerk, 2021). Furthermore, the overall prevalence of alcohol-related fatal crashes contributes significantly to the burden of disease in many countries. The Automobile Association Foundation (2013), stated that drunken pedestrians may be as much of a danger on South African roads as drunken drivers. Patek and Thoma (2013), stated that there are several measures available for specifically preventing intoxicated pedestrian accidents. None of them, however, would be likely to have a large effect on the total number of pedestrian casualties. (A possible exception is a statutory limit on the blood alcohol level in public places, accompanied by enforcement.) Instead, in most respects, the improved safety of intoxicated pedestrians will come about by making the environment safer for all pedestrians, drunk or sober. The substantially higher risk found for pedestrians in fatal crashes may relate to the complexity inherent in drivers and pedestrians needing to negotiate use of common road space but at significantly different speeds, along with the greater injury severity for pedestrians from such crashes (World Health Organization, FIA Foundation for the Automobile and Society, Global Road Safety Partnership and World Bank, 2013). Additionally, it may reflect the added complexity for drivers to negotiate the unpredictability of pedestrian behaviour, especially in suboptimal settings such as those with inadequate pedestrian infrastructure for walking and crossing and conditions where lighting is poor (DiMaggio, Mooney, Frangos and Wall, 2016). Impairment due to use of alcohol or drugs was often a contributing factor among bicyclists, pedestrians and motor vehicle drivers who died in RTCs (Pasnin and Gjerde, 2020). Furthermore, driving under the influence of alcohol or drugs was more often a contributing factor in cases where the motor vehicle driver was killed than in cases where the driver survived.

## **CORRUPTION**

Road traffic authorities are faced with a mammoth task of counteracting the issue of corruption within their institutions and their client (road users). Law enforcement agencies play a critical role in ensuring law and order in society and it is of paramount importance to have law enforcement agencies that are free of corruption as this compromise the efforts of government to ensure law and order in the communities. Corruption is a major problem worldwide even in South Africa is prevalent where many agencies are caught in corrupt activities. Inability of law enforcement agencies to root out corruption contribute to lawlessness in the communities. It is the responsibility of law enforcement agencies to ensure that they curb this problem as it contributes to lack of trust in the society and these law enforcement agencies cannot combat crime without the community so it is of utmost importance to root out corruption from top to lower level of management in all the agencies. Corruption manifests in the field of traffic enforcement and road safety (Arrive Alive, 2018):

- Bribes are often demanded in situations where road users have committed an offence such as speeding, overloading, or driving unlicensed or unroadworthy vehicles. Bribery in these instances may be used to ensure that the offender escapes a stiffer penalty (i.e. a R100 bribe is requested when the alternative is to pay a legitimate fine of double that amount).
- The most paid bribe was for traffic fines, driver testing and licensing irregularities.

- Certificates of roadworthiness are issued without the said vehicles undergoing the necessary roadworthy tests.
- Money is received in return for assisting applicants for learner's license tests to cheat in their exams.

## **FINDINGS AND DISCUSSION**

### **NON-COMPLIANCE TO THE RULES OF THE ROAD**

Road traffic authorities is faced with a challenge of not adhering to the rules of the road by road users and this contribute to negligence driving which is most common in young drivers. Disobeying the rules of the road is the main contributory factor to road traffic accidents where road users become negligent when they are on the road and this practice puts vulnerable road users such as pedestrians at risk of being involved in road traffic accidents. According to Rita and Kenea findings in 2022 indicated that driving violations include disobeying/jumping a traffic signal, driving on the wrong side of the road(driving opposite to the direction of the traffic), khat (impaired cognitive skill), lack of giving priority for another driver(vehicle), lack of giving pedestrian priority, lack of giving adequate gap in traffic, overtaking another vehicle at steep grade, overtaking another vehicle at a curve, making unexpected turning after overtaking, overtaking a vehicle from the wrong side, rash driving, speeding, making inappropriate turning, disregard traffic police commands, making unexpected driving of stopped vehicle, inattention driving and overloading.

### **CORRUPTION COMPROMISES ROAD SAFETY**

Road users disregard the road traffic laws and when they are caught they attempt to bribe traffic officials who are willing to accept bribes. Studies on crime in South Africa revealed that corruption was most evident in encounters with traffic officials, followed by the police, and then during interactions with officials over employment opportunities (Arrive Alive, 2015). Furthermore, this support the perception that corruption is a problem in local government traffic departments, municipal police services and the SAPS, and highlights the discretionary power of some of these officials. For example, the public largely interacts with traffic officials on the road where the actions of corrupt officials are difficult to monitor and this compromise the project of road safety and promote non-compliance which put road users at risk of being involved in road traffic accidents.

### **DRIVING AND WALKING WHILE INTOXICATED**

Alcohol is the main contributor to road traffic accidents and this is as a result of motorists and pedestrians being intoxicated on the road. Every drunken pedestrian who is a danger to him/herself, is as much of a danger to vehicular traffic. When motorists hit drunken pedestrians, there are no statistics to show how many vehicles have already managed to avoid the same person. When a motorist is unable to avoid a drunken pedestrian, the lives of everyone in his vehicle and in surrounding vehicles are put at risk. It is realistic to suggest that a single drunken pedestrian on the road could ultimately be liable for the death of an entire minibus taxi or bus full of passengers. Blood alcohol concentration tests on the bodies of people killed in road crashes show that, whether you are a pedestrian, cyclist or driver, your risk of dying in a road crash is higher if you have been drinking (Western Cape Government, 2023). Furthermore, alcohol impairs your ability to see and respond to what is around you on the road and in addition, you are more likely to speed and less likely to wear a seatbelt if you have been drinking.

## **RECOMMENDATIONS AND CONCLUSION**

Strengthening road safety campaigns nationwide could help in educating road users about adhering to the rules of the road and how to conduct themselves when they are on the road. The more road users are informed about road safety, the less number of fatalities on the road, it is stated above that road users are unable to understand and interpret the rules of the road and these kind of campaigns could assist in empowering road users. Road safety is a collective responsibility and all major stakeholders need to play their role in counteracting road traffic accidents. Non-compliance to the rules of the road should be given attention and traffic officials should enforce the law consistently and those who break the laws of the road should be arrested and this could send a strong message to those who are taking risks on the road by being negligent or not obeying the rules of the road and not respecting other road users. Hotspot areas for road traffic accidents should be prioritised by road traffic authorities by increasing the number of

traffic officials in those areas in order to ensure compliance to the rules of the road. It is further recommended that road traffic authorities should be capacitated with resources to counteract road traffic accidents, equipment such as breathalyser testing machines should be made available nationwide to deal with those who are driving while intoxicated as well as speed cameras and these machines should be serviced on regular basis to ensure accurate results.

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# INTERACTIONS OF ETHICAL MARKETING SCALE WITH CUSTOMERS' DEMOGRAPHICS IN THE MEDICAL SCHEME SECTOR

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## ABSTRACT

*Internationally, medical schemes must deliver ethical and eco-sustainable goods and services at affordable prices or barely survive the increasing competitive pressure. Ethical marketing, i.e. honesty and good performance, will help medical schemes to profit from the positive impact of future disruptions in this sector. Therefore, quantitative research assessed customers' perceptions of ethical marketing scale and how they relate to their demographics in the South African medical schemes setting. About 250 medical schemes that are beneficiaries responsible for monthly contributions were recruited via a non-probability convenience sampling technique in a face-to-face survey. Exploratory factor analysis and Pearson's Correlation Matrix tested the scale's measurement properties and relationships with customers' demographics. The results show that the perception that the service provider gives preferential treatment to some customers has a significant negative correlation with consumer age. In addition, there was a significant negative relationship between the perception that service provider withholds information from customers which could influence their medical cover selection and the medical scheme's brand affiliation. The implications for practice and theory contributions are outlined.*

**Keywords:** ethical marketing scale, demographic variables, medical schemes, NHI.

## INTRODUCTION

Although the classic feature of full implementation of National Health Insurance (NHI) reforms, e.g., a separated design for purchaser-to-provider through the provision of a "single-buyer" services organisation that strategically funds the healthcare services model merging both private and public sectors, is practised in many global healthcare markets, it is still absent in the context of South Africa (Competition Commission South Africa, 2018). As people increasingly emphasise the quality of living, the demand for medical and healthcare is growing. Taiwan's medical care system and the ecology of hospitals have seen changes since the implementation of the NHI scheme on March 1, 1995, and the inclusion of some of the medical staff in the applicable scope of the Labor Standards Act: large hospitals have significantly expanded with an excessive number of beds; this coupling with the general shortage of medical (Chang, Chen & Lan, 2013). Maynard (2001) added that the privatisation of the NHS (in the UK) or the introduction of national insurance (in the USA) are characteristic "panaceas".

Today, the government in South Africa has proposed an NHI scheme to minimise the range of challenges encountered in the healthcare sector, aiming to achieve universal health coverage (UHC) by 2025 by delivering a platform of comprehensive quality healthcare services to all South Africans (sometimes referred to as the benefits package) (Gray & Vawda, 2018). First, as the services benefit package of NHI healthcare and the Prescribed Minimum Benefits (PMBs) will be merged to help the swift transition of members from their medical schemes to NHI (French, 2012), this study's research question is 'How ethical marketing scale perceptions relate to customers' demographics in the South African medical scheme setting?' Second, most of the reported marketing ethical problems were measured holistically in different situations in many industries. The overall assessment of medical schemes' marketing ethics measured using the ethical marketing scale's components is unclear. Third, when studying ethical issues based on providing insights that can more clearly distinguish the ethical behaviours of large and small firms, Murphy et al. (1992) encourage future researchers to contribute theories and concepts from their disciplines. Therefore, this study

aims to measure the link between marketing ethics perceptions and consumers' demographics in the medical scheme setting.

Medical schemes offer the most common form of healthcare financing in the private healthcare sector. Members pay monthly contributions to their scheme, and schemes are responsible for financing their members' healthcare expenses as part of their benefits package (Competition Commission, South Africa, 2018). Of sixteen medical scheme administrators in South Africa alone, Discovery Health and Medscheme serve 76% of the market based on gross contribution income (GCI), making the market highly intense (Competition Commission, South Africa, 2018). However, "We cannot trust that for-profit schemes will deliver better value for consumers given multiple information failures and adverse incentives shown in the South African healthcare sector" (Competition Commission, South Africa, 2018, p. 457). Schenker et al. (2014, p. 40) note that as the economist Kenneth Arrow noted in his seminal 1963 article on health economics, "the very word 'profit' is a signal that denies the trust relations". Perception is crucial to trust, and media reporting of even low levels of misuse of public funds by healthcare commissioners could result in system-wide doubts about integrity (British Medical Association, 2017).

While, in general, the perception of specifics for the '70s, when marketing was still suspected and considered unethical, has been overcome, some specific aspects of marketing activity still have problems of ethical nature and give birth to debates between experts. These aspects relate to how advertising is done today in the medical field, especially regarding drugs and medical products/materials. Ethical problems manifest because medicines and other medical products are not similar to other consumer goods; the need attached to their consumption is a particular need, mixed with a high degree of emotional involvement and a specific pressure related to the moment of consumption. Consumers are not merely 'consumers' – they are patients – people in a particular condition or state regarding a health issue. Hence, emotional involvement is higher in medical services, and the dynamics of the need related to medical services are also atypical (Cătoi et al., 2013). In the analysis of the ethics of psychoactive advertisements, Benet et al. (1993) define this as "an emotion arousing advertising which may cause recipients to feel extremely anxious, to feel hostile toward others or to feel a loss of self-esteem". This makes it relevant to measure the link between marketing ethics perceptions and consumers' demographics in the medical scheme setting. Consumers' perceptions may differ based on age, gender, etc., because everyone is different.

The remaining sections of this paper will discuss the literature detailing the theoretical approach and ethical marketing considerations. This is followed by the research methodology and illustration of the results and their discussion. The research implications, recommendations for medical scheme practitioners, the study's limitations, and future research directions are outlined.

## LITERATURE

### Theoretical Paradigm

Because marketing facilitates transactions between buyers and sellers, concern about ethical issues in marketing can translate into concern about the processes surrounding these transactions (Diacon & Ennew, 1996). Research on ethical marketing first appeared in the late 1960s, with the pioneering work of Bartels (1967), which provided the first conceptualisation of factors influencing marketing ethics decision-making. Much of the literature on marketing ethics can be grouped into two major models of marketing practice. First, descriptive or positive models of marketing ethics focus on explaining actual behaviours in an ethical situation, and second, normative marketing ethics is designed to advocate and establish guidelines for ethical marketing practice rather than attempt to report what practitioners say or do (Sirgy & Lee, 2008). The majority of such research has been positive in nature. However, the discussion by Robin and Reidenbach (1987) focuses on the more normative aspects of integrating ethics and social responsibility into the strategic marketing planning process. It broadly analyses marketing ethics articles from a normative (prescriptive) and empirical perspective. Normative approaches to marketing ethics are the foundation for developing principles, i.e. what should be done, values, and norms. Without this normative foundation, positive decision models could not provide direction to marketers for acceptable behaviour (Ferrell et al., 2013). One of the frameworks for ethical decision-making in marketing is from Laczniaik and Murphy (2006), Level/focus Individual, corporate and societal responsibility of managers, Orientation Normative, Normative approach(es) Duty-and virtue-based ethics American Marketing Association, norms & values. These authors developed a set of normative perspectives for ethical and socially responsible marketing. Social responsibility includes fair medical treatment provided to patients by the

hospital, provision of medical services with nominal cost to needy patients, and ethical principles followed by the hospital in delivering medical care to patients among different segments of society (Padma et al., 2009).

But what are the ramifications of the social justice theory on marketing ethics? In all fairness, it should be emphasised that Rawls (1971) did not conceive that his theory would be readily transferred to marketing or, for that matter, business ethics. There is neither a universally accepted definition of business ethics nor a standard measure that allows an individual or event to be uniformly judged as ethical or unethical (Pezhman et al., 2013). According to British Medical Association (2017), organisational ethics examines the ethical implications of organisational decisions and practices on patients, staff, and the community. Overall, business ethics practices emerge as valuable instruments to market the organisation to customers and to avoid customer disidentification and sanctions (Ferrell, 2004). All the codes of ethics generally require that the members maintain a higher standard of conduct than that called for by law. The codes of ethics embraced by the legal, medical, and accounting professions are no exception (Martin, Jr. & Backof, 1991). Thus, many observers view marketing ethics as a subfield within business ethics, much like ethics in finance, accounting, human resources, and quantitative analysis. Business ethics is also considered an ‘applied’ area similar to legal or medical ethics.

Nevertheless, marketing activity has its ethical code of conduct, and principles referring to good advertising, a proper way to inform the customers, correctness, transparency, etc. However, in medical services, all these may be completed with aspects regarding the ethics of medical act (Cătoiu et al., 2013). Professional codes of conduct have historically regulated advertising for professional services—including medical, dental, social, and legal services (Kwoka, 2004). The developing focus on ethics in marketing medical services has seen a response from scholars in the past (Latham, 2004; Schenker et al., 2014). Given that the rules of conduct (or ethics) in the medical marketplace rely explicitly on (Maynard, 2001), marketing medical products is a prime area of ethical concern for medical scheme agents and their clients, making sense to understand how the marketing literature addresses ethics. The current study focuses on the marketing ethics of medical schemes in South Africa. Cătoiu et al. (2013) note that using a marketing mix in medical work is a challenge for marketers, as it is necessary to emphasise the specific social marketing component in developing medical marketing strategies. They argue that integrating marketing into medical activity is the problem of direct-to-consumer advertising. Medical institutions increasingly advertise to build their public visibility and reputation. Still, medical leaders should understand that the quality of care and how it is perceived is critical to their survival (Mechanic, 1996).

## Major Ethical Issues for Medical Services

“Marketing aims to establish, maintain and enhance (usually, but not necessarily, long-term) relationships with customers and other partners, at a profit, to meet the parties’ objectives. This is achieved by a mutual exchange and fulfilment of promises” (Takala & Uusitalo, 1996, p. 466). However, one of the major ethical issues is “false or misleading representation of products or services in marketing, advertising, or sales efforts” (Eastman et al., 1996, p. 955). In advertising, the central issue seems to be deception. By contrast, health promotion is seldom seen as deceptive in any ordinary, straightforward, intentional sense (Gardner, 2014). However, has anyone not heard stories of false advertising, pressure selling or even discriminatory pricing practices? Whether in public opinion (Nantel & Weeks, 1996). False and misleading advertising is increasingly a vital issue in organisational communications. Abuses in advertising can range from exaggerated claims and concealed facts to outright lying (Ferrell, 2004). Latham (2004) argues that at the level of institutional advertising for medical services, it is essential to consider the distinction between untruthful advertising and deceptive advertising—for an advertisement may be both entirely truthful and deceptive. Benet et al. (1993) assessed ethical considerations in advertising and marketing that use fear appeals, marketing to older people, and marketing healthcare services and products. Marketers may argue that fraudulent advertising is alright if everyone is equally subjected to it, and a rule against such practices becomes less tenable. Medical marketing, then, is full of ethical pitfalls. There are ethical problems with the nature of the medical product; fairness and quality problems with the nature of pricing; agency and access problems with placement; and problems involving deception, lack of information and conflict of interest in promotion (Latham, 2004).

Medicine, unlike most other products, is a highly complicated service. By their very nature, advertisements simplify, and inevitably all simplification contains an element of potential deception. Furthermore, self-promotional advertising introduces the element of ‘caveat emptor’ (let the buyer beware) into what should be primarily a caring relationship built on trust (Persaud, 1991). The basis for maintaining relationships is keeping promises (Gronroos,

1990). To obtain customer satisfaction, it is essential to fulfilling the promise, generate confidence, etc. (Cosma et al., 2020; Mofokeng, 2020), and trust in a brand has two dimensions: the ability to keep promises and fulfill consumer needs and good intentions regarding consumer welfare and interests (Javed et al., 2019). Brodie et al. (2009) show empirical support for the service brand theoretical framework showing the importance of both the 'making of promises' (brand image with company image) with the 'delivery of promises' (employee trust and company trust) in creating customer value and customer loyalty. In the marketing literature, Parasuraman et al. (1988) note customers' general perceptions of five essential items: (1) being able to count on an organisation to deliver on any promises made to a customer; (2) feeling that organisations and company representatives will respond to customer needs in a timely manner; (3) knowing that organisational representatives have the authority to deliver on commitments made to customers; (4) feeling that organisations see issues and opportunities from customers' points of view; and (5) being able to identify tangible results from using organisations' products and from maintaining business relationships with the organisations. Four of these five process quality items are directly tied to organisational behaviours grounded in ethical business practices (McMurrian & Matulich, 2016). For example, one of the *prima facie* duties is the *Duties of fidelity* stemming from previous actions that have been taken. These would include (to name a few) the duty to remain faithful to contracts, keep promises, tell the truth, and redress wrongful acts. In a marketing context, this might include conducting all the quality and safety testing promised to consumers, maintaining a rigorous warranty servicing program, and refraining from deceptive or misleading promotional campaigns (Laczniak, 1985).

## Demographic Variables

Many studies (Elbeltagi & Agag, 2016; Javed et al., 2019; Park et al., 2017) show demographic variables (i.e. gender, age, education and residence) that are known to influence how consumers make purchase decisions. These scholars suggest that incorporating the potential moderating effects of these variables into the analysis could extend the explanatory power of the findings. In the healthcare industry, mainly, patients' needs differ based on age, gender, etc. and the healthcare-seeking behaviours of different patient segments could produce experiences which influence different quality judgments and hence influence satisfaction positively or negatively (Padma et al., 2009). The most commonly chosen criteria for measuring satisfaction with health services are health conditions, hospital environment, service type (state or private), politeness of the stage, income, communication, employment status, gender, and education (Cosma et al., 2020). Braunsberger and Gates (2002) reported that healthier patients, older patients, males, those with a lower level of education, those who perceived higher system performance and those with lower system usage levels were more satisfied with their healthcare plan than their own counterparts. Therefore, this study examines how consumers' perceptions of ethical marketing scale (Murphy et al., 1992) relate to their demographics in South African medical schemes. The following hypothesis was developed based on the literature on marketing ethics. This study proposes that:

**H1:** Perceived marketing ethics has significant relationships with consumers' demographics such as gender (A1), age (A2), medical scheme brand affiliation (A3), informed about the benefits (A4), monthly contributions (A5), the number of people covered (A6), switching experience (A7), and the length of medical scheme use (8).

## METHODOLOGY

### Measurement Instrument

The study has adapted the marketing ethics scale (Murphy et al., 1992). These items were measured using the 5-point Likert scale ranging from 1 strongly disagree to 5 strongly agree. Consumer demographics, such as gender, age, and medical scheme brand affiliation, informed about the benefits, monthly contributions, the number of people covered, switching experience, and the length of medical scheme use, were measured in the questionnaire.

### Sample

To test the proposed hypothesis, data were collected in the public areas near healthcare facilities (in South Africa, Gauteng province) using a face-to-face survey of medical schemes' consumers. Before the surveys, a pilot test was carried out on a sample of fifty respondents, who were asked to identify issues they encountered when answering the questionnaire, such as the clarity of the questions and the length of completing the survey. The feedback from the pilot

survey was used to improve its simplicity and ease of filling. Of 250 questionnaires distributed during July – August 2019, 208 complete questionnaires were captured on Statistical Package for Social Science (SPSS) 28 for data analysis. This offered a response rate of 83.2%. When setting  $k = 10$ , using ten repetitions as Hair et al. (2019) suggested, it assumes that the sample size is large enough. This study's sample was recruited using a non-probability convenience sampling method. As many beneficiaries of the medical schemes covered reside in Gauteng (40%), it was assumed that the beneficiaries in Gauteng could represent an appropriate context for examining the problem in this study. First, Gauteng recorded an increase of 1.4% in beneficiaries, higher than other provinces in 2016 – 2017 (Council for Medical Schemes, 2018). Next, Gauteng comprises ten local municipalities, three of which are among the largest metropolitan cities in South Africa by both population and economic activity (Mushongera et al., 2017). Moreover, the study aims to assess a scarcely examined phenomenon to unveil preliminarily insights into the research question and arising perceptions that may set a direction for future research. Hence a healthcare consumer sample in Gauteng may be adequate. This study followed the ethics required in research data collection (e.g., informed consent and voluntary participation, data privacy, etc.). The institution of the researcher granted the study's ethical approval.

Table 1 indicates the sample demographic attributes of the respondents in this study. Most respondents were female ( $n = 112$ ; 53.8%). The most represented respondents were in the age groups between 25 –29 year-olds ( $n = 50$ ; 24.0%). Many respondents pay up to R3000 ( $n = 83$ ; 39.9%) monthly contributions; the majority had more than five years ( $n = 84$ ; 40.4%) of time using their medical schemes.

**Table 1: Demographic variables (n=208)**

Demographics	Categories	f	%
Gender	Male	96	46.2
	Female	112	53.8
Age	18-24	39	18.8
	25-29	50	24.0
	30-34	43	20.7
	35-39	37	17.8
	40-45	16	7.7
	46-49	10	4.8
	50 and more years	13	6.3
Monthly Contributions	R3000	83	39.9
	> R3000-R4000	74	35.6
	> R4000-R5000	33	15.9
	> R5000-R6000	10	4.8
	> R6000-R7000	7	3.4
	> R7000-R8000	1	0.5
Experience	One year and not longer than two years	60	28.8
	Two years but not longer than three years	32	15.4
	Three years but not longer than four years	16	7.7
	Four years but not longer than five years	16	7.7
	More than five years	84	40.4

## RESULTS

### Descriptive Statistics

Table 2 shows the descriptive statistics of the marketing ethics scale (Murphy et al., 1992), such as the mean and standard deviation (Pallant, 2010). The results show the mean ranging from the lowest EMI4: "My service provider offers wrong information to customers about competitor firm's medical services" ( $M = 1.65$ ;  $St.dev. = 1.043$ ), to the highest EMI5: "My service provider's price is affordable" ( $M = 2.40$ ;  $St.dev. = 2.40$ ). The standard deviation values ranged from the lowest EMI3: "My service provider gives gifts to customers in exchange for preferential treatment" ( $St.dev. = 1.032$ ;  $M = 1.66$ ), to the highest EMI5: "My service provider's price is affordable" ( $St.dev. = 1.297$ ;  $M = 2.40$ ). The reliability of the nine-scale items showed a Cronbach's  $\alpha = 0.895$ ,  $\alpha > 0.7$  (Malhotra, 2007).

## Exploratory Factor Analysis

This study analysed the exploratory factor analysis (EFA) following the Principal Component Analysis (PCA) extraction method with the Varimax rotation method. Kaiser Normalization provides the rotation that converges in eleven iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.842, Bartlett's Test of Sphericity Approximation value with Chi-Square = 1365.664, df = 136, was significant at  $p < 0.001$ . The model extracted 64.43% of the variance. Table 2 shows the results of the exploratory factor analysis (EFA). Table 3 shows the results of the exploratory factor analysis. All the factor loadings exceeded 0.6, as Hair et al. (2019) recommended, except for EMI5: "My service provider's price is affordable", which has a disproportionately lower factor loading = 0.343. This showed a lower reliability item score on the scale loaded at 0.343, below 0.6 (Hair et al., 2019), and this item was deleted. The monthly contributions for the medical scheme, the number of people covered in the medical plan, and the length of using the medical scheme loaded on one factor. Gender, affiliated medical scheme, and how well the respondent is informed about the benefits of their medical plan loaded on their respective elements. The five factors had Eigenvalues ranging from the highest, 5.299, to the lowest, 1.050, above the threshold value of 1 (Malhotra, 2007).

**Table 2: Exploratory factor analysis (EFA) (n=208)**

Codes	Items	1	2	3	4	5	Mean	Std. Dev.	$\alpha$
EMI <sup>1</sup>	My service provider allows customers to have information on their competitors.	0.685	0.019	0.187	-0.031	-0.302	2.06	1.222	0.895
EMI <sup>2</sup>	My service provider uses misleading sales presentations.	0.853	0.059	0.022	0.034	-0.058	1.85	1.033	
EMI <sup>3</sup>	My service provider gives gifts to customers in exchange for preferential treatment.	0.838	0.016	0.006	0.024	-0.071	1.66	1.032	
EMI <sup>4</sup>	My service provider offers wrong information to customers about competitor firms' medical services.	0.890	0.027	-0.037	-0.016	0.021	1.65	1.043	
EMI <sup>5</sup>	My service provider's price is affordable.	0.343	0.106	0.562	-0.287	-0.248	2.40	1.297	
EMI <sup>6</sup>	My service provider accepts favours from customers in exchange for preferential treatment.	0.866	0.054	-0.020	-0.002	-0.021	1.67	1.067	
EMI <sup>7</sup>	My service provider withholds information from customers which could influence their medical cover selection.	0.777	-0.039	-0.097	0.048	0.094	1.90	1.180	
EMI <sup>8</sup>	My service provider gives preferential treatment to some customers.	0.828	0.013	-0.092	0.090	0.144	1.88	1.192	
EMI <sup>9</sup>	My service provider allows a customer to become dependent on one medical aid service provider.	0.607	-0.009	0.037	-0.115	0.069	2.32	1.280	
A1	Gender	0.006	-0.030	0.084	-0.089	0.844			
A2	Age	-0.130	0.579	0.339	0.057	-0.334			
A3	Medical scheme used	-0.136	0.095	0.695	-0.002	0.102			
A4	How well informed about the benefits of your medical plan.	0.010	0.160	-0.092	0.821	-0.159			
A5	The monthly payment for the medical scheme.	0.162	0.673	-0.204	-0.149	0.274			
A6	Number of people covered in the medical plan.	0.065	0.607	-0.132	0.402	-0.082			
A7	Prior switching experience from any medical scheme.	-0.050	0.240	-0.520	-0.543	-0.184			
A8	Length of using the medical scheme	-0.014	0.764	0.229	0.018	-0.058			

Notes. The extraction method of Principal Component Analysis (CPA) used the rotation method of Varimax with Kaiser Normalization. Rotation converged in 11 iterations. Cronbach alpha ( $\alpha$ ) = 0.895.

## Correlation Matrix

Table 3 below shows Pearson's correlation matrix conducted using SPSS 28. Sampling method – simple calculated the relationships between variables input = EMI1, EMI2, EMI3, EMI4, EMI5, EMI6, EMI7, EMI8, EMI9, and A1 = gender, A2 = age, A3 = medical scheme, A4 = informed about the benefits, A5 = monthly payment, A6 = number of people covered, A7 = switched before, and A8 = length of use, on the criteria of confidence Interval CI-level = 95 percentile and samples = 1000 Bootstrap specifications.

Accordingly, the Pearson correlation coefficients (r) can range from -1 to +1 (Pallant, 2010). The assessment results of the ethical marketing scale in Table 3 show that the perception that EMI1: “My service provider allows customers to have information on their competitors”, has a significant positive relationship with EMI3: “My service provider gives gifts to customers in exchange for preferential treatment” ( $\beta = 0.567$ ;  $p < 0.001$ ) (LLCI = 0.443; ULCI = 0.673). The perception that EMI2, “My service provider uses misleading sales presentation”, has a significant positive relationship with EMI3: “My service provider gives gifts to customers in exchange for preferential treatment” ( $\beta = 0.730$ ,  $p < 0.001$ ) (LLCI = 0.611; ULCI = 0.820). The perception that EMI3: “My service provider gives gifts to customers in exchange for preferential treatment”, has a significant positive relationship with EMI4: “My service provider offers wrong information to customers about competitor firms’ medical services” ( $\beta = 0.699$ ;  $p < 0.001$ ) (LLCI = 0.565; ULCI = 0.805). The perceptions that EMI4: “My service provider offers wrong information to customers about competitor firm’s medical services”, has the strongest significant positive relationship with EMI6: “My service provider accepts favours from customers in exchange for preferential treatment” ( $\beta = 0.818$ ,  $p < 0.001$ ) (LLCI = 0.721; ULCI = 0.890). The perception that EMI6: “My service provider accepts favours from customers in exchange for preferential treatment”, has a significant positive relationship with EMI8: “My service provider gives preferential treatment to some customers” ( $\beta = 0.664$ ;  $p < 0.001$ ) (LLCI = 0.545; ULCI = 0.771). The perception that EMI7: “My service provider withholds information from customers which could influence their medical cover selection”, has a significant positive relationship with EMI8: “My service provider gives preferential treatment to some customers” ( $\beta = 0.645$ ;  $p < 0.001$ ) (LLCI = 0.513; ULCI = 0.750). Lastly, the perception that EMI8: “My service provider gives preferential treatment to some customers”, has a significant positive relationship with EMI9: “My service provider allows a customer to become dependent on one medical aid service provider” ( $\beta = 0.500$ ;  $p < 0.001$ ) (LLCI = 0.371; ULCI = 0.625).

In terms of the inter-relationships of ethical marketing scale items with the demographic variables, the results in Table 3 show that the perception that EMI7: “My service provider withholds information from customers which could influence their medical cover selection”, has a significant negative correlation with A3 = medical scheme affiliation ( $\beta = -0.151$ ;  $p < 0.030$ ) (LLCI = -0.301; ULCI = -0.001). In addition, the perception that EMI8: “My service provider gives preferential treatment to some customers” has a significant negative correlation with A2 = age ( $\beta = -0.155$ ;  $p < 0.025$ ) (LLCI = -0.285; ULCI = -0.009). Surprisingly, although there was a significant relationship between A5 = the monthly contributions and EMI6: “My service provider accepts favours from customers in exchange for preferential treatment” (0.167;  $p < 0.016$ ), this was rejected due to zero between the levels of confidence interval (LLCI = -0.023; ULCI = 0.347). Thus, H13 was rejected.

**Table 3: Pearson's correlation matrix**

		EMI1	EMI2	EMI3	EMI4	EMI5	EMI6	EMI7	EMI8	EMI9	A1	A2	A3	A4	A5	A6	A7	A8
EMI1	$\beta$	1	.558**	.567**	.512**	.397**	.548**	.419**	.476**	.353**	-.114	-.029	-.003	.035	.023	.113	-.016	.071
	p-value		<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.100	.682	.964	.613	.738	.103	.818	.307
	LLCI	1	.427	.443	.360	.267	.406	.266	.336	.183	-.249	-.169	-.168	-.091	-.117	-.022	-.121	-.068
	ULCI	1	.666	.673	.641	.518	.676	.567	.605	.492	.024	.111	.155	.165	.175	.242	.105	.210
EMI2	$\beta$	.558**	1	.730**	.712**	.285**	.721**	.634**	.640**	.417**	-.017	-.007	-.104	.052	.146*	.062	-.036	.038
	p-value	<.001		<.001	<.001	<.001	<.001	<.001	<.001	<.001	.812	.923	.134	.457	.036	.377	.610	.589
	LLCI	.427	1	.611	.596	.124	.609	.502	.497	.284	-.156	-.166	-.242	-.091	-.012	-.068	-.153	-.098
	ULCI	.666	1	.820	.799	.441	.809	.736	.749	.538	.115	.147	.031	.197	.290	.196	.082	.170
EMI3	$\beta$	.567**	.730**	1	.699**	.304**	.689**	.592**	.592**	.429**	-.012	-.067	-.126	.030	.124	.101	-.038	-.017
	p-value	<.001	<.001		<.001	<.001	<.001	<.001	<.001	<.001	.861	.339	.069	.671	.073	.148	.584	.809
	LLCI	.443	.611	1	.565	.155	.565	.453	.450	.295	-.144	-.220	-.265	-.092	-.025	-.030	-.151	-.158
	ULCI	.673	.820	1	.805	.440	.792	.709	.716	.549	.112	.096	.027	.163	.259	.227	.077	.107
EMI4	$\beta$	.512**	.712**	.699**	1	.247**	.818**	.625**	.767**	.499**	-.011	-.073	-.111	-.013	.162*	.040	-.019	-.002
	p-value	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001	.870	.292	.109	.856	.019	.569	.784	.972
	LLCI	.360	.596	.565	1	.091	.721	.486	.666	.376	-.146	-.223	-.241	-.123	-.009	-.087	-.132	-.146

	ULCI	.641	.799	.805	1	.393	.890	.733	.850	.620	.113	.082	.035	.124	.334	.173	.099	.130
EMI <sup>5</sup>	B	.397**	.285**	.304**	.247**	1	.267**	.136	.125	.205**	-.009	.172*	.110	-.078	.032	-.011	-.069	.140*
	p-value	<.001	<.001	<.001	<.001		<.001	.050	.071	.003	.895	.013	.115	.263	.651	.874	.325	.043
	LLCI	.267	.124	.155	.091	1	.118	-.027	-.030	.058	-.147	.036	-.030	-.212	-.107	-.154	-.184	.000
	ULCI	.518	.441	.440	.393	1	.410	.305	.286	.346	.148	.303	.250	.054	.177	.131	.072	.268
EMI <sup>6</sup>	B	.548**	.721**	.689**	.818**	.267**	1	.623**	.664**	.398**	-.040	-.113	-.082	-.016	.167*	.113	-.025	.030
	p-value	<.001	<.001	<.001	<.001	<.001		<.001	<.001	<.001	.569	.105	.242	.817	.016	.104	.722	.667
	LLCI	.406	.609	.565	.721	.118	1	.479	.545	.257	-.174	-.261	-.209	-.144	-.023	-.025	-.144	-.116
	ULCI	.676	.809	.792	.890	.410	1	.739	.771	.533	.092	.038	.056	.105	.347	.255	.088	.157
EMI <sup>7</sup>	B	.419**	.634**	.592**	.625**	.136	.623**	1	.645**	.433**	.039	-.112	-.151*	.007	.087	-.001	-.034	-.002
	p-value	<.001	<.001	<.001	<.001	.050	<.001		<.001	<.001	.575	.106	.030	.915	.214	.988	.625	.975
	LLCI	.266	.502	.453	.486	-.027	.479	1	.513	.297	-.096	-.255	-.301	-.111	-.073	-.127	-.147	-.143
	ULCI	.567	.736	.709	.733	.305	.739	1	.750	.577	.164	.031	-.001	.139	.238	.135	.084	.134
EMI <sup>8</sup>	B	.476**	.640**	.592**	.767**	.125	.664**	.645**	1	.500**	.044	-.155*	-.095	.041	.142*	.074	-.037	.011
	p-value	<.001	<.001	<.001	<.001	.071	<.001	<.001		<.001	.525	.025	.172	.552	.040	.285	.595	.871
	LLCI	.336	.497	.450	.666	-.030	.545	.513	1	.371	-.086	-.285	-.237	-.085	-.019	-.050	-.151	-.129
	ULCI	.605	.749	.716	.850	.286	.771	.750	1	.625	.174	-.009	.056	.191	.295	.210	.088	.143
EMI <sup>9</sup>	B	.353**	.417**	.429**	.499**	.205**	.398**	.433**	.500**	1	.019	-.045	-.030	-.035	.119	-.010	.011	-.057
	p-value	<.001	<.001	<.001	<.001	.003	<.001	<.001	<.001		.790	.519	.667	.615	.087	.891	.879	.413
	LLCI	.183	.284	.295	.376	.058	.257	.297	.371	1	-.120	-.179	-.164	-.144	-.038	-.138	-.144	-.187
	ULCI	.492	.538	.549	.620	.346	.533	.577	.625	1	.152	.090	.104	.096	.279	.134	.171	.070
A1	B	-.114	-.017	-.012	-.011	-.009	-.040	.039	.044	.019	1	-.195**	.002	-.111	.024	-.078	-.010	-.063
	p-value	.100	.812	.861	.870	.895	.569	.575	.525	.790		.005	.972	.110	.726	.264	.886	.368
	LLCI	-.249	-.156	-.144	-.146	-.147	-.174	-.096	-.086	-.120	1	-.321	-.131	-.239	-.112	-.212	-.156	-.199
	ULCI	.024	.115	.112	.113	.148	.092	.164	.174	.152	1	-.061	.135	.030	.169	.064	.117	.073
A2	B	-.029	-.007	-.067	-.073	.172*	-.113	-.112	-.155*	-.045	-.195**	1	.129	.106	.129	.242**	-.053	.440**
	p-value	.682	.923	.339	.292	.013	.105	.106	.025	.519	.005		.062	.126	.063	<.001	.447	<.001
	LLCI	-.169	-.166	-.220	-.223	.036	-.261	-.255	-.285	-.179	-.321	1	.001	-.028	-.010	.101	-.167	.330
	ULCI	.111	.147	.096	.082	.303	.038	.031	-.009	.090	-.061	1	.277	.226	.266	.373	.054	.540
A3	B	-.003	-.104	-.126	-.111	.110	-.082	-.151*	-.095	-.030	.002	.129	1	-.061	-.092	.050	-.132	.165*
	p-value	.964	.134	.069	.109	.115	.242	.030	.172	.667	.972	.062		.381	.188	.473	.057	.017
	LLCI	-.168	-.242	-.265	-.241	-.030	-.209	-.301	-.237	-.164	-.131	.001	1	-.163	-.200	-.097	-.283	.032
	ULCI	.155	.031	.027	.035	.250	.056	-.001	.056	.104	.135	.277	1	.038	.040	.199	.029	.304
A4	B	.035	.052	.030	-.013	-.078	-.016	.007	.041	-.035	-.111	.106	-.061	1	-.041	.314**	-.153*	.151*
	p-value	.613	.457	.671	.856	.263	.817	.915	.552	.615	.110	.126	.381		.557	<.001	.028	.029
	LLCI	-.091	-.091	-.092	-.123	-.212	-.144	-.111	-.085	-.144	-.239	-.028	-.163	1	-.151	.166	-.279	.029
	ULCI	.165	.197	.163	.124	.054	.105	.139	.191	.096	.030	.226	.038	1	.078	.443	-.033	.274
A5	B	.023	.146*	.124	.162*	.032	.167*	.087	.142*	.119	.024	.129	-.092	-.041	1	.251**	.080	.309**
	p-value	.738	.036	.073	.019	.651	.016	.214	.040	.087	.726	.063	.188	.557		<.001	.251	<.001
	LLCI	-.117	-.012	-.025	-.009	-.107	-.023	-.073	-.019	-.038	-.112	-.010	-.200	-.151	1	.099	-.023	.180
	ULCI	.175	.290	.259	.334	.177	.347	.238	.295	.279	.169	.266	.040	.078	1	.392	.179	.421
A6	B	.113	.062	.101	.040	-.011	.113	-.001	.074	-.010	-.078	.242**	.050	.314**	.251**	1	.076	.259**
	p-value	.103	.377	.148	.569	.874	.104	.988	.285	.891	.264	<.001	.473	<.001	<.001		.275	<.001
	LLCI	-.022	-.068	-.030	-.087	-.154	-.025	-.127	-.050	-.138	-.212	.101	-.097	.166	.099	1	-.070	.132
	ULCI	.242	.196	.227	.173	.131	.255	.135	.210	.134	.064	.373	.199	.443	.392	1	.202	.389
A7	B	-.016	-.036	-.038	-.019	-.069	-.025	-.034	-.037	.011	-.010	-.053	-.132	-.153*	.080	.076	1	.068
	p-value	.818	.610	.584	.784	.325	.722	.625	.595	.879	.886	.447	.057	.028	.251	.275		.328
	LLCI	-.121	-.153	-.151	-.132	-.184	-.144	-.147	-.151	-.144	-.156	-.167	-.283	-.279	-.023	-.070	1	-.081
	ULCI	.105	.082	.077	.099	.072	.088	.084	.088	.171	.117	.054	.029	-.033	.179	.202	1	.250
A8	B	.071	.038	-.017	-.002	.140*	.030	-.002	.011	-.057	-.063	.440**	.165*	.151*	.309**	.259**	.068	1
	p-value	.307	.589	.809	.972	.043	.667	.975	.871	.413	.368	<.001	.017	.029	<.001	<.001	.328	
	LLCI	-.068	-.098	-.158	-.146	.000	-.116	-.143	-.129	-.187	-.199	.330	.032	.029	.180	.132	-.081	1
	ULCI	.210	.170	.107	.130	.268	.157	.134	.143	.070	.073	.540	.304	.274	.421	.389	.250	1

Note: A1 = Gender, A2 = Age, A3 = Medical Scheme, A4 = Informed about the benefits, A5 = Monthly payment, A6 = Number of people covered, A7 = Switched before, A8 = Length of use;  $p < 0.001^{**}$ ;  $n = 208$ ; Standard estimate =  $> 0.5$ ; LLCI = Lower Level Confidence Interval; ULCI = Upper-Level Confidence Interval. [95% LLCI; ULCI].



**Table 4: Summary results of the hypotheses**

Hypotheses	<i>Relationships of ethical marketing items</i>	$\beta$	LLCI	ULCI	<i>p</i> -value	Result
H1	EMI1>EMI3	0.567	0.443	0.673	0.001**	Accepted
H2	EMI2>EMI3	0.730	0.611	0.820	0.001**	Accepted
H3	EMI3>EMI4	0.699	0.565	0.805	0.001**	Accepted
H4	EMI4>EMI6	0.818	0.721	0.890	0.001**	Accepted
H5	EMI5>EMI6	0.267	0.118	0.410	0.001**	Rejected
H6	EMI6>EMI8	0.664	0.545	0.771	0.001**	Accepted
H7	EMI7>EMI8	0.645	0.513	0.750	0.001**	Accepted
H8	EMI8>EMI9	0.500	0.371	0.625	0.001**	Accepted
	<i>Relationships between ethical marketing items and demographic variables</i>					
H9	A1=gender>EMI1	-0.114	-0.249	0.024	0.100	Rejected
H10	A2=age>EMI8	-0.155	-0.285	-0.009	0.025*	Accepted
H11	A3=medical scheme brand affiliation>EMI7	-0.151	-0.301	-0.001	0.030*	Accepted
H12	A4=informed about the benefits>EMI5	-0.078	-0.212	0.054	0.263	Rejected
H13	A5=monthly payment>EMI6	0.167	-0.023	0.347	0.016*	Rejected
H14	A6=number of people covered>EMI1	0.113	-0.022	0.242	0.103	Rejected
H15	A7=switched before>EMI5	-0.069	-0.184	0.072	0.325	Rejected
H16	A8=length of use>EMI5	0.140	0.000	0.268	0.043*	Rejected

Note: *n* = 208. LLCI = Lower Level Confidence Interval; ULCI = Upper-Level Confidence Interval. [95% LLCI; ULCI], two-tailed. *p*<0.001\*\*

## DISCUSSION

The study's findings showed that the perception that the service providers withhold information from customers, which could influence their medical cover selection, is negatively related to consumers' age groups. Further, the perception that the service providers give preferential treatment to some customers is negatively related to consumers' medical scheme affiliation in South Africa. These results answer the research question in this study. Moreover, the results of relationships of ethical marketing scale items show that the perception that EMI1: "My service provider allows customers to have information on their competitors", has a significant relationship with EMI3: "My service provider gives gifts to customers in exchange for preferential treatment. The perception that EMI2: "My service provider uses misleading sales presentation", has a significant relationship with EMI3: "My service provider gives gifts to customers in exchange for preferential treatment". Thus, H1 and H2 were accepted. Research shows that "false or misleading representation of products or services in marketing, advertising, or sales efforts" are the major ethical issues (Eastman et al., 1996, p. 955). It seems brokers are interested in making a sale even if their products do not fit the customer's needs. They want to maintain a good reputation and relationship with large insurers even when those insurers mistreat customers, and so on (Latham, 2004).

The results indicate that the perception that EMI3: "My service provider gives gifts to customers in exchange for preferential treatment", has a significant relationship with EMI4: "My service provider offers wrong information to customers about competitor firm's medical services". Diacon and Ennew (1996) report that the issue of promoting inappropriate products and designing commission structures which may introduce product bias is perhaps both issues for which the ethical implications are more subjective and less clear-cut than is the case for activities such as deceptive marketing and offering unauthorised gifts. Although the consumer must rely on the agent for correct information and proper guidance (Román, 2003), unexpectedly, the results indicate that the perception that EMI4: "My service provider offers wrong information to customers about competitor firm's medical services", has a strong significant relationship with EMI6: "My service provider accepts favours from customers in exchange for preferential treatment". Thus, H3 and H4 were accepted.

Surprisingly, the perception that EMI5: “My service provider’s price is affordable”, had a low factor loading. Thus, H5 was rejected. Alternatively, it may be the case that pricing strategies only generate additional barriers to switching basic insurance providers, thereby reinforcing consumer inertia (Lamiraud, 2013). As the question of “What is the role of pricing in relationship marketing?” is among the list of issues necessitating more research (Berry, 1995, p.244), further work is needed to unravel the consumer price perception and determine whether consumers have a perception that service providers may accept favours in exchange for preferential treatment. Relationship marketing requires pricing strategies in the medical scheme sector to develop a perception of satisfaction, trust, and commitment (Morgan & Hunt, 1994).

The findings show that the perception that EMI6: “My service provider accepts favours from customers in exchange for preferential treatment”, has a significant relationship with EMI8: “My service provider gives preferential treatment to some customers”. The perception that EMI7: “My service provider withholds information from customers which could influence their medical cover selection”, has a significant relationship with EMI8: “My service provider gives preferential treatment to some customers”, and the perception that EMI8: “My service provider gives preferential treatment to some customers” has a significant relationship with EMI9: “My service provider allows a customer to become dependent on one medical aid service provider”. Thus, H6, H7, and H8 were accepted. It suggests that patients may be subject to unethical coercion by providers who abuse their power position, forcing them to take one treatment option over another (Latham, 2004).

The results of the relationships of ethical marketing scale items with demographic variables showed that H9 was rejected, while H10 and H11 were accepted. The perception that “My service provider gives preferential treatment to some customers significantly negatively correlates with A2 = age groups. Further, the perception that EMI7: “My service provider withholds information from customers which could influence their medical cover selection”, has a significant negative relationship with A3 = medical scheme brand affiliation. Other hypotheses were rejected, e.g., 12, 13, 14, 15, and 16. This suggests that the perception that the service provider gives preferential treatment to some customers” negatively relates to the consumer age groups. In addition, the perceived marketing ethics of medical schemes that withholds information from customers, which could influence their medical cover selection, translates into a negative perception towards affiliation with the medical schemes. Research has indicated that corporate brands’ positive Consumer Perceived Ethicality (CPE) is transferred into a positive evaluation of product brand trust and product brand effect (Singh et al., 2012). The relationship between a customer and a firm exists because of mutual expectations built on trust, good faith, and fair dealing in their interaction (Ferrell, 2004).

## Major Contributions and Implications

Every business manager would agree that ethical implications are often inherent in marketing decisions (Laczniak, 1985). This study contributes to the framework for ethical decision-making in marketing by Laczniak and Murphy (2006). These authors built a set of normative perspectives for ethical and socially responsible marketing. The current study showed how the perceived marketing ethics is related to customers’ demographic characteristics (e.g., age and medical scheme brand affiliation) in the South African medical scheme sector. While the questions concerning psychological and informational manipulation have been raised more frequently about commercial campaigns (advertising) than social marketing campaigns (Gardner, 2014), the results of this study validate the normative theory perspectives for ethical and socially responsible marketing for practitioners in the medical scheme industry. The current study contributes knowledge about marketing ethics for practitioners intending to transform their business towards ethical positioning in the medical scheme business by highlighting customers’ important ethical marketing perceptions in this industry. This will help to benefit from the positive impact of future disruptions. Therefore, the findings will help medical schemes in South Africa, and the international medical schemes sector will understand how to acquire the benefits of ethical marketing from the positive impact of future disruptions. The stakeholders, policymakers, and regulators will understand how the perceived marketing ethics is related to customers’ demographic variables (e.g., age and medical scheme brand affiliation).

First, it is essential to note that applying marketing principles within medical activity will always be challenging. In identifying the best methods and strategies to fulfill such needs, marketers must bear in mind the delicate problem raised by the ethics of the medical act (Cătoi et al., 2013). Purposeful organisational leadership efforts can reinforce positive ethical behaviours within sales organisations (Donoho et al., 2013; Pezhman et al., 2013). For example, when a salesperson’s behaviour is perceived as ethical, the organisation is also perceived as ethical. Due to the different types of healthcare consumers using healthcare quality and performance information in differing ways

to make their healthcare decisions (Axtell-Thompson, 2005), medical service providers should refrain from using misleading sales presentations and providing wrong information to customers about competitor firms' medical services. Second, product and service management, an essential activity for marketing people, can raise ethical problems (Nantel & Weeks, 1996). For instance, the product's ethical aspects relate to fitness issues for purpose and safety (both to users and others who might be affected). In the design of savings and life insurance products, it is essential to delegate this responsibility to actuaries with clearly defined standards of professional conduct to ensure that the product is fair and equitable. Consequently, even in the case of ostensibly low-risk products, problems may arise when products are sold in circumstances they were not intended for (Diacon & Ennew, 1996). Therefore, medical service providers should avoid using misleading sales presentations.

The current study contributes knowledge showing that service providers who allow customers to have information on their competitors may be related to service providers who give gifts to customers in exchange for preferential treatment. It shows that as advertising is also implicitly comparative and seeks to emphasise differences between what may be broadly similar products, advertisements naturally imply that competitors in healthcare provision are inferior and could generally lower public faith in the profession (Persaud, 1991). Hence, medical scheme practitioners should ensure that advertisements which produce tension rather than energy activation are avoided, so characteristics of such advertisements need to be identified (Benet et al., 1993). Advertisements viewed as inappropriate or uninformative may erode patients' trust in providers and healthcare institutions (Schenker et al., 2014). While the purpose of direct-to-consumer advertising by pharmaceutical companies is to sell more products, not to educate the population broadly, such advertising may influence prescribing behaviour as patients question their providers about medications they have been exposed to through the media (Holcombe, 2015). Latham (2004) further insists that medical professionalism can be added as the fifth P of medical marketing, helping minimise the ethical pitfalls. For example, professionalism conduct in promotions to earn the public's trust would erode the use of deceptive-though-true advertising. It would reduce the opportunistic behaviour of physicians to take advantage of patients in conflict-of-interest situations. The concept of professionalism, with its link to ethics rooted in the virtues of doctors, is only one way of configuring the nature of reciprocal obligations between health professionals and their patients (British Medical Association, 2017).

While the perception that "a service provider's price is affordable" had a low factor loading unexpectedly, it is worth noting that consumers should not pay different prices based on race, gender, or some arrangement of discrimination unless the principles of distributive justice are met (Ferrell & Ferrell, 2008; Lacznia, 1999). If price calculation is truly a problem for individual practitioners, the role of associations could be limited to sharing cost-calculation models instead of guidelines on pricing, thus leaving the pricing decision to each practitioner (Competition Commission South Africa, 2018). In some international markets, e.g., the US, applying federal antitrust laws to the medical profession abolished many formal ethics rules relating to price advertising—however, a strong social norm against such advertising lives on (Latham, 2004). The question of ethical approaches to pricing requires, as a minimum, that pricing is transparent as far as possible. It is also advisable to draw up rules to produce full disclosure of commissions and charges. This should result in greater pricing transparency, although the industry has strongly resisted such changes (Diacon & Ennew, 1996). In part, this resistance may be explained by the difficulties associated with defining a price in monetary terms (for products whose costs will not be fully specified until some future date); nevertheless, these changes should significantly improve the degree of transparency in pricing. In addition, it should be noted that regulation can only provide a partial solution, and the extent to which more transparent pricing will be beneficial depends on the willingness of consumers to use such information (Diacon & Ennew, 1996).

Nonetheless, by applying the framework of normative perspectives for ethical decision-making (Lacznia & Murphy, 2006), this study contributes scarce knowledge needed to develop relationships and interact with stakeholders ethically and socially responsibly in the medical scheme business in general. According to Ferrell and Ferrell (2008), a stakeholder orientation can be a part of a proactive response system to improve marketing ethics and the overall image of the marketing profession. Firms must know and manage negative ethical images and socially irresponsible behaviour that turns customers off their products (Mulki & Jaramillo, 2011; Farah et al., 2018). The promotion activity, for instance, should only be carried out by professionals with experience in adapting promotional techniques to specific medical services. The ideal marketing system would be fair (Ferrell & Ferrell, 2008). Murphy et al. (1992) found that smaller firms demonstrate more ethical behaviour on marketing issues and avoid unethical behaviour on marketing issues, while larger companies avoid unethical behaviour on operational matters. Unless these issues are addressed well through stakeholder engagement, the marketing system can potentially destroy consumer confidence, trust, and general welfare (Ferrell & Ferrell, 2008).

## CONCLUSION

In contributing to the framework for ethical decision-making in marketing by Lacznia and Murphy (2006), the results indicate that consumers' perceived marketing ethics of the medical schemes withholding information from customers, which could influence their medical cover selection, is negatively related to consumers' age groups. Also, consumers' perceived marketing ethics of the medical schemes giving preferential treatment to some customers is negatively associated with the medical scheme affiliation in South Africa. However, there are a few limitations. The study only included a small sample of consumers in Gauteng. Future studies can involve samples across South Africa, using longitudinal studies and experimentations of consumers' reactions and responses to medical schemes' services. As the NHI makes provision for the measurement of patient satisfaction, according to the amended NHI White Paper (as amended), the patient satisfaction results will be used by the Office of Health Standards Compliance (OHSC) to identify gaps and implement action plans to ensure sustained patient satisfaction (Competition Commission South Africa, 2018). Health Sector Anti-Corruption Forum (HSACF) also acknowledges that in the health sector, both public and private healthcare markets are vulnerable to corruption and fraud because of large and varied numbers of transactions on goods and services, including fraudulent orders, tender irregularities, fiscal dumping by government departments through non-governmental organisations, bribery, over-pricing, poor governance, transfer of liabilities to the state, and bogus and fraudulent qualifications (Council for Medical Schemes Annual Report, 2020). All these ethical issues require future research investigations to benefit from future disruptions' positive impact. Research should investigate how medical schemes settle service disputes, resolve complaints and enquiries, perception of switching, factors influencing the selection of medical schemes and healthcare professionals, the dimension of emotional and psychological support performed, and assess how patients' experience impact their commitment to the schemes, etc.

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# AN INTEGRATED FINANCING FRAMEWORK FOR GREENING SOUTH AFRICAN CITIES

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## ABSTRACT

*The National Development Plan encourages metropolitan cities to provide their communities with healthy, safe, and sustainable environments (SA, 2012a:37-38). However, the issue faced by South African metropolitan cities is the lack of financing required to purchase green infrastructure to improve their communities' lives sustainably (SANC, 2016:2). Employing a qualitative research method, this study aimed to assess the adequacy of the current financing structures in greening South African metropolitan cities and to develop an integrated financing framework to assist in greening these cities. Purposive sampling assisted in collecting data through virtual and telephone interviews with 7 out of 8 participants in the city sustainability/environmental management departments across all eight South African metropolitan cities. Key findings included financial constraints, lack of adequately trained staff members, political influence and procurement process issues. Derived from the findings, the effectiveness of the current financing structures was evaluated, and an integrated financing framework for greening South African metropolitan cities was developed. Furthermore, policymakers may have a sound system to guide and support the execution of operations and assist municipalities in properly managing revenue for sustainability purposes as the developed integrated financial framework may define policies, procedures, regulations, and standing orders of greening cities.*

**Keywords:** financing structures, green finance, lack of finance, green infrastructure, green cities.

## INTRODUCTION

This paper endeavours to assess the effectiveness of the current financing structures in greening South African Metropolitan cities. The National Development Plan of South Africa encourages all metropolitan cities to create sustainable environments for their communities (SA, 2012: 37-38). However, the issue faced by South African metropolitan cities is the lack of financing required to green their cities on a large scale basis. (SANC, 2016: 2). Globally, cities are encouraged to create policies providing a sustainable environment, as this is not only a South African problem. In particular, these policies should improve the current public transport, green buildings, and renewable energy and further preserve the green spaces available (European Union, 2019:11). While this underlines the importance of global green cities, also the European Union is aware that municipalities may not have sufficient funds to implement the projects (European Union, 2019: 5).

### Access to Finance for Green Infrastructure Finance

Municipalities attempting to embark on greening their infrastructure or any other green-related projects are often advised to seek external investors due to high financing requirements, as their revenue generated is insufficient (Owen *et al.*, 2018:139). However, municipalities also face barriers to be dealt with before investors can assist them (Owen *et al.*, 2018:140). On the other side, investors usually have strict criteria to be met before a municipality can be financed, such as an excellent institutional capacity, good financial system standards, and good performance management.

While South Africa had already targeted early to reduce the pumping of greenhouse gases and carbon dioxide emissions significantly by the year 2020 (Hammer *et al.*, 2011:22), greening has happened only on a small-scale basis due to a lack of financing. In the year 2021, it was reported that less than 5% of green projects in cities had been achieved to date, mainly due to the lack of financing (Bigger & Webber, 2021:37-38). In the year 2022, Sach *et al.*



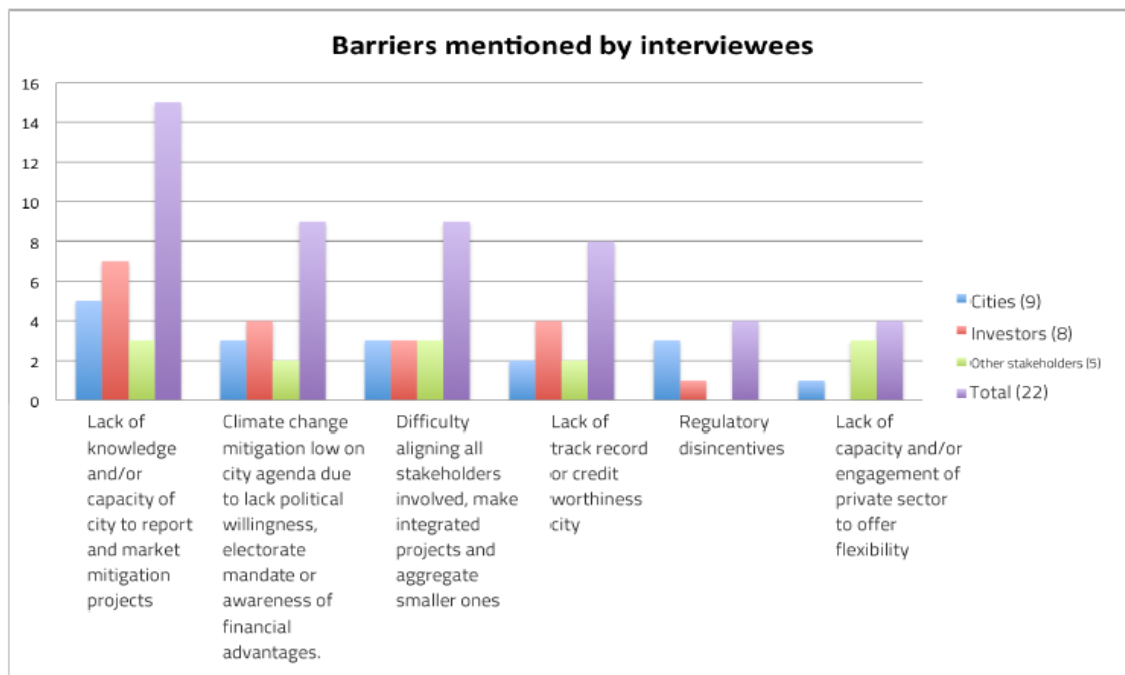
(2022:1) confirmed that the greening of cities is not being achieved due to severe financing constraints holding back the success of developing countries. Besides preserving peace and lowering geopolitical tensions, the key to achieving the greening of cities is substantial finance.

However, already the Constitution of the Republic of South Africa of 1996, Section 24 (SA, 1996: 10-11) gives everyone the right to:

- An environment that is free from hazards and healthy for the well-being of the citizens and
- Preservation of natural resources for future generations by:
  - Setting laws that minimise carbon dioxide emissions;
  - Setting laws that prohibit depletion of natural resources; and
  - Setting laws that encourage sustainable resources that consider the economic, social, and environmental factors into account.

Hence, although the Constitution of South Africa and the National Development Plan compel municipalities to green their cities and although the fast progression of climate change makes this issue even more urgent, cities still face barriers that hinder them from sourcing financing from investors. According to De Boer (2015:3), prospective private gave the following reasons why many cities are not given the required financing:

**Figure 1: Barriers mentioned by interviewees (De Boer, 2015:3)**



Learning from them would give municipalities better chances to obtain finance and assist them in improving how they can attract prospective investors. In addition, since municipalities urgently require financing to green their cities, they may explore the possibilities of acquiring finance through existing financing structures. The following section discusses the major existing financing structures.

## MAJOR EXISTING FINANCING STRUCTURES

Table 1 presents the major existing financing structures that are currently used by developed countries in greening their cities (Grunewald et al., 2018:157):

**Table 1: Major Existing Financing Structures (Mokgopha & Klingelhöfer, 2020:16)**

<b>Financing Structures</b>	<b>Advantages</b>	<b>Challenges</b>
<b>Own-source financing</b> – levies charged for particular goods or services rendered by the municipality to households and businesses (Merk et al., 2012:24)	The attraction of local and international investors as well as other seasonal visitors to boost the demand side of local economies (Merk et al., 2012:24)	<ul style="list-style-type: none"> <li>- non-payment of services by households</li> <li>- municipalities lack the proper cash flow</li> <li>- depends on a sustainable cash flow to finance the city's capital (Merk et al., 2012:24)</li> </ul>
<b>Private investors</b> – finance of public sector projects through the private sector (Deloitte by Fishman & Hamilton 2018:1)	Financial power and considerable experience in creating green cities (Perboli et al., 2014: 471)	<ul style="list-style-type: none"> <li>- Possibility of bankruptcy of the private investor (Merk et al., 2012:29)</li> </ul>
<b>Tax incremental financing (TIF)</b> – is a technique where tax credits are used as a subsidy for redevelopment, infrastructure, and other community development initiatives (Renz, 2017: 3)	<ul style="list-style-type: none"> <li>- encourages the use of available municipal funds to implement some projects (Renz, 2017: 3)</li> <li>- identifies new property rates funds instead of the standard non-distributable funds for 10 to 20 years (Renz, 2017: 3)</li> </ul>	<ul style="list-style-type: none"> <li>- non-payment of services by households</li> <li>- municipalities lack proper cash flow (Renz, 2017: 3) &amp; (Merk et al., 2012:24)</li> </ul>
<b>Crowdfunding-</b> money raised in small amounts by several people to finance a specific project (Jyoti & Patil, 2018: 234)	<ul style="list-style-type: none"> <li>- in the form of donations (Jyoti &amp; Patil, 2018: 234)</li> <li>- based on three elements: <ul style="list-style-type: none"> <li>+ project to be funded;</li> <li>+ people or organisations supporting the project</li> <li>+ mediator between the initiator and the people or organisations elements (Jyoti &amp; Patil, 2018: 250)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- political interference</li> <li>- lack of accountability</li> <li>- corruption (Jyoti &amp; Patil, 2018: 234)</li> </ul>
<b>The Green Revolving Fund (GRF)</b> is – an internal investment instrument that offers finance to parties inside a used for cost-saving sustainability initiatives dealing such as energy efficiency renewable energies etc. (Allen et al., 2018: 1)	<ul style="list-style-type: none"> <li>- relying on renewable energy resources and other cost-saving projects (Allen et al., 2018: 1)</li> <li>- money saved from the above projects can be used to finance other (green) projects</li> </ul>	mainly utilised by tertiary institutions and national departments but not tailor-made for municipalities (Allen et al., 2018: 1)

Unfortunately, these financing structures are not conducive to implementing the greening of cities, while the pressure to green South African cities is rising. For example, Bielenberg et al. (2016:1) outlined that in the period from 2015 to 2030, the demand for sustainable infrastructure will exceed the planned spendings by round about R852 trillion globally (with R being the currency South African Rand; 1 US\$ = R 18.3438, by 25 April 2023), i.e. an estimated R4 trillion per country (of 197 global countries). Therefore, developing cities must find better ways to attract

investors, which might be a challenge considering the additional financing barriers compared to most cities in developed countries (Allen et al., 2018: 1).

## RESEARCH METHODOLOGY

The summarised research methodology of this study is discussed in the depicted Table below:

**Table 2: Summary of the overall research process (Source: Own)**

DECISION	CHOICE
<b>Method</b>	Qualitative
<b>Population and sampling</b>	Purposive sampling: one (sustainability, climate change, or environmental management) official of each of the 8 metropolitans of South Africa was selected to be interviewed. To retain anonymity, the 8 letters A to H were employed to cote the metropolitans.
<b>Data gathering instruments</b>	Virtual and telephone interviews and document analysis
<b>Questions asked for primary data</b>	<ol style="list-style-type: none"> <li>1. As a municipality, Which sustainable/green policies have been approved in line with the NDP?</li> <li>2. Which platforms can the public utilise to access the approved sustainable/green policies?</li> <li>3. How many sustainable/green projects have been planned by the municipality, and what are the due dates for the planned projects?</li> <li>4. What is the estimated cost of the planned sustainable/green projects?</li> <li>5. Which of the planned projects mentioned above have been achieved to date?</li> <li>6. What are the reasons for not successfully achieving the planned projects?</li> <li>7. What barriers were encountered during greening cities' planning and implementation phases?</li> <li>8. What financing mechanisms are used for greening their cities?</li> </ol>
<b>Secondary data</b>	All South African metropolitan municipalities' climate change municipal documents and related documents
<b>Data analysis</b>	Content analysis and thematic analysis
<b>Validity and reliability of the research</b>	Descriptive, interpretive, and theoretical validity.
<b>Limitations of the research</b>	Only virtual and telephone interview data collection instruments were employed, which leaves other instruments unexplored.
<b>Ethical consideration</b>	The Tshwane University of Technology Research Ethics Policy and internationally basic principles of ethical treatment of human participants were followed; ethical clearance was obtained.
<b>Future Studies</b>	Use Google Forms to give the interviewee time to prepare and face-to-face interviews. Future studies can also research the issue of the buy-in of the community members and non-financial factors of greening cities.

## RESULTS

The interview questions were conducted with one city sustainability official, climate change official, or environmental management official of each of the purposefully selected eight (8) South African metropolitan cities (depending on how each municipality names its portfolios). Seven (7) responded: Metropolitan A, B, C, D, F, G and H (88% response rate). Figure 2 analyses and interprets the responses from the virtual and telephone interviews to the 8 questions mentioned in Table 2.

Figure 2: Findings from the virtual and telephone interviews (Source: Own)



According to these answers, the metropolitan cities have proper action plans, requiring considerable investments to combat climate change impacts:

- Metropolitan B has established a solar PV system, producing more than 5 000 megawatts, with energy storage underway. Furthermore, the city is currently busy with an energy grid that will transmit energy to households and businesses, which the city will fully control. The city has protected more than 800 000 indigenous plants and significant trees in a quest to protect the environment and assist the city in carbon dioxide trapping.
- Metropolitan D is a South African Green Building Council member and has enacted a by-law for green building that promotes the relevant concepts and design initiatives. In addition, the Building Efficiency Accelerator program serves as a vehicle to accredit green building and to assist in and to show retrofitting of existing structures.
- Metropolitan G has planned to remove alien plant species to create adequate green open spaces. The only barrier is the lack of accessible funds to execute the strategy. In order to instil climate change mitigation and adaptation strategies, it works with various stakeholders, such as community members, schools, and businesses. Hence, as a starting point to become more effective, Metropolitan G has realised that they require the buy-in of the citizens.
- Metropolitan H has developed extra strategies to combat climate change. However, they are still on hold due to financing challenges.

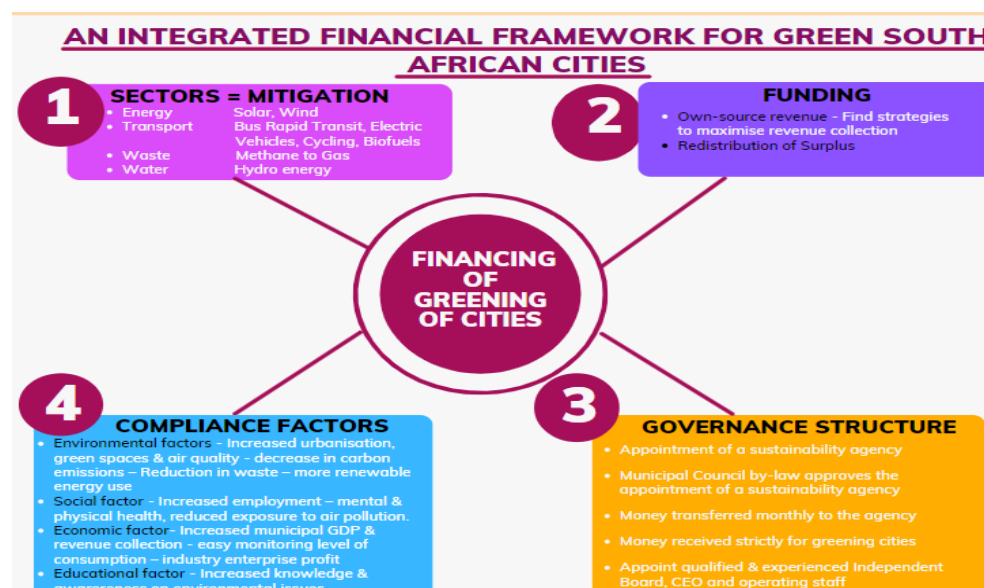
- Metropolitan A has developed creative methods to address climate change in its space. Firstly, it organised two climate change awareness campaigns: Coastal, Disaster, Environmental Health, Environmental Pollution, Housing, Spatial Planning, Waste Management, and Transport Planning. The campaigns made attendees admit they did not understand climate change issues. Then secondly, climate change officials began to educate these departments about the effects of climate change. This will continue until all departments understand because climate change officials require the support of all departments to combat climate change. However, the third step – adapting these departments to new technologies – is still outstanding.
- Trying to test outcomes, Metropolitan F conducted various small-scale projects successfully. The most outstanding projects are renewable energy projects and involve improved gas extraction (methane) to create power. In addition, the municipality on its own three landfills destinations. The landfills gas extraction still requires massive capital for expansion, but the city remains hopeful that it will acquire funds.
- While Metropolitan C sees financing as the most significant barrier to executing green projects, it is convinced to find innovative ways to align itself with the right investors. Its climate change office has strong support from the various internal departments and municipal entities. The city has various successful projects on a small-scale basis and hopes that, with the correct financing, the projects will expand on a large scale, ensuring that the year 2030 and the year 2050 goals are achieved.

## DISCUSSIONS AND RECOMMENDATIONS

Figure 3 proposes an integrated financial framework solution that not only tries to solve financing issues but also attempts to address the challenges mentioned above currently faced by municipalities as well as the ones alluded to by Kranjčić *et al.* (2022:2), Boyd *et al.* (2022:1 & 9) and Esmail *et al.* (2022:10):

- Failing to capture the emitted carbon dioxide and Insufficient carbon dioxide strategies may be employed to help reduce the carbon dioxide emitted.
- Insufficient green spaces may serve as recreational spaces for community members.
- Traffic congestion issues and reluctance to cycle, walk and use public transport, especially in cities, may aid in reducing air pollution.
- Reduction of municipal waste by encouraging households to recycle more.
- Reducing water leakages by encouraging households to report leaking taps to municipal offices may encourage community participation.
- The lack of capacitated staff members to deal with green projects causes backlogs in greening cities.
- Barriers encountered when applying for financing from external financing institutions and also cases backlogs in greening cities.

**Figure 3: An Integrated Financial Framework for Greening South African Cities (Source: own)**



In the following, the main segments of this framework (sectors to be greened together with their mitigation strategies, proposed funding strategies, governance structure, and the compliance factors to be employed when approving green projects) shall be explained before the last subsections deal with the advantages and disadvantages of the proposed financial framework.

## Framework Segment 1 – Sectors to be Greened and Mitigation Strategies

The following Table provides a guideline for activities the established sustainability agencies may conduct. It focuses on the energy, water, transport and waste sectors for guideline purposes.

**Table 3: Sectors to be greened and their mitigation strategies**

<b>Sector</b>	<b>Mitigation Strategies</b>
<b>Energy</b>	<ul style="list-style-type: none"> <li>- <b>Solar</b> - produce electricity from the sunlight, which will require robust storage systems in absents of sunlight.</li> <li>- <b>Wind</b> - producing electricity from the wind will require robust storage systems without sunlight.</li> <li>- <b>Biofuel</b> - refined from wheat, corn, sugar beets, sugar cane, molasses, and any other sugar or starch.</li> </ul>
<b>Transport</b>	<ul style="list-style-type: none"> <li>- <b>Bus Rapid Transit</b> – encourages communities to utilise public transport. Most cities have this transit, but they are still required to expand.</li> <li>- <b>Electric Vehicles</b>- the cities can benefit more from this type of vehicle, especially the allocated vehicles for service delivery purposes.</li> <li>- <b>Cycling</b>- Assists in carbon dioxide emissions reduction.</li> </ul>
<b>Waste</b>	<ul style="list-style-type: none"> <li>- <b>Methane to Gas</b> – if waste is utilised to draw methane, metros may also save on landfill sites.</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>- <b>Hydro energy</b> - is entirely renewable, which means that it will always be available as long as there is still a water supply.</li> </ul>

Since the sustainability agencies may comprise climate change experts in sustainability, they may improve on it, strive to provide a safe and healthy environment for communities and develop policies aligning with the National Climate Change Response (NCCR) and NDP objectives. Since the metropolitans have to uphold the Constitution and the White Paper on NCCR in providing a safe and healthy environment for the citizens of South Africa, the proposed integrated financial framework proposes sectors that may be greened. Therefore, sustainability agencies may be required to prioritise the highest carbon dioxide-emitting sectors and cost-effective mitigation strategies if financing is insufficient in the initial phase. They may undertake carbon footprinting and emissions accounting for big manufacturing industries in a quest to determine the amount of carbon emitted reasonably. The prioritisation may make it easier for the agencies to plan, monitor, and report to municipal councils on progress in creating a safe and healthy environment.

## Framework Segment 2 – Funding

The metropolitan cities are compelled to render services to the citizens. Although the non-payment of these services is high, they are still expected to supply them to the non-paying community. Various studies have tried to bring solutions to assist municipalities in recovering household debts. For example, the Centre for Sociological Research and Practice (CSRP) (2022:2) researched the depth of the electricity non-payment issue in the biggest township in South Africa, Soweto. The households of Soweto mentioned that they do not have a problem with paying; however, they only have an issue with paying fluctuating amounts every month because their salaries are stagnant. Having other monthly obligations besides electricity, they fail to budget appropriately. Hence, already Mathonsi *et al.* (2017:1080-1081) recommended that families pay a flat-rate tariff for their services, which might help municipalities recover the revenue owed for services rendered. Then, cities might benefit from their own-source income, encouraging more households who could not afford to pay fluctuating bills to pay their bills. Paying for services may assure community members that paying for their services will come with better quality of life through greener cities.



According to Galal (2021:1), South Africa has an estimated 17 160 000 million households as of 2019. However, 7 625 122 households are in the eight metropolitan cities (SA, 2018:56-66). Therefore, every month, all metropolitan households could contribute on a sliding scale (different rates charged for different class groups) to pay for services they consumed, except for poor households. According to the proposal of Mathonsi *et al.* (2017:1080-1081), in particular, in an environment like South Africa with its huge inequality, people with low incomes can be exempted from paying, while the sliding scale for higher earning classes rates may then be calculated based on the metropolitans' budget expenditure expectations (e.g. from R600 for the lower middle class to R1 800 for the upper class) (Mathonsi, 2017: 161-171). Furthermore, Mathonsi mentioned that this proposal, which transfers the concept of the equivalent unit calculation from cost accounting to municipal tariff setting, is still covered by Section 74 of the Municipal Systems Act (MSA): Section 74 (2a) of the MSA confirms that households are unequal and (2c) mandates that people with low incomes should be able to access basic services.

Moreover, Section 74 (3) of the MSA allows for the differentiation of tariff policy that may apply to different categories of users – as long as it does not amount to unfair discrimination. It can also be adjusted to create additional revenues for greening cities: metropolitans not collecting sufficient fail to deliver services to the communities as the Constitution requires. Hence, the proposed funding model of the financial framework is supported by Section 152 (2) of the Constitution, as it helps to raise the finances to achieve the municipalities' mandates to communities (Mathonsi, 2017:161-171).

The Appendix illustrates how this can be done so that South African metropolitan cities can collect sufficient revenue to accommodate service delivery continuation and the greening of cities. The extraction of the current revenue collected status versus the budgeted revenue in the first part confirms that South African metropolitan cities struggle to collect sufficient revenue to run their cities. Based on different classifications, the tariff rates were then benchmarked in the second part according to the users' current paying patterns and affordability, employing the example of metropolitan E. Finally, the third part shows how the R16 billion per year that were derived from the SSTECH eco-city project for greening the eight South African metropolitan cities for 30 years was determined by charging different classes flat rates ranging from R600 to R1 600 and exempting people with low incomes from paying (Mokgopa & Klingelhöfer, 2020:17). The calculations considered both issues of service continuation as well as putting aside money for the greening of cities.

### **Framework Segment 3 – Governance Structure**

The establishment of skilled sustainability agencies shall assist metropolitans in greening on a large-scale basis by attempting to resolve the lack of sufficient capacitated sustainability/climate change employees: In the same way, as Metropolitans already appoint agencies, e.g., to provide road infrastructure and economic developments services, these agencies shall help to execute also greening projects free from municipal internal dynamics and political influence that require specialists. In doing so, the sustainability agencies may be tasked with proper monitoring and evaluation (e.g., to project scope, quality, timeline, budget and compliance issues) and reporting to the municipal council. Thus, they can assist in resolving the issues mentioned above and barriers faced by the sustainability/climate change units within the municipalities, particularly concerning the procurement processes, incapacitated staff members, and political influence. Furthermore, the monitoring and reporting findings might be used as insights to optimise processes for future projects.

Therefore, the proposed integrated financial framework serves as a blueprint attempt to assist metropolitans in achieving their new target timeline of the year 2050 to implement green projects in a quest for carbon reduction, among other issues. Furthermore, the proposed integrated financial framework aligns with the NDP objectives and available green policies to ensure that all eight metropolitan cities are equally green and innovative in planning and implementation. Nevertheless, although the Covid-19 global pandemic provides an example of municipalities innovating to mitigate it, they suffered significant setbacks in greening their cities (Shava & Vyas-Doorgapersad, 2022:281).

### **Framework Segment 4 – Compliance Factors**

According to Purvis *et al.* (2019:682) and various other studies, a sound green financing framework must consider environmental, economic, and social factors. However, education must also be considered to achieve maximum results

as it helps to build awareness and find creative ways to empower people with knowledge of specific concepts. Therefore, sustainability agencies should ensure that all projects, especially long-term ones, follow these four compliance factors before they can be approved and implemented.

## The Advantages and Disadvantages of the Proposed Financial Framework

This section will discuss the advantages and disadvantages of the proposed financial framework, as illustrated by Table 4. The Table may assist in pointing out the necessity of an integrated financial framework for green cities and the flaws that might hinder their successful execution. Furthermore, identifying its risks and benefits may enable the sustainability agencies and cities to customise the proposed framework and develop better plans to minimise harmful events before they arise to fit best the type of city they are assisting for maximum results.

**Table 4: The advantages and disadvantages of the integrated financial framework (Source: Own)**

Advantages	Disadvantages
Metropolitans might thrive on collecting sufficient revenue and will be able to use it to self-fund green projects through sustainability agencies.	Households are reluctant to pay. Hence a provision for bad debts is considered to ensure the success of the proposed financial framework.
Relying more on own-source funding, municipalities may reduce their dependencies on interest payments and risky loans, reducing interest payments and the risk of losing all the acquired green infrastructure if they fail to repay the loans.	The sustainability agency might fail to fund all sectors at once if households fail to pay on sliding scales as expected. The failure to collect sufficient revenue will prolong the 30 years duration set to adhere to the NDP estimated timelines.
All sectors have an opportunity to be funded at the same time if the revenue collection unfolds as planned.	Initial installation costs are high, which might slow progress so that the sectors' prioritisation might be implemented.
Has the capacity to develop and implement policies for greening.	Requires community support because community members' unwillingness to adhere to green policies can slow the greening progress. However, community members might slowly change their behaviour if the educational component can be featured as time passes.
Accelerating the greening initiatives to achieve the climate-change-related targets set by the NDP by 2030.	Lack of money by financially constrained middle-class households to change from conventional to green methods.
The municipalities gain control over the future of the assets as the sustainability agency will rely on the metropolitans' self-generated revenue.	
The involvement of sustainability agencies in all eight metropolitan cities will provide capacities to execute green projects efficiently and independently from political changes/preferences.	
Incorporation of environmental education in formal education programmes.	

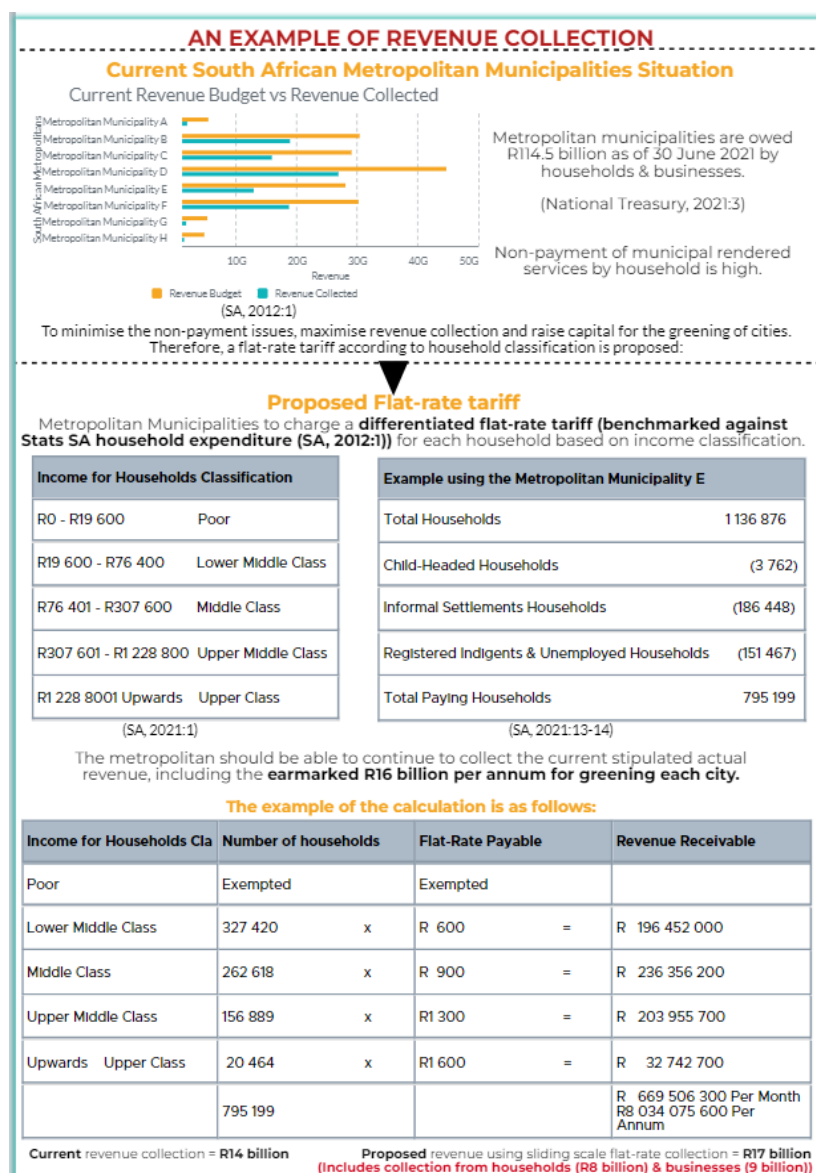
Since the identified advantages surpass the disadvantages, the proposed integrated financial framework promises to be viable for South African cities and to improve dealing with the challenges of greening South African cities embedded in the existing financial structures. Municipalities may reduce the need to fulfil private investors' or financial institutions' financing requirements to encourage own-source revenue. Additionally, the proposed integrated financial framework may attract new investors and retain existing investors because investors prefer financially stable municipalities (SA, 2022:54).



## SUMMARY

The proposed integrated financial framework that considers the education, economic, social, and environmental aspects aim to provide holistic financial assistance to greening South African cities. The integrated financial framework is presented in four (4) parts to ensure that South African cities' greening becomes a reality. In addition, the proposed integrated financial framework presented a self-funding possibility for municipalities by changing their current tariff structure to encourage self-sustainability. Because a self-funded city is an excellent sign of independence (SA, 2019), which can help attract investors to South African municipalities. Furthermore, the initial funding that may be obtained from the flat-rate tariff may strongly influence the rate and productivity of private capital formation, political stability, expanding the opportunity for new businesses, improved infrastructure, efficient public utilities, and many other aspects. Also, establishing sustainability agencies may accelerate cities' greening to meet the year 2050 timelines set by metropolitans' climate change action plans. Therefore, South Africa needs to create financially capacitated cities for sustainability purposes.

## APPENDIX



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# A GENDER COMPARISON OF THE FACTORS INFLUENCING GENERATION Y STUDENT CONSUMERS' WEARABLE ACTIVITY TRACKER USAGE INTENTIONS

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## ABSTRACT

*Since its commercialisation around 2009, the smart wearables market experienced significant growth with an expected 105.3 million units to be shipped by 2024. Although the diffusion and adoption of this market has been established, gaps in the literature remain. This study addressed the gap related to the gender differences in relation to consumers' WAT device perceptions. Three prominent technology adoption models, namely TRA, TAM and TPB, with the inclusion of social image, served as the theoretical underpinning for this study. Following a quantitative, descriptive research design and cross-sectional approach, data were gathered, using self-administered questionnaires, from a non-probability sample of 480 South African Generation Y university students aged 18 to 24 years. Using SPSS version 28 to execute, among other tests, an independent samples t-test and regression analysis that subsequently revealed that, based on mean values, a gender-based difference was only applicable to perceived ease of use. Further, all but one perceptual factor, namely subjective norms, were statistically significant predictors of females' WAT usage intentions, whereas for males, only their attitude, perceived behavioural control and perceived ease of use were statistically significant predictors of their WAT usage intentions. The findings of this study have several practical, managerial and theoretical implications.*

**Keywords:** gender and perceptual differences, Generation Y consumers, technology adoption theories and models, wearable activity trackers, usage intentions.

## INTRODUCTION

A wearable activity tracker (WAT) is defined as “any type of device that is attachable to the human body, including clothing items, capable of measuring the user’s movement and fitness-related metrics, whilst simultaneously providing real-time feedback using a smart device” such as a smartphone, desktop application or web service (Muller, 2022). The global WAT market is reported to generate a projected \$48.2 billion by the end of 2023 (P&S Market Research, 2018). The South African market, though lacking behind compared to larger economies, generated a reported \$134 million in 2021 (Statista, 2021) and in 2020 ranked 18th and 17th worldwide in terms of revenue generated and user penetration, respectively. As such, within the wearables market, wearable activity trackers are the largest category and dominates in terms of unit sales (Statista, 2020a).

The success of the wearable fitness market can be attributed to consumers who increasingly rely on this technology, specifically wrist-based devices, such as fitness and smart watches and bands, that enable them to, at a minimum, keep track of their daily activity including steps and distance travelled, heart-rate data, calories expended, sleep patterns and quality, sedentary periods where some consumers link the data to their overall health status (Shin et al., 2019). Advanced devices, including heart-rate-based chest and arm straps and smart clothing, including Hexoskin™, are targeted towards consumers and athletes interested in performance monitoring and management (Palladino, 2016). This includes, but is not limited to, tracking multiple sport codes and analysing the data as well as blood oxygen saturation, respiration rate, body battery information, training status, intensity minutes, with most advanced devices having on-board GPS sensors for detailed route tracking and dedicated training plans, with selected devices having an integrated solar panel for extended battery life Song, 2023; Skjong & Roberts, 2023).

The benefits of using these devices are evident, yet literature does not provide insights as to whether this technology is favoured by one gender over the other. This investigation is necessary to enable WAT manufacturers, resellers and marketers to target the most lucrative market segments. Since the information about gender differences and wearable technology use is thin, this study used findings from what was available as well as other research with a different context in support of the investigation.

## **GENDER DIFFERENCES IN TECHNOLOGY USAGE**

Goswami and Dutta (2016) highlight varying results regarding the influence gender has on the adoption of technological devices and systems, such as WATs. These include the usage of Information Technology (IT), including computers, email services, electronic data management systems and the like, where gender may be deemed as an influencing factor in the adoption of use of IT as males have been found to be more technologically adept in comparison to women. In terms of Internet or mobile banking, the literature shows that there are mixed observations regarding the impact of gender, while in e-commerce and mobile commerce it is evident that both males and females equally use online shopping, although female consumers are more influenced by consumer reviews in comparison to men. With regards to, gender was deemed to significantly influence the acceptance of e-learning applications, which was the same for online stock trading, where several studies found females to be more prone to technical challenges and risks associated with using technological devices or systems.

Evidence shows that there are more female consumers who own WATs (57%) as opposed to male consumers (43%) (Statista, 2020a). In comparison, the South African WATs market comprised a larger percentage of males (55.6%) compared to females (44.4%) (Statista, 2020b). Additionally, South Africa is ranked among the top 150 of the world's leading digital economies in relation to WATs, highlighting South Africa as the next possible big market for WATs (Business Tech, 2018). Similarly, the global and South African WATs market is driven by individuals aged between 18-34 years (Statista, 2020a; Statista, 2020b), which constitute the individuals more commonly referred to as the Generation Y cohort (Markert, 2004). As such, it is imperative that organisations develop an understanding of the Generation Y cohort and their subsequent consumer behaviour (Smith, 2011).

As such, this study aims to determine whether gender differences exist in relation to Generation Y student consumers' wearable activity tracker usage intentions and its independent factors, namely behavioural intention, attitudes, perceived ease of use and usefulness, subjective norms, perceived behavioural control and social image.

## **THEORETICAL FRAMEWORK**

The underpinning theories used in this study include the technology acceptance model (TAM) of Davis *et al.* (1989), the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1991). All of which were employed to investigate the the factors influencing Generation Y student consumers' wearable activity tracker usage intentions, namely behavioural intentions, attitudes, subjective norms, perceived behavioural control, perceived ease of use, perceived usefulness and social image.

Using the technology acceptance model (TAM) of Davis *et al.* (1989:985) as one of the underpinning theories of this study, the factors involved in the acceptance of technology, namely perceived ease of use and perceived usefulness, were investigated with regards to consumers' intentions to use wearable activity tracking devices (WATs). Suki and Suki (2011:55) and Fathema, Shannon and Ross (2015:227) suggest that when an individual views technology as easy to use, the individual is more likely to perceive the technology in question as useful, resulting in positive attitudes towards the use of the technology and the increased likelihood that the individual will use the subsequent technology, similarly influencing the actual use of the technology, such as a wearable activity tracking device (WAT).

Sobieraj and Krämer (2020) theorise that not only is there a difference that exists between the way males and females accept and use technology, but there is also a difference regarding their self-perceptions pertaining to technology, where females are more inclined to view themselves as less capable when making use of technological devices and systems. Based on the findings of Goswami and Dutta (2016), gender is theorised to be a significant variable in explaining the technology acceptance behaviour of individuals. Consequently, this study aims to investigate

if a difference exists between gender regarding the factors that influence Generation Y student consumers' wearable activity tracker usage intentions.

## **Behavioural Intention**

Ong and Lai (2006) identify some difficulties in interpreting the multidimensional aspects of use as mandatory versus voluntary, informed versus uninformed, effective versus ineffective, amongst others. Delone and McLean (2003) suggest that behavioural intention may be a worthwhile alternative. Behavioural intention is an attitude, whereas use indicates behavior (Ong & Lai, 2006). A significant body of research has found that men are more experienced in terms of working with computers and exhibit more positive attitudes than females (Durndell & Thomson, 1997; Ong & Lai, 2006; Whitley, 1997). Furthermore, Reda and Dennis (1992) investigated gender-based attitudes towards using computer assisted learning (CAL) amongst university students, where the results revealed that male students preferred using CAL in contrast to female students.

## **Attitude**

According to Kurniawan et al. (2019), attitudes are the feelings or predispositions, which may be either positive or negative, that individuals have regarding a specific object, individual or situation, based on their existing beliefs and knowledge. Consequently, the attitudes of consumers influence the behaviour of consumers and the way they respond to stimuli. Rahman et al. (2018) add that attitudes are the positive or negative feelings that consumers have in relation to specific products, where a consumer with a positive attitude is more likely to purchase the product in question, which results in consumers either favouring or disfavouring the brand. With regards to technology, attitudes encapsulate an individual's overall emotional reaction towards the use of a specific technological device or system (Venkatesh et al., 2003). With regards to WATs, attitude reflects the likelihood that consumers will accept or reject the use of these devices. Based on the findings of previous studies, it is evident that attitude significantly influences consumers' intentions to use or adopt smartwatches (Choi & Kim, 2016; Wu et al., 2016; Kim & Shin, 2015), wearable healthcare devices (Park et al., 2016) and smart clothing (Chae, 2009).

## **Perceived Ease of Use and Usefulness**

Nor and Pearson (2008) theorise that when an innovation is deemed as easy-to-use, the more likely consumers will feel inspired to adopt and use the innovation and subsequently develop a positive attitude towards it. For this study, perceived ease of use (PEOU) is the extent of difficulty associated with using WATs to learn and recall how to measure daily activity and the extent to which this process is free of physical and mental effort. According to Davis (1989), when an innovation, such as a technology device or system is perceived as being easier to use in comparison to a more complex substitute, the more inclined consumers will be to accept, adopt and use such a technology device or system. As such, if millennial youth consumers perceive WATs as easy to use for evaluating health-related metrics, they are more likely to perceive the technology as useful, to form a positive attitude towards it and to purchase a WAT.

This pattern has become evident in several studies undertaken in relation to technological devices and systems. From the findings of these studies it is evident that PEOU can be deemed as a significant predictor of consumers' behavioural intention with regards to the use of a technological device or system (Azharshaheen et al., 2020; Gao & Bai, 2014; Nikou & Economides, 2017; Taylor & Todd, 1995; Venkatesh, 2000; Wang et al., 2014), including consumers' attitudes towards the technology device or system (Chuah, 2016; Kim & Shin, 2015; Park, 2016; Taylor & Todd, 1995; Wu et al., 2016), although one study highlighted the absence of a significant relationship between PEOU and consumer attitudes towards smartwatches (Choi & Kim, 2016). Research also reveals the compelling influence of PEOU on perceived usefulness (PU) (Choi & Kim, 2016; Chuah, 2016; Chun et al., 2012; Gao & Bai, 2014; Kim & Shin, 2015; Nikou & Economides, 2017; Taylor & Todd, 1995; Venkatesh, 2000), which directly relates to usage behaviour (Davis, 1989).

The perceived usefulness (PU) of technology was originally defined as the extent to which individuals believe that employing the use of a specific technology device or system would assist in enhancing their job performance (Davis, 1989). Based on the characteristics, uses and features of WATs, there is a plethora of health and performance-related data that can now be generated, highlighting the perceived usefulness of these devices. Consequently, PU

encapsulates the extent to which individuals believe that using a WAT will not only improve, but increase the level and quality of the physical activity engaged in. Davis (1989) asserted that PU is a fervent indicator of user technology acceptance, so the individual who perceives WATs as highly useful may be expected to have a positive attitude towards the devices and to be likely to adopt them. Previous research has also shown PU to significantly influence consumers' attitudes towards a device or form of technology (Choi & Kim, 2016; Chuah, 2016; Felea et al., 2021; Kim & Shin, 2015; Lunney et al., 2016; Park et al., 2016; Taylor & Todd, 1995), and to influence technology adoption intention (Azharshaheen et al., 2020; Chuah, 2016; Chun et al., 2012; Felea et al., 2021; Gao & Bai, 2014; Park et al., 2016; Taylor & Todd, 1995).

Subawa, Dewi and Gama (2021:617) suggest that individuals accept a technology device or system, such as a WAT, based on their needs, which will in turn influence their perceived ease of use and perceived usefulness of the technology device or system in question, such as a WAT.

## **Subjective Norms and Perceived Behavioural Control**

Subjective norms are defined as the norms which individuals adopt based on the opinions of the people, such as family and friends, that individuals hold dear to themselves, as to how they should behave or act (Fishbein & Ajzen, 1975). With regards to WATs, subjective norms may be viewed as a reflection on an individual's belief that if the people that they hold near and dear to them believe they should use a WAT, then using a WAT becomes a good idea to these individuals, which will in turn influence the individual's attitude towards WATs and their ultimate decision to purchase and use WATs. Based on several research studies concerned with numerous forms of technology (Blut et al., 2016; Gao & Bai 2014; Kim et al., 2013; Lee, 2009; Nor & Pearson 2008; Pavlou & Fygenson, 2006; Taylor & Todd, 1995; Turhan, 2013; Venkatesh & Davis, 2000), it is evident that subjective norms do influence both behavioural intention and attitude towards the technology in question, in this case WATs.

Consequently, a consumer's attitude towards the technology being investigated, their subjective norm in the form of normative influences and their perceived behavioural control over using a particular technology, will ultimately determine an individual consumer's intention to use the technology, both in the present and the future (Hsu & Lin, 2016), however it is unclear if male and female students consumer intentions to use a particular technological device or system differ.

## **Social Image**

Social image is used to describe how individual consumers are perceived by other individuals within a society (Leary, 2020). Lin and Bhattacharjee (2010) associate social image with the extent to which a student may believe that the adoption and use of a WAT will improve their standing within their relevant reference groups, which will in turn promote their social role and subsequent standing within the group. Based on existing literature, prior research confirms the significant relationship between social image and consumers' attitudes towards and usage intention of new technological devices or systems (Yang et al., 2016; Lin & Bhattacharjee, 2010).

# **METHODOLOGY**

This study followed a positivist, quantitative and cross-sectional approach with a descriptive research design. From the sample frame comprising the 26 registered public universities in South Africa (South African Market Insights, 2023), a judgement sample of three public universities in the country's Gauteng province was selected. Data were collected at a traditional, university of technology and a comprehensive university to ensure representation from all three categories of universities in the country. A non-probability convenience sample 600 of undergraduate Generation Y university students between 18 to 24 years was targeted.

After obtaining ethical clearance, data were gathered using a self-administered questionnaire with four sections; a cover page with the study details and an informed consent statement; Section A requesting demographic information; Section B requesting information related to respondents' wearable activity tracker experience; Section C with the six-point Likert-type scaled-items (1=strongly disagree to 6=strongly agree) relating the seven factors. The scales were adapted from previously validated research: usage intention (three items) and attitude (four items) from

Kim and Shin (2015); PEOU (three items) from Nor and Pearson (2008); PU (five items) and social image (four items) from Yang et al. (2016); subjective norms (three items) from Lee (2009); and PBC (three items) from Taylor and Todd (1995).

The reliability and validity of the measurement instrument was confirmed using pre-testing (feedback from five competent researchers) and pilot testing on 50 individuals outside the main sample – returning Cronbach alpha values of  $r=0.913$  for the 25-item scale and ranged  $r=0.755-0.946$  for the individual scales. Data analysis using SPSS version 28 included descriptive statistics (frequencies and measures of central tendency), an independent samples t-tests and linear regression analysis. For all significance tests, the significance level was set at the conventional five percent level.

## FINDINGS AND DISCUSSION

Of the 600 questionnaires distributed in the main survey, 480 were returned, but only 462 were usable after the data were cleaned, resulting in a 77 percent response rate. The internal consistency reliability and the nomological validity of the data were confirmed by computing the Cronbach Alpha values. The 35-item scale delivered an overall Alpha value of 0.892 with an average inter-item correlation value of 0.191, with individual factors yielding values of  $r = 0.755$  to  $0.946$ . The reliability and validity of the scales can be confirmed since these values exceed the acceptable  $r>0.7$  level (Malhotra, 2020). The findings section departs by reporting on the sample profile in Table 1.

**Table 1: South African Generation Y student sample profile**

Gender	<i>f</i>	%	Institution	<i>f</i>	%	Province of origin	<i>f</i>	%
Male	184	39.8	Traditional	173	37.4	Eastern Cape	18	3.9
Female	276	59.7	Technology	174	37.7	Free State	30	6.5
Missing	2	0.5	Comprehensive	115	24.9	Gauteng	239	51.7
Age			Race			KwaZulu- Natal	20	4.3
18	95	20.6	Black/African	410	88.7	Limpopo	84	18.2
19	128	27.7	Coloured	16	3.5	Mpumalanga	36	7.8
20	85	18.4	Indian/Asian	9	1.9	Northern Cape	0	0
21	78	16.9	White	25	5.4	North-West	30	6.5
22	41	8.9	Missing	2	0.5	Western Cape	3	0.6
23	23	5.0				Missing	2	0.5
24	12	2.6						

This study's sample comprised more females (59.7%) than males (39.8%), the majority being aged 18-21 and were black/African students (88.7%). There was student representation from all but one of the nine provinces (NC) despite the survey occurring in Gauteng. The proportion of responses from the traditional university and the university of technology were similar, but fewer responses were obtained from the comprehensive university.

Contextualising the data regarding Generation Y students' WAT interest at the time of data collection is equally important as describing the demographics of the responding sample. Table 2 reports on wearable activity tracker and smartphone ownership, their interest in tracking their daily activity and whether they had an activity tracking application on their phone if not a wearable activity tracker. The latter question was particularly important since WAT devices were still largely unknown to the population at the time of data collection.



**Table 2: South African Generation Y student WAT interest**

		Male <sup>a</sup>		Female <sup>b</sup>		Total sample <sup>c</sup>	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<b>WAT Ownership</b>	Yes	10	5.5	17	6.2	<b>27</b>	<b>5.8</b>
	No	173	94.0	257	93.1	<b>432</b>	<b>93.5</b>
	Missing	1	0.5	2	0.7	<b>3</b>	<b>0.7</b>
<b>Activity tracking interest</b>	Yes	145	78.8	210	76.1	<b>357</b>	<b>77.3</b>
	No	38	20.7	61	22.1	<b>99</b>	<b>21.4</b>
	Missing	1	0.5	5	1.8	<b>6</b>	<b>1.3</b>
<b>Smart phone ownership</b>	Yes	171	92.9	264	95.6	<b>436</b>	<b>94.4</b>
	No	13	7.1	11	4.0	<b>25</b>	<b>5.4</b>
	Missing	0	0	1	0.4	<b>1</b>	<b>0.2</b>
<b>Activity tracker app</b>	Yes	49	26.6	70	25.4	<b>119</b>	<b>25.8</b>
	No	135	73.4	204	73.9	<b>341</b>	<b>73.8</b>
	Missing	0	0	2	0.7	<b>2</b>	<b>0.4</b>

a Male sample n=184

b Female sample n=276

c Total frequencies are based on the total sample where n=480

Table 2 shows that at one point, merely 5.8 percent or 27 of the Generation Y student sample owned an activity tracker, with more females than males. This was expected given the novelty of the devices. A promising finding for device manufacturers and resellers is that 77.3 percent or 357 of the sample were interested in tracking their daily activity, this time in favour of male students. Further 94.4 percent or 436 of the respondents owned a smartphone, more so by female students, though male students were more likely to have an activity tracking app installed on their phones.

**Table 3: Descriptive statistics and independent samples t-test results**

Factors	Full sample n=480		Males n=184		Females n=276		M→F	p-value
	Mean	SD	Mean	SD	Mean	SD	Mean difference	Two-tailed
UI	4.82	1.09	4.80	1.16	4.82	1.05	-0.019	0.853
ATT	4.91	0.81	4.90	0.83	4.91	0.80	-0.003	0.972
SNs	3.31	1.50	3.32	1.45	3.29	1.53	0.023	0.853
PBC	4.67	0.93	4.72	1.02	4.63	0.86	0.099	0.263
<b>PEOU</b>	<b>4.39</b>	<b>0.88</b>	<b>4.58</b>	<b>0.92</b>	<b>4.27</b>	<b>0.84</b>	<b>0.308</b>	<b>0.001*</b>
PU	4.71	0.86	4.71	0.89	4.70	0.94	0.018	0.831
SImg	3.55	1.19	3.60	1.28	3.51	1.13	0.082	0.434

\*Statistically significant at the 0.05 level

For Table 3, it is evident that six of the seven factors returned a mean score above 3.5, with a slightly lower mean recorded for subjective norms. This latter finding is arguably due to the respondents' unfamiliarity with the technology at the time of data collection, so much so that, to them, owning WAT devices was not regarded as a social norm. Regardless, these mean values suggest that the combined sample of Generation Y student consumers have a positive attitude towards and high probability of using WAT devices, they perceive these devices as easy to use and useful to their daily lives, while feeling confident about being able to use these devices and having access to the necessary resources and knowledge. Though, they do not perceive owning such devices as a social norm, nor do they explicitly perceive using these devices will improve their standing in a peer social group.

In terms of gender comparison based on the mean values, clearly, the only statistically significant difference was recorded for the perceived ease of use factor. That is, for this factor, males recorded a higher mean value ( $X=4.576$ ) than their female counterparts ( $X=4.268$ ) with a mean difference of 0.308. Conversely, there were no differences between males and female Generation Y student consumers regarding their attitude towards WAT devices

( $p > 0.05$ ;  $p = 0.972$ ) their intention to purchase such devices ( $p > 0.05$ ;  $p = 0.853$ ), their perceived usefulness of these devices ( $p > 0.05$ ;  $p = 0.416$ ) or their perceived behavioural control ( $p > 0.05$ ;  $p = 0.131$ ). Furthermore, there were no significant differences between male and female Generation Y student consumers regarding subjective norms ( $p > 0.05$ ;  $p = 0.398$ ) associated with WAT purchase intentions, nor the social image factor ( $p > 0.5$ ;  $p = 0.467$ ). While most of the factors are statistically non-significant, there are gender differences to consider, albeit small.

For example, the attitude and intention factors produced almost exact mean scores, therefore indicating no definitive preference based on gender. Again, while non-significant, males recorded higher mean scores ( $X = 4.713$ ) than female respondents ( $X = 4.696$ ) with regards to the perceived usefulness of WAT devices, subjective norms, perceived behavioural control and social image. This suggests that male Generation Y student consumers perceived WAT devices as useful to a higher degree, that they have the resources to use these devices, and that using these devices are somewhat of a social norm while it can enhance their peer standing, albeit slightly, than female Generation Y student consumers. Overall, the findings align with statistics indicating that the South African wearable activity tracker market is dominated by male consumers (Statista, 2020b).

Addressing the purpose of this study, a regression analysis was executed to first determine whether male and female Generation Y students consumers' WAT devices usage intentions can statistically be forecasted in relation to their responses to the six independent factors, and second, to establish the differences between male and female student consumers in terms of the six factors influencing their WAT usage intentions. Tables 4 and 5 outline these findings.

**Table 4: Regression model summary and ANOVA results**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup> Adjusted</b>	<b>F</b>	<b>p-value</b>
<b>Model 1 (Male's WAT usage intentions)</b>	0.651	0.424	0.404	21.673	<0.001
<b>Model 2 (Female's WAT usage intentions)</b>	0.622	0.387	0.373	28.263	<0.001

The significant F-ratios ( $p \leq 0.01$ ) outlined in Table 4 suggests that Model 1 statistically predicts South African Generation Y student consumers' WAT device usage intentions, whereas Model 2 does so likewise, though specifically for females. Furthermore, the  $R^2$  values produced by Model 1 suggests that 42.2 percent of the variance in male student consumers' WAT device usage intentions is explained by the six independent factors, whereas only 38.7 percent in the variance in female student consumers' WAT device usage intentions is explained by the same six factors. This implies that further research is needed to explain the other 61.3 percent for females and 57.6 percent for males of the variance and identifying the possible coinciding underlying factor influencing their WAT device usage intentions.

**Table 5: A gender comparison of the factors influencing Generation Y student consumers' WAT usage intentions**

<b>Independent factors</b>	<b>Males</b>			<b>Females</b>		
	<b>Standardised <math>\beta</math></b>	<b>t-values</b>	<b>p-values</b>	<b>Standardised <math>\beta</math></b>	<b>t-values</b>	<b>p-values</b>
ATT	0.384	5.581	<b>0.001*</b>	0.268	4.466	<b>0.001*</b>
SNs	0.113	1.633	0.104	-0.045	-0.760	0.448
PBC	0.269	3.964	<b>0.001*</b>	0.298	5.244	<b>0.001*</b>
PEOU	-0.173	-2.749	<b>0.007*</b>	-0.129	-2.399	<b>0.017*</b>
PU	0.087	1.217	0.225	0.225	3.547	<b>0.001*</b>
SImg	0.121	1.776	0.077	0.129	2.235	<b>0.026*</b>

\*Statistically significant at the 0.05 level

The most important findings, as linked to the primary purpose of this study, relate to the gender difference in relation to the factors influencing male and female Gen Y student consumers' WAT usage intentions. From the regression analysis output, as shown in Table 5, it is evident that for male student consumers, only three of the six factors, namely their attitude ( $\beta = 0.384$ ,  $p = 0.001$ ,  $p < 0.05$ ), perceived ease of use ( $\beta = -0.173$ ,  $p = 0.007$ ,  $p < 0.05$ )

and perceived behavioural control ( $\beta = 0.269$ ,  $p = 0.001$ ,  $p < 0.05$ ) have a statistically significant influence on their WAT device usage intentions. Female student consumers, on the other hand, overlap with male students in relation to the three latter factors [(Attitude:  $\beta = 0.268$ ,  $p = 0.001$ ,  $p < 0.05$ ); (PEOU:  $\beta = -0.129$ ,  $p = 0.017$ ,  $p < 0.05$ ); (PBC:  $\beta = 0.298$ ,  $p = 0.001$ ,  $p < 0.05$ )], but to them, perceived usefulness ( $\beta = 0.225$ ,  $p = 0.001$ ,  $p < 0.05$ ) and social image ( $\beta = 0.129$ ,  $p = 0.026$ ,  $p < 0.05$ ) were also direct influencers of their usage intentions.

Therefore, in comparison, female student consumers are more likely to use wearable activity trackers if they provide useful health and activity-related metrics, whereas for male students, the utility of these devices are insignificant to their usage intentions. Similarly, female student consumers also believe that owning a wearable activity tracker will help them fit in and feel part of a social group, more so than male students. Also, for both male and female student consumers, in accordance with the standardised beta coefficients, the two strongest influencers of their WAT device usage intentions are their attitude towards these devices and their perceived behavioural control and confidence in using these devices. Though, for females, their perceived usefulness of wearable activity trackers is also a strong predictor of their usage intentions. Overall, the social factors, namely subjective norms and social image are the least important factors influencing usage intentions, yet further and updated research is required to verify whether this is still a gender-based reflection.

## CONCLUSION

While the wearable fitness technology market contributes to the country's income and is expected to grow significantly in the next year, several research gaps remain limiting WAT brands, resellers and marketing professionals in their ability to maximise their marketing efforts. An essential part of growing any market is to know who to and how to target consumers based on their perceptions of the technology. This study determined that, while adoption of wearable trackers at the time of collecting data, most Generation Y students are interested in tracking their daily activity and since most of them own a smartphone, marketers can use mobile marketing strategically to target this consumer segment. Furthermore, this study confirmed that there are in fact significant differences between male and female students and their perceptions of wearable activity trackers.

Consequently, targeting male student consumers and addressing the factors that did not have a significant influence on their usage intention, should include marketing strategies emphasising that wearables have become a societal norm and will help them form part of social groups, and encourage them to conform to these norms, while also emphasising the usefulness of using a wearable tracker to provide valuable information on their health and activity metrics and why it is important to keep track of this information. Using these tactics might change male students' perceptions of WAT devices and also increase the likelihood of them buying and using these devices. Targeting efforts for female student consumers should mainly focus on strengthening the notion that these devices have become a societal norm and to encourage their significant others like friends and family members to also use these devices to remain informed about their health status.

Of course, as this study is merely a snapshot in time, updated research is required since consumer spending and preferences change constantly. This study was perhaps also limited by the geographic scope of the study and using a student sample, which is therefore not generalisable to the larger South African context. Thus, a larger scale study across the country and abroad can provide a deeper understanding and more value to WAT manufacturers, resellers and marketing professionals. A gender comparison is merely one angle and fills a small gap in the literature yet provides a departure point for other comparative studies, including based on income, social class, age, occupation and other distinguishing factors.

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# LITERATURE REVIEW OF CONTEMPORARY PERSPECTIVES ON MANAGEMENT OF BUSINESS FOR SMEs IN THE DIGITAL ERA

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## ABSTRACT

*Current research lacks in-depth insights into the digital transformation management of business processes in Small and Medium sized enterprises. The aim of this article is to develop a framework for digital business management for Small and Medium sized enterprises in emerging economies. A systematic literature review approach was used. 153 articles were shortlisted, and 33 articles were finalized which formed the sample for this study. Results shows that Small and Medium Enterprises in lacks the understanding of the importance of developing new business models or adopting already tested business models well aligned with the demands of the digital era. This study inspires managers to embrace change, to develop new competencies needed in order to guide their organizations into the uncertain future of the digital age.*

**Keywords:** digital transformation, Industrial Revolution 4.0, Internet of Things, SMEs.

## INTRODUCTION

Digitalization is becoming an increasingly central issue for companies. However, most companies, and in particular SMEs, are struggling to engage in a coherent global digital transformation process (Dethine, Enjolras & Monticolo, 2020). Dethine et al. (2020) further argued that digitalization affects much of a company's organizational strategy, including the development of market opportunities. Digitalization has been identified as an element that fosters the competitiveness of SMEs. This paper however reviews that the integration of digital technology requires proper management, investments, and changes in a company's internal practices through the mobilization of new resources, as well as by implementing specific capabilities to manage them. Initially, the existence of Small and Medium Enterprises (SMEs) was considered an important source of job creation and the main driving force of local economic development (Mpofu & Mhlanga, 2022). There is a significant growth in the literature coverage of SMEs which are said to represent some 90 per cent of the businesses globally. However, in the current and future of globalization and digital era, the role of SMEs existence is increasingly important as one source of foreign exchange. SMES businesses are adopting Information and Communication Technology (ICT) for the company's operations as part of digital transformation which is critical in the business environment as it makes them to be efficient companies in the field of economic development of a nation.

SMEs face challenges, especially those caused by the rapid development of economic globalization and trade liberalization along with the rapid rate of technological progress (Yustini, 2018). Imran et al. (2018) mentioned that Industrial Revolution 4.0 (IR 4.0) is disconnected from the needs of SMEs. Therefore, research is needed to support the sustainable survival and growth of SMEs. Local SMEs are unlikely to compete successfully in their present form without improving quality, cost competitiveness and management practices (Aydn & Savrul, 2014) brought by digital era. Although the adoption of digital technologies by firms has been studied extensively from a technical point of view, previous research lacks insight into the managerial aspects of digital transformation, which, given the transformation's interdisciplinarity, might have substantial implications for digital business management research. In



particular, it is unclear how small and medium-sized firms (Soluk & Kammerlander, 2021). Meanwhile, how SMEs reconfigure their capabilities to promote business model innovation by adopting digital platforms has remained an under-researched area. To address this gap, this paper established a conceptual framework to explain how digital platforms affect SMEs' business model innovation through the uptake and adoption of Internet of Things by employees and managers. The objectives of this study are therefore to establish the uptake of Internet of Things (IoTs) by SMEs in digital era; assess different business models adequate for SMEs in new and unfamiliar environment brought by digital era and to develop a framework for digital business management for SMEs in emerging economies.

## LITERATURE REVIEW

The digital era is radically changing our societies and how firms do business. Innovating the business model has become a fundamental capability to survive competition, particularly for small and medium-sized enterprises (SMEs). Recent research contributions revealed that enterprises are adopting digital technologies to improve their management processes that in turn have an impact on innovation, the market and financial performance (Saldanha, Melville, Ramirez, Richardson, 2013; Saldanha, Mithas, Krishnan, 2017; Raguseo, Vitari, 2018). The process of digital transformation requires a careful management since it involves a set of technological, organisational, cultural, and social changes that impact the organization as a whole. For that reason, in order to reach satisfying results, it is not enough to passively adopt digital technologies throughout the organisation. Instead, it is important to be aware of the key organisational implications of embracing such a change in order to be able to manage the whole process in the best possible way (Casalino, Nunzio, Zuchowski, Ireneusz, Labrinos, Nikos, Nieto, Ángel Luis Muñoz, Martín-Jiménez, José Antonio, 2020). Casalino, et al. (2020) further argued that in order to balance the ongoing digital transformation, it is becoming fundamental to improve also the so-called "digital resilience", that is becoming a critical factor for the success of any SME now and in the future. Digital resilience needs to be regarded as an integral part of the strategy and mission of any business and should be centred around all involved staff in SMEs.

Digital transformation is becoming a main issue for every small and medium-sized enterprise (SME). The rise of software as a service is an opportunity for them to innovate their business processes; however, the lack of digital knowledge and resources is often perceived as a barrier to starting a digital transformation (Cavillier, Quentin, Cavillier, Wieser & Philippe, 2018). The digital economy has grown significantly in the global landscape due to the impact of Industrial Revolution (IR 4.0) technologies. IR 4.0 has been recognised as the new efficient component of an economic strategy that results in lower costs and boosts efficiency in many industries (Radanliev et al., 2019). This can also help SMEs in emerging economies to be able to compete globally by taking advantage of IR 4.0. Developing countries have seen a surge in digital activities over the years and the African countries and other emerging economies are no exception (Mpofu & Mhlanga, 2022).

Digitalisation represents an opportunity for SMEs in Sub Sahara Africa, where a less structured organisation can faster develop the capability to proactively lead Business Model Innovation (BMI) (Lindgren and Abdullah 2013). Digital technologies can increase levels of production efficiency to reduce production costs while optimising immobilised capital, by minimising inventories and streamlining information flows. Indeed, SMEs can limit risks by sharing processes and activities to reduce the risks of flow interruptions along the supply chain, minimising operational risks contingent on operating costs (Fiorentino 2016). It is therefore the objective of this review study to develop a framework for digital business management for SMEs in emerging economies. The rapid development of digital era therefore encourages small and medium enterprises (SMEs) to accelerate digital transformation to increase their sustainable competitiveness (Harini, Pranitasari, Said & Endri, 2023).

### Conceptualising Industry 4.0, Digitalisation Transformation, Digital Age

Academics and industry are used to the term "digital transformation" as a key term to express organizational changes influenced by digital technologies. However, while a clear definition has not been widely adopted, all the scientific articles are nevertheless unanimous in expressing the fact that digital transformation induces a radical change in organizations (Burki, 2018). According to Lucas et al. (2013), these changes concern adjusting business processes, creating new organizations, changes in organization/customer relationships, markets, user experiences, and the number of customers, and finally, the impact of disruptive technologies.

## Industry 4.0

Industry 4.0, often known as the “Fourth Industrial Revolution”, is defined as the emergence of cyber-physical systems that provide people and machines with whole new capabilities (Mpofu & Mhlanga, 2022). Schwab (2015) stated that even though these capabilities are based on the third industrial revolution’s technologies and infrastructure, Industry 4.0 represents fundamentally new methods through which technologies are integrated into communities and even our bodies. The term “Industry 4.0” refers to an advancement in technologies that blurs the distinctions between the physical, digital, and biological worlds. Klaus Schwab, the World Economic Forum’s founder, and executive chairman created the phrase 4IR. The 4IR is commonly compared to an approaching rainstorm, a sweeping pattern of change appears in the distance that arrives quickly and leaves little time to prepare (Mpofu & Mhlanga, 2022). Therefore, SMEs should be prepared and not to be caught unaware by this storm of digital era. This can well be achieved if the management can tap into the advantages which is brought by 4IR by re-configure and re-engineer its’s business processes.

The growth of the digital economy must be viewed in the context of the Fourth Industrial Revolution (4IR) (Mpofu & Mhlanga, 2022). After the first industrial revolution employed waterpower, mechanisation, and steam power, the second revolution relied on mass manufacturing through electricity and assembly lines. The third industrial revolution centred on automation, electronics, and computers (Juswanto and Simms 2017). The characteristics of the modern external environment that affects enterprises are described in numerous modern studies. Klaus Schwab calls the provocations of modernity the Fourth Industrial Revolution, or Industry 4.0, Thomas Siebel calls the era of “Digital Transformation”, Erik Brynjolfson and Andrew McAfee (2017) talk about the “Age of Machines”, Tjeue Blommaert and Stephan van den Broek - the Age of Singularity.

## Digitalisation Transformation

Digital transformation is forcing companies to increase agility and proactiveness, to implement continuous change and to constantly adapt strategies to market demand. To develop flexibility, businesses should employ innovative business models (Tohanean et al., 2018; Lambert, 2018) and conceive new ways of designing customer experience. Eisingerich and Bell demonstrated that Digital Transformation (DT) enables companies to use digital capabilities to create new Business Models (BM), products, and services. They argued that this is an ongoing process that adapts to the customer or market changes and drives innovative change. The digital age is fundamentally changing the way our society and businesses operate. Business Model Innovation (BMI) has become a fundamental function to survive competition, especially for SMEs. Digital technology is a powerful force that is pushing companies to embrace new BMs (Cohen & Kietzmann, 2014; Fjeldstad & Snow, 2018), making innovation increasingly relevant.

# RESEARCH METHODOLOGY

This research was based on an exploratory deductive approach to unpack issues pertaining to uptake of Internet of Things by SMEs, business models in digital era. The objective was to build a theoretical research object in view developing a framework for digital business management for SMEs in emerging economies. According to Saunders et al. (2003), an exploratory research approach can either be a goal or constitute part of the research upstream of a subsequent testing process. Thus, this study methodological approach aims at identifying and clarifying the aspects pertaining to management of business for SMEs in digital era by carrying out a systematic literature review, based on a theoretically exploratory study. The researchers adopted this review method because it allows in-depth and critical analysis of literature in the subject area and can show the knowledge gaps in the literature, as well as policy gaps (Snyder, 2019).

A bibliometric analysis was conducted using a keyword research algorithm: TITLE-ABS-KEY (management AND business AND SMEs AND “digital era” OR “information age” OR “Industrial revolution” OR “digital transformation”) Only “article” document types were considered and only papers written in English between 2018 to 2023 were used. PRISMA framework was therefore used to perform the systematic review analysis. The first bibliographic analysis was performed on the Scopus database and provided a total of 153 corresponding articles. Next, the relevance of each paper was checked, according to its research area. This refining process resulted in the exclusion of papers from unrelated areas of research such as energy, engineering, environmental science, mathematics, and psychology. 47 papers were then retained for the next step. Retained 47 papers were exported to CSV excel, duplicate data was removed, and abstracts were screened using the coding Relevant (R) = 1, Not Relevant (NR)= 0 and Maybe Relevant (MR) = 2. Irrelevant papers were removed, and 33 papers were retained. A deep analysis of each considered

article was performed in order to establish the uptake of Internet of Things (IoTs) by SMEs in digital era; assess different business models adequate for SMEs in new and unfamiliar environment brought by digital era. A systematic review on barriers and facilitators on the uptake, adoption and usages of Internet of Things and various innovative business models was done and how it can promote the efficient of the management of digital business management for SMEs. The gathered information became the input in the development of a framework for digital business management for SMEs in emerging economies.

## RESULTS

### Uptake and Usage of ICT by SMEs

Results showed that the investigated SMEs made more intensive use of traditional digital technologies supporting customer knowledge management processes, rather than more innovative digital technologies, despite the latter being generally cheaper, more user-friendly and more effective (Antonelli, Geuna & Steinmueller, 2000; Esposito & Mastroianni, 2002; Matlay & Westhead, 2005; Garrigos-Simon; Alcamí & Ribera, 2012). Castagna, Centobelli, Cerchione, Esposito, Oropallo and Passaro (2020) also established that SMEs tend not to adopt more updated tools (e.g., direct email marketing, banner advertising, affiliate marketing, advergames) when conducting their businesses.

The results that are obtained from the review also indicate that the importance of the application and use of ICT strongly supports the development and sustainability of SMEs themselves (Sani et al., 2021). According to Martinsuo and Luomaranta (2018), SMEs would need broader networks and support to adopt the new technologies as digitalisation of industries is being carried out differently in distinct nations and they cannot develop the value chain in isolation (Phuc Khanh Linh et al., 2019). This creates opportunities for SMEs to gain access to existing knowledge and create a resilient system and processes in the future (Radanliev et al., 2019). Moreover, SMEs are able to differentiate themselves from their competitors and by adopting technologies, it allows them to be more competitive when managing their businesses.

Nwaiwu (2018) indicated that there is a high adoption rate of digital technologies within large multinational corporations, with high level of sophistication in how these technologies were integrated into their business management and operations and with other information systems. On the other hand, SMEs in emerging economies seemed to lack the understanding of the importance of developing new business models or adopting already tested business models well aligned with the demands of the digital era. They had a lower adoption rate and had their adoption of digital technologies in more fragmented manner that was often restricted to certain functional areas such as moving vital assets to the cloud or use of social media in engaging with their customers (Nwaiwu, 2018). Thomas Siebel believes that “the size of a company does not affect its stability and longevity. Small agile start-ups are crowding out giants that have ceased to develop” (Siebel, 2019) With this phrase, the author confirms to the advantage of SMEs to update quickly and thereby adapting to the external environment for survival.

### Management and Leadership in Digital Era

Results review that top management should create an organisational culture that encourages digital transformation practices and make internal incentives for these practices (Ilvonen, Thalmann, Manhart, Sillaber (2018). The digital transformation could be a competitive game-changer that raises creativity, revenues, efficiency, and profitability, and helps SMEs to potentially disrupt more well-known multinational companies (Phuc Khanh Linh et al., 2019). The study shows that if SMEs can use the potential of e-commerce to handle the difficulties of the new business environment, the more it can be able to compete globally. Factors that affect the financial performance of an enterprise is management style in the organization, the economic situation in the country, and the company's timely or untimely response to changes which is brought by digital. It is noteworthy that the leadership style in the company turned out to be the most significant. Hence, it can be said with certainty that the management system in the company plays a decisive role (Dorogaia, 2022), therefore should transform in line new technology brought by digital era.

Credibility, competence, communication, coordination, and participation from employees reflect the success of leadership styles in the digital era (Cahyadi et al., 2022). The findings revealed that support from the business leaders is necessary to motivate and encourage IT users to innovate with new technology. However, resistant to change, feeling complacent and anxious towards new technology are some of the challenges that the business leaders for SMEs have to deal with IT users. Business leaders for SMEs believed that management involvement, continuous

discussion, educating IT users, demonstration of knowledge and coaching will help to motivate and inspire IT users to make full use on the benefits of new technology.

## **Business Models for Innovation**

Findings reveal that digitalisation and firms' boundaries affect Business Model Innovation (BMI) in SMEs. Moreover, results demonstrate how boundary management, specifically its technological and relational aspects, directly impacts BMI and mediates the relationship between boundary size and BMI (Garzella et al., 2021). Comprehensively, it can be seen that the sustainable growth of SMEs is measured by the company's performance, and that the sustainable growth is affected by the BM of SMEs (Kim, 2021). It is BMI that enables SMEs to generate revenue now and, in the future, and turn BMs into competitive positions and improve performance. Findings show that business leaders play important role in IT innovation. This includes the ability to provide idealised influence, inspirational motivation, intellectual stimulation and individualised consideration (Kim, 2021).

Reis, Amorim, Melão and Matos (2018), established that around 15% of management have digital as a core business approach and customer sales and services account for 54% of digital projects. They advocated that the business deoxyribonucleic acid (DNA) undergoes significant change and concurs with Kaldero (2018); the reason for this is that digital transformation requires a mindset change in thinking about a digital data- and model-driven business.

## **DISCUSSION**

### **Managerial Implications**

The result of this review has significant managerial and practical implications as it offers some insights to SME managers when handling issues to deal with digitalisation, digital transformation, 4IR and IoT. Management is responsible for the digital transformation of the business and must understand that data management is the most important asset in the digital era (Gaffley & Pelsner, 2021). Based on the outcome of this research, other researchers and managers can investigate further the digital transformation initiative so the small and start-up SMEs can enhance their participation opportunity in the global market. This will be beneficial from an academic as well as a managerial point of view. Management can be able to identify the skill gaps within their organisation which may require rearrangement of staffs who mismatched positions or cannot be reskilled or upskilled to work with the new technologies' application (Phuc Khanh Linh et al., 2019) which are brought by digital era in order to transform businesses, quickly seize opportunities, and mitigate risks from digital transformation.

### **Practical And Theoretical Contribution**

SMEs in emerging economies have changed the way they do business in this digital age and managers are the ones who must lead by example. This study will inspire managers to embrace change, to develop new competencies needed in order to guide their organizations into the uncertain future of the digital age. Moreover, SMEs can never fully embrace the digital age if their managers are not willing to change the way they work and manage their employees. Although there are still few managers lack these competencies, but most of them have started to develop them (Dorogaia, 2022) and should be in line with the business models which supports digital era. Digital transformation strategies bring about changes and have implications for business models as a whole (Matt et al., 2015).

Business Process Models (BPM) and Management Models (MM) allows for the assessment of the current BPM maturity of SMEs, organization and/or individual groups of processes and, on this basis, comparison with the competition and planning of further management activities They are extremely important to the success of organizations, especially at the time of rapid digitization or automation and/or organizations changing their model to e-business (Bispo et al., n.d.). However, it is becoming increasingly clear that the development of the BPM MM has not kept up with changes in the entire business ecosystem. (Szelągowski & Berniak-Woźny, 2022) and therefore the objective of this review to develop a framework for digital business management for SMEs in emerging economies in digital era

Finally, the authors of this review paper believe and recommend that SMEs should be part of the ecosystems of the Framework for management of business for SMEs in digital era, in which there are close ties in terms of the cloud of Internet of Things, enablers, disablers, facilitators as well as the major business functions which are brought together to realise vibrant SMEs in digital era as demonstrated in Figure 3 below.

## CONCLUSION

Digital era involves a large amount of information that changes rapidly which has affected business for SMEs in emerging economies and other business in general. To streamline organizational processes, it is necessary to consider business processes carefully by reconfiguring and re-engineering for competitive advantage. Industry 4.0 provides customer co-creation process (Suryani et al., n.d.). Meffert and Swaminathan (2018) concluded that businesses which digitise will remain competitive and have a long-term future. At the same time, under the influence of new technologies, production processes will be implemented automatically, so employees have more time for creative work on the part of an entrepreneur. Martinsuo and Luomaranta (2018) further assert that SMEs should plan strategies to overcome the challenges in digital technology adoption which include a clear identification of the benefits of the technology investment, a selection of focal application areas and decision on “make or buy”.

## Recommendations

SMEs could take some proactive actions to overcome the lack of technological knowledge such as reducing technical and material uncertainties through learning, small-scale experiments, and research, giving resources to designers to learn and experiment (Phuc Khanh Linh et al., 2019). In addition, scouting and collaborating with some potentially lead customers through Public Private Partnerships (PPPs) in providing the necessary infrastructure which will enable SMEs to gather data, increase digitalisation and create demand through innovative paradigms and activate partners. It is necessary to develop an "adaptation" a framework, which means an appropriate business processes, proper business management, leadership style, organizational structure, corporate culture, team,

This study therefore recommends a framework for SMEs in digital era for emerging economies for adaptation, which is an appropriate for business processes, proper business management, leadership style, organizational structure, corporate culture and building teams. The framework in Figure 1 below demonstrates the significance of a clear understanding and an implementation strategy which are important for SMEs managerial governance focusing on gaining technological competitive advantage.

### Cloud (umbrella) of IoT

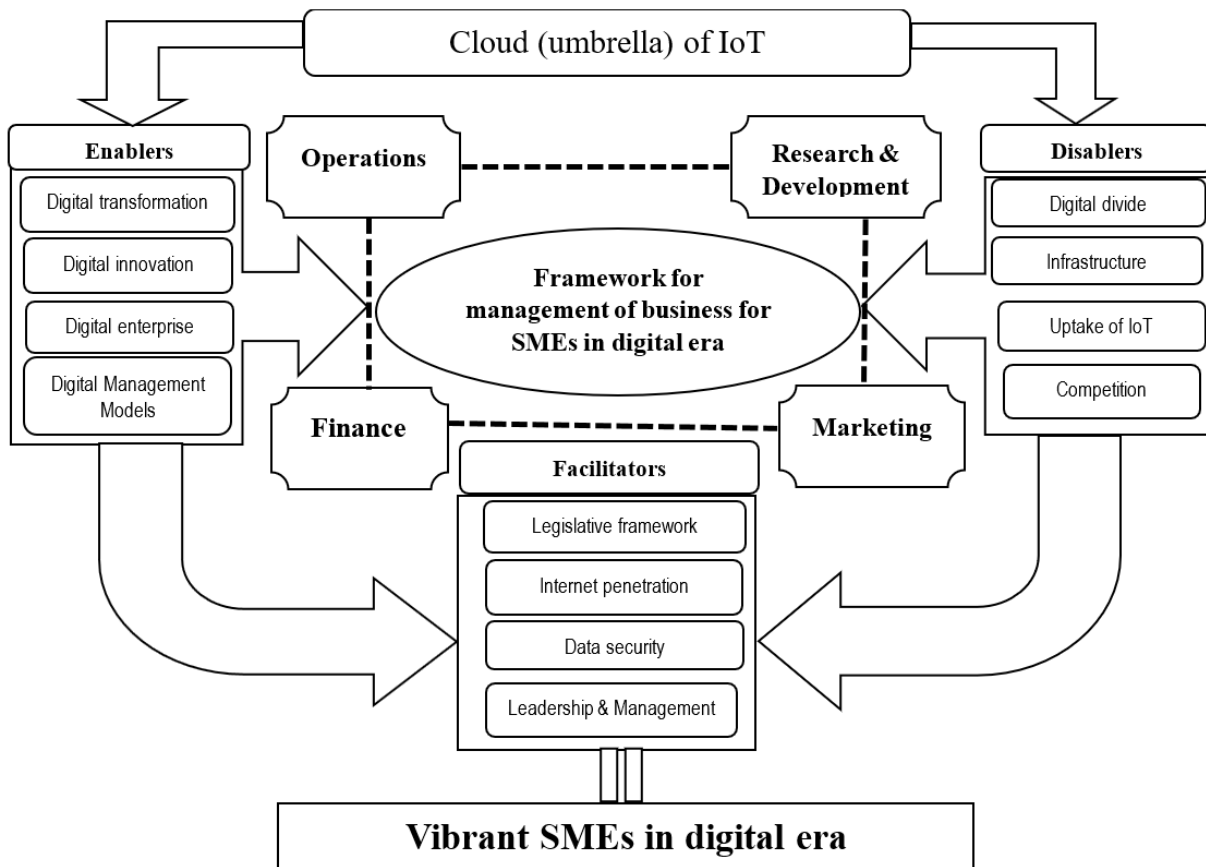
Most of business, be it small enterprise or big enterprise is now being conducted in the cloud which is brought by Industry 4.0 which can be considered as the umbrella coving all activities happening in digital era. Cloud involves transacting making use of the internet. Information is now being saved in the cloud, no more or limitation of filing in the physical filing cabinets in physical offices. Industry 4.0 has radically changed the traditional concept of innovation in business; it encompasses new highly mechanized and automatized ways to produce goods even if it also includes numerous areas like: smart factory, Cyber-physical Systems, Internet of Things (IoT), new distribution systems (Suryani et al., n.d.). Therefore, SMEs in emerging economies should follow that trajectory if they are to survive in the competitive environment.

### Enablers and Disablers

There are four main dimensions used to assess the enablers of adopting digitalisation by SMEs which are digital transformation, digital innovation, digital enterprise, and digital management models. There are opportunities for the adoption of digitalisation by SMEs now and in the future. SMEs in emerging economies should ride on the enablers brought by Industry 4.0. SMEs should capitalise on their advantages if they are to realise the benefits brought by digital era for their competitive advantage. There are four main dimensions to assess for the pillar of disablers which are digital divide, infrastructure, uptake of IoT and competition. These dimensions pose a challenge in emerging economies as compared to developed economies. In many ways, digital access, affordability, and ability are now collectively the primary determinants of digital divides or “digital poverty”, which can be viewed as another dimension of multidimensional poverty. Those without digital connectivity have reduced access to the public services and economic opportunities that are increasingly moving online (UN E-Government Survey report, 2022). As indicated in the UN E-Government Survey report (2022) that the cost of mobile broadband subscriptions as a percentage of gross

national income per capita remains significantly higher in Africa than in other parts of the world, contributing to the digital divide. As the digital divide is significant in many metropolitan areas and rural areas, it is important that free Internet access be provided in public spaces (UN E-Government Survey report, 2022). To achieve equitable participation in the digital society and bridge the widening digital divide, Governments must make meaningful digital opportunities available for all including SMEs -beyond basic connectivity, in particular the poorest members of society, women and girls, older people, persons with disabilities, youth, migrants, refugees, and other marginalized groups (UN E-Government Survey report, 2022).

**Figure 1: Figure 3: Framework for management of business for SMEs in digital era**



*Source: Authors own contribution*

### **Facilitators**

Facilitators such as legislative framework which supports the rolling out of IoT for the benefit of the SMEs can promote the economic growth of emerging economies. Governments should have a wide-ranging Government and has wide-ranging responsibilities relating to digital services for e-government applications, data science and artificial intelligence, traditional and cloud infrastructure, cybersecurity, the Internet of things. This can be achieved by increasing Internet penetration by providing infrastructure through partnerships with broadband companies for 5G commercial network and fiber network development; digital twin technology for operational simulations), Data security should also be in place to give confidence for those using IoT in digital era. This can be achieved through authentication, encryption, and personal data protection using passwords. Leadership and Management is enhanced in the framework by taking into consideration functions of business management such as finance, operations, research, and development as well as marketing innovation.

## LIMITATIONS AND FUTURE RESEARCH

The study could be strengthened by conducting qualitative research to make the findings more robust than to use systematic review as a methodology. Moreover, the review was limited to the SMEs in emerging economies and the authors focused on the first stage of industrial revolution which lasted until 2015 to 2016, and the second stage of the Fourth Industrial Revolution from 2017 to present day. Future research is needed to do scenario planning as digital era turns into singularity in 2030 and its implications to SMEs in emerging economies. Digital era involves a large amount of information that changes rapidly which has affected business for SMEs in emerging economies and other business in general. To streamline organizational processes, it is necessary to consider and develop business processes and models which can carefully reconfigure and re-engineer SMEs for competitive advantage turning into singularity in 2030 and beyond. The study therefore provides the base for continued research and contributes to the body of knowledge. The research has laid a foundation for future studies by scenario planners and researchers to extrapolate what will happen next in the road to the singularity brought by digital era beyond Industry 4.0 and its implications to SMEs and other businesses in general.

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# THE FACTORS AFFECTING GEN Z'S LOYALTY TOWARD ONLINE MARKETPLACES

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## ABSTRACT

*Generation Z is the generation coming after Millennials and before Generation Alpha. Although there is not a clear-cut consensus on the time span covering the birth dates of Gen-Zers, it is generally assumed that Gen-Z comprises of consumers who are born from mid-1990s to early 2010s (i.e. 1997-2012). They are also known as 'digital natives' since they have grown up with Internet and other information and communication technologies. It is obvious that their preferences and behaviors are shaped by how they grew up. There are several unique characteristics of Gen Z, which differentiate them particularly from the Generations X and Y. The way they live, communicate, shop and consume are all completely different from previous generations. Members belonging to Gen Z are known as tech-savvy, cautious about climate change and sustainability issues, focus on innovation, look for convenience, and more careful about how they spend their budget. All these divergent attributes of Gen Z consumers bring them under the spotlight of both academicians and practitioners. It is widely accepted that Gen Z has an inclination for online shopping, however, it is crucial to understand what they really look for or how marketers can get their attention. Hence, in this study, it is aimed to figure out the determinants that might influence their repeated purchase decision from online marketplaces. In other words, the main purpose is to discover what attributes really affect Gen Z for re-patronage or being a loyal customer of an online marketplace. Since there is a great competition among both local and international marketplace brands, the study will bring important insights about the little-known customer cohort; namely-Gen Z, regarding their loyalty in the online market. It has been found that perceived value, visual appeal, responsiveness, efficiency, and fulfillment dimensions are the main determinants of Generation Z's loyalty towards online marketplaces, whereas, design appeal, system availability, privacy, trust, compensation, contact and interactivity have no significant impact on the loyalty of those consumers.*

**Keywords:** Generation Z, loyalty, online marketplace, Gen Z, online shopping.

## INTRODUCTION

A generation includes a cohort or a group of individuals who are born within a particular period and have distinct personality traits and consumer behaviors (Lissitsa & Kol, 2021). Understanding different generations is crucial for marketers since it provides them insights regarding the consumption behaviors of individuals belonging to the same cohort that is defined based on their birth date. Generation Z, which refers to the generation born between 1997-2012, has been raised with the internet and social media, and some of them are now finishing college and entering the workforce (Insider Intelligence, 2023). Generation Z has also taken different names such as Gen Z, Zoomers or iGeneration (Voyado Elevate, 2023). According to a recent report (Insider Intelligence, 2023), Generation Z, is the youngest, most ethnically-diverse, and largest generation in US comprising 27% of the population. Individuals belonging to Generation Z consider themselves more accepting and open-minded than other generations, and their majority supports social movements, transgender rights, and climate change (Insider Intelligence, 2023). Similarly, it has been also asserted that Gen Z consumers have affinity for technology, solid beliefs in social causes, and a strong individualistic streak (Talon.one, 2023). According to a very recent report by Voyada Elevate (2023), it is revealed that 77% of the Gen Zers have taken some form of action for a cause they believe in, and 23% have boycotted a brand. Likewise, Gen Zers tend to be "informed consumers" and less loyal to specific brands, and they give high importance to brand ethics as well as corporate responsibility (Talon.one, 2023). According to World Economic Forum (2022), Generation Z cares more about sustainable buying decisions than brand names, and is inspiring other age groups to act more sustainably. Furthermore, Gen Z gives importance to sustainable business growth, and believe that the previous generations represented overconsumption, capitalism and materialism (Voyado Elevate, 2023). They love to

travel, are prone to anxiety due to social media, are money-driven and ambitious, and are known to set boundaries in terms of work-private life balance (GWI, 2023a). In addition, among all generations, they are the most likely to shop via social media and are price conscious (Talon.one, 2023). Moreover, it is mentioned that 65% of Gen Zers have purchased something based on an influencer's recommendations (Voyado Elevate, 2023). In other words, Generation Z uses social media to research products and connect with their favorite brands, and meanwhile influencers account for a large part of their purchasing decisions (Talon.one, 2023; Voyado Elevate, 2023). It has been demonstrated that 52% of Gen Z in the US prefer to shop online, while 48% prefer to shop in-store, and yet, their love for online shopping has an increasing tendency (GWI, 2023b). When it comes to loyalty, Gen Z continues to astonish marketers by exhibiting interesting and unexpected behaviors. That is to say, only 41% of them mention they are loyal to brands they like, which is a smaller proportion compared to older generations (GWI, 2023b). Besides, it is revealed that 34% of Gen Z use loyalty or reward programs, and what is more remarkable is that the number of Gen Zers who say loyalty points are important to them when shopping online has increased 22% since the 4<sup>th</sup> quarter of 2021, so that it becomes the second fastest growing area after a repeat order function (+24%).

Researchers who state that there are many differences between generations reveal that each generation has certain characteristics and important differences (Twenge & Campbell, 2010). It is clear that Gen Z is obviously different from the previous generations in terms of the way they live their lives, how they shop, the priorities they have, and the concerns they value. Additionally, it is estimated that Generation Z will soon become the most pivotal generation for the future of retail sector, and many will have enormous spending power by 2026 (Insider Intelligence, 2023). Therefore, marketers and brands try to catch up with the interests and habits of Gen Z consumers so that they can meet the digital expectations of this generation. But what is equally crucial is that, it is not enough to take the attention of this cohort, it is equally important to have long-run relations by concentrating on the retention of Gen Z consumers so that it would be possible to increase their loyalty to and re-patronage from their brands. Hence, in this study we try to explore the factors that might have an impact on the loyalty of Gen Z consumers towards online marketplaces, one of the most popular online shopping platforms. The findings of the study will shed light on the way retailers can improve their services to better fulfill the expectations of this cohort so that they can end up with loyal consumers and even brand ambassadors. The following part is devoted to the literature about Gen Z's online shopping behavior.

## LITERATURE REVIEW

The literature about Gen Z's online shopping patterns, motives, attitudes, and intention to purchase has been growing within the last few years as they started to earn their own money by entering business world. Tunsakul (2020) examined the impact of hedonic motive, simplicity motive, and usefulness motive on the attitude toward online shopping of Gen Z consumers and found that hedonic and usefulness motives had a significant impact on attitude towards online shopping. And as expected, it was revealed that attitude towards online shopping had a significant impact on online shopping intention of this cohort (Tunsakul, 2020). In another study, Dabija & Lung (2019) compared Gen Z with Millennials in terms of online shopping in an emerging market and discovered that both generations still prefer shopping in brick-and-mortar stores to online shopping, while Gen Z mostly prefers shopping online with their smartphones. Furthermore, Copeland et al. (2023) have employed the Technology Acceptance Model (TAM) to examine how ease of use and usefulness of an application and whether involvement, self-confidence and self-expression of users have an impact on purchase intention of Chinese Gen Z users. It was shown that perceived ease of use and usefulness did not directly relate to attitude, instead, attitude was directly affected from self-expression, confidence and involvement as the determining factors of positive attitude, ultimately leading to intention to purchase (Copeland et al., 2023). Another research that utilized TAM for online shopping intentions of Generation Z consumers was conducted by Ngah et al. (2021). The findings demonstrated that perceived risk did not affect the perceived usefulness and perceived ease of use, but positively influenced trust; and only trust and perceived ease of use influenced online purchasing behavioral intention while web store design did not contribute to perceived usefulness for Gen Z consumers Ngah et al. (2021).

Besides online shopping intention, Gen Z consumers' continuance intention of online shopping, in other words e-loyalty, also generated attention in the literature (Ayuni, 2019; Thi et al., 2022). For instance, Ayuni (2019) explored the relationship of e-service quality, online customer value, e-satisfaction and e-loyalty. It was detected that e-service quality and online customer value affects e-satisfaction and e-loyalty (Ayuni, 2019). According to Ayuni (2019, p. 175), "e-service quality had a significant effect on e-satisfaction, implying that if the companies can provide

a better quality e-service on their websites, Gen Z will feel that they get more benefits (social, economic and functional) from those websites”. Similarly, in another study, it was uncovered that perceived usefulness, perceived ease of use, satisfaction, and environmental awareness are the facilitators of repurchase intention while perceived risks of online shopping served as a barrier (Thi et al., 2022). Nevertheless, based on the literature, Dabija & Lung (2019) asserted that it is difficult to gain Gen Z consumers’ loyalty as they would rather exhibit multifaceted behavior through which they seek maximum benefit than show loyalty to a particular retailer and/or its products. There are also studies that particularly concentrate on loyalty of Gen Z’s toward marketplace brands (Gunawan & Djabatika, 2022). For instance, it was observed that brand communication activities and marketplace service quality can affect Generation Z’s online shopping culture, which then leads to loyalty to a certain marketplace (Gunawan & Djabatika, 2022). In other words, Generation Z’s loyalty to the marketplace can be predicted by using three variables: brand trust, brand communications, and service quality (Gunawan & Djabatika, 2022).

## RESEARCH METHODOLOGY

While extensive research exists with respect to factors affecting Gen Z consumers’ online shopping intentions, attention needs to be paid to factors influencing the e-loyalty of Gen Z as they are the emerging consumer cohort. Consequently, the main objective of this research is to determine the factors that might have an impact on the loyalty of Gen Z consumers towards online marketplaces. In line with the research objective of this study, an online survey was prepared which started with a brief introduction about the scope, duration and objectives of the survey. The survey continued with demographic questions (e.g., gender, education, birth date) and then the respondents were asked to choose their most preferred online marketplace, and indicate their shopping frequency from these online marketplaces. Then, based on a rigorous synthesis of the literature, 12 variables were identified which might influence the loyalty of Gen Z consumer towards online marketplaces. E-SERVQUAL scale of Parasuraman et al. (2005) was used to measure the effects of independent variables; *efficiency, system availability, fulfillment, privacy, responsiveness, compensation, contact, perceived value* on the dependent variable loyalty. In addition, WEB-QUAL scale of Loiacono et al. (2002) was also utilized as the independent variables, which included the variables of *design appeal, trust, visual appearance and interactivity*. All measurement scales were evaluated on a five-point Likert scale ranging from 1: “strongly disagree” to 5: “strongly agree”. The data has been collected with a convenience sampling approach, and the only quota was related with being a member of Gen Z cohort. The survey was distributed by using the authors’ social media accounts, such as WhatsApp, LinkedIn, and Instagram to reach the target respondents. At the end, a total of 250 respondents fully completed the questionnaires. The demographic profile of the respondents was exhibited in Table 1. As it is seen, the majority of the sample consists of females, and in terms of birth dates it can be concluded that the mass of the respondents belong to the early part of the Gen Z cohort in terms of birth dates. This is also consistent with the finding that the great majority of the sample was composed of either university graduates or university students.

**Table 1: Demographic profile of the respondents**

<b>Gender</b>	<b>Male</b>	<b>Female</b>	<b>Not specify</b>	
	94 (37.6%)	147 (58.8%)	9 (3.6%)	
<b>Birth Dates</b>	<b>1997-1999</b>	<b>2000-2002</b>	<b>2003-2006</b>	
	171 (68%)	64 (26%)	15 (6%)	
<b>Education</b>	<b>Some high school degree or less</b>		<b>University Student/Graduate</b>	
	34 (14%)		216 (86%)	

As shown in Table 2, the most frequently preferred online marketplace among Turkish Gen Z consumers was Trendyol, which was followed by Hepsiburada and Amazon respectively. The participants were also asked how long they have been shopping from their most preferred online marketplace. Table 3 demonstrated that almost 35% of the respondents were shopping from their popular online marketplace for about 1-2 years, which was followed by 3-4 years with 31%.

**Table 2: Which is the online marketplace that you prefer and like to use most often?**

Marketplace	Frequency	%
Trendyol	142	57%
Hepsiburada	41	16.4%
Amazon	36	14.4%
Gittigidiyor	11	4.2%
AliExpress	9	3.6%
N11	7	2.8%
Morhipo	4	1.6%

**Table 3: How long have you been shopping from this marketplace?**

Period	Frequency	%
< 3 months	8	3.2%
3-6 months	19	7.6%
7-12 months	24	9.6%
1-2 years	87	34.8%
3-4 years	78	31.2%
5-6 years	20	8.0%
> 7 years	14	5.6%

The participants were also asked about their frequency of shopping from their most preferred online marketplace, and as shown in Table 4, the great majority of the respondents indicate that they shop at least once a month with almost 44%. While 23% mention that their shopping frequency is once in a 2 to 3 months, it is followed by respondents who are shopping once in a week with approximately 20%. Therefore, it can be concluded that the sample consists of Gen Z individuals who have a certain level of re-patronage tendency or e-loyalty towards their most preferred online marketplace.

**Table 4: On average, how often do you shop from this marketplace?**

Period	Frequency	%
Once in 2 to 3 Days	13	5.2%
Once in a Week	49	19.6%
Once in a Month	109	43.6%
Once in 2 to 3 Months	58	23.2%
Once in 6 Months	21	8.4%

## FINDINGS

As stated earlier, this research has relied on the literature and borrowed the constructs mainly from the studies of Parasuraman et al. (2005) and Loiacono et al. (2002). Table 5 presents constructs and their items used in this current research in detail with their sources, mean values of each construct, and reliability scores. As it is given in Table 5, all the constructs have surpassed the threshold Cronbach's alpha ( $\alpha$ ) level of 0.70, providing satisfactory internal consistency for all scales, except *visual appeal* scale which is slightly lower than 0.70, but still above the 0.60 minimum cut-off point of Cronbach's  $\alpha$  as suggested acceptable in the literature (DeVellis, 1991; Burns & Burns, 2008). The mean values of each construct is higher than 4 out of 5, except two variables: compensation ( $\bar{X}$ : 3.71) and contact ( $\bar{X}$ : 3.96), which are still close to 4.

**Table 5: Constructs, survey items, sources, reliabilities, and construct mean values**

<b>Efficiency (<math>\alpha</math>: 0.879), <math>\bar{X}</math>: 4.36</b>	<b>adapted from:</b> Parasuraman et al. (2005)
This site makes it easy to find what I need.	
It makes it easy to get anywhere on the site.	
It enables me to complete a transaction quickly.	
Information at this site is well organized.	
It loads its pages fast.	
This site is simple to use.	
This site is well organized.	
<b>Design Appeal (<math>\alpha</math>: 0.773), <math>\bar{X}</math>: 4.30</b>	<b>adapted from:</b> Loiacono et al. (2002)
The design of the website structure is user-friendly.	
Content on the website is easy to read.	
Product information on the website is easy to understand.	
<b>Visual Appeal (<math>\alpha</math>: 0.672), <math>\bar{X}</math>: 4.00</b>	<b>adapted from:</b> Loiacono et al. (2002)
The website is visually pleasing.	
Shopping on this website is enjoyable.	
Shopping around this website without purchase intention is fun.	
<b>System Availability (<math>\alpha</math>: 0.804), <math>\bar{X}</math>: 4.23</b>	<b>adapted from:</b> Parasuraman et al. (2005)
This website launches and runs right away.	
This website does not crash.	
<b>Fulfillment (<math>\alpha</math>: 0.884), <math>\bar{X}</math>: 4.17</b>	<b>adapted from:</b> Parasuraman et al. (2005)
It delivers orders when promised.	
It quickly delivers what I order.	
It sends out the items ordered.	
It has in stock the items the company claims to have.	
It is truthful about its offerings.	
It makes accurate promises about delivery of products.	
<b>Privacy (<math>\alpha</math>: 0.830), <math>\bar{X}</math>: 4.03</b>	<b>adapted from:</b> Parasuraman et al. (2005)
It protects information about my Web-shopping behavior.	
It does not share my personal information with other sites.	
This site protects information about my credit card.	
<b>Trust (<math>\alpha</math>: 0.874), <math>\bar{X}</math>: 4.08</b>	<b>adapted from:</b> Loiacono et al. (2002)
I feel safe about my transactions on this website.	
I trust that the website keeps my personal information safe.	
I trust the website does not misuse my personal information.	
<b>Responsiveness (<math>\alpha</math>: 0.920), <math>\bar{X}</math>: 4.13</b>	<b>adapted from:</b> Parasuraman et al. (2005)
It provides me with convenient options for returning & refunding items.	
This website handles product returns well.	
This site offers a meaningful after-sales guarantee.	
It tells me what to do if my transaction is not processed.	
It takes care of problems promptly.	
<b>Compensation (<math>\alpha</math>: 0.833), <math>\bar{X}</math>: 3.71</b>	<b>adapted from:</b> Parasuraman et al. (2005)
This website compensates me for problems during shopping.	
It compensates me when my order doesn't arrive on time.	
It picks up items I want to return from a convenient location.	
<b>Contact (<math>\alpha</math>: 0.875), <math>\bar{X}</math>: 3.96</b>	<b>adapted from:</b> Parasuraman et al. (2005)
The website provides a toll-free number to reach the company.	
This website has customer service representatives available online.	
It offers live chat in case of a problem.	
<b>Interactivity (<math>\alpha</math>: 0.838), <math>\bar{X}</math>: 4.15</b>	<b>adapted from:</b> Loiacono et al. (2002)
This website allows me to interact with it to receive tailored information.	
This website have interactive features to help me achieve my task.	

<b>Perceived Value (<math>\alpha</math>: 0.790), <math>\bar{X}</math>: 4.20</b>	<b>adapted from: Parasuraman et al. (2005)</b>
The prices of the products sold at this website are reasonable.	
This website generally offers a positive customer experience.	
The overall value I get from this site is worth my money.	
<b>e-Loyalty (<math>\alpha</math>: 0.899), <math>\bar{X}</math>: 4.22</b>	<b>adapted from: Parasuraman et al. (2005)</b>
I'll tell positive things about this site to other people.	
I'll recommend this site to someone who seeks my advice.	
I'll encourage my friends and peers to do business with this site.	
I'll consider this site to be my first choice for future transactions.	
I'll do more business with this site in the coming months.	

In order to determine the impact of various variables on e-loyalty of Gen Z consumers, we have used multiple regression analysis, where efficiency, design appeal, visual appeal, system availability, fulfillment, privacy, trust, responsiveness, compensation, contact, and interactivity were included as independent variables and e-loyalty as the dependent variable. There are some calculations offered for the minimum sample size requirement to run multiple linear regression. Most widely used approach is Green's (1991) computation where it is suggested that the sample size should be 50 more than eight times the number of independent variables. In our study, we have 12 input variables, so this corresponds to 146 respondents. Hence, it is confirmed that our data is suitable to conduct multiple regression analysis. While running multiple regression analysis, we have utilized **enter method**- a procedure for variable selection in which all variables as a block are entered in a single step. The output of the regression analysis is presented in Table 6.

In regression analysis R stands for the regression coefficient and is defined as the correlation or relationship between an independent and a dependent variable. An R value of 0 means that there is no relationship between these variables; and when R gets closer to 1, it indicates that there is a strong relationship between them. In our study, the regression analysis has produced a high level of R (0.843) value which means that there is a strong relationship between the dependent variable and the predictor variables.  $R^2$  is a statistical measure in a regression model that determines the proportion of variance in the dependent variable which can be explained by the predictor variables. In other words,  $R^2$  indicates how well the data fit the regression model-a kind of goodness of fit, and it ranges from 0 to 1 but usually expressed as a percentage during interpretation. In our study,  $R^2$  value is 71%, which means the model fits the data well and that independent variables sufficiently explain the variation in the dependent variable. Consequently, the individual effects of predictor variables were examined by considering their beta coefficients. In the current study, five out of 12 predictor variables have p-values less than the significance level (0.05), which is good because it means that the predictor variables in the model actually improve the fit of the model. As exhibited in Table 6, *efficiency*, *visual appeal*, *fulfillment*, *responsiveness*, and *perceived value* are the predictor variables that have p-value less than the acceptable level, indicating that they play a role in determining the loyalty of Gen Z consumers towards their most preferred marketplace. Furthermore, it is observed that *perceived value* has the greatest impact on consumers' loyalty with a  $\beta$  value of 0.319, and it is followed respectively by *visual appeal* ( $\beta$ : 0.250), *responsiveness* ( $\beta$ : 0.218), *efficiency* ( $\beta$ : 0.185), and *fulfillment* ( $\beta$ : 0.142). It also worth to note that these variables are the ones which have mean values higher than 4.00.

**Table 6: R,  $R^2$  values and beta coefficients for the predictor variables in regression analysis**

	<b>Dependent Variable: Loyalty Toward Marketplace</b>
	<b>R: 0.843</b> <b><math>R^2</math>: 0.710</b>
<b>Efficiency (<math>\beta</math>)</b>	<b>0.185 (p-value: 0.022)*</b>
<b>Design Appeal (<math>\beta</math>)</b>	-0.022 (p-value: 0.744)
<b>Visual Appeal (<math>\beta</math>)</b>	<b>0.250 (p-value: 0.000)*</b>
<b>System Availability (<math>\beta</math>)</b>	0.028 (p-value: 0.553)
<b>Fulfillment (<math>\beta</math>)</b>	<b>0.142 (p-value: 0.040)*</b>
<b>Privacy (<math>\beta</math>)</b>	0.007 (p-value: 0.903)

Trust ( $\beta$ )	-0.011 (p-value: 0.844)
Responsiveness ( $\beta$ )	<b>0.218 (p-value: 0.001)*</b>
Compensation ( $\beta$ )	-0.061 (p-value: 0.165)
Contact ( $\beta$ )	-0.001 (p-value: 0.983)
Interactivity ( $\beta$ )	0.000 (p-value: 0.995)
Perceived Value ( $\beta$ )	<b>0.319 (p-value: 0.000)*</b>

## DISCUSSION AND CONCLUDING REMARKS

This study focuses on the factors that determine the loyalty of Gen Z consumers toward online marketplaces. To our knowledge, even though there are several studies exploring online shopping intentions of Gen Z consumers, there are only few studies that investigate the repatronage behavior of this cohort. For the sustainability of their businesses, brands and marketers should pay specific attention to understand the needs and wants of this consumer group, search for the unique ways to acquire them by offering what they really look for, and subsequently keep them engaged and encourage them to make more purchases and positive word of mouth, prevent them from switching to a competitor, and convince them to allocate a greater share of their wallet to their company. Since Generation Z is completely different from the previous generations, and increasingly becoming a major cohort of online shoppers across the world, it becomes vital to have a comprehensive understanding how to keep them as loyal consumers.

In this research, we concentrate on this issue and mainly utilized the studies of Parasuraman et al. (2005) and Loiacono et al. (2002). It is observed that for Generation Z, the most meaningful feature of online marketplaces is the *perceived value* that they create. Gen Z consumers look for reasonable prices, and seek for value in return of their money. Additionally, they want to see that their favorite brand really cares for their welfare and offers them a great customer experience. This finding is consistent with the sectoral research reports as well. For instance, GWI (2023b) proposed that Gen Z consumers do not use “buy now pay later services” as high as it is expected from them, rather, if Gen Z consumers cannot afford something at the moment, they tend to just stick to their budget. In another report, it is discovered that Gen Z consumers want to save money and adopt better spending habits (GWI, 2023a). Moreover, they are very inclined to do impulse shopping, and spontaneity means a lot for them (GWI, 2023b). Another characteristic of this cohort is that Gen Z uses social media as a place for inspiration, and they want to explore and find things they did not even know they needed. Hence, companies might have an opportunity to use social media to reach this consumer group in an effective and efficient way. To catch Gen Z consumers, brands can create unique and special campaigns or events or collaborate with influencers on their social media accounts, or use technology to enhance the customer experience.

*Visual appeal* is the second most important feature that Gen Zers look for while they make repeated purchases from an online marketplace. This means that they want to spend their time in a pleasing and enjoyable way and they even visit the marketplace even though they will not make a planned shopping at that time. Their motive is to have good time during their visit. It is known that Gen Zers regularly experience stress and anxiety (GWI, 2023a). Hence, they may feel that they can escape from their pressing daily lives through visiting their most preferred marketplace. This implies that online marketplaces have to concentrate on delighting their consumers, and their focus should be on creating memorable experiences rather than selling or transaction.

Thirdly, Gen Z consumers value the *fulfillment* feature, which briefly means that businesses should keep their promises, do their business in an ethical way, have company principles, and internalize trustworthiness and be reliable while serving this special consumer cohort. For instance, they should not overpromise just to attract the Gen Z consumer for the sake of increasing their sales.

The fourth finding of this study is that like previous generations, *efficiency* still matters for Gen Zers as well. They look for convenience, ease of use, simplicity, user-friendliness, easy navigation, being well-organized and structured. Online marketplaces have to give priority to all these issues while designing their websites, and think about every need of their customers while they are visiting or shopping at their websites.



Finally, to keep Gen Z consumers loyal to an online marketplace requires *responsiveness*. Providing live chat on company website, offering easy return options, having clear and easily accessible refund policies, giving various after-sales services are among the actions that can be taken by the online marketplaces to convince their Gen Z consumers to buy more and frequently from their businesses.

To gain Gen Z consumers' loyalty, the online marketplaces have to focus on delivering superior services, enhancing customer experience, keeping their promises, and considering all the issues that we have so far discussed. However, our study has some drawbacks as well. One of the limitations of this study is that the sample mainly consists of the Gen Zers who were born between 1997-1999, the eldest part of that generation. Hence in future research other age groups within Gen Z can be studied as well. Second limitation is that our sample is female dominant, therefore in future research a more evenly distributed gender profile can be preferred. Finally, this study is carried out in an emerging market which has been undergoing severe economic conditions.

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# FUNCTIONAL CONGRUENCE, STUDENT SATISFACTION, AND STUDENT HOUSING PREFERENCE

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## ABSTRACT

*The current study used 5 factors (bedroom, building quality, facilities, and monthly rental) to predict preference for student housing in South Africa. A five-point Likert scale was used for measurement, ranging from 1 (extremely unimportant) to 5 (extremely important). A non-probability convenience sampling was used to collect 542 valid responses through online surveys. SPSS and AMOS version 28 were used for data analysis, and the results showed that bedroom and washroom facilities had positive influence on satisfaction and therefore preference. Overall, functional factors (functional congruence theory) influence preference for student housing. Future studies can incorporate self-congruence factors and categorise students by type of residence in similar studies.*

**Keywords:** functional congruence, student satisfaction, preference, student housing, South Africa.

## INTRODUCTION

Demand for spaces in higher education institutions has seen tremendous growth in South Africa in the past 2 decades. Since the year 2000, South Africa has seen a 4.2% annual growth in student enrolment, further highlighting the interest in the SA higher education (Matsolo, Ningpuanyeh and Susuman, 2016). The influx is not only limited to South Africa citizens, but also those from other parts of the world, supporting Malema's (2021) and Scimago Institutions Rankings (2023) assertion that four (4) of South Africa's universities (University of Cape Town, Stellenbosch University, Wits University and University of Pretoria) are part of the Top 5 best universities in Africa. The increase in students going to study at tertiary institutions far from their homes has resulted in an increased demand for temporary housing during their studies (Nurdini & Harun, 2011).

From the various categories of student housing, privately supplied student housing comprises two types, accredited and non-accredited by the said institutions (Nhlabathi, 2021). Student residences have benefited from the limited student housing supplied by tertiary institutions, thus attracting students not accommodated by their institutions (Ngwenya, 2016). Besides limited space, students prefer to stay in privately supplied housing for various reasons in line with their functional needs (Najib, Yusof & Sani, 2015).

## Problem Statement

As student housing plays a major role in student performance, student satisfaction with such housing is an important aspect influencing such performance (Gbadegesin et al., 2021). Various attributes determine student satisfaction with student housing, which include student privacy, freedom, independence, expenses, proximity to campus, access to own facilities (amenities) like bathroom, kitchen (Rasmussen & Jensen, 2020).

Thus, the current study seeks to use the functional congruity model to investigate the influence of the general functional attributes of a student housing on student satisfaction with student housing. Part of the main functional attributes used to measure student satisfaction, drawn from extant literature, include the bedroom environment, building quality, leisure room facilities, support facilities, washroom facilities and monthly rental (Nhlabathi, 2021; Campagna, 2016; Husin et al., 2015). Nhlabathi (2021) looked at student satisfaction in the context of on-campus

accommodation. This study takes a general student housing viewpoint and focusing only on the functional congruence as the base model, which include housing reference as an outcome variable (Sirgy, 2005).

## **Research Objectives**

- To investigate the relevance of functional congruity components on student satisfaction with, and preference for student housing.
- To investigate the influence of housing attributes on student satisfaction with student housing in South Africa.
- To investigate the influence of housing satisfaction on housing preference for student housing on South Africa.

## **LITERATURE REVIEW AND HYPOTHESES**

### **The Self-Congruity Theory (SC)**

The broader self-congruity theory comprises two approaches, namely the self-congruity (SC) and functional congruity (FC), which explain and predict people's housing choices and preferences (Sirgy, Grzeskowiak & Su, 2005; Sirgy, 1986). Through the SC, housing preferences and choices are explained from a social psychological perspective, instead of the initially applied economic models (Sirgy et al., 2005; Dieleman, 2001). Basically, the theory explains a homebuyer's preferences and choice based on the home environment, residential occupant's image, self-image, housing choices & preference as well as residential mobility and migration aspects (Sirgy et al., 2005; Coolen et al., 2002; Coolen & Hoekstra, 2001). Functional housing attributes such as building quality, amenities, price, facilities, and financing availability help consumers make better choices (Usakli, Kucukergin, Shi & Okumus, 2022; Ahn et al., 2013; Kressmann et al; 2006; Sirgy et al., 2005).

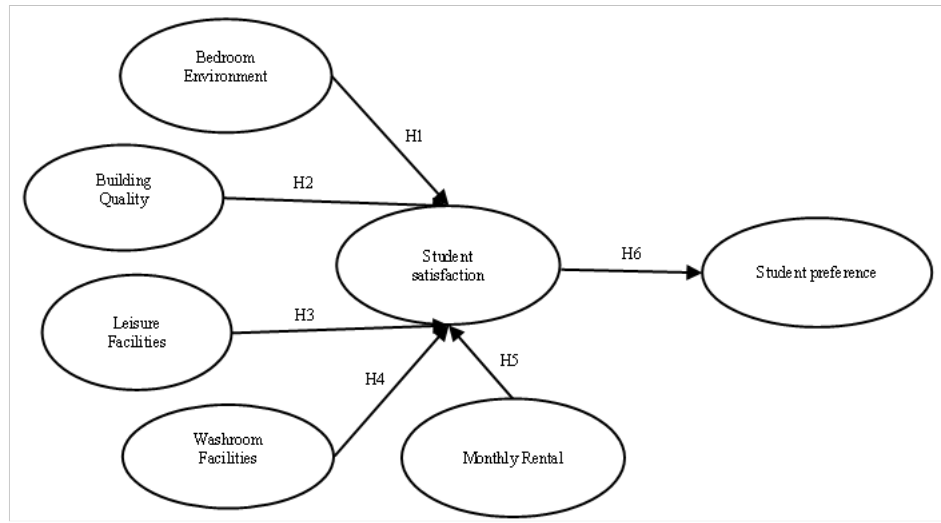
### **Housing Attributes, Student Satisfaction & Housing Preference**

Extant literature explains housing satisfaction through the purposive and aspirant-gap approaches (Amole, 2009). The purposive-gap approach predicts that satisfaction will happen when the environment limits or facilitates a user's goal (Oseland, 1990), while the aspirant gap asserts that satisfaction is a gap between a consumer's actual needs and aspirations (Galster, 1987).

On one hand, when physical housing attributes such as bedroom environment, building quality, facilities (leisure and washroom) meet or exceed consumer expectations, they will enhance consumer satisfaction with the housing (Nhlabathi, 2021; Berkoy et al., 2009;). On the other hand, consumers with higher disposable income and perceive monthly rental as within their budget, will show higher levels of satisfaction with the housing than otherwise (Frank & Enkawa, 2008; Law, Wong & Lau, 2005). Combined, the physical and social attributes make up the functional congruity concept, which literature predicts that will have a positive influence on student satisfaction with student housing. Based on the above literature, the study proposes the following hypotheses (H1-4). Extant literature has also shown that housing preference is preceded by satisfaction (Nhlabathi, 2021), hence the following hypothesis (Dizaj & Khanghahi, 2022).

- H1-4: Bedroom environment, building quality, facilities have positive and significant influence on student satisfaction with student housing.
- H5: Monthly rental has a positive and significant influence on student satisfaction with student housing.
- H6: Student satisfaction has a positive and significant influence on housing preference towards student housing.

**Figure 1: Conceptual model to determine student satisfaction with, and preference for student housing, using the functional congruity model**



## METHODS

### Measurement

Using similar studies from related fields (marketing, psychology, behavioural studies), a 5-point Likert scale was used in the questionnaire, with the scales ranging from 1 (strongly disagree) to 5 (strongly agree) (Taherdoost, 2019). To source construct and items, Nhlabathi (2021) was used. Thirty (30) respondents meeting the selection criteria were used to pilot the questionnaire. As adapted from an existing instrument, very minimal issues were identified in the questionnaire, which were addressed before the final version of the questionnaire was distributed to the final sample.

### Sampling and Data Gathering

A non-probability convenience sampling method was used and five hundred and forty-two (542) valid responses were obtained, using a self-administered online survey. It was cheaper and wide-reaching to use these sampling and data collection methods (Stratton, 2021). The questionnaire had questions for screening, demographic and core-constructs. The ethics process was adhered to as detailed in the consent form attached and as part of the ethics clearance provided by the relevant ethics committee.

### Data Analysis and Results

Data analysis was conducted on SPSS version 28 for descriptive statistics and AMOS version 28 for structural equation modelling (SEM) to test the hypotheses. Descriptive demographic statistics of the data are presented in Table 1. Over half of the respondents were male, with just below 50% female. Respondents aged 18-25 years made up 63%, while level of study (Year 1 - 4) made up 77%. The type of residence was split almost evenly among on-campus, off-campus accredited and off-campus non-accredited housing.

**Table 1: Demographic statistics of respondents**

Characteristic	Frequency	Percentage
<b>Gender (n=542)</b>		
Male	275	50.7%
Female	264	48.7%
Prefer not to say	3	0.6%
<b>Age Groups (n=542)</b>		
18-25 years	341	62.9%
26-30 years	158	29.2%
31-35 years	41	7.6%
Over 35 years	2	0.4%
<b>Current year of study (n=542)</b>		
Y1	71	13.1%
Y2	145	26.8%
Y3	95	17.5%
Y4	109	20.1%
Y5	28	5.2%
Advanced Diploma	10	1.8%
Postgraduate (Hon, MA & PhD)	84	15.5%
<b>Current residence (n=542)</b>		
On-campus	185	34.1%
Off-campus	172	31.7%
Off-campus not accredited	184	33.9%
Refused	1	0.2%

## MEASUREMENT MODEL ANALYSIS

The measurement model accuracy was assessed by testing for its reliability and validity. For reliability, the aim is to test for consistency in the output upon repeated testing (Malhotra, 2020). For this study, the composite reliability (CR), average variance extracted (AVE) and Cronbach's values were used, recommended at greater than 0.7 (for CR and Cronbach's Alpha) and 0.5 (for AVE) (Hair et al., 2020). See Table 2 for reliability values. In Table 3, for instrument validity, the aim is to assess if the instrument measures what it is meant to (Mohajan, 2017). The AVE and correlation matrix were used, as shown in Table 2. Discriminant validity was confirmed based on the inter-construct correlation matrix values being below the 0.9 threshold (Henseler et al., 2015).

For this study, some items were dropped (BED5, BF1, BF5, LF2, LF5, WF1, WF4, WF6, PRE4) to improve the factor loadings from the initial run and the final run had items per construct as follows: BED – 4 (5); BF – 3 (5); LF – 3 (5); WF – 3 (6); PRE – 3 (4). Some items (BED1 – 0.687, BED4 – 0.678, BF3 – 0.697, LF3 – 0.693, MR1 – 0.699, WF5 – 0.673) loaded slightly below the recommended 0.7 threshold but were not removed as extant literature has shown that values in the range of 0.5 - 0.7 can be acceptable when the AVE is above the 0.5 threshold (Hair et al., 2010).

**Table 2: Statistical evidence of convergent validity and reliability**

Item	Construct	Factor Loadings	Cronbach Alpha	CR	AVE	Final number of items (initial)
CS1	Customer Satisfaction	0.799	0.922	0.924	0.672	6 (6)
CS2		0.857				
CS3		0.844				
CS4		0.762				
CS5		0.791				

Item	Construct	Factor Loadings	Cronbach Alpha	CR	AVE	Final number of items (initial)
CS6		0.859				
BED1	<b>Bedroom Environment</b>	0.687	0.822	0.852	0.594	4(5)
BED2		0.929				
BED3		0.762				
BED4		0.678				
BF2	<b>Building Facilities</b>	0.780	0.804	0.815	0.597	4(5)
BF3		0.697				
BF4		0.834				
LF1	<b>Leisure Facilities</b>	0.735	0.760	0.767	0.523	3(5)
LF3		0.693				
LF4		0.741				
MR1	<b>Monthly Rental</b>	0.699	.862	0.866	0.620	4(4)
MR2		0.826				
MR3		0.848				
MR4		0.767				
WF2	<b>Washing Facilities</b>	0.821	.735	0.803	0.577	3(6)
WF3		0.778				
WF5		0.673				
PRE1	<b>Preference</b>	0.829	.857	0.844	0.644	3(4)
PRE2		0.852	.857			
PRE3		0.721	.857			

**Table 3: Correlation matrix (discriminant validity of the measurement model)**

Latent Constructs	LF	BED	BF	MR	PRE	WF	CS
<b>LF</b>	<b>0.723</b>						
<b>BED</b>	0.386	<b>0.771</b>					
<b>BF</b>	0.515	0.347	<b>0.772</b>				
<b>MR</b>	0.546	0.369	0.738	<b>0.787</b>			
<b>PRE</b>	0.501	0.324	0.544	0.713	<b>0.803</b>		
<b>WF</b>	0.549	0.693	0.508	0.519	0.397	<b>0.760</b>	
<b>CS</b>	0.216	0.340	0.133	0.147	0.204	0.332	<b>0.819</b>

## Goodness of Fit Indices

The study used the recommended the guidelines provided in Table 4 to inspect the structural model fitness for the proposed relationships (Scherer et al., 2019; Wang, Wang & Lee, 2018). Results for both the initial and final measurements are presented.

**Table 4: Model fitness test statistics**

Fit Indicator	Threshold adapted from Hair et al. (2014: 579-580)	Initial measurement model	Final measurement model
CMIN/DF (Chi-square/degree of freedom)	Below 3 (good) From 3 to 5 (acceptable) Over 5 (bad)	4.366	3.661
RMSEA (Root Mean Square Error of Approximation)	Below 0.05 (good) From 0.06 to 0.1 (acceptable) Over 0.1 (bad)	0.079	0.07
CFI (Comparative Fit Index)	Below 0.90 (bad) Over 0.90 (good)	0.834	0.910
TLI (Tucker Lewis Index)	Below 0.80 (bad) From 0.80 to 0.90 (acceptable) Over 0.90 (good)	0.806	0.885

*Source: Nhlabathi, Mgiba & Ligaraba (2022)*

## Hypotheses Testing

The hypotheses results presented in Tables 5 showed that three (H1, H4 and H6) of the six hypotheses were positive and significant, thus confirming the hypothesized relationships. H2, H3 and H5 were therefore rejected as they are not significant.

**Table 5: hypotheses testing results & effect sizes**

	Dependent	Independent	Estimate	t-value	p-value/sig. level	Results
H1	CS	BED	.214	3.199	.001	Accept
H2	CS	BF	-.051	-.622	.534	Reject
H3	CS	MR	-.021	-.253	.800	Reject
H4	CS	LF	.083	1.202	.229	Reject
H5	CS	WF	.184	2.100	.036	Accept
H6	PRE	CS	.216	3.716	***	Accept

## DISCUSSION AND IMPLICATIONS

### Discussion of Results

The results of the data analysis showed that student satisfaction with housing was mainly influenced by the bedroom environment and washing facilities, respectively. This suggests that students who prefer to stay in student accommodation are mainly concerned with the various aspects of the bedroom. Literature has shown that students will be satisfied when the bedroom provides them with privacy, secured storage, and location and comfort (Nhlabathi, 2021; Campagna, 2016; Amole, 2009).

Similarly, the results showed washroom facilities to have significance in determining student satisfaction with their housing. This was in line with extant literature which found facilities such as bathrooms, showers, washing tubs, etc. to have importance as these cater for the basic needs of the students (Amole, 2009; Amole, 2005). The other facilities such as leisure rooms were not so important to students as shown by its positive but insignificant influence on students who want to satisfy their basic needs. Amole (2009) argued that students could find alternatives for study rooms (e.g., bedroom), computer rooms (e.g., personal laptop), etc., further justifying the insignificance of these facilities for students whose concern is to prioritize their basic needs.



The relationship between customer satisfaction and preference showed the highest level of significance among the hypotheses. This suggests that students who are satisfied with the main attributes of a student housing are likely to prefer or choose it for their housing purpose. This is corroborated by studies which found that students prefer to stay in rooms with less sharing partners, sufficient furniture (e.g., desks, chairs, cabinets) (Yildirim & Oguzhan, 2010). Students also preferred sharing washroom facilities with less people (Amole, 2009). Overall, functional congruence factors were found to have influence on student satisfaction with, and preference for student housing.

## **Implications of the Study**

For theory, this study expanded the application of the functional congruence theory by focusing on the student market, in the context of South Africa. This narrowed the focus to the student market, and more specifically the student providers. Previous studies have examined this from a different country (Iran) and university provided housing (Dizaj & Khangahi, 2022; Nhlabathi, 2021; Amole, 2009).

Student property owners, managers, and other practitioners in the field of real estate need to understand the changes in the market in which they operate. The current findings give players in the sector insights on the aspects of student housing which are important and take priority to students. This is important for planning purposes, using such insights to allocate resources accordingly. It would not be advisable for the surveyed sample to allocate more resources to leisure facilities based on the findings. Most resources ought to cater for the study bedroom and washroom facilities, which will increase satisfaction levels, and eventually increased preference by students. To remain relevant in the highly competitive market, the players need to offer students what they like or prefer, thus providing value for their money.

## **Limitations and Recommendations for Future Research**

Student satisfaction for this study was investigated only from the functional attributes' perspective (bedroom, building quality, monthly rental, washroom, and leisure facilities). The functional congruity construct was also studied without breaking it into its different attributes to determine the individual strengths of the attributes. The focus on the functional congruity also left room for the self-congruity aspect of the student satisfaction and preference to be explored, which can help understand other non-functional loyalty predictors such as self-image. The study also looked at the overall student housing, without distinction among the type of housing (on-campus, off-campus accredited and off-campus non-accredited). From a methodology perspective, future studies can use the heterotrait-monotrait (HTMT) and Fornell & Lacker criteria to assess discriminant and construct discriminant validities as they produce better results (Hamid et al., 2017; Henseler et al., 2015; Gold et al., 2014; Kline, 2011).

## **CONCLUSION**

The study aimed to investigate the relevance and influence of functional congruence factors on student preference for student housing. The predictors of student satisfaction investigated were the bedroom, washroom, leisure room, and monthly rental. A sum of 542 valid responses were analyzed on SPSS to test the hypotheses. The outcome of satisfaction was also investigated, specifically the student preference. This study was grounded in functional congruence theory. The results of the study showed that student satisfaction was influenced by bedroom and washroom facilities, while satisfaction influenced preference.

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# INTEGRATION OF IOT IN INCUBATOR BUSINESS FRAMEWORK: A CONCEPTUAL REVIEW

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## ABSTRACT

*Business incubation is a crucial instrument for assuring the growth of small and medium-sized firms (SMEs), especially considering the rapidly evolving and noticeable trends in technology across the globe. The Internet of Things (IoT) is gaining popularity in the commercial world on a global scale. Evidence, however, indicates that SMEs are trailing behind in the adoption of IoT technologies. To help SMEs expand, this conceptual paper aimed to highlight the significance of incorporating IoT technology into the incubator's business environment. Thus, status of the business incubator system is investigated in the paper. The opportunities and difficulties of IoT technology in incubators are also covered. The paper is based on an interpretative that gathers data through a literature review. Based on the literature presented and reviewed, it is apparent that the world is aggressively moving towards seamless IoT transaction driven model. As the world of technology evolved, the incubation programme has to incorporate Industry 4.0 technologies to be able to compete in the global markets. Thus, this paper concludes that enterprises and government should embrace the use of technologies such as Artificial Intelligence (AI), Big Data Analytics, IoT if they do not want to be left behind. The study sets a research agenda for the future on how IoT integration affects SMEs' development, expansion, and economic growth.*

**Keywords:** SMMEs, IoT, Industry 4.0, incubator, incubator framework.

## INTRODUCTION

In the past years, the acknowledgment of SMEs' role to the growth of economies in developing and developed countries has gained traction globally. The benefits of SMEs include the generation of jobs, innovation and creativity, economic growth, and empowerment (Lose, Maziriri & Madinga, 2016). Due to the poor survival rate of SMEs, incubation as a means of business support emerged. Incubators were established with the objective to create and develop enterprises by providing; networking opportunities, shared administrative services, business advice, government support programmes, enabling access to finance, business and technical services, and access to new markets (Masutha & Rogerson, 2015). For this reason, incubators are perceived as providing the best support and safe environment for SMEs. However, as the fourth industrial revolution approaches, there is an increasing demand for company incubation to make sure that the SMEs are connected with technology so that they enhance survival rates.

Like all revolutions, the Fourth Industrial Revolution, also known as Industry 4.0, is expected to cause disruption in society, business, and government. Manda and Dhaou (2019) suggest that this revolution creates new opportunities that enterprises and government can embrace with the use of technologies such as Artificial Intelligence (AI), big data analytics, and Internet of Things (IoT). Businesses and the government risk falling behind if they reject the digital-driven Industry 4.0. The digital transformation of industry enabled by IoT permits new ways for enterprises to connect, collaborate, co-establish value and improve the incubator ecosystem (Munsamy & Telukdarie, 2018). As enterprises in the incubation strive for sustainability, the business industry is undergoing its fourth revolution. IoT as one of the technologies in Industry 4.0 is the connection of objects, things through embedded technologies, actuators and the internet (Dlodlo, 2012). IoT is expected to give rise to new opportunities

for technology; giving birth to new applications and services that will leverage the opportunity it offers (Miorandi, Sicari, De Pellegrini, & Chlamtac, 2012). It is also expected to offer solutions that will transform the operations and systems in enterprises. That said, it is argued that the SMEs in South Africa are lagging in technology. On the other hand, the IoT will provide immense opportunities, effectiveness and efficiency and financial returns (Palattella, Dohler, Grieco, Rizzo, Torsner, Engel, & Ladid, 2016). Yet, Sommer (2015) argues that Industry 4.0 will bring potential distortion between the different enterprises in the ecosystem and value chain of enterprise incubators. Therefore, the incubators should not only integrate IoT technologies into the framework and ecosystem but also leverage the power of these technologies in their incubator frameworks to improve value chain and enterprise success.

## **PROBLEM STATEMENT**

The growing number of incubators in South Africa translates to the acknowledgment that incubators provide favourable business environment for SMEs which contributes to their success and the economy at large (Masutha & Rogererson, 2014; Lose et al, 2016). IoT, for example, could pose a danger to the expansion of SMEs if incubator managers do not include these IoT technologies into their business frameworks and incubator ecosystem. Industry 4.0 technologies are, however, transforming the business climate. These developments necessitate a thorough examination of the prospects for and difficulties in integrating IoT technologies into South African incubators and corporate structures.

Previous studies in South Africa focused on the impact and performance, challenges and opportunities as well as incubator services and sustainability of the enterprise incubators (Buys & Mbewana, 2007; Sukhur, & Bakar, 2018). Limited research has been conducted in the use of IoT technologies in enterprise incubators. Therefore, it is more important to carry out additional research aimed at improving our comprehension of Industry 4.0 technologies like Big Data Analytics, AI, IoT, and Virtual Reality among other emerging ones. The purpose of this conceptual paper is to evaluate the literature and investigate the advantages and potential of incorporating IoT technologies within incubator frameworks.

The remaining sections of the paper are structured as follows: in the beginning, we review the literature on the role of business incubators, incubator framework, prospects, difficulties, and IoT technology. After outlining the research methodology, we go on to the results and suggestions before setting the agenda for future research.

## **LITERATURE REVIEW**

### **Overview of Small Enterprises**

Different definitions of SMEs have emerged in the past years, resulting in not one that is agreed upon. There are inconsistencies in how SMEs are defined globally. The definitions range between survivalists, micro, very small, small and medium-sized enterprises (Masarira & Msweli, 2013). Some academics categorize SMEs based on their size, resources, and revenue generated by each business or area (Rwigema & Karungu, 1999). Micro-enterprises in the different sectors, varying from the manufacturing to the retail sectors, are defined as businesses with five or fewer employees and a turnover of up to R100,000. In South Africa, a 'small business' is defined in Section 1 of the National Small Business Act of 1996 as amended by the National Small Business Amendment Acts of 2003 and 2004 (NSB Act) as a business entity that is managed by one or more people, that is predominately carried on in any sector or sub-sector of the economy (Van Scheers, 2018).

SMEs in South Africa play a vital role in the growth of the economy (Khosa, 2020), and drive growth in the economy, create jobs, and provide innovation. The government acknowledges the importance of SMEs, so much so that a Ministry of Small Business Development was established in early 2014. SMEs are recognized worldwide as the engines for economic growth and innovation (Gherghina et al, 2020, Chimucheka & Mandipaka, 2015). While the significance of SMEs in economic growth is acknowledged and agreed upon, most of them fail to survive for a variety of reasons, such as the entrepreneur's lack of business management experience, lack of technical skills, lack of managerial skills, lack of financial skills, lack of planning skills, and lack of market research skills (Lose et al, 2016; Masuthu & Rogerson, 2014).

## Incubator

According to (Buys & Mbewana, 2007), an organisation that aids small business owners and entrepreneurs in some way in the development of their business ideas is referred to as an incubator. Business incubators were developed to aid small businesses by providing support with the difficulties they experience as part of a bigger company growth strategy (Mutambi et al., 2010). According to the National Business Incubation Association (Mian, 2014), business incubation is a business assistance procedure that offers incubatees a variety of instruments and services in order to quicken the successful development of start-ups. The management of the business incubator typically arranges for these services and makes them accessible through its contacts as well as inside the incubator.

SMEs are known to have dismal survival rates in South Africa. By offering operating SMEs support during their early phases of business development, incubators are thought to help improve these survival rates (Chimucheka & Mandipaka, 2015). Since their inception, there has been different definitions and interpretations of incubation globally. In contrast, academics have agreed on what enterprise incubators are. Therefore, for the purpose of this research, an enterprise incubator is seen as an organisation that supports incubatees by offering technical, business, managerial, operational, and financial support (Lalkaka, 2003; Hackett & Dilts, 2004). South Africa had to adopt business incubation as part of national and local creativity to help the small business economy in order to follow trends from other developing and developed nations. Nonetheless, there is a growing need to equip incubators with the technology necessary to operate efficiently in the industry 4.0.

Since incubation was originally introduced in the 1980s, four generations have been recognized on a global scale (Lalkaka, 2001). In the first generation, the incubators offered incubatees office space at a reasonable cost to aid in the development of the business. Incubatees were additionally helped by shared resources like offices, phones, fax machines, company management assistance, counseling, and networking services. In the 1990s, the second generation expanded the available assistance to include consulting and business advice.

Incubators throughout this age were designed to advance and expand the information and communication technology (ICT) sector. The third generation of incubators concentrated their efforts on assisting technology labs in the establishment of prospective high-tech and ICT start-ups. For the growth of knowledge-based businesses, this generation provided a comprehensive array of support services. The fourth-generation incubator offered assistance with market analysis, counselling on global market strategy, partner and international sales development, and opening offices in nations where there is a market. International business incubator accreditation is granted to incubators of this generation (Khalid, Gilbert, & Huq, 2014). The majority of South Africa's incubators are third-generation facilities; as a result, there is a need to upgrade the incubator's structure and incorporate cutting-edge technology that will enable incubatees to successfully compete on the global market.

## Incubator Characteristics and Types of Incubators

On a worldwide scale, the following attributes are some of the key characteristics of incubators: the provision of an extensive and well-rounded business support service in collaborative spaces. This is providing access to mentorship programs, a team of experts who support new start-ups in their early stages, and a network of professionals who can address early-stage dangers to incubatees. In all incubators, incubatees go through a rigorous selection process before they are admitted into the incubator programme. Incubators provide a conducive business environment at a cost subsidised by the government for public sector incubators. Incubatees are selected on the ability of self-sustaining and potential growth. Incubators set a time period by which an incubatee must graduate. The incubators also provide post-incubation support for recent graduates to help integrate and run operations independently (Lalkaka & Bishop 1996; Ravjee, 2013).

South Africa has three different types of incubators: those that are located in the public, private, and academic sectors. Additionally, there is a growing trend in many nations to choose virtual incubators over actual incubators, which will not be covered in this study. *Public sector incubators*: these incubators are non-profit development agencies sponsored by government and mandated to allocate funds. Their main objective is to support enterprise growth and to create employment to rejuvenate the economy. Statistics South Africa (2022) reported an unemployment rate of 33,9% in the second quarter of 2022. Therefore, any country with a high unemployment rate must prioritize employment generation. Additionally, incubators in the public sector work with a variety of

organisations, including academic and research institutes. *Private sector incubators*: these are profit-driven incubators and are not financially supported by the government. They are capable of working successfully with their own financial resources. They offer useful services to incubatees such as shared resources, equipment, and other business services. *University Incubators*: these incubators are supported by the universities, offering them access to research facilities such as research labs, equipment, computers, libraries, assistance on the use of those facilities. Their primary objective is to promote a commercial university research in a financially viable way. They are normally non-profit incubators. All South African public incubators are accountable to the Department of Trade and Industry (DTI), while all private incubators are accountable to their parent firms (Ravjee 2013). Noticeable differences can be identified in how public and private sector incubators recruit incubatees to their incubators programmes. While private incubators are recognized for having more stringent and inflexible selection criteria, public sector incubators are known for having relatively flexible selection criteria. In the private sector, the main considerations are a business plan, profitability and development potential, and an entrepreneur with a strong track record. Consequently, private incubators focus on selecting enterprises that have the potential to grow into assets of value (Masutha & Rogerson, 2015).

Masutha and Rogerson's (2014) study found that private incubators performed significantly better than public incubators overall. They had an ability to create more jobs and graduate more incubatees than that of the public sector incubators. However, they face similar challenges in their programmes. Despite the interventions by the public and private sector in South Africa, incubators still face a high dropout rate. There are several reasons for the high dropout rates, including lack of effort or commitment from incubators, a drop in sales due to a lack of demand for local goods, financial mismanagement, a dearth of entrepreneurs who are also employed, and noncompliance with procurement requirements (Khalid, Gilbert & Huq, 2014).

## **The Role of Incubators**

The basic aim of a business incubator is to create successful SMEs that will graduate from the program as flourishing, independent businesses. Through the provision of complete support ranging from office space, tools, and technical support, business incubation therefore aims to systematize the process of developing successful new enterprises. By offering SMEs business development and training support services, as well as networking opportunities and the key infrastructure support services, a business incubator aims to provide SMEs with the fundamental skills needed to create viable businesses (Scaramuzzi, 2002; Mutambi et al., 2010; Virtanen & Kiuru, 2013).

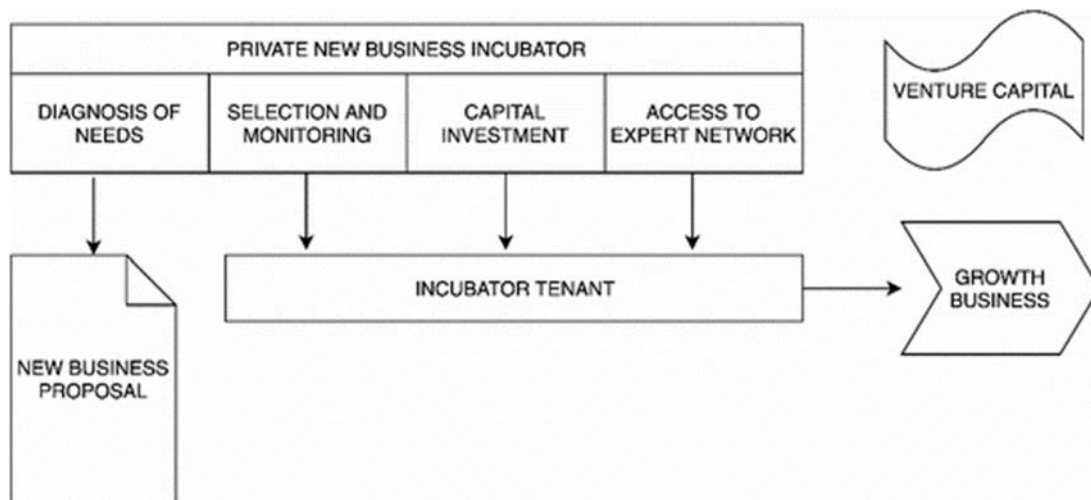
In response to the increasing number of failing SMEs in South Africa, in April 2006, the Small Enterprise Development Agency (SEDA) Technology Programme (STP) was created through the “combination of the activities of the Godisa Trust, the National Technology Transfer Centre (NTTC) of the Department of Science and Technology, and the Technology Advisory Centre (TAC) of the Department of Trade and Industry (SEDA, 2006).” The creation of the SEDA Technology Programme stemmed from the South African government’s strategic decision to merge and assimilate the activities of SME support interventions across the different government agencies. The main goal of the SEDA Technology Program's establishment and the program's mandate was to turn the eight out of ten small business failures into eight out of ten successes by increasing small businesses' competitiveness, performance, and productivity; boosting their profitability and growth; expanding the availability and usefulness of technologies; and facilitating the acquisition, development, and transfer of technology to small businesses (SEDA, 2006).

## **Incubator Business Framework**

An incubation framework is broadly defined as a guide for easing the process of starting and growing enterprises, providing expertise and networks for the success of incubatees (Bhaskar & Phani, 2018). In the early phases of the concept's development, Campbell et al. (1987) provided a foundation for the business process (Figure 1). They discussed the many tools and strategies the incubator uses to turn business ideas into profitable enterprises (Bhaskar & Phani, 2018). They then envisioned the incubation process that adds value to the incubatee and provided four stages for incubation. The initial step is a panel of seasoned business owners and industry professionals analyzing the possible new incubatee's business needs as a whole. Next, they choose incubatees who meet the requirements and who can receive services at a reasonable cost. For the purpose of boosting competitiveness and reducing failure

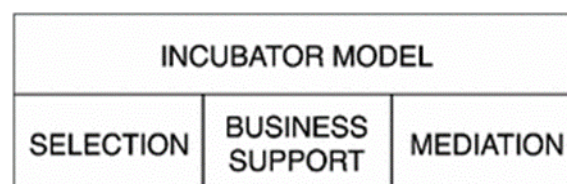
risks, the incubator oversees, plans, and effectively delivers the services that the incubatee has identified as necessary. The incubator administers the funding required for product development and other outside services in the third step. The incubator offers access to its ecosystem, network of experts, and client base to the incubatees in the fourth step to ensure the flow of knowledge and information.

**Figure 1: Campbell, Kendrick & Samuelson's (1985) incubation model**



The framework is devoid of specific selection criteria, it solely considers internal sources of value addition, and it operates under the presumption that firms with potential would succeed. The approach solely examines private incubators and presumes that every incubatee will succeed (Bhaskar & Phani 2018, Gozali et al., 2015). Through the use of an outside viewpoint, Smilor (1987) expanded Campbell's framework. Internal incubation procedures were left out of the framework. Following several modifications to the initial framework over the course of a decade, Bergek and Norrman (2008) developed a framework with three stages, namely: selection, business assistance, and mediation. They considered both sources of value addition, i.e., internal and external as opposed to the first incubator framework by Campbell and his team. The features that Bergek and Norrman (2008) identified explain the procedure of incubation into an external and internal variable as selection, business support and mediation which are all equally important. *Selection*: focused on the idea of the incubate/s technical abilities and feasibility study of the business, thus, only the business ideas that are having potentials get to be selected. Incubator manager must have expertise in judging the entrepreneurs' or teams' behavioural and personal traits and business-related capabilities. *Business support*: includes training, business advice, administrative support, various business managerial areas of support, judicial matters, marketing and assistance related to finance. These strategies depend on the level of the required intervention as per incubatee needs. *Mediation*: business incubator must provide a network and ecosystem for mediating or to ensure the free flow of resources such as knowledge and technology, finance and human capital between incubatee and innovation systems. This may help to create a more supportive environment for the growth of early-stage businesses and increase the chances of their success.

**Figure 2: Incubation framework by Bergek and Norrman (2008)**





## Industry 4.0

Klaus Schwab, the founder and executive chairman of the World Economic Forum coined the term Industry 4.0. In reference to Industry 4.0, Schwab (2015:1) bemoaned how the technology revolution would fundamentally alter how people lived, worked, and interacted with one another. Industry 4.0 refers to a global revolution in the use of mobile Internet, low-cost, robust sensors, artificial intelligence, and machine learning (Dlodlo, 2012). Since the beginning of industrialisation in the 18th century, we are currently in the fourth great industrial period. Industry 4.0 is revolutionising quickly and will have a significant impact on systems and society as a whole. It also introduces changes that will affect production and management systems. It introduces digitisation and technologies that diffuse the lines between the physical, digital spheres of global production (Kearney, 2017; Xu, et al. 2018).

According to Lu (2017), the concept of Industry 4.0 can be summarised as “an integrated, adapted, optimised, service-oriented, big data, as well as the creation of digital value chains to enable communication between products, their user environment, and business partners”. Industry 4.0 system involves digital technology, network communication technology, computer technology, automation technology, and many other areas. In addition, the foundation of its application is built on digital design and simulation, extremely automated methods, manufacturing method management, translating the whole method to access of knowledge and the laws of management, and decision making. The IoT technologies that serve as the foundation of this study will be highlighted in the next section, together with cloud computing, big data, and advanced analytical approaches.

## Technologies in the Industry 4.0

*Cloud Computing Technology* is a computing technology that is established from a search engine platform to offer high performance at reduced cost. The platform provides numerous internet services such as software, hardware, and other information technology infrastructure resources. The end-user simply uses resources depending on application needs, relying on on-demand access to computers and storage systems (Kebande, Malapane, Karie, Venter, & Wario, 2018).

*Artificial intelligence (AI)* is the study of diversity of intelligent behaviour. To understand human intelligence and to produce machines that are useful to humankind (Garnham, 2017). AI includes the study of perception, memory, emotion, judgment, reasoning, proof, recognition, understanding, communication, design, thinking, learning, creating, and so on, which can be realized artificially by machine, system, or network (Li & Du, 2017).

*Big Data* refers to a large amount of data sets that include mixed methods of structured and unstructured data. Due to its complexity, Big Data requires the most powerful technologies and algorithms (Oussousa, Benjellouna, Lahcena, & Belfkih, 2018). Big data technology employs cutting-edge processing techniques to quickly obtain valuable information from a variety of data kinds, to produce in-depth comprehension, insight, and findings to support precise decision-making. Enterprises must manage a wide range of data, including enormous amounts of both structured and unstructured data, as well as data on products, operations, value chains, along with the external environment (Kebande et al., 2018).

*Internet of Things (IoT)* was presented by Kevin Ashton in 1999, but it has only recently begun to gain popularity (Dlodlo, 2016). IoT refers to a system of interconnected things or objects that can speak to one another or with other devices over the internet. Embedded technologies within devices such as Radio Frequency Identification, sensors and microchips allow these devices to be interconnected thereby becoming smart devices. Internet is the source of these smart devices as they cannot connect outside the internet (Kebande, et al., 2018,). IoT is the largest enabler of responsible digital transformation. The World Economic Forum (2018:3) has estimated that IoT will bring about \$14 trillion of economic value to the global economy by 2030. The increase is only possible when consumers and the public sector are included. IoT has the ability to benefit society. IoT is fundamentally about using previously connected gadgets to measure and remotely control people and objects that technology previously could not reach.

However, the good news is that significant progress is already being made in South Africa, where IoT projects are ongoing and the creation of smart cities is a top priority (Mavimbela, & Dube 2016). Cape Town and

Johannesburg are considered the leaders in the race to become smart cities (Musakwa & Mokoena, 2017). The IoT is critical to the realisation of a smart city, as it facilitates the traverse between the physical world and the digital one (Mavimbela & Dube, 2016). This study focuses on the IoT as one of the industry 4.0 technologies that can benefit enterprises in incubation. The IoT will bring fundamental changes in the management of incubator dispersed value chains and increase the relations into the incubator networks. Presently, enterprises monitor the flow of products and services and maintain separate flows of information. However, with the use of IoT, products will be tracked using their assigned unique identifies. The information will be linked and stored regarding their origin and destination. IoT will reduce the need of manually coordinating and synchronising information on the flow of products and services.

## **Opportunities and Benefits**

With the help of IoT, enterprises will be afforded the opportunity to create new value propositions to grow their businesses. IoT will enable expansion when it comes to product differentiation as the software will allow enterprises to customize their products. Enterprises will customise their new smart products to fit their customers' needs which has the potential to increase demand (Schmidt et al., 2015). Real-time capturing of data, customer historical data and product data will enable enterprises to form stronger relationships with their customers (Porter & Heppelmann, 2014). The analysed data will be used to gain a competitive advantage by understanding customer, market and industry patterns. The data can also be used in order to improve products (Wason, 2016). The IoT future opportunities will enable tailor-made solutions for a very specific business need. This will result in reduction of the bargaining power of the buyers significantly as the cost of customised products will rise. IoT will increase value-added services to customers as well as offering superior performance, customisation and differentiation (Mabotja, 2018) which can drive customer loyalty and retention.

## **Challenges**

The industry 4.0 revolution has a variety of challenges that Manda and Dhaou (2019) recognized, including job loss, infrastructure issues, security issues, and privacy issues. IoT generates a massive amount of data, which can be challenging to manage and analyse effectively. Enterprises must have the right infrastructure and tools in place to store, process, and analyse this data to extract insights and inform business decisions. The use of industry 4.0 technologies such as IoT presents a massive threat of job losses globally. In South Africa, the government is struggling to curb the high unemployment rate of 32,7% according to the national accounts data (Statistics South Africa, 2022). On the other hand, The World Economic Forum (2016) suggests that industry revolution will bring a momentous impact on jobs, ranging from momentous creation of jobs to job displacement widening the skills gap and increasing the skills challenges. These challenges will greatly affect SMEs in addition to the economic challenges. Some of the enterprise challenges include a high probability of new industry entrants. Products will have embedded software that will require new type of skills to enable enterprises to compete on a global stage (Porter & Heppelmann, 2014). Spencer, Ruiz-Sandoval, & Kurata, (2014) assert that there will be a need for complex algorithms that will be used to monitor and control the devices that will be providing the core capabilities of the enterprise. The software will need to be standardised in order to improve and achieve full compatibility between the technologies in the internet of things (Manda & Dhou, 2019). There is a potential hike in the cost of these smart devices and software which will lead to a decline in profit margins. IoT devices and systems can be expensive to develop, deploy, and maintain. Enterprises must carefully weigh the costs and benefits of IoT solutions to ensure that they are cost-effective and provide a positive return on investment. Another challenge is that due to IoT software's, suppliers that provided physical components in the incubator value chain and network will cease to exist as new suppliers will emerge with a more aggressive approach for growth. Therefore, the new suppliers will provide new value to the market such as software and analytics.

## **RESEARCH METHODOLOGY**

The conceptual approach used in this study lends itself to a content analysis that is supported by the literature review. In this study, the researchers adopted an interpretivist approach in order to understand and describe the meaning of the study. Since the study was descriptive in nature, a qualitative approach was employed to investigate the possibilities for integrating IoT technology in incubators, as well as the IoT's obstacles and prospects. Qualitative research was chosen on the ground that it affords researchers with theoretical lenses that offer direction to the

research (Cohen, Manion, & Morrison, 2011). The literature search followed the typical format of a literature review in research (Creswell, 2009). The databases searched included ProQuest, EBSCOhost, and Mendeley, which enabled searches in different journals. The search keywords used included “business incubators”, business incubator framework’, “IoT strategies and frameworks”, “SMEs in the Industry 4.0”. Google Scholar was also used to search for IoT challenges and opportunities, as well as Fourth Industrial Revolution technologies. Topics included the role of incubators, the challenges, and opportunities that will be presented by IoT to incubators, incubator business framework, Industry 4.0 technologies.

## **DISCUSSION**

This conceptual paper reviewed existing literature on the state of incubators in South Africa with regards to the industry 4.0. It is evident that incubators are still performing on the third-generation era. They still lagging behind in terms of the technology support. As Sommer (2015) alluded, these industries 4.0 technology will bring distortion to enterprises that have not yet integrated technology in their value chain and network. Incubators are and have been a good instrument to develop and grow economies both in developed and developing. Literature revealed that even though incubators have been in existence for a number of years, they still face a high rate of dropouts due to challenges that incubators are not designed to mitigate. However, it is the researchers’ view that although incubators are still in the third generation and struggling to report on success, incubators in South Africa have a potential to change the situation around. Incubators need to be equipped with a framework that will integrate IoT technologies into their ecosystem and network to help SME’s grow and become sustainable. Competitive advantage in the local and global market will only be achieved by the reduces cost associated with international distribution and trade.

After reviewing the literature on the current incubator structure, it became clear that the framework has to be revised. Additionally, there is little study on the main issues incubators confront and the solutions they need to implement to improve the success rate of their incubated companies. When IoT is implemented, literature has demonstrated that it will provide a variety of opportunities and economic advantages, but it is mute regarding the incubators' readiness to help incubatees transition to industry 4.0. Additionally, the government of South Africa must update its plan for promoting SMEs. Innovative approaches to tackling socioeconomic difficulties including probable job losses and the skills gap should be considered in the redesigned strategies.

## **CONCLUSION AND RECOMMENDATIONS**

SMEs can expand and survive in the current challenging business environment with the help of incubators. This paper looked at the incubation concept and business frameworks that exist based on literature. Types and characteristics and the role of incubators in South Africa were discussed. Based on the literature presented and reviewed, it is apparent that the world is aggressively moving towards seamless IoT transaction driven model. As the world of technology evolved, the incubation programme has to incorporate Industry 4.0 technologies to be able to compete in the global markets. Thus, this paper concludes that enterprises and government should embrace the use of technologies such as Artificial Intelligence (AI), Big Data Analytics, Internet of Things (IoT) if they do not want to be left behind.

Lastly, it is crucial to consider these issues for future research: what measures will improve the success rate of incubates? A look at the difficulties incubators are having in the 4.0 industry. What qualifications do they have, and how do these incubators get hired? Can they integrate IoT into their corporate structure? A technical education is also required for them. They want to train incubators on IoT, but will they be able to do that? A framework that will incorporate IoT and other technologies into the incubator ecosystem and network must also be created.

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# CORPORATE FRAUD AT THE SMALL ENTERPRISE FINANCE AGENCY AFFECTS THE ECONOMIC GROWTH IN SOUTH AFRICA

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## ABSTRACT

*Corporate fraud can be very harmful to any organisation because it may lead to companies collapsing and cause economic downfall in a country. One of the factors that has a negative impact on a country's economy is unemployment. Joblessness can also be a crime generator. The South African government noted this challenge and developed the National Development Plan (NDP) of 2030. This plan articulates the aims in reaching the goal for driving economic growth through various means, including sustainable job creation. As a result, this plan gives a summary of the programmes that were created to encourage, support, and develop entrepreneurship and Small, Medium and Micro Enterprises (SMMEs) to create jobs and limit the increase of unemployment through the establishment of State-Owned Companies such as the Small Enterprise Financial Agency (SEFA) to help create sustainable employment by the year 2030; and improve the economic growth in South Africa. The SEFA is meant to bring inclusive participation in the economic prosperity through developmental credit to the previously disadvantaged across South Africa. This paper intends to prove that corporate fraud does exist at the SEFA and affect the country's economic growth. Moreover, it provides a framework to curb corporate fraud which can stimulate an ailing economy.*

**Keywords:** corporate fraud, economic growth, corruption, unemployment, financial institution.

## INTRODUCTION

Unemployment links with human rights at some point in life. Some human rights can only be met when there is an employed breadwinner in the family. Job creation through the SEFA was meant to encourage people who are self-employed and with an interest in employment-generation by establishing a small business through financial assistance (Mphidi, 2022). However, criminals also observed such opportunities. Financial institutions such as the SEFA are likely to be a target of crime, which goes against their mandate to create jobs. The South African government therefore created laws to assist in regulatory compliance to minimise and combat corporate fraud. Corporate fraud is a problem for companies, regardless of size, sector, or region where they operate in and occurs all over the world (Kurant, 2014). The entrepreneurship and the SMMEs sector have been the engine for driving economic growth as well as the rationale for job creation. The programmes for encouraging entrepreneurship and SMMEs are set to be executed through better coordination with some of the South African State-Owned Companies (SOCs) (Amra, Hlatshwayo & McMillan, 2013). A safe and secure country encourages economic growth and transformation by providing an environment conducive to employment creation, improved education and health outcomes, and strengthened social cohesion (Pheiffer, 2013). Corporate fraud weakens the economic growth that is necessary for community development and stability. The aim of this research was to explore corporate fraud at the SEFA and to establish other successful methods at a global glance to mitigate fraudulent activities at financial institutions and boost the economic growth in South Africa.



## THE HISTORICAL GAP OF ECONOMIC EXCLUSION

Economic growth can create opportunities to right historical wrongs, if policy makers and business leaders foster more inclusive economies and societies (McKensy & Company, 2022). It is a known fact that some of the citizens of the Republic of South Africa were restricted to participate in many activities which some would yield to inclusion in the economic growth during the Apartheid era. There is a history of discrimination and segregation in terms of economic standards and the way of life in South Africa. This is when certain people in a country are subjected to a system that places them at a disadvantage based on their ethnicity, religion, gender, age, disability, migrant status, and many other dimensions. Thus, propelled the new South African government ensure that there are measures in place to close these gap. South Africa joined other countries to fall under the African Agenda (AA) 2063, focused on the vulnerable and extremely poor (Plagerson & Mthembu, 2019). These mentioned are crucial factors for consideration in pursuit of inclusive economic growth in a country like South Africa (Mphidi, 2022). Hence, the National Development Plan of 2030 was developed to address such inequalities.

The SEFA was established to provide developmental credit to foster the establishment, survival, and growth of SMMEs contributing to alleviation of poverty and job creation (SEFA, 2015). This institutions registration with the NCA Act 34 of 2005 obligates the SOC to complete the National Credit Regulator (NCR) Form 39 to the regulator, which outlines details of how many individuals from historically disadvantaged, through business sector, were afforded the opportunity to become economically viable (NCR, 2016). Employment for individuals is particularly important, since it gives them a sense of independence to do things which are desired, either for themselves or family members. These tasks include the buying of food, paying for transport, nurturing talents through education, and paying for tuition fees, medical aid, and other general needs. Not being able to afford these things gives rise to negative feelings. Such negative feelings may trigger individuals' frustration levels causing them to do things that they would not normally do (Mphidi, 2022). Some of these deeds include resorting to a life of crime. However, some individuals also commit corporate fraud not because they cannot afford something but merely out of greed. Corporate fraud affects a country's economic growth. The more individuals are employed to take care of themselves, the more pressure is on the government to focus on other important projects to benefit the lives of the people in the country.

Corporate fraud within direct lending products was the focus of this study, as it is the most targeted product with major potential monetary losses. A direct lending product is an investment activity that addresses the financing needs of start-ups and new entrepreneurs who are often not fundable by commercial financiers. Consequently, an evaluation of all the stages, such as the application process, approval process and the post-approval stage to establish where the gap or opportunity lies was of vital importance to secure the SEFA direct lending product and prevent corporate fraud (Mphidi, 2022). The implication of the geographical footprint for economic drive and publicity are highlighted in the SEFA Annual Reports since its inception (SEFA, 2020). Clients' viability to access developmental credit which was of concern raised by the Parliament Monitoring Group (PMG) (2018). Information disseminated to clients in South Africa was articulated to be a contributing factor in any organisation. The idea was to ensure that the differently impaired clientele should also enjoy the privilege of receiving information on the types of criteria for funding of financial services offered by the SEFA, irrespective of their location and the level of understanding of the this agency's monetary products and services offered to them. The issue of geographical area was to avail access to everyone, irrespective of their human interaction ability, be it the language or communication method. The effectiveness and efficiency of internal processes which focus on the human element should be monitored because a process is conducted by human beings (Mphidi, 2022). Thus, as noted in the SEFA (2020) that internal controls can be there, but the human element can bring up an error. It was important to understand to which extent the South African government is willing to go in ensuring that citizens are advanced at all costs. The analogy to understand the threat of corporate fraud in the business life cycle in pursuit of economic growth and to explore the financial efforts made by the government to undertake difficult tasks to implement new ways and improve the lives of citizens, was necessary. Hence, to comprehend the impact of the government's efforts and appreciation (Ruttley, Robinson & Gerstenmaier, 2017). The business life cycle is the progression of a business in phases over time and is most commonly divided into five stages, namely launch, growth, shake-out, maturity and decline (Business Life Cycle, 2015). It was determined that the government was committed to transforming the economic status of the country to the benefit of everyone through the SEFA.

## **AN OVERVIEW OF THE SMALL ENTERPRISE FINANCE AGENCY**

The goal of the NDP 2030 is for government to improve the economy by 2030 as highlighted in a report by the South African Bankers Services Company Limited (BankServ Africa) and Payments Association of South Africa. The SEFA was created as one of the SOCs to facilitate and ensure that the vision of the NDP 2030 is executed (Mphidi, 2022). In addition, South African government goals include achieving eleven million jobs by the year 2030 (SEFA, 2016). Consequently, these jobs are expected to be permanent, decent, and sustainable to improve the standard of living of citizens by 2030 (South Africa, 2011). The SEFA was registered with the Companies Intellectual Property Commission (CIPC) in terms of the Company's Act (CA) 71 of 2008 and is a Schedule 2 listed entity in terms of the Public Finance management Act 1 of 1999 and Treasury Regulations (SEFA, 2017). A schedule 2 company comprised of supervisory bodies that have been identified for their governance authority over the economic sectors and industries they oversee (South Africa, 2019). Thus, it is also subjected to monitoring by the regulatory bodies and must meet all regulatory requirements (Mphidi, 2022). According to the Compliance Institute of South Africa (CISA) (2013), regulatory requirements are statutory, regulatory, and supervisory requirements, industry codes, and best practice guidelines to which an organisation should abide. For the SEFA to comply with legislation applicable to its business operations it must have policies and procedures in place to ensure compliance with legislation. The idea is to be able to identify compliance risks, make risk assessments, deal with risk management, conduct monitoring and training, and provide advisory services to the institution. The SOCs are legal entities that fall within the ambit of the CA 71 of 2008 (Thabane & Snyman-Van Deventer, 2018).

The SEFA is a financial institution, which subject this SOC to register with the Financial Intelligence Centre (FIC) of South Africa in terms of the amended Financial Intelligence Centre Act 1 of 2017. This SOC is indeed registered as an accountable institution, in terms of the Financial Intelligence Centre Act 1 of 2017 (South Africa, 2017). The SEFA registration with the FIC binds this SOC to develop policies in line with legislation and comply with the regulatory requirement to disclose reports on issues relating to misconduct or suspected criminal activities to an institution other than the South African Police Service (SAPS), because the registration make it an oversight body (FIC, 2016). Other legal procedures that require the SEFA to comply with is the Guide for Accounting Officers of the Public Finance Management Act 1 of 1999 (2000), recommend that departments develop Fraud Prevention Plans (FPPs) no later than 31 March 2001 and the Treasury Regulations (TRs) also plays a key role. The Public Service Anti-Corruption Strategy (PSACS) (2002) and Prevention of Corrupt Activities Act (PRECCA) 12 of 2004 command that, other than government institution, SOCs must also create some measures to combat fraud and corruption (Department of Public Service and Administration, 2002).

### **Regulatory Requirement Monitoring Inclusive Economic Growth**

The Constitution of South Africa (1996), mandates National Treasury to ensure transparency, accountability and sound financial controls in the management of the country's public finances. Furthermore, the Department of Economy and Finance's aim is to focus on reviewing tax policy and strengthening regulation in the financial sector, supporting sustainable employment, supporting infrastructure development and economically integrated cities and communities, managing future spending growth and fiscal risk, managing government's assets and liabilities, making government procurement more efficient, strengthening financial management in government, and to facilitate regional and international cooperations (South African Government, 2023). One of the enabling legislations which the SEFA must comply with is the National Credit Act (NCA) 34 of 2005, which stipulates the types of products and services (direct lending) in business operations (Mphidi, 2022). This means that the SEFA must be registered as a credit provider in terms of section 40 and 41 as a Developmental Credit Provider (DCP) of the Act with the NCR of South Africa and is registered as a developmental credit provider with registration number NCRCP160 (NCR, 2016); and it is a legal obligation that credit providers must register with the NCR for regulatory purposes to ensure fairness during business transactions for both the institution and the clients, referring to the SMMEs in need of financial support (Mphidi, 2022). According to South Africa (2005), the National Credit Act (NCA) 34 of 2005 obliges SOCs to comply with the legislative requirement by submitting statistical reports on the NCR Form 39 to the NCR (the regulator). The report entails information such as how many individuals and companies were provided with developmental credit, the geographical area of the beneficiaries, as well as their race, gender, and amount granted. The intention was for the regulator to establish the extent of inequality, poverty and other measures stipulated to address historical exclusion as mentioned by the United Nations (UNs) Sustainable Development Goals (SDGs) (Plagerson & Mthembu, 2019; Meiring, Kannemeyer & Potgieter, 2018).

## **Government's Role in Monitoring Inclusive Economic Growth**

According to the SEFA (2013), the SEFA capital funding was sourced from grants from the Economic Development Department (EDD) through this agency's only shareholder, the Industrial Development Corporation (IDC). In addition to grants received, the IDC committed to funding the amount of R921 million (2016: R921 million) should this be required in the future. A grant of R213 million (2016: R406 million) was received from the government to support the SEFA's activities. The grant was paid to the IDC, which was conducting the required oversight over this institution's operations, and was also made available for operational purposes through a shareholder's loan (SEFA, 2017). All the funds in the SEFA were referred to as public money, namely taxpayers' contributions (SEFA, 2014). On the government side, to ensure that the NDP 2030 is being upheld for the purpose it was intended for, there is monitoring from the South African Parliamentary Monitoring Group (PMG). According to Mphidi (2022), the portfolio committee in the PMG are assigned to interrogate and access the SEFA reports on a quarterly basis. These sessions are usually conducted on public television, they are not secret, those who are interested can view through Parliamentary Television, which seldom repeat sessions held during the day or a day before. The South African government has spent large sums of money trying to assist with the improvement of financial products and services to enhance economic development through organisations such as the SEFA. As South Africans, the researchers' have had the experience of living in rural and semi-rural areas, townships, suburban areas, and the city. It can clearly be seen from the geographical demarcations whether a place has economic activity or not. Efforts made by the government must materialise and be supported until there are viable economic growth through changing people's lives. Some of the monies injected into the SEFA are explained below to disclose the amounts, as indicated by the SOC.

## **THE IMPACT OF CORPORATE FRAUD ON ECONOMIC GROWTH**

Corporate fraud causes significant damage to the organisation, regardless of the way in which it is carried out. Experts say that a typical organisation loses about 5% of its gross income per year due to corporate fraud. This poses a significant threat to financial institutions. Corporate fraud affecting the interests of investors entails a huge risk of causing losses and undermines the business reputation of the company (Krokhicheva, Mezentseva & Yu, 2021). Fraud is no alien to a specific country but a global problem to all types of businesses and eventually an economic downfall. Although there has been a significant development of fraud detection and deterrent measures, fraudsters have equally improved. Therefore, over the past twenty years, the total amount of fraudulent financial events committed at the international level has been evaluated at United States Dollars of 5.127 trillion, with related losses rising by 56% since 2009. Thus, represents 6.05% of gross domestic product (GDP). Losses due to fraud in any company are estimated to account for 3% to 10% (Bashir, Ciupac-Ulici & Beju, 2021). Cornwall (2023) confirms that poverty can be reduced and people's lives can be improved through economic growth because it was proven to be the most powerful instrument to do just that.

Despite tough economic conditions, from 2012 – 2016, the SEFA has approved R3.6 billion in loans to SMMEs and cooperatives and disbursed R3.2 billion into the South African economy (SEFA, 2016). Furthermore, over 160 000 enterprises have benefited and created over 300 000 formal and informal sector jobs. In the SEFA Annual Report, SEFA (2017), it is mentioned that 2016/17 financial year this financial agency approved R827 million and contributed over one billion rand into the country's economy. As a result, the contribution assisted 43 000 SMMEs and cooperatives, thus, created and maintain close to 56 000 jobs. Amidst these contributions, the SEFA emphasised its commitment to the national policies and industrial policy action plan, by approving R359 million in respect of the productive sectors of the economy. In addition, R366 million was disbursed to fund businesses focused on operations in the country's priority provinces, R407 million was shared by businesses run by women, and just over R451 million was disbursed to entrepreneurs requiring less than R500 000.

For the financial year ending March 2018, SEFA disclosed that R446 million was approved in loan financing to SMMEs and cooperatives. SEFA disbursed over R1,3 billion as part of its contribution to the South African economy. This funding showed an impact and was regarded as a truly remarkable achievement, as the total amount paid out for the past five years which ended in March 2017, is a staggering R4,3 billion (SEFA, 2018). During 2018, reviews showed that the loans spend assisted over 45 000 small businesses and cooperatives, which led to over 54 000 jobs being created in the formal and informal sector. In pursuit of the developmental impact, the SEFA (2019) mentioned that during the 2018/19 financial year, loans to the value of R703 million were approved. In that year, a total of R1.2 billion was dished out to the South African economy. The beneficiaries were 72 894 entrepreneurs through

various loan programmes, which assisted in the creation of 88 590 jobs. In 2020, it was reported that the SEFA approved loans to the value of R1.4 billion.

Furthermore, R1.3 billion was disbursed into the South African economy during the 2019/20 fiscal year and the amounts disbursed to Black-owned businesses was 921 million, R446 million to women-owned enterprises, R212 million to youth-owned businesses, and R371 million to businesses in rural towns and villages. This enormous monetary funding helped 74 472 SMMEs, and cooperatives and created and sustained 87 828 jobs (SEFA, 2020). As leaders focus on stabilising their businesses, they should consider how fraud might penetrate their ecosystem, and strategise how to prepare for the disruption it brings (PriceWaterhouseCoopers, 2020). However, some of the borrowed money was intentionally not returned, thus constituted first-party-fraud. Other funds were lost in a form of occupation fraud, this is when some clients were able to access funds, colluded with the employees which led the SOC to lose over R20 million. Lastly, lack of monitoring post-investment or after clients were funded. The negligence caused the SEFA losses in write-offs of impairments. Thus, defeats the mandate of inclusive economic development and participation because its either a business failed due to the lack of monitoring or non-repayment to the SEFA, or spent on personal things than contributing to economic growth of the country.

## **RESEARCH DESIGN & METHODS**

This research was empirical in nature and followed an explanatory research design. Following a mixed method approach, data was collected by means of literature study, questionnaires, and interview schedules. To show how important it is for SEFA to exist and assist SMMEs with funding for inclusive economic growth, primary data and secondary data was collected and presented as evidence pertaining the impact of the SOC to the country. A selection of probability and non-probability sampling methods were used to collect data. The sample consisted of SEFA staff dealing with the direct lending product in the eight SEFA provincial branches within South Africa, namely Limpopo, Mpumalanga, Northwest, Northern Cape, Western Cape, Free State, Eastern Cape and KwaZulu Natal. A mixed analysis was conducted to obtain the outcomes of this study – whereby MS Word (2016) graphs and MS Excel (2016) were used, which were matched with the data collected from the questionnaire survey and interviews.

## **RESULTS AND DISCUSSION**

Results show that the threat of corporate fraud in the SEFA direct lending product is a reality. Corporate fraud exists because there are opportunities within the business life cycle which can be exploited by internal and external parties. Corporate fraud takes the form of application fraud, first-party-fraud, third-party-fraud, corruption, and occupational fraud. This SOC developed controls to curb corporate fraud, such as policies and procedures. However, feedback from staff members working with the direct lending product suggested that not all employees were familiar with the internal policies and procedures, and the available rules and procedures for reporting fraud were not efficient. The SEFA was indeed mandated to generate economic growth through its financial products and services, and to close the gap of economic exclusion by promoting inclusive economic participation across the country. It includes an overview of the impact of the institution and its mandate for job creation linked to the NDP 2030 for qualifying South African clients. The rise in unemployment from the previous years within South Africa are highlighted, which emphasises why it is essential to evaluate corporate fraud at this agency. Preventing corporate fraud will allow the organisation to thrive and assist qualifying clients to grow economically. The SEFA was established in a legislative sphere with an obligation to abide by regulatory requirements within the financial industry to fight corporate fraud. Internal controls were developed, articulating how fraud should be managed in a fraud prevention policy signed in 2014. This institution has also developed a fraud register and records fraudulent activities on a regular basis for further internal action (Mphidi, 2022). Literature on corporate fraud proves that fraud is a universal problem facing all financial institutions despite the internal controls put in place. The costs of fraud have been highlighted, as well as its negative impact on the economic growth in South Africa.

This research further revealed that the estimated monetary loss due to fraudulent activities in the SEFA's direct lending product amounts to millions of rands which could have been used to help the poor. It was also discovered that this financial institution operates on taxpayers' funds, which is not adequately monitored and therefore has an impact on the country's economic growth through funding. The contribution of the SEFA to improve the economic growth was recognised and an analogy to the business life cycle highlights the impact of this SOC on the economy of the country. Therefore, it was of the essence to examine this organisation's corporate fraud register from inception to

get an idea of the type of fraud this SOC has been facing. It was found that the SEFA was in great danger of application fraud, corruption, occupational fraud, and other professional corporate fraudsters targeting the organisation, along with the clientele. The modus operandi of corporate fraud occurs through impersonation, submission of forged documents, and defrauding of clients who already applied for funding and are awaiting the outcome of the application (Mphidi, 2022). Fighting fraud is a complex battle, as the worst enemy of the organisation could be its employees (from management to junior staff). However, it is possible to minimize fraud. It is important to create an early warning system for effectively managing the risks arising from the business relationship with clients (Agarwal & Sharma, 2014). According to Gerard and Weber (2014), it is also vital to keep in mind that fraud can be committed by those in a close working relationship to employees, which also requires close attention. Neglecting to introduce remedial action will cause even greater damage. The SEFA has approved over R3 billion and disbursed millions (nearly billions) to businesses to facilitate job creation. As a result, this financial institution has already facilitated the creation of more than 312 480 jobs by providing financial assistance to small businesses that meet the mandated criteria. Inadequate knowledge management to internal and third parties was one of the factors raised by the South African Parliament (Mphidi, 2022). While economic growth and development are crucial in addressing the factors which lead to corporate fraud, poorly managed development can itself contribute to increased criminal activities (Pheiffer, 2013). This research found that oversight over the SEFA business activities was not productive. Funds have been injected to assist entrepreneurs, but the government did not invest in ensuring the implementation of a strict monitoring plan. This SOC was left to run the business on its own without an independent forensic audit by the government. Some of the PMG Committee members suggested that the SEFA should not audit themselves, and the Auditor-General and the portfolio committee should be the only bodies tasked with such a function. The South African Parliament also highlighted inadequate reporting and stated this agency was using bullying tactics and wasting taxpayers' money, thus they are not helping poor people (PMG, 2017). Some of the developed countries rely on small businesses to generate financial growth, which also applies to South Africa (Mphidi, 2022). A small business is an engine for economic growth (Stan, 2014). Fraud and corruption are strongly interconnected, representing a persistent problem for all countries that impacts financial and economic development. In economic literature, corruption is often associated with bribery for obtaining private advantages that may help businesses to avoid taxation and regulations or to obtain public contracts. Furthermore, corruption harms the development of financial and banking markets, and thus influences economic growth (Bashir et al, 2021). This study considers the need to analyse the risk of corporate fraud in the SEFA as an important condition for ensuring economic upswing in South Africa.









## Recommendations

Successful methods to curb corporate fraud include the identification of risks and educational training on how to detect it. Instances of fraud increase despite the measures put in place to uphold the law and encourage economic growth for the country. It is recommended that SOC's reach out to a legitimate target market for local economic growth; and that the SEFA implement best practices as outlined in this study's conceptual framework to pinpoint motives, opportunities, and other contributing factors to minimise corporate fraud, specifically customised for the financial business environment; and economic growth in South Africa. According to Mphidi (2022), best practices to mitigate corporate fraud and prevent the financial losses caused to the economy and the welfare of masses, suggest that SEFA implement the following:

- Consider vetting and conducting a security clearance of criminal records for new and old employees, including previous and new ones which might be unknown to the employer;
- Strictly discourage occupational fraud and promote compliance with legislation and internal policies and procedures. Encourage staff members to exercise professional due care when they conduct business using state funds. Also note and consider the fact that fraud affects all South Africans;
- Reconsider new automated systems to change internal processes to minimise corporate fraud;
- Conduct remedial action on First-Party Frauds (FPFs) and make the post-monitoring programme more efficient;
- Fully disclose reports and misconduct;
- Establish corporate fraud reporting lines;
- Implement compliance-based investigations; and
- Provide wellness support to employees experiencing personal problems which could cause individuals to commit occupational fraud, corruption, and other forms of criminal activities to overcome these challenges.

The prevention of corporate fraud in financial institutions will have a significant effect on the country's economic growth. Below table displays a proposed new conceptual framework for the SEFA to boost South Africa's economy by eradicating corporate fraud.

**Table 1: A conceptual framework for the SEFA to prevent corporate fraud**

Stages within the SOC			Stages within the target market			Enforcing the SEFA mandate /NDP 2030			Impact on economic growth		
 			 			 			 		
Prevention	Fraud minimisation legislation, risk assessments, fraud prevention policies, compliance policy to processes and procedures, and reporting obligations										
Detection	All the regulatory requirements for the SEFA										
Response	Activities to be carried out to minimise corporate fraud in the SEFA										
Activities in the SEFA			Activities on target market			Impact on the mandate			Impact on the economic growth		
Prevention	Detection	Response	Prevention	Detection	Response	Prevention	Detection	Response	Prevention	Detection	Response
Publicity (radio and television); vetting of employees (security clearance); skills and product training; employ ethics and fraud officers; reliable automated systems; monthly risk monitoring fraud control plan; national hotline reporting.	Compliance tracking, risk register; external auditing; fraud monitoring and reporting plan; vetting (lifestyle audits).	Employ fraud investigator internal investigations linked to compliance (legislation and policies); internally criminal proven cases reported to the police; institute disciplinary actions.	Radio adverts in native languages on products and services; procuring office buses to cater for vulnerable groups in rural areas; Outreach programme to purposefully target clientele with special disabilities in collaboration with home affairs and social development departments; training (SEFA) processes) and adequate post-monitoring.	Vetting of criminal records from the police. attend to complaints reported within the legal period; compliance tracking register on the terms and conditions of the contract; fraud monitoring on reports to identify signs of first-party fraud.	Immediate investigation on allegations reported and providing feedback to the client; create radio and television alerts on innovation of new fraudulent activities.	Publicity (radio and television); disclosures of complaints received and addressed; fraudulent cases and their status in the SEFA annual report; procuring office buses to cater for vulnerable groups in rural areas; authentic reporting.	Auditor-General of South Africa; South African Receiver of Revenue.	Regulatory requirement: compliance reports as an SOC, special investigating unit for existing cases reported,	Compliance report on legislative requirements; disclosure on reporting corporate fraud in the annual report to enhance trust in the local and international community (transparency).	Auditor-General of South Africa; portfolio committee responsible for monitoring SEFA.	Regulatory requirement: compliance reports as an SOC; special Investigating unit for existing cases reported.

## CONCLUSION

This study discovered that over the years the South African Government through the portfolio committee, which is the PMG to oversees the SEFA business activities, were not exercising their powers to get the problem of corporate fraud resolved prior injecting more funds to this SOC. The mandate of the SEFA to serve as a vehicle and close the gap of historical discrimination to inclusive economic growth through its financial products and services, was supposed to assist the government in ensuring that the previously disadvantaged get an opportunity to participate through developmental credit at a community level, instead of being based in major cities and not at local government. Thus, financial services are still not accessible to the majority of citizens in rural areas. The PMG did not make adequate follow-ups on the lost funds through the regulatory bodies and law enforcement. Official and publicised investigations should have been on the public domain so that victims could feel vindicated and potential clients feel free to approach this SOC for funding. South Africa is a dynamic country with its own personalised lifestyle per area. Financial products and services are not aligned with the lifestyle of local communities. The citizens of the country

have a different view of life because they are under the impression that they are in a new democratic era, where there is supposed to be access to things that can better their lives. The establishment of the SEFA was from a national policy, which makes it the responsibility of the government to have made it possible for SOCs to thrive and serve its mandate to alleviate poverty and create inclusive economic growth. Consequently, the suggestions made in this paper are meant to advise the government of South Africa that enforcement monitoring and evaluation of methodologies on state funds expected to create an impact on citizens lives is key in ensuring that its original mandate, which is to ensure that inclusive economic participation through job creation and supporting the sustainability of SMMEs, is achieved.

It is possible to monitor funds, enforce investigations into allegations, and publicly inform the citizens throughout the various processes. This can discourage the actions that can lead to the shame that comes with being caught misusing, trying to defraud this SOC, client, or any potential client for self-benefits than for the vulnerable groups. The beneficiaries of this research include potential victims of corporate fraud, such as the SEFA; entrepreneurs; Small, Medium and Micro Enterprises; the South African Criminal Justice System entities such as the South African Police Service, the courts and the correctional services, regulatory authorities; the South African government and local communities (Mphidi, 2022). This study's recommendations make a valuable contribution as a practical, new framework which could be used to speed up the economic growth process through job creation without the extreme threat of corporate fraud. It would be possible if the South African historical factors, demographics, and acknowledgement of new talent for job creation are considered for economic prosperity and the prevention of corporate fraud.

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# THE ATTRIBUTES OF ENVIRONMENTAL SUSTAINABILITY IN SOUTH AFRICAN CITIES: TRANSFORMING THE INFORMAL BUSINESS SECTOR TOWARDS GREEN-ECONOMY

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## ABSTRACT

*The purpose of the paper is to interrogate the environmental sustainability attributes of transforming informal business sector. The South African informal business sector is characterized with excessive resource consumption, poor waste disposal and high levels of pollution-n due to its unregulated nature. It is dominated by businesses such as street vending, vegetable & fruit stalls, shoemakers, fast food outlets and ghetto car washes which are mostly reliant on the natural resources to operate. Consequently, most activities in informal business sector threaten environmental sustainability initiating environmental concerns such as land degradation, resource depletion and pollution. Therefore, there is a need to shift from a resource exploitative production towards a resource conserving production to foster environmental sustainability. This paper relied on a qualitative approach to gather secondary data through academic journals, books, conference papers. Findings indicate the prevalence of a parasitism symbiosis relationship between the informal business sector and the environment which results from shallow environmental planning due to bureaucracy, pollution, and congestion. The application of industrial ecology brings forward the practice of green economics to provide surety that businesses are environmentally sensitive and sensible, following environmental management values over profit and business owner's interests. The paper recommends that the informal business sector should take into cognizance of the raising environmental concerns they pose. Taking cognizance may be fostered through incentives such as environmental management awareness campaigns, environmental sustainability learnerships, business incentives and environmental performance rewards to the informal business sector participants.*

**Keywords:** informal sector, environmental sustainability, industrial ecology, green economy, businesses.

## INTRODUCTION

Environmental sustainability is defined as maintaining the environmental service delivery of life support systems such as the atmosphere, water, and soil (Carfi, Donato, Alessia, Schilirò and Daniele, 2018). Sarangi (2019), highlights that the characteristics of environmental sustainability carefully integrated with green economy are viewed as the relevant tool to transit towards good management of environmental resources. They were established to provide a summary of the usage of resources, emissions reduction, improved energy and raw material productivity, supply systems and infrastructure while maintaining high and moderate economic levels. South Africa to be precise adopted the notion of environmental sustainability and green economy as a solution towards addressing environmental issues predominant in the country's townships and rural areas. The environmental sustainability attributes driving South Africa's commitment towards ensuring green economy include ensuring resilience to environmental & other risks, enhancing energy and resource efficiency in the economy, reduction in fossil fuel dependency, reduction of air and water emissions and reduction in loss of biodiversity (Partnership for Action on Green Economy, 2017; United Nations Division for Sustainable Development, 2012). It is believed that the juxtapose between environmental sustainability and green economy can foster type of economy that creates jobs, businesses and investments in a clean way to safeguard the environment by avoiding waste and pollution, greenhouse gas emissions and conserving natural resources (Slaper and Krause, 2019). Thus, an important feature to integrate in the informal business sector.

Given the increase in population demands, economic development and technological progress have raised the standard of living and improved the overall quality of global human life. However, the shortage of resources and environmental pollution resulting from the industrialization process has increasingly become a bottleneck that limits the development of human society (Han, Feng, Wang, Yang, Yang and Shi, 2021). Business and economics interests on integrating environmental sensitivity in industries is due to the prevalence of production entities as the largest portion of the society that produces most goods and services making it the main and largest contributor towards environmental damage, exploitation, and degradation (Kennedy and Lifset, 2021). The juxtapose between environmental sustainability and green economy inevitably brings forward industrial ecology into the informal sector realm due to its resource exploitative nature. The South African informal sector is unregulated and largely characterized with excessive resource consumption, poor waste disposal and high levels of pollution. It is dominated by businesses such as street vending, vegetable & fruit stalls, food stalls and ghetto car washes (Hamilton, 2020). The informal economies constitutes of a labour force that is highly dependable on natural resources for fostering their livelihoods which means that limited environmental regulation can potentially lead to the informal sector largely contributing towards environmental degradation and resource depletion (C40 Cites Climate Leadership Group and C40 Knowledge Hub, 2019).

In developing countries, the informal economy constitutes between 35 to 90 % of total employment, largely consisting of self-employment: 70 % of the total informal economy in sub-Saharan Africa, 62 % in North Africa, 60 % in Latin America and the Caribbean, and 59 % in Asia (International Labour Office, 2009; International Labour Office, 2011; Jiagmin, Yiming, Desheng, Gengzhi, and Zuge, 2021). Henceforth, the raising percentages of informal economies highly contribute to the raising environmental concerns brought by the activities in the sector. In addition, informal economies often entail pollution-intensive activities, such as leather tanning, brickmaking, metal working, and resource exploitation and production in small-scale factories or family-based workshops (Biswas, Farzanegan, and Thum, 2012; International Labour Organisation, 2007). However, it can be agreed that business activities have brought about rapid economic growth, but they also face the dual challenges of resource constraints and environmental pressure (Carfi, Donato, Alessia, Schilirò and Daniele, 2018). In the absence of appropriate regulations and incentives, markets can lead to undesirable environmental outcomes (International Labour Office, 2011).

Although most wealthy countries have done an excellent job in protecting the environment. Jiagmin, Yiming, Desheng, Gengzhi, and Zuge (2021) highlights that emerging countries are yet struggling to regulate pollution due to their informal and unregulated economies. The root cause of the struggle by developing countries is due to the outwit of governmental oversight and so frequently elide environmental standards, informal economies are more prone to increase pollution levels and cause environmental deterioration (Biswas, Farzanegan, and Thum, 2012; International Labour Organisation, 2007; Chaudhuri and Mukhopadhyay, 2006). For instance, environmental concerns have grown in countries like China over the last few decades as a result of rapid industrialization and shortcomings in environmental management (Georgeson, 2018; Lahiri-Dutt, 2004; Blackman, 2000; Blackman, 1998). Moreover, South Africa's environmental consideration is undoubtedly clouded by financial and fiscal constraints because more capital will have to be directed towards improving the focus areas as well as by patterns capitalism, inequality and marginalization of communities. Henceforth, the emphasis of environmental sustainability in the informal sector is built upon encouraging sustainability in their practices and activities to improve and maintain environmental quality (Kennedy and Lifset, 2021; Huang, Chen and Chou, 2016). The integration of green economy is deemed necessary in the informal business sector as it reflects a proactive mechanism that presents a seemingly attractive framework to deliver resources to societies efficiently by reallocating natural, social and financial capital into creating benefits for economic development, social equity and environmental protection (Sarangi, 2019; Georgeson, 2018). According to International Institute for Environment and Development (2016), Zang and Fang (2013) and Lahiri-Dutt, (2004), attempts to achieve green growth and sustainable development, meantime, should become increasingly evident that they must be anchored in a thorough understanding of the informal sector – especially if such efforts are to be inclusive and assist the poor.

## **THE THEORY OF INDUSTRIAL ECOLOGY AS A LENS TO ENVIRONMENTAL SUSTAINABILITY**

Industrial ecology is a broad, holistic framework aimed at guiding the transformation of the industrial system to a more environmentally sustainable basis (Saavedra, Iritani, Pavan and Ometto, 2018). Chertow (2016) defines industrial ecology as a field of study focused on the stages of the production processes of goods and services from a

point of view of nature, trying to mimic a natural system by conserving and reusing resources. The theory applies a bottom-up research approach, starting from specific industrial systems that produce pollution, and seeks to prevent and treat pollution in the whole process through clean production, circular economy, and industrial symbiosis to achieve green development (Han, Feng, Wang, Yang, Yang and Shi, 2021). Furthermore, industrial ecology is preceded by two main principles that seeks to attain environmental sustainability at all costs. With reference to the theory, businesses should not overuse any resource with an attempt to maximize profits wherein they should shift from treating the environment as their cash cow towards treating it like a human being who has rights and senses (Business Ethics, 2018). Furthermore, the theory calls on the corporate management to take into account environmental implications of the business activities first before satisfying the interest of all stakeholders (Fernandez-Guandano and Sarria-Pendroza, 2018). The rationale behind the prioritization of environmental values first before the interests of investors and shareholders is because the two stakeholders are often fixated and obsessed on the profitability of the business in order to bring back their revenue (The Organization for Economic Co-operation and Development, 2011).

The paper is epistemologically grounded from the theory of Industrial Ecology which attempts to phase out the linear model of production adopted in the global economy. The linear model of production encapsulates consumer goods that are manufactured from raw materials, sold, used, and then discarded as waste (Blackman, 1998). The reason for the adoption of industrial ecology theory towards the attainment of environmental sustainability is simply because industrial ecology emphasizes that economics should shift from treating the environment as their cash cow towards treating it like a human being who has rights and senses. Principles of industrial ecology which are: the profit motive be replaced by a more environmentally sensitive & sensible approach as well as; the environmental management values supersede the interests of investors & shareholders will be included into the study in an attempt to achieve the goal and objective of the study, which is to expand environmental sustainability in South African informal economies. Henceforth, the adoption of industrial ecology can potentially create and raise awareness of the tenuous balance between the health of the environment and corporate profits because the profitability of businesses solely depends on safeguarding the natural environment (Zang and Fang, 2013). The latter is vehemently to deal with South Africa's environmental concerns by ensuring that environmental management values supersede the interests of investors & shareholders. The rationale behind the prioritization of environmental values first before the interests of investors and shareholders is because the two stakeholders are often fixated and obsessed on the profitability of the business in order to bring back their revenue (Saavedra, Iritani, Pavan and Ometto, 2018). Therefore, the interests of the stakeholders cannot be prioritized in business for the sake of the environment due to their potential to contribute to environmental orphan.

## **LEGISLATIVE FRAMEWORKS**

The exacerbating environmental damage co-existing in the South African informal economies is confronted with the lack of policy initiatives to manage the demand for fostering sustainable livelihoods. Environmental management legislative frameworks function under the mandate of the Constitution of the Republic of South Africa 1996. The environmental management legislative frameworks in South Africa include the National Environmental Management Laws Amendment Act, 2014; Integrated Pollution and Waste Management Act No. 1998; and the Integrated Development Plan (IDP).

### **National Environmental Management Laws Amendment Bill, 2014**

The existence of NEMLA Act of 2014 is to provide environmental management instruments aimed at safeguarding environmental resources. According to the Republic of South Africa Government Gazette (2014), the environmental management instruments include Environmental Impact Assessment (EIA), Environmental Risk Assessment (ERA), Environmental Feasibility Assessments (EFA), Environmental Management Programs as well as environmental norms and standards. Henceforth, environmental management frameworks are adopted for the purpose of promoting sustainability, securing environmental protection; and promoting cooperative environmental governance (Mapulane, 2018). According to the amended Section 24R of the National Environmental Management Act of 1998, every holder and owner of works is responsible for any environmental liability, pollution, or ecological degradation, as well as the pumping and treatment of polluted or extraneous water, as well as the management and long-term closure thereof. The act aims to provide environmental rehabilitation from negative environmental consequences as well as the repair of latent environmental impacts that may develop in the future (The Republic of South Africa Government Gazette,

2014). As a result, it emphasizes the importance of enacting regulatory measures to combat environmental damage caused by pollution, production, and ecological deterioration.

## **Integrated Pollution and Waste Management Act No. 1998**

Any substance, material, or thing that is undesirable, rejected, abandoned, discarded, or disposed of by the holder of such substance, material, or object, whether or not such substance, material, or object can be re-used, recycled, or retrieved. The main rationale behind the formation of the Act is to provide the identification, further development, and promotion of best practices in waste minimization, re-use, recycling, and recovery, the implementation of approved guidelines, norms, and standards for waste minimization (The Republic of South Africa Government Gazette, 2014). The foci of the Act is based on the implementation of industry waste management plans for those activities that generate specific waste streams with the aim to provide re-use, recycling, or recovery of waste measures in previously disadvantaged communities. However, local governments are required to submit their endorsed integrated waste management plan for approval as well as to add it in their integrated development plan contemplated in Chapter 5 of the Municipal Systems Act (The Republic of South Africa Government Gazette, 2014). The inclusion of the integrated waste management plan in the IDP of municipalities is to ensure that the municipal environmental management is being prioritized in development planning and management.

## **Integrated Development Plan (IDP)**

Gueli, Liebenberg, and Van Huyssteen (2007) define IDP as a management tool that is used to align scarce resources, to define policy objectives/ priorities in the broader framework of developmental local government. The IDP is designed to reflect a developmental government that ensures sustainable delivery of municipal services, promotes socio-economic development, stimulates a safe/healthy environment, and encourages community involvement in local government, as required by the Constitution of the Republic of South Africa of 1996. It fosters active citizen interaction and ensures improved coordination and integration with other governmental sectors (StepSA, 2010). Furthermore, Moodley (2003) agree by affirming that “Every municipality should have an IDP that enables a more effective utilization of limited local, cost-effective and sustainable resources by focusing on recognized and prioritized local needs”. Therefore, the IDP as the document that has a higher legal position and surpasses all previous plans for local development is intended to arrive at decisions on matters such as municipal budgeting, land management, economic growth, and institutional reform in a participatory, systematic, and strategic manner (Malefane and Mashakoe, 2008). Therefore, the IDP should contain a variety of development objectives and operations which include municipal environmental management endeavors with reference to the main challenges experienced such as pollution, poor waste disposal and mismanagement of environmental resources. According to Gueli, Liebenberg, and Van Huyssteen (2007), the IDP assists in identifying areas in where development should be increased and to establish and improve the identified areas.

## **CHARACTERISTICS OF THE INFORMAL BUSINESS SECTOR IN SOUTH AFRICAN CITIES**

The term “informal economy” refers to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements (International Labour Office, 2002). In the informal economy, many people operate as so-called “subsistence entrepreneurs”: those who run a business in order to survive (Eiidenberg and Borner, 2017). Enterprise can be informal when it is not registered, but there may be elements of informality also when it does not pay taxes, has employees who are not formally recruited, or does not provide to its workers all the social protection benefits to which they are entitled according to national legislation (De Gobbi, 2012).

## **Shallow Environmental Planning Due to Bureaucracy**

Bureaucracy plays a significant role in the delay of municipal environmental management actions requiring prior processes constituting to shallow environmental plans and efforts. Feasibility studies, environmental impact analyses (EIA), and heritage or agriculture approvals are examples of prior processes that contribute to the time taken by

subsequent operations (De Vissor and Poswa., 2019). Furthermore, officials in charge of authorizing environmental actions may take a long time to approve or respond to local development project proposals concerning the environment. Extensive approval procedures for strategies and plans may generate investment delays and clog planning system (United Nations, 2008). Due to significant backlogs of applications awaiting consideration by municipal authorities and political disputes among public officials, lengthy approval times occur primarily in larger cities (United Nations Economic Commission for Europe, 2008; The Republic of South Africa, 2001).

## **Pollution**

Pollution is understood as the introduction of substances that are hazardous to humans and other living organisms into the environment, lowering the quality of our surroundings (Manisalidis, Stravropoulou, Stravropoulos, and Bezirtzoglou, 2020). In the case of South African business informal sector, pollution is generated in multiple ways which include manufacturing, day to day business operations and waste disposal methods. The concentration of businesses in the informal economy which usually occurs at a single location consequently led to high levels of littering which results in land pollution. Moreover, the combination of motorists, industrial trucks, different public transport to bring in materials/goods to the sector as well to conduct business activities constitutes to noise pollution through hooting of the cars, and air pollution as a result of the smoke coming from exhaust. For instance, food businesses such as local “Chisanyamas” release too much smoke when braaiing meat. Many factors influence pollution dispersion, the most important of which are atmospheric stability and wind speed (Manisalidis, Stravropoulou, Stravropoulos, and Bezirtzoglou, 2020). The noise and air pollution that arise as the result of informal economies in city centers adversely affects the environment and the biotic factors constituting the environment.

## **Congestion**

United Nations Economic Commission for Europe (2008) postulate that mobile and immobile vendors (in improvised buildings) with various sorts of displays operate near to the major growth points, either on the sidewalks or along the road itself, causing congestion and obstructing human and traffic flow. As a result, the day-to-day operations of the crowded and congested economies potentially lead to heat island effects wherein the air consisting of smoke and heat is trapped in the area creating humidity. The effects of the heat island effect include urban/city centers becoming hotter than other surrounding areas in the location. According to Racaud, Kago and Owuor (2019), informal productions and industrial accidents increases the spread of a toxic fog can be fatal to the local population.

# **CONCEPTUALIZING ENVIRONMENTAL SUSTAINABILITY**

Environmental sustainability is defined by Morelli (2011) as "a state of balance, resilience, and interconnectedness that allows human society to meet its needs while not exceeding the capacity of its supporting ecosystems to regenerate the services required to meet those needs, nor reducing biological diversity through our actions". According to Han, Feng, Wang, Yang, Yang and Shi (2021) and World Commission on Environment and Development (1987), sustainable development was introduced as the common future which encouraged the global population to consider achieving the harmonious mutual development of society, economy, and environment.

Henceforth, environmental sustainability as a notion that seeks to balance resource use and resource protection was brought forward. Henderson (2015) together with Cantele and Zardini (2018) assert that environmental sustainability is vital for humanity's future and makes good business sense due to its protective nature. However, the practice of environmental sustainability focuses on the management of the degradation of the natural environment and is one of the major concerns for scientists, businesses and governments worldwide (Ardito, L., Carrillo-Hermosilla, del Río, Pontrandolfo, 2018). According to Salimzadeh (2016), environmental sustainability is a dimension of business sustainability. The practice is a strategic construct in which businesses are aware, engage and commit to practices that lead to the protection of the natural environment (Fatoki, 2018).

# ENVIRONMENTAL SUSTAINABILITY AND THE INFORMAL BUSINESS SECTOR

Social and economic interference with the environment is allowed for the purpose of enhancing the quality of life whilst maintaining the integrity of ecosystems through efficient management of natural resources is of important (Moldan, Janousková, and Hak, 2012). The intensification of environmental hazards and the emergence of the global energy crisis have raised awareness in human society regarding the environmental crisis, spurring the exploration of a green, circular, and sustainable development model to improve the ecological environment (Dias, Seixas and Lobner, 2020). Although big businesses are increasingly becoming conscious of the environmental aspects of their operations, it has been observed that informal businesses and Small-Medium Sized Enterprises (SMEs) are continuously lagging behind (Jansson, Nilsson, Modig, and Vall, 2017). It is alleged that owners/managers of many informal businesses opine that their operations do not impact on the environment because of their small size (Natarajan and Wyrick, 2011).

The integration of environmental sustainability into the informal business sector is fueled by the need to incorporate cleaner production, consumption, items and services that reduce environmental risk and limit pollution and resource use. Environmental sustainability practices have a broader societal impact by lowering pollutants and increasing air quality wherein they potentially lead to more dependable products and services, lower waste and energy costs, and increased long-term profitability in the informal economy (Fatoki, 2018). Businesses that integrate environmentally sustainable practices include recycling, waste reduction, waste minimization, environmentally or environmentally friendly products and services, pollution, energy efficient use of environmentally friendly products, reduction of carbon emission and environmental management policy (Salimzadeh, 2016; Jayeola, 2015; Brammer, S., Hoejmose, S., Marchant; 2011; Viviers, 2009). ESPs are activities carried out by businesses with the goal of decreasing the environmental impact of their operations, products, and services. Environmentally sustainable actions can potentially lead to a more sustainable informal economy.

## RECOMMENDATIONS FOR DECISION MAKERS

Establishing a *Municipal Informal Sector Cooperative* is a probable solution to be considered by decision makers in planning and management towards the problems associated with informal business sector. Due to the unregulated and unregistered nature of the informal sector, a less formal approach/strategy might be viable to increase environmental consideration and environmental sensitivity and sensibility in the sector. The municipal informal sector cooperative is a form of collaboration and partnership between the government and informal workers & businesses (C40 Cities Climate Leadership Group and C40 Knowledge Hub, 2020). The cooperative will mobilize informal workers to collectively partake in environmental protection that will be providing integrated and multifaceted knowledge, skills, experience, and other benefits which include financial gains, and interpersonal skills that can potentially lead to an overall increase in the economic and environmental performance of the sector. The essence of the cooperative is to provide a charismatic model and approach that integrates both economic and environmental goals that will lead to the adherence to the principles of industrial ecology. The aim of the municipal informal sector cooperative is to try to integrate green and environmental sensitivity while supporting the growth of the informal economies. Thus, creating a balance between resource use and resource management as highlighted by Jolly in her definition of Environmental Management in 1978 (Sholarin and Awange, 2014).

A cooperative is a form of a stokvel that functions as an informal self-help association that involves several people sharing a certain goal and willing to collectively work together to address the common needs and goals, to use the resources they have as a way of responding to their socio-economic issues (Matuku, and Kaseke, 2014). The approach has been adopted by the Department of Agriculture and Rural development by creating agricultural cooperatives to improve farming practices in South African rural areas and it has received attention as well as yield positive results (The Republic of South Africa Government Gazette, 2014). The primary purpose of agricultural cooperatives was to address income poverty among subsistence farmers which extended towards the provision and sharing of homestead inputs, farming instruments, motorization, sustainable farming inputs, cash advances, horticultural augmentation, advertising of ranch items and other monetary exercises between members (Nefale, 2016). With reference to the agricultural cooperatives, the municipal informal sector cooperative can effectively yield better results in environmental protection if practiced accordingly. As any other cooperative, a committee will have to be elected to lead the cooperative which will consist of about 8 to 12 members which include informal workers with

outstanding leadership skills, municipal leaders/officials, and environmental planners from the department of environmental affairs. The municipal informal sector cooperative encapsulates the following actions aimed at maximizing efforts towards environmental sensitivity and sensibility as well as uplifting environmental management values:

## **Learnership and Training**

Offering learnership and training opportunities for people involved in informal businesses which will result in capacity-building and co-learning towards environmental management (C40 Cites Climate Leadership Group and C40 Knowledge Hub, 2020). The learnership and training program will offer lessons, skills and expertise on environmental protection as well as introducing green practices in business (Lucas, Pinnington, and Cabeza, 2018). For instance, provide tips on production processes, materials and packaging methods that are less detrimental to the environment, pollution preventative measures on daily business activities. To gain increased awareness, membership and effective participation in the cooperative, business incentives such as funding and stipends may be provided. Furthermore, certificates of participation will be issued out upon completion of the program which will assist the informal businesses to gain competitive advantage in their sector because certain customers do give attention to how green businesses are.

## **Recycling Program**

Introduction of a recycling program to the members of the cooperative wherein they will engage in recycling activities on a daily basis while conducting their business activities. Recycling is the process of collecting and processing materials that would have been thrown away as waste and turning them into new products (Fatoki, 2018). The rationale behind the recycling program is that, instead of throwing waste materials from their production and service rendering to the streets, land surfaces and water bodies which lead to pollution, they will recycle them. The materials subjected to recycling to reduce pollution and environmental damage include metal objects, cardboards, paper, wood, plastic, and glass (C40 Cites Climate Leadership Group and C40 Knowledge Hub, 2020). The department of environmental affairs will provide the businesses with containers that they will use to put their waste materials and also collect them to recycling centers at the required time.

## **Add Modules and Subjects on Environmental Management in Educational Institutions**

According to Dimante, Tambovceva, and Atstaja (2016), one of the most important aspects of decreasing the ever-increasing environmental impact is education and raising awareness. Universities all around the world play an important role in the creation and diffusion of environmental education ideas. It is critical for institutions that want to improve the quality of their educational programs to embrace and put environmental principles into practice by integrating environmental management modules/courses in business courses. Hopkins, McKeown and Van Ginkel (2005) assert that universities are called on to educate not only the skills required to advance successfully in a globalized society, but also to nurture in their students, faculty, and staff a constructive attitude toward environmental issues and cultural diversity. Furthermore, secondary learning institutions may integrate environmental management theory in subjects like Natural Sciences as well as in commerce streams in High school to increase awareness. Environmental education should not be an end to science students, it should be a common course and subject to all educational programs as the interactions with the environment and its resources are done by all.

## **CONCLUSION**

Informal business and environmental sustainability, factoring in the role played by environmental sustainability in encouraging green spaces in urban areas, improving the overall environmental management and developing sustainable settlements. It is known and observable that the informal sector of South Africa is dominated by marginalized black people which makes the cooperative a potential tool to lure them into putting environmental concerns first by being environmental sensitive because the stokvel groups are a common thing in most marginalized black communities. However, it is evident that we cannot separate business from the environment because it depends on it for survival. Therefore, what can be done is to attempt or rather build a mutualism symbiotic relationship rather than a parasitism one. Industrial ecology tries to lead businesses and their corporates to the path towards the



establishment of a mutualistic relationship between themselves and the environment using the guiding principles. Adoption of the principles can potentially result in sustainable development wherein there is a balance between resource utilization and resource protection in the business environment due to increased environmental consideration in a sensitive and sensible manner by promoting environmental values above anything else in their production, distribution, packaging, and sales.

Henceforth, the adoption of the municipal informal sector cooperative can potentially play a role in the journey towards green informal business sector. The municipal informal sector cooperative will be easier for the informal workers to follow and support because they solely understand and believe in its capacity. It is known and observable that the informal sector of South Africa is dominated by marginalized black people which makes the cooperative a potential tool to lure them into putting environmental concerns first by being environmental sensitive because the stokvel groups are a common thing in most marginalized black communities. Justification for the recommendation is based on the notion that South African black townships have been and continuously engage in cooperative schemes that are categorized based on their purpose which include saving to invest, to cope with ad hoc emergencies, access to loans at no interests, bereavement and mutual support acquisition of assets, a sense of belonging to a group and other social benefits. Therefore, the municipal informal sector cooperative will be easier for the informal workers to follow and support because they solely understand and believe in its capacity.

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# UNDERSTANDING STRATEGIES FOR SERVICE FAILURE RECOVERY IN OPEN DIGITAL GOVERNMENT

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## ABSTRACT

*The purpose of this study is to evaluate the strategic process for effectively dealing with online public service failures as recovery strategies in Pakistan. The specific context is the National Database and Registration Authority (NADRA), Post office Pakistan, and the Citizen Portal of Pakistan. The study uses a qualitative approach, including semi-structured interviews and online reviews to collect data from both customers and public service managers. Thematic analysis was used to identify and analyze key themes related to online public service failures and recovery strategies in Pakistan. The study provides several recommendations for government-based organizations to enhance their performance, meet customer needs, and remain competitive in the marketplace.*

**Keywords:** online public services, open digital government, qualitative approach, thematic analysis, failure analysis, coordination, communication, institutional factors.

## INTRODUCTION AND THEORETICAL CONTEXT

Online public service delivery has become a crucial aspect of government operations in many countries, including Pakistan. However, service failures in online public services can have significant negative impacts on citizen satisfaction and trust in government (Jain & Singh, 2018). This issue is particularly acute in developing countries like Pakistan, where public service organizations often face challenges such as political interference, corruption, and lack of training (Aslam et al., 2018; Muqadas et al., 2017). As a result, public service failures are relatively high in these countries, and the need for effective recovery strategies is essential. In the context of online public service failures in Pakistan, there is limited research on how to effectively deal with these failures and develop suitable recovery strategies. When service failures occur, effective recovery strategies are essential to mitigate the negative impact on service users and to restore their trust in public service organizations (Döring, 2020; Wei et al., 2020; Ozuem et al 2021c). To address this issue, it is important to critically evaluate the strategic process for effectively dealing with online public service failures as recovery strategies in the context of online public services in Pakistan. Effective service recovery strategies can improve citizen satisfaction and trust in government, which can in turn lead to increased usage of online public services (Jain & Singh, 2018). However, little research has been conducted on effective service recovery strategies in the context of online public services in developing countries like Pakistan (Auriol et al., 2021; Loeffler, 2020). Therefore, this study aims to fill this research gap by examining the strategic process for dealing with online public service failures as recovery strategies in Pakistan. To achieve this aim, the study critically evaluates the existing literature on service failure and recovery strategies in public sector organizations (Döring, 2020; Wei et al., 2020; Ozuem and Willis 2022). Fieldwork for this study obtains perspectives from both customers and public service managers on issues of service failure and recovery strategies in online public services in Pakistan. Additionally, the study contextualizes the institutional factors that play a critical role in service failure and the development of recovery strategies in Pakistan.

Online public services are increasingly becoming an important tool for governments to provide citizens with accessible and convenient services. However, the success of these services depends on their ability to effectively deal with service failures and implement appropriate recovery strategies. In the context of Pakistan, public service organizations are facing unique challenges such as political involvement, uncertainty, lower training, corruption, and

poorly executed policies, which contribute to high failure rates. Therefore, it is crucial to evaluate the strategic process of dealing with online public service failures and recovery strategies in Pakistan to address these issues. Recent studies have highlighted the importance of effective service recovery strategies to restore trust and satisfaction amongst customers following service failure (Dabholkar & Bagozzi, 2020; Singh et al., 2021). However, the success of these strategies depends on the organization's ability to understand the factors that contribute to service failure, and the needs and expectations of customers. In the context of online public services, the situation becomes even more complex due to the involvement of technology and the need for effective communication and coordination between different stakeholders (Zhang & Shi, 2021). To address this challenge, this research aims to critically evaluate the strategic process of dealing with online public service failures as recovery strategies in the context of online public services in Pakistan. The study explores the current practices of public service organizations in Pakistan and identifies the key factors that contribute to service failures. It also examines the effectiveness of different recovery strategies and their impact on trust and satisfaction amongst customers. Ultimately, the research aims to develop a comprehensive framework for effective service recovery strategies in online public services in Pakistan. This research is significant as it aims to address a critical issue in the delivery of public services in Pakistan and contributes to the growing body of literature on service failure and recovery strategies. The findings have important implications for public service organizations and policymakers in Pakistan and other developing countries where similar challenges exist.

## METHODOLOGY

The research philosophy for this study is interpretivism, which assumes that social phenomena are complex and subjective, and require an in-depth understanding of the perspectives of the participants (Bryman, 2017). The ultimate aim is to understand the perceptions and experiences of both customers and public service managers regarding online public service failures and recovery strategies in Pakistan. The research paradigm that is applied is constructivism, which emphasizes that knowledge is constructed through interactions between the researcher and the participants (Creswell, 2014). The paper constructs a context-specific service recovery process model that is suitable for online public service failures and recovery strategies in Pakistan, based on the perspectives of both customers and public service managers. A qualitative approach was used which is appropriate for exploring complex social phenomena such as service failures and recovery strategies in public service organizations (Bryman, 2017; Ozuem, Willis and Howell 2022). Semi-structured interviews and online reviews were carried out to collect data from customers and public service managers. Such an approach has facilitated an in-depth understanding of various perspectives on service failure and recovery strategies in online public services in Pakistan.

The use of semi-structured interviews and online reviews is appropriate for this study as they allow for a flexible approach to data collection, which is essential for exploring complex social phenomena (Bryman, 2017; Ozuem et al 2021a). Semi-structured interviews allowed the researcher to gain an in-depth understanding of the participants' perspectives, while online reviews have provided additional data from a larger sample of customers. By using both methods, the study aims to obtain a comprehensive understanding of the experiences and perceptions of both customers and public service managers regarding online public service failures and recovery strategies in Pakistan. The selection of three organizations, including the National Database and Registration Authority (NADRA), Post office Pakistan, and Citizen Portal of Pakistan, is appropriate for this study as they represent different types of public service organizations in Pakistan. NADRA is a government agency responsible for managing national databases and issuing identification cards, while Post office Pakistan is a traditional postal service provider. The Citizen Portal of Pakistan is an online platform that provides a range of government services. By selecting organizations with different service delivery models, the study succeeds in exploring the perspectives of both customers and public service managers in different contexts to develop a context-specific service recovery process model that is suitable for online public service failures and recovery strategies in Pakistan. Thematic analysis is an appropriate method for this study as it allows for the identification and analysis of patterns and themes within qualitative data (Braun & Clarke, 2019; Ozuem et al 2021b). By using thematic analysis, this study aims to identify and analyze key themes and patterns related to online public service failures and recovery strategies in Pakistan, based on the perspectives of both customers and public service managers.

# FINDINGS AND DISCUSSION

## Main theme: Service Recovery Strategies

Service recovery strategies are critical for restoring customer trust and satisfaction after a service failure in the context of online public services (Dabholkar & Bagozzi, 2020; Singh et al., 2021). Effective service recovery strategies can improve citizen satisfaction and trust in government, which can in turn lead to increased usage of online public services (Jain & Singh, 2018). However, the success of these strategies depends on the organization's ability to understand the factors that contribute to service failures, and the needs and expectations of customers (Wei et al., 2020). In the context of online public services, the situation becomes even more complex due to the involvement of technology and the need for effective communication and coordination between different stakeholders (Zhang & Shi, 2021). The main theme of this study is service recovery strategies for online services in Pakistan, which includes the following sub-themes:

1. **Failure Analysis**, which refers to the process of examining the causes and consequences of service failures in order to identify areas for improvement and prevent future failures (Folke & Edvardsson, 2020). In the context of online public services in Pakistan, failure analysis is a crucial step in developing effective service recovery strategies.
2. **Customer Feedback**, which refers to the collection and analysis of feedback from service users in order to identify areas for improvement and develop more effective service recovery strategies (Söderlund & Öhman, 2019). In the context of online public services in Pakistan, customer feedback is essential for understanding the needs and expectations of users and developing context-specific service recovery strategies.
3. **Coordination and Communication** refers to the effective coordination and communication between different stakeholders involved in the delivery of online public services in order to ensure timely and effective service recovery (Gronroos, 2021). In the context of Pakistan, effective coordination and communication between public service organizations, government agencies, and other stakeholders is essential for developing and implementing effective service recovery strategies.
4. **Institutional Factors** refer to the organizational and institutional factors that contribute to service failures and impact the effectiveness of service recovery strategies (Sulaiman et al., 2020). In the context of online public services in Pakistan, institutional factors such as political interference, corruption, and lack of training can contribute to service failures and hinder the development and implementation of effective service recovery strategies. Therefore, it is important to consider institutional factors as a subtheme of service recovery strategies for online public services in Pakistan.

### Code 1: Failure Analysis

Keywords: root cause, targeted solutions, collect data, continuous improvement, complex issues, availability of data. Failure analysis is a systematic approach to investigating the root cause of a failure or a fault in a system, process, or product. The aim is to identify the underlying issues that led to the failure and to develop strategies to prevent similar failures from occurring in the future. In a series of interviews with customers and experts/managers, it was revealed that failure analysis is an essential process for any organization that aims to improve its systems and processes. According to one manager, "Failure analysis is a critical tool for organizations to identify and eliminate the root causes of failures. It helps in preventing future failures and improving the overall performance of the organization" (OCP Manager 5, Interview). One of the managers at the post office discussed the importance of collecting data to identify the root causes of failures, saying "We need to collect more data about why packages are being delayed and where in the delivery process they are getting held up. This will help us identify the root cause of the problem and develop targeted solutions" (PO Manager 8, Interview). Similarly, one of the managers at the online citizenship portal emphasized the need for continuous improvement and learning, stating "We need to be constantly learning from our failures and using that knowledge to improve our services. Failure analysis is a critical part of that process" (OCP Manager 11, Interview). The managers interviewed recognized the benefits of failure analysis in identifying the root causes of failures and developing targeted solutions to prevent future failures. However, failure analysis can be time-consuming and costly, and it may not always be feasible for smaller organizations with limited resources.

Online reviews can also provide valuable insights into the failure analysis process. For example, a review of a faulty product highlighted the importance of fault identification, and one participant stated that "the online portal failed to function as intended, but the fault was not immediately clear. After conversation with customer care, I experience that they are not capable enough to identify the root cause of the problem and develop a solution" (Nadra

review, February 29, 2022). "I tried to apply for a new ID card through the online citizenship portal and it was a complete failure. The system kept giving me errors and wouldn't let me submit my application. When I called the helpdesk, they said they were aware of the issue but didn't have an estimated time for when it would be fixed. This is unacceptable." (OCP review, March 7, 2022). Another participant noted: "I've been waiting for my package for weeks now and it still hasn't arrived. Every time I try to track it online, the system is down, or it says the information is not available. This is ridiculous!" (PO review, February 15, 2022). Another customer shared the experience such as "I had to send some important documents through the post office and paid extra for the express service, but it still took over a week to arrive. When I tried to follow up on the delivery, their tracking system was down, and I couldn't get any information. This cost me a lot of time and money." (PO review, January 27, 2022). While failure analysis is an important process, it is not a one-size-fits-all solution. The success of a failure analysis process depends on several factors, including the availability of data, the expertise of the analysts, and the effectiveness of the solutions developed. Additionally, failure analysis can be a time-consuming and costly process, which may not always be feasible for smaller organizations. Therefore, organizations must carefully evaluate the benefits and costs of failure analysis before implementing it as a standard practice. Nonetheless, failure analysis remains a critical tool for any organization that seeks to continuously improve its performance and prevent future failures.

### **Code 2: Customer Feedback**

Keywords: insights, customer satisfaction, improvement opportunities, common issues, online reviews, positive reviews, negative reviews, trends.

Customer feedback is a critical component of improving the performance of any organization. It provides valuable insights into customer satisfaction, identifies improvement opportunities, and helps organizations to address common issues. In a series of interviews with customers, it was revealed that customer feedback is an essential process that aims to improve its services and products. According to one customer, "Feedback is important because it helps the organization to understand what customers like and what needs to be improved. It also makes the customer feel valued and heard" (Nadra review, November 17, 2022). Similarly, another customer stated, "Providing feedback is not only good for the organization, but it also helps the customer to feel like they have a voice and that their opinions matter" (Nadra review, January 7, 2022). The customers interviewed recognize the benefits of providing feedback, and the importance of feedback in driving continuous improvement. Online reviews can also provide valuable insights into customer feedback. Positive reviews can indicate areas of strength for an organization, while negative reviews can highlight areas that require improvement. For example, a positive review of the online citizenship portal praised its ease of use and fast processing times. One participant stated: "I was able to apply for my ID card through the online citizenship portal, and it was a breeze. The application process was straightforward, and I received my card within a few days" (OCP review, August 11, 2022). Similarly, a positive review of the post office highlighted excellent customer service, with one participant stating: "The post office staff was very friendly and helpful. They took the time to explain the shipping options and helped me choose the best one for my needs" (PO review, March 22, 2022). On the other hand, negative reviews can indicate common issues or areas that require improvement. For example, one negative review of the online citizenship portal criticized the lack of support for users experiencing technical difficulties. The participant noted: "When I tried to apply for my passport through the online citizenship portal, the system kept crashing. When I called the helpdesk, I was on hold for over an hour, and no one was able to help me. This is unacceptable" (OCP review, February 5, 2022). Similarly, a negative review of the post office criticized the lengthy wait times and poor customer service, with another participant stating: "I had to wait in line for over an hour to mail a package, and the staff was rude and unhelpful. They didn't provide any information on why the wait times were so long or offer any solutions to speed up the process" (PO review, January 15, 2022). Trends and common issues identified through customer feedback can help organizations to prioritize areas for improvement. For instance, if multiple customers report issues with a particular service or product, this may indicate a systemic problem that requires attention. Organizations can also use customer feedback to identify improvement opportunities and develop strategies to address them. For example, organizations can implement training programmes for staff to improve customer service or invest in new technologies to address technical difficulties. Customer feedback is a critical tool for these selected public sector organisations that seek to continuously improve its performance and meet customer needs.

### **Code 3: Coordination and Communication**

Keywords: collaboration, communication channels, responsiveness, streamlined processes, customer support, customer service, inter-departmental coordination.

Coordination and communication are essential for the efficient functioning of any organization since they facilitate efficient collaboration and ensures that processes are streamlined, resulting in improved customer service and support.



In a series of interviews with managers and customers of the online citizenship portal and the post office of Pakistan, it was found that effective coordination and communication are crucial for delivering high-quality services and products to customers. One manager at the online citizenship portal highlighted the importance of inter-departmental coordination, stating, "We work closely with our technical team, customer support team, and management to ensure that we are meeting customer needs and delivering services efficiently. This coordination helps us streamline processes, reduce wait times, and improve the overall customer experience" (OCP Manager 3, Interview). Similarly, a manager at the post office emphasized the need for streamlined processes and efficient communication channels, stating, "We have implemented a centralized system for tracking and managing packages, which has greatly improved our ability to communicate with customers and respond to their inquiries promptly" (PO Manager 7, Interview). The managers interviewed recognized the benefits of coordination and communication as a means to improve the customer experience and meet customer needs. Online reviews can also provide valuable insights into the coordination and communication process. For example, one positive review of the online citizenship portal praised the responsiveness of the customer support team, with one participant stating, "I had an issue with my ID card application, and I reached out to the customer support team. They responded promptly and helped me resolve the issue. I was impressed with their level of responsiveness and professionalism" (OCP review, July 3, 2022). Similarly, a positive review of the post office highlighted the streamlined processes and excellent communication channels, stating, "I needed to send an urgent package, and the post office staff was able to expedite the process for me. They kept me informed throughout the process, and I received my package on time. I was impressed with their efficiency and communication skills" (PO review, December 10, 2022).

On the other hand, negative reviews highlighted areas where coordination and communication require improvement. For example, one particular review of the online citizenship portal criticized the lack of coordination between departments, with the participant stating, "I had an issue with my ID card application, and I had to speak with multiple departments to get it resolved. Each department had a different response, and it was very confusing. The lack of coordination between departments resulted in a delay in my application" (OCP review, June 20, 2022). Similarly, another negative review of the post office criticized its poor communication channels. The participant noted: "I was trying to track my package, and the tracking system was down. I called the customer support line, but I was on hold for over an hour, and no one was able to provide me with any information. The lack of communication channels made it impossible to get any help" (PO review, September 5, 2022). Effective coordination and communication are critical for these organisations that seeks to deliver high-quality services and products to customers. It requires inter-departmental collaboration, streamlined processes, and efficient communication channels. Organizations must actively seek out and listen to customer feedback to identify areas for improvement in coordination and communication and develop strategies to address them. By doing so, these government-based organizations can enhance customer satisfaction and loyalty, increase revenue, and remain competitive in the marketplace.

#### **Code 4: Institutional Factors**

Keywords: policies, regulations, resources, organizational structure, governance, decision-making processes, accountability.

Institutional factors play a critical role in the functioning of any organization. Policies, regulations, and resources can shape organizational structures, decision-making processes, and accountability frameworks. In a series of interviews with managers and customers of the online citizenship portal and the post office of Pakistan, it was found that institutional factors are important determinants of organizational performance. One manager at the online citizenship portal highlighted the role of policies and regulations in shaping the organization's structure and processes, stating, "We need to adhere to strict policies and regulations in our work, and this has helped us to develop efficient processes and procedures for delivering services to customers" (OCP Manager 12, Interview). Similarly, post office manager emphasized the importance of resources in delivering high-quality services, stating, "We need adequate resources to meet the demands of our customers. This includes investments in technology, infrastructure, and personnel" (PO Manager 16, Interview). Policies and regulations play a critical role in shaping organizational practices and ensuring compliance with legal and ethical standards. The online citizenship portal manager's emphasis on adhering to strict policies and regulations shows how such factors can contribute to the development of efficient processes and procedures for delivering services to customers. By complying with regulations, organizations can also build trust and credibility with their customers and stakeholders.

The organizational structure and governance of an organization can also be influenced by institutional factors. For example, one manager at the online citizenship portal emphasized the importance of decision-making processes in the organization, stating, "We have a well-defined decision-making process that involves input from multiple

departments and stakeholders. This helps to ensure that decisions are made based on a thorough analysis of the situation and consideration of the potential impacts" (OCP Manager 9, Interview). Additionally, accountability frameworks can be shaped by institutional factors such as regulations and policies. For instance, one of the post office customers highlighted the importance of accountability in delivering high-quality services, stating, "The post office needs to be held accountable for its performance. If they fail to deliver on their promises, there should be consequences" (PO review, June 17, 2022). The success of organizations is often determined by the effectiveness of its institutional factors. For example, if policies and regulations are outdated or inadequate, they can impede organizational performance. Public organizations must evaluate their institutional factors and develop strategies to address any weaknesses or challenges. By doing so, these government-based organizations can enhance their performance, meet customer needs, and remain competitive in the marketplace.

## **MAJOR CONTRIBUTIONS AND IMPLICATIONS**

The findings of this study have several implications for academia and practice. From a theoretical perspective, the study contributes to the existing literature on failure analysis, customer feedback, coordination and communication, and institutional factors in the context of online public services in Pakistan. The study highlights the importance of failure analysis in identifying the root causes of failures and developing targeted solutions to prevent future failures. Additionally, the study underscores the significance of customer feedback in improving the performance of online public services, identifying improvement opportunities, and addressing common issues. Furthermore, the study emphasizes the crucial role of coordination and communication in delivering high-quality services and products to customers. Finally, the study sheds light on the influence of institutional factors such as policies, regulations, resources, organizational structure, governance, decision-making processes, and accountability frameworks in shaping organizational performance.

From a practical standpoint, the study provides several recommendations for government-based organizations that offer online public services in Pakistan. First, organizations should implement a robust failure analysis process to identify the root causes of failures and develop targeted solutions to prevent future failures. This process should include collecting and analyzing data, and developing targeted solutions based on the findings. Second, organizations should actively seek out and listen to customer feedback to identify areas for improvement and prioritize improvement opportunities. Third, organizations should focus on improving coordination and communication among departments, and with customers to deliver high-quality services and products. Fourth, organizations should evaluate their institutional factors, such as policies, regulations, resources, organizational structure, governance, decision-making processes, and accountability frameworks, to identify areas for improvement and develop strategies to address them. The findings of this study provide insights into the strategic process for effectively dealing with online public service failures as recovery strategies in the context of the online public service in Pakistan. The study highlights the importance of failure analysis, customer feedback, coordination and communication, and institutional factors in shaping organizational performance. The recommendations provided can help government-based organizations to enhance their performance, meet customer needs, and remain competitive in the marketplace. This study has practical implications for policymakers, managers, and practitioners who are responsible for the delivery of online public services in Pakistan, and it provides a theoretical foundation for future research in this area.

## **Limitations and Future Directions**

One potential limitation of this study is that the sample of participants may not be representative of the wider population of users of the online public services provided by the post office, online citizenship portal, and NADRA in Pakistan. Challenges were also faced in terms of gaining access to the organizations and participants for the data collection phase. This was due to the sensitive nature of the topic and the bureaucratic hurdles. Another limitation is the scope of the study, as it only focuses on three organizations and cannot therefore provide a comprehensive view of the overall online public service sector in Pakistan. Future studies could address the limitations of this study by conducting larger and more representative surveys or implementing a mixed methods approach to incorporate quantitative data. Additionally, further research could be carried out on service failures and recovery strategies at other public service organizations in Pakistan beyond the organizations that were the focus of this study. Finally, the use of emerging technologies, such as artificial intelligence and machine learning, could be explored as a means of improving service recovery and overall user experience in online public services in Pakistan.

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# **LEAP FORWARD DEVELOPMENT OF VOLUNTARY PRODUCTIVITY AND WELFARE CREATION EDUCATION PLAN FOR PRE-RETIREEES (ELDERLY) AND ACTIVE DUTY IN KOREA AND AROUND THE WORLD (LIFELONG CREATIVE PATH TO ACTIVE DUTY, NO RETIREMENT)**

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## **ABSTRACT**

*A measure to respond to the rapidly progressing trend of population aging is to improve the voluntary productive capacity of pre-retirees and the elderly. Most of the author's 86 years of life has been spent researching and lecturing at Chung-Ang University, and I will share my opinions on the results of empirical research. 21st century corporate and university education is lifelong formal education. Trainees develop infinite diversity on their own, experience the truth in their own work, do not compete with others, and explore the truth. All trainees must display their genius in their education field to create their own value existence through 5<sup>th</sup> dimensional awareness education in corporate and university education courses, 18 components of practical experience, academic discipline, and development of 21st century cosmic human consciousness (spirituality) scientific civilization (achieved before 2030). New business and university education must be developed so that people can pursue it. Pre-retirees and seniors, as well as anyone currently working in the workplace, take the following two steps at the same time with the belief that there is no retirement by making use of the experience accumulated at the workplace for more than 10, 20, or 30 years. Creative work to practice "I live and contribute to my true self", that is, "looking after and embracing people by finding my true self, and dedicating myself to the community through participation and sharing" while holding a seminar on "Participation and Sharing (True Self)" developed by the author for a short period of time, i.e. one year. am. Self-education training is required. The first is to grow and sublimate one's own 5-dimensional consciousness (spirituality), and the second is to train oneself to create one's own creative career academic literature based on the experience of one's practical work field. There is no retirement if you contribute to the 5<sup>th</sup> dimensional consciousness growth, sublimation, creation of your own creative career, academic literature, and participation in field work. I will share only two of the 100 specific action plans based on "Management Of allSelves' Enlightenment and Empowerment (MOSEE), which the author created for the first time in the world in 1990. One is the S T F model. Recognize the differences in the characteristics and contents of the S T F of young adults and those of prospective retirees and seniors (young and senior citizens) with a youthful heart, and cooperate with each other to complement each other, and to utilize the 18 components of "career studies and academic discipline" that each person will create on their own. The training plan is presented as follows. For young adults, S stands for SPEED, T stands for TALENT, F stands for FASHION, and for elderly adults, S stands for SPIRITUALITY, T stands for TRUST, and F stands for FAITH. It is the achievement of sublimation of 5-dimensional consciousness growth and creation of each person's "practical career academic Scientific Discipline" with 18 academic components.*

**Keywords:** Management Of allSelves' Enlightenment and Empowerment (MOSEE), 5<sup>th</sup> Dimensional Spirit Sublimation Leadership, Enlarging Law of Performance output with respect to Input Resources, Integrated Theory of Creative Language and Behavior Academic Scientific Discipline of Practical Career with 18 Components.

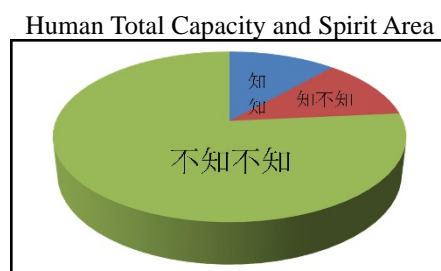
## **MANAGEMENT OF ALLSELVES' ENLIGHTENMENT AND EMPOWERMENT (ABBREVIATION: MOSEE) IN 5<sup>TH</sup> DIMENSIONAL VALUE CREATION AND CAREER ACADEMIC LITERATURE CREATIVE EDUCATION THEORY AND SPECIFIC METHODS (AUTHOR FOUNDED IN 1990)**

### **Ultimate Truth and Economics Management Target Area**

**The ultimate truth is Life Origin Opening Living.**

Human beings, as children created of God's love, are the origin of life and at the same time the origin of life, realize openness and livelihood, live as new people, and always rejoice and experience a sense of vitality. If the total vitality (100%) of humans and groups and social organizations composed of humans is divided into percentages, the area of support for knowing what humans know (知知I Know What I Know), that is, knowledge information (Knowledge Information) Management ability is about 3%, Area I Know What I Don't Know, that is, wisdom management ability is about 27%, and the remaining 70 % is an area where humans do not even know what they do not know (Area I Don't Know What I Don't Know What I Don't Know), so this part is an area that requires the birth of MOSEE. In fact, we do not even know that we do not know that we do not know that what we understand with reason, what we feel with emotion, and what we do are all different, and living in darkness is a definite existence. Management that allows one to realize oneself is the 5th Dimensional Consciousness Management (MOSEE).

**Figure 1: 3 parts of life whole capacity**



Blue 3%: Knowledge area, Red 27%: Wisdom area,  
Green 70%: allSelves' Enlightenment and Empowerment (SEE) area

### **Comparison Between Knowledge Management and Enlightenment (Spiritual) Management (Author's Theory)**

Knowledge management and wisdom management are management resources that determine management performance, and define four-dimensional external capabilities such as land, capital, human resources, technological level, and development capability. However, Enlightenment Management creates a 5th-dimensional internal ability of mental consciousness in addition to the 4th dimension external ability).

MOSEE: Management Of allSelves' Enlightenment and Empowerment (MOSEE) is the realization of the creation of original beings in the reality of 5-dimensional consciousness (Spirituality)

– “is”.

In Korea, Hwanin Hwanung, Gojoseon, and ancient times, deepened the world of consciousness (spirituality) in the 5th dimension, and learned to live the heavenly lover and Hongik human), and developed the fundamental experience of Cheonbugyeong, Samil Shingo, and True Precepts. In India and China, they have also opened their eyes to the world of consciousness (spirituality) of the 5th dimension, had an intuition to the essence of enlightenment, and the way, benefit, and righteousness. It emphasizes the practice of wisdom and faith. It is a theory related to enlightenment management such as awakening and resolution.

**Table 1: Comparison of knowledge management and MOSEE (Management of allSelves' Enlightenment and Empowerment) (the author's theory)**

Knowledge Management	MOSEE: Management Of allSelves' Enlightenment and Empowerment
<ul style="list-style-type: none"> <li>· Possession Management</li> <li>Material and Circumstances dominate Me</li> <li>· Starting by Desire ends up with Satisfaction</li> <li>· Enjoy Only Success of competition in Survival Business Game</li> </ul>	<ul style="list-style-type: none"> <li>· Being Management</li> <li>· New Being and Objectives Created by Me Create and Dominate Material and Circumstance</li> <li>· Being Management creates Breakthrough and uses Breakdown as New Opportunity as Happy Being by Itself</li> </ul>
<ul style="list-style-type: none"> <li>· Gap between Objectives and Present Situation=Breakdown →Problem Definition →Solution →Bigger Problem →Other Solution →Vicious Cycles Continue Over Again</li> </ul>	<ul style="list-style-type: none"> <li>· Gap between Objectives and Present Situation = New Opportunity</li> <li>· Gap=Gap Itself</li> <li>· Breakthrough and Breakdown are Face and Back of Same Coin</li> <li>· Strong Structure for Productive Performance</li> </ul>
<ul style="list-style-type: none"> <li>· Pursues Answer for Question But there can be No Answer for Question in Reality. Then why Pursue Definite Answer? Because Knowledge Management can avoid Responsibility and feel easy</li> </ul>	<ul style="list-style-type: none"> <li>· Inquiring Continuously</li> <li>· Spirit Quality Assurance Need</li> </ul>

## EVOLUTION OF R&D ENGINEERING PRODUCTION (R&DEP: RESEARCH & DEVELOPMENT ENGINEERING PRODUCTION) MANAGEMENT METHOD AND RESOURCE ASSETIZATION OF 5-DIMENSIONAL CONSCIOUSNESS (CONSCIOUSNESS SPIRIT) FOLLOWING THE REVOLUTION FROM THE PARTICLE CIVILIZATION OF THE 20TH CENTURY TO THE WAVE OF CIVILIZATION OF THE 21ST CENTURY (CREATION BEING MANAGEMENT)

According to futurists and economists, the economic development of human history is that land in feudal societies, guilds in commercial societies, factories in industrial societies, and production in modern societies. And while predicting a knowledge economy society, he said that people would be the source of wealth in the future society.

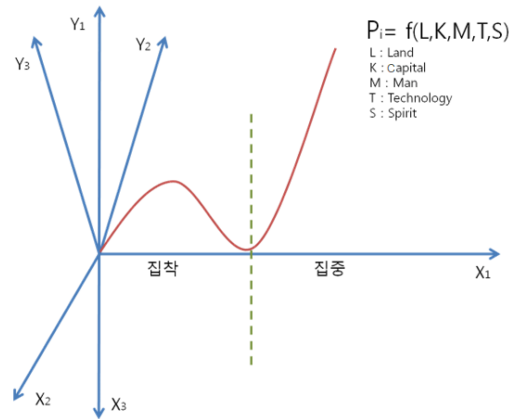
The fact that people are the main Beings of wealth creation means that people, like other resources of production, need to be considered. For example, in order to actively produce high value, people's knowledge and information environment must be improved, such as trying to improve land to increase productivity of land and improving factory environment to increase productivity of factories. However, in the Enlightenment Management Science (MOSEE) created by the author, a new existence that man should be the main Being of management, not the main means of wealth creation, and that the resources of 5<sup>th</sup> dimensional consciousness (spirituality) such as human consciousness,

mind, and heart can be turned into spiritual resources and assets. It is sublimation beyond transformation so that you can create on your own.

If in the particle civilization, management was discussed with a focus on the three-dimensional extrinsic abilities of land, capital, human Being, and technological level, in the wave of civilization, human spirituality, which is an innate ability, is also the subjective creation of management. From this Spirituality viewpoint of MOSEE opens the era of 'creative management' beyond 'innovation' in realizing the true meaning of existential management by demonstrating the energizing ability that integrates internal and external abilities – “do”. Recently, the mind management program has emerged as a major issue in accordance with the topic of “the mind changes the brain”. This is a new concept of creative management. The Quantum Jump transformation of 21st century Economics management methods and Comparison of Ownership Management and Spirituality Being Management are newly critically important (Author’s Theory)

**Transformation from the law of diminishing returns in knowledge management, centered on possession, to the law of increasing returns in the field of spirituality-centered realization (spirituality) management.**

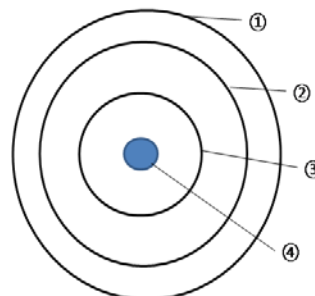
**Figure 2: Curve of law of increasing yield of concentration on spiritual management of existence (author’s theoretical model)**



In the equation of  $P = f(L, K, M, T, S)$ , S (Spirit) is 'human consciousness' and refers to spiritual resources. L is land, K is capital, M is human resources, T is technological innovation, information and knowledge. Communicate the spirit right, the personality right, and the real right.

**In-depth insight into the determinants and correlations of spiritual leadership events and creative management plans (Author’s Theory)**

**Figure 3: Determinants of spiritual leadership exercise**





- 1: Performance through comparative research and action.
- 2: Progressive results of imitation, learning, education, training, lifestyle, and personality modification of the leadership spirit and driving behavior of other groups or leaders.
- 3: Guiding spirit and driving behavior depend on what is considered an accurate or incorrect analysis of the mental, physical, and constitutional conditions and characteristic abilities of the actor and the direct target of the specific action of the promotion task and the belonging, organization, and environment. It is an outcome that is influenced and decided. In this case, the decision (Decide) means that Cide means killing other alternatives (Suicide), and since it is a decision (Decide) driven by the surrounding situation, the actor does not act as a subjective being of new possibility.
- 4: Spiritual leadership and actions are the leader's subjective judgment, prejudice, emotion, means of success, etc., and how to approach and appear to the leader himself is not a causal relationship with the leader's driving behavior, but a correlation phenomenon. When the spiritual leader knows this, the space of infinite realization is opened, and when the spiritual leader makes a new word (declaration), this new word (declaration) and the new human relationship and situation resulting from it opens up a new choice (Choose, Choice). In this way, becoming a choice maker is an open mind and a subjective existence that chooses one of the numerous possibilities, thereby demonstrating a new dimension of life and holistic leadership that masters the right to human rights and property. Therefore, it is not a decision maker who lives pushed by circumstances, but a choice maker who lives as an independent being in a new dimension. In this way, a new choice is made, expressed in words (declaration), and accordingly, human relationships and situations are faithfully practiced, creating a reality of new possibilities. Then, the leader who acts naturally is reborn as a being of new potential and creates new achievements by pursuing sympathetic language, harmonious action, and common values with everyone around him. This academic system is a SEE (allSelves Enlightenment and Empowerment) technique invented by the author.

#### **MOSEE (the author' theory) can pioneer a new path in the 21st century.**

Establishing a firm will to share the values of myself and the community, that is, corporate society and public organizations, discriminating between real and non-realistic awareness of reality, and the gap between the meaning of shared values and reality (it is to accurately recognize gaps) and manage these gaps as opportunities for new creation. It must be clearly recognized that these gaps are not problems, and therefore, it is difficult to take a problem-solving perspective. This is because the management spirit and consciousness bring the management reality to itself. In managing the gaps organized above as opportunities for new creation, failure is an illusion in a story that does not exist, and even frustration, stoppage, and mistakes are recognized as success and the relationship between the front and back, and if you firmly restore authenticity and integrity, This is the reality of business management, the realization of being successful every moment, and I, the author of this thesis, have already developed and utilized specific methodologies and techniques in this field.

## **Human Consciousness (Spirituality) Map Application of MOSEE**

**Based on the premise of the structural constraint formula for the input of management resources for the achievement of the objective function that represents the performance of management by introducing the map of consciousness and spirituality and achieving the growth of management consciousness accordingly. We are going to evaluate and discard the law of diminishing returns from a new perspective and look at the process of managing infinite possibilities on the premise of structural self-increasing expansion of management resource – “input”.**

From ancient times to today, we have many achievements of research on this in Korea, the East and the West. There are stages at the level of mental consciousness seen in a philosophy that came down from Korean, Gojoseon. There are stages at the level of spiritual consciousness seen in Eastern Confucian thought, as well as achievements published by various scholars in the West. Namely, Piaget, Toynbee, Maslow, Ken Wilbur, David Hawkins, etc. From now on, I will briefly explain the practical aspects of each field and explain Dr. David Hawkins' Map of Consciousness. Dr. David Hawkins made a map of the consciousness of individuals, organizations, and cultures through demonstrations of kinematics method experiments, and organized the stages from the lowest level of consciousness to the highest level of consciousness into 17 stages. This map of consciousness applies not only to individuals, but also to large and small organizations and cultures. The lowest level is shame, then, step by step, guilt, helplessness, sadness, fear, desire, anger, pride, courage, moderation, spontaneity, tolerance, reason, love, joy, peace and enlightenment. This is to enable

individuals and communities to manage the direction of awareness and value orientation of individuals, organizations and cultures, and to achieve concrete measurement and improvement, namely innovation.

**It is an actual map of measured values of the energy field of consciousness.**

The measured values correspond to a particular world of consciousness expressed through emotions, perceptions, attitudes, worldviews, and beliefs. When mapping the world of consciousness, the level of 'courage' is seen as a turning point. In other words, it is the divergence point of whether the influence is positive or negative. The attitude of life below the level of 'courage' is 'survive'. Among them, the lowest level 'shame' is the realm of despair and depression resulting from poverty and deficiency. The 'guilt' level holds grudges, is evil, blames others, and is destructive in everything. The 'lethargic' level blames fate and gives up easily in despair. The 'sadness' level is a discouraged attitude with contempt and regret, but a 'survival' life begins only when there is an intense expression of one's emotions through tears and words. Beyond the level of 'fear', which is the number of days to withdraw with a lot of fear and reach the stage of 'desire' and 'anger', self-centered and impulsive actions are taken for personal survival. This is when you use anger as energy to reach the next level, the level of 'pride', where you begin to understand for the first time that your instinct to survive is also important to other people. We live a life filled with hope, are optimistic about everything, and actively act according to our intentions. At the 'inclusive' level, you live a compassionate and harmonious life, forgive others generously, and live with a generous conscience that transcends your own selfishness.

The next level of 'reason' is a different level, and you have wise wisdom, create a life with clear meaning, understand everything brightly, and have abstract abilities in areas that ordinary people cannot think of. The next level of 'love' is another level and reaches a stage that humans can't dare imagine. It is to have infinitely vast love, mercy, and respect for the fundamental existence of all people and things, and to reach a high level of understanding the essential intuition and revelation beyond the form of body consciousness and mind consciousness. Thinking of the love and happiness of others becomes an integral part of life. The next level is 'joy', insight into the oneness of existence, there is only stillness and holiness. At the level of 'peace' there is always-present perfection and wholeness, and there is infinite blessing and awareness. When you reach the highest level, 'enlightenment', the principle of the existence of the universe and the principle of the self are united and become the absolute existence of pure consciousness before language.

## **Achieving a Successful Plan for the Creative Spirituality Industry (SI) Entrepreneurship Management Missions with Human Creative Language and Language System (Author's Theory)**

Individuals should consciously use a creative language system in order to make spiritual realization a part of their daily life and improve their performance. When a declaration of new existence is made through language in daily life, it affects behavior, which is repeated as a habit, and the character changes and becomes a philosophy. A creative language system must break with the prejudice of the past, exist in the present, create a realm of infinite possibilities with new thinking, and make language, or words, reality. It can be seen that many intellectuals are adapting language, or words, to what they think is reality. This allows incremental improvement, but not essential creation. Words become seeds (declaration→action→habit→character→idea→philosophy) (see table below).

**Table 2a: Integrated Innovation Theory of Creative Language and Behavior (Author's Theory)**

<b>Language dimension</b>	<b>2nd dimension</b>	<b>3rd dimension</b>	<b>4th dimension</b>	<b>5th dimension</b>
<b>Speaker Intent</b>	Ordinary people. Automatic reaction life.	Unauthentic people. Justification Intent.	Authentic People. Improvement intent.	Creative Action people. Transformative intent
<b>Way of thinking &amp; Language role</b>	Already always as it was in past	Stand for own stance. Extreme judgement Good/Bad Progress/	Keep on past practices experience influence. Change a little	Break past prejudice. Existing now & here. New way of seeing and thinking.

		Retreat Left/Right Unite/Divide. No credibility.	better more. Lengthy explain complex persuade. Words to fit Reality.	New realm of actual possibilities. Simplify the World. Be in harmony communication. Words create a new reality.
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Language dimension	2nd dimension	3rd dimension	4th dimension	5th dimension
<b>Speaker Intent</b>	Ordinary people. Automatic reaction life.	Unauthentic people. Justification Intent.	Authentic People. Improvement intent.	Creative Action people. Transformative intent
<b>Way of thinking &amp; Language role</b>	Already always as it was in past	Stand for own stance. 2Extreme judgement Good/Bad Progress/ Retreat Left/Right Unite/Divide. No credibility.	Keep on past practices experience influence. Change a little better more. Lengthy explain complex persuade. Words to fit Reality.	Break past prejudice. Existing now & here. New way of seeing and thinking. New realm of actual possibilities. Simplify the World. Be in harmony communication. Words create new reality

**Table 2b: Four spiritual leadership areas, emotional intelligence competencies, and spiritual intelligence skills**

Four Spiritual Leadership Areas
<ul style="list-style-type: none"> <li>• Inner-Personal: Spiritual Leadership within the Self and in Individual Consciousness</li> <li>• Personal: Spiritual Leadership in Behaviors and Interactions with Family, Others, and external Environments</li> <li>• Inner-Collective: Spiritual Leadership within Groups, Culture, and Collective Consciousness involving Managerial &amp; Organizational Decisions</li> <li>• External Collective: Spiritual Leadership in Social Systems and Policies involving Local and Global Communities</li> </ul>

**Table 2c: Spiritual intelligence skills and examples of integral visions in four spiritual leadership areas**

4 Quadrants	12 Spiritual Intelligence Skills	Examples of Integral Visions for Business Leaders
“I” realm SubjectivePersona	Awareness of Own Worldview	To know myself with humility, dignity, and self-worth
	Awareness of Life Purpose	To aim for a life that benefits others and the world
	Awareness of Ego self/ Higher Self	To become aware of weaknesses and strengths in personal habits and lifestyles
“It” realm - ObjectivePersonal	Awareness of Interconnectedness of Life	To understand and respect the oneness of humanity and interconnectedness of life
	Awareness of Worldviews of Others	To create and nurture mutually beneficial networks and relationships
	Awareness of Spiritual Laws	To maintain faith in the operation of universal spiritual principles in the world
“We” realm - IntersubjectiveCollective	Commitment to Spiritual Growth	To study and respect diverse spiritual principles and practice methods
“Its” realm – InterobjectiveCollective	Keeping Higher Self in Charge	To practice the highest levels of social ethics & social responsibilities

## **Establish a Practical Career Academic Literature Course (Author's theory)**

5<sup>th</sup> Dimensional consciousness growth sublimation.

5<sup>th</sup> Dimension Whole body 64 trillion cells Enlightenment Faith Salvation Dedication of pure Being.

4<sup>th</sup> Dimension Heart Wisdom Permanence Temporal Object Sharing Insight and Free Collaboration.

3<sup>rd</sup> Dimension Head Knowledge Spatial Object Insight and Cooperation in Competition: Mutual Credit.

2<sup>nd</sup>-Dimensional Thinking: Aeros Love Absolute Power Survival Competition Black and White Logic.

one-dimensional one-to-one relationship of emotion.

0-Dimensional consciousness living alone 0 connects with 00 infinity.

Each person's 5<sup>th</sup>-dimensional consciousness growth sublimation methodology is: Achieved by one's own creative words (conversation) (see Table 2a)

### **Creation of one's own creative career academic scientific discipline**

1. Comparative study of the philosophical aspect of ultimate truth.
2. Definition of people.
3. Comparative study of management performance.
4. Comparative study of genuine creative management.
5. Comparative study of autonomy, spontaneity and autonomy in value selection.
6. Awareness of management subject.
7. Recognition of management object.
8. Comparative consideration in terms of language system.
9. Comparative consideration in terms of research area and subject.
10. Comparison and analysis of the difference between MOSEE and Knowledge Management.
11. Comparison and analysis of the difference between existence management and ownership management.
12. New 21st century space, humanity, super-spiritual, super-scientific and technological civilization, training and vision.
13. Enlightenment Management Academic Teaching Methods and Techniques of Economics (MOSEEE).
14. Applied Practice of Enlightenment Management Economics (MOSEEE).
15. Areas of Application.
16. Vision of MOSEEE: Life Peace Consciousness (Spirituality) Autonomous District Federal Network Construction and Operation.
17. Creative structuring of entrepreneurship, achievement of existence, success in achieving goals, and presentation of methods for complete expansion and reproduction.
18. Design, application, experiment, and measurement of 100 techniques of Enlightenment Management Economics (MOSEEE) and D/B of 366 Hongik Ingan, indexing and quantification, tracking the trend of leap forward development of the 5th dimension leading the spiritual civilization of the new cosmic human consciousness.

As mentioned above in this paper (see Figure 1) for the sacred accomplishments of their respective practical careers and academics. In the equation of  $P=f(L, K, M, T, S)$ , S (Spirit) is a "human consciousness (spirit)" and refers to spiritual resources. L refers to land, K capital, M human resources, T which refers to information and knowledge and technology on innovation.

## **CONCLUSION**

In this paper, we look at the characteristics of each dimension of 5-dimensional sublimation of consciousness: 5th dimension Whole body 64 trillion cells Enlightenment Faith Salvation Devotion of pure existence, 4th dimension Wisdom of the heart Permanence Temporal sharing of objects Insight and free collaboration, 3D head knowledge Spatial object insight and cooperation in competition: Mutual credit, 2D plane thinking: Aeros Love Absolute power Competition for survival Black-and-white logic, 1-dimensional one-to-one relationship, 0-dimensional living alone 0 is connected to 00 infinity. Each individual's 5-dimensional consciousness growth sublimation methodology thoroughly practices one's creative words (conversation) and achieves creation through action evidence. We look at the 18 components for creating one's career academic literature mentioned above. Through the design, application, experiment, measurement, indexation, and quantification of the base (D/B), by tracking the trend of quantum leap

forward in the 5th dimension leading to the new space of human consciousness and spiritual civilization, individuals, organizations, societies, countries, and international relations. The world's 21st century newspaper leads the development of reputation. The sacred achievement of each person's practical career and academic literature is to practice the realization of the 64 trillion cells of the whole body beyond the knowledge of the head and the wisdom of the heart by embodying the growth and sublimation of 5-dimensional consciousness as an experiential reality in the 64 trillion cells of the whole body. Behavioral proof, self-observation, career, academic literature creation, and newly integrated life body with one's own consciousness (spirituality), personality, soul and body as a creative being. Be open and live, that is, live a life of practicing and acting the ultimate truth of the renewal of life. You can pursue the value of dedication and happiness as a pure being for the rest of your life, going beyond your home, workplace and contributing to society, nation, and humankind.

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# IDENTIFYING KEY USABILITY CHARACTERISTICS FOR FASHION BRAND AUGMENTED REALITY APPS

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## ABSTRACT

*This study identifies the key usability characteristics of augmented reality (AR) apps in the fashion industry to improve their effectiveness for customers. To achieve this, a qualitative content analysis was conducted of user reviews for three popular fashion brand AR apps: Gucci, ASOS, and Zara. The study employed four coding categories: visual appeal, consumer engagement, interactivity features, and information accessibility. Our findings indicate that visual appeal, consumer engagement, interactivity features, and information accessibility are critical factors in enhancing the usability and effectiveness of AR apps. Positive reviews highlighted the importance of visual appeal, interactive experiences, personalized recommendations, try-on features, filters, and comprehensive information. Negative reviews highlighted the need for improvement in technical difficulties, confusing navigation, inconsistent product information, and accessibility for users with disabilities. The originality of the study lies in its qualitative analysis of user reviews of popular fashion brand AR apps, providing valuable insights into the usability characteristics that are critical for the success of AR apps in the fashion industry.*

**Keywords:** usability, fashion brands, visualisation, gamification, customers, qualitative.

## INTRODUCTION AND BACKGROUND

Augmented reality (AR) has gained immense popularity in recent years, especially in the retail sector, due to its potential to enhance customer shopping experiences. Several studies have explored the use of AR apps in different retail contexts, including beauty products, fashion, and smart retailing. However, despite the increasing interest in AR apps, research has yet to identify the most important usability characteristics of such apps in the fashion industry with a view to improving their usage amongst brand-loyal customers. Studies have shown that the use of AR apps can positively influence purchase intentions and enhance consumer perceptions of brand personality. For instance, Wang et al. (2022) found that the use of AR apps in the beauty product industry increases consumer purchase intentions. Similarly, they found that the use of experiential AR apps in fashion enhances consumer purchase intentions. Moreover, Cuomo et al. (2020) highlighted the importance of managing the omni-customer brand experience via AR to increase customer loyalty. Although AR apps have shown potential to enhance customers' shopping experiences, Smink et al. (2020) highlighted the importance of considering factors such as spatial presence, personalization, and intrusiveness to ensure their effectiveness. Moreover, Rauschnabel, He and Ro (2018) emphasized the need to address the privacy risks associated with the adoption of AR smart glasses.

Research has shown that AR apps can positively impact consumer purchase intentions in the beauty product (Wang et al., 2022) and fashion retailing industries (Watson et al., 2018; Ozuem et al 2021b). AR can also enhance brand personality (Plotkina et al., 2022) and transform the retail sector (Kang et al., 2023). Additionally, AR can improve the user experience of fashion retailing by providing personalized, immersive, and interactive experiences (Xue et al., 2023; Ozuem et al 2021c). However, the adoption and effective use of AR apps depends on several factors, such as privacy risks (Rauschnabel et al., 2018), spatial presence, personalization, and intrusiveness (Smink et al., 2020). To improve the usability of AR apps amongst fashion brand customers, it is essential to identify the most important characteristics that influence their perceptions and usage behavior. A qualitative investigation of the Italian fashion retailing system identified the importance of managing omni-customer brand experience via AR (Cuomo et al., 2020). A review of AR and virtual reality (VR) in physical and online retailing also highlighted the need for more research on the design, implementation, and evaluation of AR and VR applications (Bonetti et al., 2018). Intentions to use retail brands' mobile AR apps can be achieved through a symmetric approach that addresses the needs and preferences of customers (Nikhashemi et al., 2021). The persuasive impacts of AR and VR video advertisements on consumers have also been explored (Jayawardena et al., 2023). A comparison of consumer perceptions between AR and VR in immersive interactive technologies and virtual shopping experiences revealed differences in their effects on consumer behavior (Kim et al., 2023). Finally, AR technology can reshape mobile marketing and consumer-brand relationships (Scholz & Duffy, 2018).

The use of augmented reality (AR) technology has gained popularity in various industries, including the fashion industry. AR technology has the potential to enhance customer shopping experiences by allowing them to virtually try on clothes, visualize how accessories might look on them, and interact with products in new ways. However, the effectiveness of AR apps for enhancing customer experiences depends on the usability characteristics of the apps. Given the importance of AR apps in the fashion industry and their potential to enhance customer shopping experiences, this study aims to identify some key usability characteristics of AR apps to improve their use amongst fashion brand customers. The study builds on previous research in the field and aims to fill a research gap by identifying the specific usability characteristics that can enhance customer experiences with AR apps in the fashion industry. The findings contribute to the development of effective AR apps that can improve customer engagement and loyalty in the fashion industry. It is important to identify the most important usability characteristics of AR apps to improve their use among fashion brand customers. By understanding these characteristics, fashion brands can design AR apps that are more user-friendly, leading to higher adoption rates and increased customer satisfaction. Additionally, identifying the most important usability characteristics of AR apps can inform future research and development in this field. This study aims to fill a gap in the literature by identifying the most important usability characteristics of AR apps in the fashion industry.

## METHODOLOGY

This research embraces the social constructivist paradigm, which emphasizes the importance of social and cultural contexts in shaping individuals' experiences and perceptions (Creswell, 2014). This paradigm recognizes the complexity of human experiences and acknowledges that these experiences are influenced by social, cultural, and historical factors. The research philosophy adopted for this study was interpretivism with the aim of understanding the subjective meanings and interpretations of individuals (Bryman & Bell, 2015). This philosophy is appropriate for this study as it aims to explore the perceptions and experiences of fashion brand customers regarding the usability of AR apps. By adopting a social constructivist paradigm, this study acknowledges the influence of social and cultural factors on individuals' experiences and perceptions of AR apps. Similarly, the interpretivist philosophy emphasizes the subjective meanings and interpretations of individuals, which is essential for understanding how fashion brand customers perceive and use AR apps. This study employs a qualitative research approach, which involves collecting and analyzing non-numerical data to gain an in-depth understanding of the phenomenon (Creswell, 2014). A qualitative approach is appropriate for this study as it allows for a detailed exploration of the experiences and perceptions of fashion brand customers regarding the usability of AR apps.

Semi-structured interviews were deployed as a flexible approach to data collection for this study, allowing the researcher to ask follow-up questions and clarify responses while maintaining a degree of structure (Ozuem et al 2021a; Bryman & Bell, 2015). Semi-structured interviews were seen as appropriate in order to be able to explore the perceptions and experiences of fashion brand customers as regards AR apps. Data were collected through semi-structured interviews with fashion brand customers. The sample consisted of around 25 customers who had used AR

apps in the fashion industry. The sample was selected using purposive sampling, which involved selecting participants who met specific criteria relevant to the research question (Creswell, 2014). The selected fashion brands were contacted and asked to broker access to a sample of customers. Data were collected until data saturation was reached, meaning that no new information or themes emerged from subsequent interviews. The data collected through interviews were analyzed using thematic analysis. Thematic analysis is a method for identifying patterns and themes within qualitative data (Ozuem & Willis, 2022; Braun & Clarke, 2019). The analysis involved identifying codes and themes within the data, categorizing the codes and themes, and interpreting the data to draw conclusions about the most important usability characteristics of AR apps for fashion brand customers.

## **FINDINGS AND DISCUSSION**

### **Usability Characteristics**

Usability characteristics refer to the attributes of a product or service that determine how easy or difficult it is to use, and how effectively it can accomplish the intended task. In the context of fashion brands and augmented reality (AR) apps, usability characteristics can include factors such as ease of navigation, clarity of instructions, visual appeal, responsiveness, and interactivity. The main theme of Usability characteristics covers the following codes:

Visual Appeal refers to the visual design and aesthetics of the AR app, which can impact users' perceptions of the app's usefulness and appeal. Research has shown that visual appeal is an important factor in determining the effectiveness of AR apps. For instance, Xue et al., (2023) found that AR apps with visually appealing design elements improved engagement and satisfaction amongst users. Similarly, Scholz and Duffy (2018) highlighted the importance of visual appeal as a means to enhance user experiences of AR apps.

Consumer Engagement refers to the level of user engagement and interactivity facilitated by the AR app. Research has shown that AR apps can increase consumer engagement with fashion brands. For instance, Plotkina, Dinsmore, and Racat (2022) found that AR marketing can enhance service brand personality by increasing consumer engagement. Additionally, Kang et al. (2023) found that the use of AR apps can increase online and offline store patronage intentions amongst customers.

Interactivity features refers to the interactive features provided by the AR app, such as the ability to try on virtual clothes or visualize how accessories might look once purchased. Research has shown that interactivity features can improve user engagement with AR apps. For instance, Watson, Alexander, and Salavati (2018) found that experiential AR apps can enhance fashion purchase intention by providing users with interactive and immersive experiences.

Information Accessibility is about understanding the ease with which users can access information within the AR app. Research has shown that information accessibility is an important factor in determining the effectiveness of AR apps. For instance, Bonetti, Warnaby, and Quinn (2018) highlighted the importance of providing clear and concise information within AR and VR applications. Additionally, Nikhashemi et al. (2021) emphasized the need for a symmetric approach to continuous intention to use retail brands.

### **Visual Appeal**

Visual appeal refers to the overall aesthetic design of AR apps, which can impact user perceptions of the usefulness and appeal of apps. In the case of fashion brands such as Gucci, ASOS, and Zara, visual appeal is a critical factor in determining the effectiveness of AR apps. Positive reviews of AR apps associated with Gucci, ASOS, and Zara highlight the visually appealing design elements that enhance user engagement and satisfaction. For example, a user review of Gucci's AR app on the App Store states, "The AR feature is really cool! It's a lot of fun to see the shoes in 3D and rotate them. The design of the app is also visually stunning" (Interviewee, P10). Similarly, a user review of ASOS's AR app on Google Play notes, "The app is fantastic! The AR feature works really well, and the design of the app is very visually appealing. It's fun to use, and I love being able to try on clothes virtually" (Interviewee, P24). These positive reviews highlight the importance of visual appeal in enhancing the user experience of AR apps. "Gucci's AR app is visually stunning, with high-quality graphics that create an immersive and engaging experience



for users (Interviewee, P14). “The ASOS AR app provides users with a realistic view of how clothing items will look on them, making it easier to shop online and reducing the likelihood of returns” (Interviewee, P11). This suggests that the app was designed to offer effective usability and practicality, in addition to being visually appealing. Overall, these findings suggest that both Gucci and ASOS have invested in creating visually appealing and practical AR apps that enhance the user experience.

Negative reviews of apps produced by Gucci, ASOS, and Zara also highlight visual appeal as a potential weakness. One user review of Zara's AR app on the App Store states, "The AR feature is cool, but the design of the app is a bit clunky and not very visually appealing" (Interviewee, P22). Similarly, one user review of ASOS's AR app on the App Store notes, "The AR feature is great, but the app's design is a bit outdated and could be more visually appealing" (Interviewee, P19). These negative reviews suggest that the design elements of AR apps can impact the overall user experience and highlight the need for fashion brands to prioritize visual appeal in the development of their AR apps. “This Gucci's AR app can be slow to load and visualize, which detracts from the overall experience” (Interviewee, P13). I experienced that this app often has glitches, with clothing items appearing distorted or not fitting correctly on the user's body (Interviewee, P19). The issue of slow loading and visualization may also indicate technical difficulties with the app's design and functionality, which could be a concern for Gucci's brand reputation. While these AR apps offer visually stunning graphics, there are technical issues that may negatively impact the app's usability and effectiveness. Gucci may need to address these issues to ensure that the app provides a seamless and accurate user experience.

## **Consumer Engagement**

Consumer engagement is a critical factor for the success of AR apps, particularly in the fashion industry. Positive reviews of the AR apps of Gucci, ASOS, and Zara highlight the user engagement features that enhance the overall experience. For instance, a user review of Gucci's AR app on the App Store states, "The AR feature is really interactive, and it's exciting to see the products in 3D. It creates a fun and engaging experience that makes me want to shop more" (Interviewee, 5). Similarly, a user review of Zara's AR app on Google Play notes, "I love how the app integrates with social media platforms like Instagram, making it easy to share my virtual try-on sessions with my followers" (Interviewee, P4). These positive reviews suggest that AR apps can effectively engage users by providing interactive and personalized experiences. Negative reviews of the AR apps of Gucci, ASOS, and Zara also highlight potential weaknesses in terms of consumer engagement. One user review of Gucci's AR app on the App Store states, "The app lacks personalized recommendations and customization options, making it difficult to find products that match my style and preferences" (Interviewee, P13). Similarly, a review of Zara's AR app on Google Play notes, "The app's checkout process is clunky and confusing, which detracts from the overall experience and discourages me from making purchases" (Interviewee, P21). These negative reviews suggest that fashion brands need to prioritize user engagement and optimize the AR app's features and functionality to ensure a seamless and satisfying user experience.

Feedback mechanisms are another crucial aspect of consumer engagement that can impact the overall user experience of AR apps. One user review of ASOS's AR app on the App Store notes, "I appreciate how the app incorporates user feedback to improve the app's functionality and features. It shows that the brand cares about its customers and values their input" (Interviewee, P23). These feedback mechanisms can help fashion brands gather insights into user preferences and improve the effectiveness of their AR apps. Gamification is another effective strategy for engaging users and increasing purchase conversion rates. One user review of Zara's AR app on the App Store states, "The app's gamification features, like the virtual treasure hunt, make shopping more fun and exciting. It encourages me to make purchases and increases my brand loyalty" (Interviewee, P15). These gamification features can not only enhance the user experience but also increase engagement, purchase conversion rates and brand loyalty.

## **Interactivity Features**

Interactivity features are critical in AR apps for the fashion industry as they provide users with a personalized and immersive shopping experience. Positive reviews of the AR apps of Gucci, ASOS, and Zara highlight the interactivity features that enhance the user experience. For instance, one review of Gucci's AR app on the App Store states, "The app provides a seamless product visualization experience that makes it easy to try on different styles and colors" (Interviewee, P15). Similarly, a review of ASOS's AR app on Google Play notes, "The 3D modeling and scanning features are impressive and provide an accurate representation of how the clothes will look on me" (Interviewee, P27).

These positive reviews suggest that AR apps can effectively engage users by providing interactive and personalized experiences. One of the most critical interactivity features in AR fashion apps is the 'try-on' feature. The AR try-on feature allows users to scan their bodies and visualize how different clothes will look on them. One review of Zara's AR app on Google Play notes, "The try-on feature is impressive, and it makes it easy for me to visualize how the clothes will look on me before making a purchase" (Interviewee, P19).

Similarly, a user review of ASOS's AR app on the App Store states, "The try-on feature is great and provides a realistic view of how the clothes will look on my body. It's fun to use and makes online shopping more convenient" (Interviewee, P28). These reviews highlight the importance of try-on features in enhancing the user experience and increasing purchase conversion rates. Filters are another effective interactivity feature in AR fashion apps that allow users to customize their search results based on different parameters such as color, style, size, and price. One user review of Gucci's AR app on the App Store notes, "The filters make it easy for me to find the products I'm looking for quickly. It saves me time and makes online shopping more convenient" (Interviewee, P16). Similarly, a user review of ASOS's AR app on Google Play states, "The filters are impressive and make it easy to search for specific products based on my preferences. It's a great addition to the app" (Interviewee, P29). These reviews suggest that filters are an essential interactivity feature that enhances the usability and convenience of AR fashion apps. One user review of Gucci's AR app on the App Store states, "The app's response time is slow, and the processing of requests is inaccurate, which can be frustrating" (Interviewee, P28). Similarly, a review of Zara's AR app on Google Play notes, "The app's interactivity features are confusing, and the navigation is difficult to understand" (Interviewee, P29). This suggests that technical difficulties with the design and functionality of the app may need to be addressed to provide a seamless and accurate user experience. On the other hand, a user review of Zara's AR app notes that its interactivity features are confusing, and the navigation is difficult to understand, indicating that the app's design may be unclear or not intuitive. This highlights the need for fashion brands to prioritize the design and functionality of their AR apps to ensure that the interactivity features are user-friendly. These findings suggest that technical issues and unclear design can negatively impact the interactivity features of AR apps and highlight the importance of addressing these issues to provide a satisfactory user experience.

## Information Accessibility

Information accessibility refers to the ease with which users can access and understand product information within an AR app. Positive review of AR apps associated with Gucci, ASOS, and Zara highlight the importance of clear and accessible product information. For example, a user review of ASOS's AR app on Google Play notes, "The product information is comprehensive and easy to understand, making it easier to make informed purchases" (Interviewee, P22). Similarly, a user review of Gucci's AR app on the App Store states, "The product descriptions are clear and accurate, providing me with all the information I need to make a purchase decision" (Interviewee, P9). These positive reviews suggest that AR apps can effectively engage users by providing clear and accessible product information. Negative reviews of AR apps associated with Gucci, ASOS, and Zara highlight potential weaknesses in terms of information accessibility. One user review of Zara's AR app on the App Store states, "The navigation is confusing, and it's difficult to find the information I need about the products" (Interviewee, P14). Similarly, a review of ASOS's AR app on the App Store notes, "The app's product information is not consistent across all products, which makes it difficult to compare and make informed decisions" (Interviewee, P7). These negative reviews suggest that fashion brands need to prioritize information accessibility and optimize the AR app's features and functionality to ensure a seamless and satisfying user experience.

Accessibility is another important aspect of information accessibility that can impact the overall user experience of AR apps. One review of Gucci's AR app, "The app is not accessible for users with visual impairments or disabilities, which limits its usefulness" (Interviewee, P4). Similarly, a user review of Zara's AR app on Google Play states, "The font size is too small, making it difficult to read product information on smaller devices" (Interviewee, P2). These reviews highlight the importance of accessibility and the need for fashion brands to ensure that their AR apps are designed to be accessible to all users. In terms of accuracy and clarity of product information, one review of ASOS's AR app on the App Store notes, "The product images are clear and accurate, providing me with a good idea of what the product will look like in real life" (Interviewee, P6). Similarly, a user review of Gucci's AR app on the App Store states, "The product information is accurate and up-to-date, which is important when making purchase decisions" (Interviewee, P8). These positive reviews suggest that fashion brands need to prioritize the accuracy and clarity of product information to enhance the user experience and increase purchase conversion rates.

## MAJOR CONTRIBUTIONS AND IMPLICATIONS

This study identifies some important usability characteristics of augmented reality apps in the fashion industry. Specifically, the study highlights the significance of visual appeal, consumer engagement, interactivity features, and information accessibility as variables that improve the use of AR apps amongst fashion brand customers. These usability characteristics are critical in enhancing the overall user experience and increasing purchase conversion rates. Additionally, the study identifies potential weaknesses and challenges in the development of AR apps and highlights the need for fashion brands to prioritize these usability characteristics to provide a seamless and satisfying user experience. The study highlights the importance of user-centered design and the need for fashion brands to prioritize user feedback in the development of AR apps. This can help to improve the usability, functionality, and overall effectiveness of apps. The findings suggest that fashion brands need to prioritize usability characteristics such as visual appeal, consumer engagement, interactivity features, and information accessibility in the development of their AR apps. This emphasis on usability aligns with the usability engineering approach, which emphasizes the importance of designing products that are easy to use and meet user needs and expectations.

The practical implications of this study suggest that fashion brands need to prioritize visual appeal, consumer engagement, interactivity features, and information accessibility in the development of their AR apps. By enhancing the user experience through these usability characteristics, fashion brands can increase brand loyalty and purchase conversion rates. Furthermore, addressing potential weaknesses and challenges can improve the effectiveness and efficiency of AR apps and enhance their overall usability. This study provides valuable insights for fashion brands looking to leverage augmented reality technology to enhance the online shopping experience and engage customers in new and innovative ways. The findings suggest that fashion brands can enhance the use of AR apps amongst customers by focusing on visual appeal, consumer engagement, interactivity features, and information accessibility. These findings can be used to inform the design and development of AR apps in the fashion industry, with the ultimate goal of providing users with a personalized, immersive, and enjoyable shopping experience.

## LIMITATIONS AND FUTURE DIRECTIONS

A key limitation of this study is that the sample size is relatively small, consisting of a limited pool of customers who have used AR apps in the fashion industry. Therefore, the findings may not be representative of the larger population of fashion brand customers who use AR apps. Additionally, the study only focused on three popular fashion brand AR apps, namely Gucci, ASOS, and Zara. Thus, the findings may not be generalizable to other fashion brands. Another limitation is that the study relied solely on qualitative data collected through user reviews. While qualitative data provides valuable insights into the perceptions and experiences of fashion brand customers, it may not provide a comprehensive understanding of the usability characteristics of AR apps. Future studies could complement this qualitative data with quantitative data to provide a more robust understanding of the topic.

One potential future direction for research is to conduct a comparative analysis of AR apps across different fashion brands to identify similarities and differences in their usability characteristics. Such a study could provide insights into how fashion brands can differentiate their AR apps from their competitors and improve their overall effectiveness. Another future direction could be to explore the impact of personalized and gamified experiences in AR apps on customer engagement and loyalty. Research has shown that personalized and gamified experiences can enhance customer engagement and loyalty, and applying these principles to AR apps could further improve their effectiveness in the fashion industry. Lastly, future research could explore the potential impact of emerging technologies such as virtual and augmented reality glasses on the usability of AR apps in the fashion industry. As technology continues to evolve, it is important to understand how these new technologies can be leveraged to enhance the effectiveness of AR apps for fashion brand customers.

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# VALIDATING AN ORGANIC FOOD PRODUCT PURCHASE BEHAVIOUR MODEL AMONGST SOUTH AFRICAN GENERATION Y CONSUMERS

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## ABSTRACT

*Combined with the increasing demand for organic foods throughout the world, South Africa has seen a rise in the demand for safer sustainable business practices and organic products. Based on the increased demand for organic products, prices should begin to decrease, which is believed to enhance the likelihood that consumers will begin to purchase more organic products. Factors including health consciousness, environmental knowledge, environmental concern, attitudes, subjective norms and perceived behavioural control may also influence consumers' purchase intentions with reference to organic products. Consequently, the question then posed is, what are the antecedents that influence Generation Y consumers to purchase organic products within South Africa. The sample for this study comprised 500 Generation Y consumers drawn from across South Africa. The data was collected by a specialist data collecting organisation. The target market consisted of South African consumers, ranging in age from 18 to 35 years. The collected data was analysed using outlier statistics, descriptive statistics, Pearson's Product-Moment correlation coefficient and structural equation modelling. The findings indicated that the organic food purchase intention measurement model is a seven-factor structure comprising health consciousness, environmental knowledge, environmental concern, attitude toward organic food, subjective norms, perceived behaviour control and purchase intention. The measurement model exhibited acceptable fit indices, construct validity and reliability.*

**Keywords:** organic food, purchase intention, Generation Y, South Africa.

## INTRODUCTION

Owing to the rise in hazardous issues facing consumers in the present environment, environmental awareness is becoming increasingly important. As such, there has been an increased tendency among consumers to purchase and consume organic products as opposed to traditional food products. This has resulted in consumers altering the way in which they make food related purchases, which has given rise to increased consumer attention being given to organic food products. Factors including health concerns, environmental issues, natural taste and future preservation may be deemed as contributing factors in the alteration being witnessed in consumer consumption. As consumers are beginning to make a conscious effort to alter their lifestyles, so an increase in organic food choices is being witnessed.

Padmaja and Parashar (2018) articulate organic products as food products which have been exposed to minimal processing, to produce food products that maintain the integrity of food, but ensuring no artificial ingredients, irradiation or preservatives are used. Furthermore, organic products are developed by employing the use of environmentally friendly processes and cultivation techniques, which consider the attributes of the product being produced, as well as the process undertaken to produce the product (Sing & Verma, 2017; Watson, 2017; Paul & Rana, 2012).

For organisations who endeavour to produce products that can be classified as “organic”, they need to ensure they abide by the required standards, namely the production, processing, transportation, packaging and distribution

standards, that must be adhered to when producing products related to organic agriculture (Sing & Verma, 2017; Paul & Rana, 2012). As for South Africa, organic farming incorporates the production of livestock and food crops in a manner that is in line with nature and not in any ways or means harmful. Therefore, it is imperative that organisations engaged in organic farming and food production ensure that they preserve the natural resources of South Africa as much as possible. This may be done by employing the use of the most effective and efficient ways in which to use water, water-wise crops, soil quality improvement and the humane management of livestock which are some of the preservation measures that can be employed (South Africa Online, 2021).

Bhalla (2020) highlights the increasing demand for organic foods throughout the world. With regards to South Africa, the demand for safer sustainable business practices and organic products is on the rise. Consequently, organisations striving to remain relevant in the ever-changing consumer market need to be cognisant of this environmental movement and its subsequent influence. Based on the increased demand for organic products, prices should begin to decrease, which is believed to enhance the likelihood that consumers will begin to purchase more organic products. Factors including health consciousness, environmental knowledge, environmental concern, attitudes, subjective norms and perceived behavioural control may also influence consumers' purchase intentions with reference to organic products. Consequently, the question then posed is, what are the antecedents that influence Generation Y consumers to purchase organic products within South Africa.

Included in this paper is a review of the literature, which includes a discussion on health consciousness, environmental knowledge and concern, attitude toward organic food, subjective norms, perceived behavioural control, purchase intention and the cohort referred to as Generation Y. In addition, the paper outlines the research methodology that was employed, including the methods relating to sampling, data collection and the instrument employed to gather the data. The results of the study are delineated upon, followed by the conclusion.

## **LITERATURE REVIEW**

### **Health Consciousness**

Health consciousness is the awareness an individual has of the extent to which an individual's diet and lifestyle may be deemed as healthy. Phan and Mai (2016) add that health consciousness is an individual's subjective intent or motivating force to enhance their health. Wolfson (2019) postulates that organic food products not only contain no chemicals, but they are both beneficial in their ability to improve an individual's health through consumption and through the simultaneous improvement of the environment. As such, the more consumers become concerned about food safety, the more likely consumers are to develop positive attitudes in relation to organic food products (Tandon et al., 2021).

Health consciousness has become a significant influencing factor with regards to consumer behaviour, which is associated with purchasing organic products. With regards to the environment and the protection of biodiversity, the health concerns of individual consumers have become increasingly widespread with regards to the influence on organic purchases (Xie et al., 2015; Paul & Rana, 2012). Not only are organic products likely to possess lower levels of cadmium, which is the name for a particular metal, but antioxidants that may be present in conventional soil serve as a provider of nutritional superiority for organic crops and foods, which are further enhanced by the absence of pesticides and chemicals (Wolfson, 2019).

### **Environmental Knowledge**

Environmental knowledge is the combined knowledge an individual possesses in relation to the current environmental issues pertaining to the world. As a consumer moves through the stages involved in the consumer decision-making process, the knowledge an individual possesses in relation to a particular object or group of objects will influence the outcome of the final purchase made. The same applies for consumers who follow the decision-making process when deciding to purchase environmentally friendly products (Zsóka et al., 2013:27). Zahari and Esa (2016:447) propose that the more individuals identify with environmental degradation, the more inclined individuals will be to consider purchasing products that are environmentally friendly. Environmental knowledge may be deemed as a positive correlating factor with environmental concern (Heo & Muralidharan, 2019:424; Yadav & Pathack, 2016:734;

Almossawi, 2014:9; Zsóka et al., 2013:127; Polonsky et al., 2012:243), which may result in pro-environmental behaviour.

## **Environmental Concern**

Gray et al. (2019:395) relate environmental concern to educated individuals, where the potential to earn higher disposable income increases the chances of these individuals engaging in pro-environmental behaviour. As such, the consumers' purchase intentions towards organic products may be directly and positively influenced by their environmental concern.

## **Attitudes**

According to the Theory of Planned Behaviour (Ajzen, 1991), as an individual develops a positive attitude towards behaving in a certain way, the more inclined the individual will be to behave in a certain way. As such, positive consumer attitudes towards organic food products tend to result in positive consumer attitudes towards the actual purchase of organic food products. Liang (2016) predicts that as a result, consumers become more inclined to develop an intention to purchase organic food products.

As consumers' health consciousness and environmental preservation increases, so their demand for organic products increases (Xie et al., 2015; Dunn et al., 2014). Therefore, consumers' concerns regarding health and environmental safety are contributing factors to consumers' buying behaviours pertaining to organic products (Bizcommunity, 2017; Xie et al., 2015; Magnusson et al., 2001). This has led to an alteration in consumers' purchase patterns and behaviours (Lim et al., 2014).

## **Subjective Norms**

Subjective norms may be defined as the views of significant others that individuals use in an advisory capacity regarding how to perform or not to perform specific behaviours and motivations, in addition to a willingness to undertake or not undertake a particular task that is deemed important (Utami et al., 2017). Conner and Armitage (1998) define significant others as individuals whose preferences regarding a particular behaviour are held in high esteem by an individual. According to Al-Debei, Al-Lozi and Papazafeiropoulou (2013), individuals tend to behave in a manner that is not only accepted, but that is encouraged by the individuals they deem as significant others.

Although previous research has alluded to the fact that one of the pitfalls of the theory of planned behaviour is the significantly weak relationship that exists between subjective norms and intentions, Ajzen (1991) explains that intentions are significantly influenced by personal factors, including perceived behavioural control and attitudes. Ham et al. (2015) propose that the confirmed correlation between descriptive norms and intentions implies the possibility of the predictive power of this variable, which provides a strong motivation for further research in this area. Descriptive norms are defined as real-life activities and behaviours that individuals are engaged in. Furthermore, social norms constitute the perceptions of other individuals' opinions as to how an individual is expected to behave. As such, both social and descriptive norms combined to form the subjective norms factor (Unicef, 2021).

According to Hansen et al. (2018), an individual's identity is significantly associated with social consciousness towards behavioural intention with regards to the purchasing of organic foods. Ossowski (2001) indicates that social consciousness is the term used to describe a set of common characteristics that individuals that belong to a particular social environment may possess, which is reinforced in the consciousness of individuals through mutual suggestion and by the conviction that these characteristics are shared by other individuals within the same group. This may lead to consumers feeling pressured into identifying as being individuals who are not only environmentally friendly, but who are concerned with the safety and quality of the food products they purchase and ultimately consume.



## Perceived Behavioural Control

Organic products are indicated as being more expensive in comparison to traditional food products (Asare-Bediako, 2015). Furthermore, organic food products may be somewhat scarce in some locations, highlighting that although consumers may be able to afford to purchase organic products at their higher prices, they may find it difficult to source these organic products. In addition, the shorter lifespans associated with organic products may be deemed as a further obstacle due to these organic foods being free of preservatives.

According to Cherry (2021), individuals who possess positive attitudes towards engaging in a certain behaviour, may develop negative attitudes when experiencing an obstacle of some nature. Based on the findings of Azjen (1991), when consumers illustrate higher degrees of perceived behavioural control there is an increased likelihood that these consumers will behave in a certain manner. As such, the higher the degree of perceived behavioural control consumers have in relation to purchasing organic products, the more likely consumers will intend to purchase organic products.

## Generation Y

Given the subsequent purchasing patterns of consumers within the Generation Y cohort, evidence shows that these consumers are prone to investing in a lifestyle that is environmentally sustainable (Huh & Chang, 2017; Rogers, 2013). As such, these consumers are believed to be the forerunners of this subsequent environmental movement (Eastman & Liu, 2012). Based on the purpose for this study, Generation Y constitutes individuals born between 1986 and 2005, which as of 2023 constitutes individuals aged between 18 and 37 years. As of 2019, approximately 37 percent of the population within South Africa were deemed as Generation Y, with these consumers being dubbed as ecologically aware (Statistics South Africa, 2019; Eastman & Liu, 2012). Moreover, these consumers who possess a tertiary education, may be viewed as trendsetters and influencers, who are opinionated and more inclined to not only find employment, but secure above average earning power, contributing to significant increases in the disposable incomes of these consumers (Bevan-Dye & Surujlal, 2011). For these consumers it is important that the organisations they support are socially responsible, with a reputation of giving back to communities, being involved with environmental conservation and who endeavour to incorporate sustainability programmes into organisational operations (Huh & Chang, 2017; Smith, 2012; Thieme et al., 2015). As such, for organisations to succeed when targeting these consumers, it is imperative that they develop sustainable marketing strategies, while simultaneously developing a deeper understanding of these environmental Generational Y consumers, as these consumers represent both the future consumer and the future of the environmental movement (Taufique & Vaithianathan, 2018; Kanchanapibul et al., 2014). As such, the following hypothesis is proposed for this study:

*H: Organic food purchase behaviour is a seven-factor measurement model composed of health consciousness, environmental knowledge, environmental concern, attitude toward organic food, subjective norms, perceived behaviour control and purchase intention.*

## PROBLEM INVESTIGATED

The main purpose of this study was to validate an organic food purchase behaviour model amongst Generation Y consumers in South Africa. The research questions for the study are:

- Is the organic food purchase model a seven-factor structure?
- Does the proposed organic food purchase measurement model comply with the requirements to conduct a structural model?

## METHODOLOGY

### Research Design

With the use of a descriptive research design, this study employed the use of a single cross-sectional analysis. This involves the use of a data collection process where data is collected from recipients at a single point in time, as opposed

to a longitudinal study, which collects data from respondents more than once at different periods of time (Shukla, 2010:38).

## **Target Population**

The target population for this study were South African Generation Y consumers, aged between 18 and 35 years. The components of the target population included South African consumers via an IPSOS panel.

## **Sampling Technique and Data Collection**

For the purpose of this study, a convenience sampling technique was used. Employing the use of an internationally renowned market research company to gather the required data. Ipsos South Africa employs the use of a panellist data set consisting of roughly 40 000 participants from across Southern Africa. Given the extensive pool of respondents, the response rate is usually 100 percent of the sample size. The age parameters for this study were set to range between 18 and 35 over a three-day collection time period.

## **Sample Size**

The sample size for this study was based on previous studies undertaken Hansmann et al. (2020:1) (sample size: 620), Wang et al. (2020:1) (sample size: 518), Liang (2016:183) (sample size: 507) and Yin et al. (2010:1361) (sample size: 432). Consequently, the sample size of 500 respondents was deemed as viable for the purpose of this study.

## **Measuring Instrument and Data Collection Technique**

The data for this study was collected with the use of the research company Ipsos, who makes use of a FastFacts method to collect data. The FastFacts program requires respondents to undertake a structured self-administered online questionnaire. The measuring instrument employed was adapted from various published and validated research. The questionnaire was split into two sections namely Section A, which included all relevant demographical data and Section B, which contained the latent factors of the measurement model influencing Generation Y consumers' intent to purchase organic food products. To determine Generation Y consumers' level of health consciousnesses, environmental knowledge, environmental concern and attitudes towards organic food products, the validated scales of Tarkiainen & Sundqvist (2005), Mostafa (2007) and Yadav and Pathak (2016) were used, respectively. Generation Y consumers' subjective norms, perceived behaviour control and purchase intentions were measured using the scales of Fielding et al. (2008), Kim and Choi (2005) and Mostafa (2007) respectively. A Likert scale based on a six-point range was the chosen tool for capturing the responses of participants, where the scale ranged from strongly disagree (1) to strongly agree (6). Before respondents answered any questions, they were shown a cover letter which explained the purpose of the study, which provided all relevant contact information of the researchers and also assured participants that their information would remain anonymous and that all data would only be used in a statistical nature. With the use of The FastFacts questionnaire programme respondents were not able to move between sections of the questionnaire prior to completing all questions within each section. In relation to the data collection timeframe, the availability of the questionnaire was set at a maximum of three days for completion and once 500 responses were received the questionnaire was closed for any further responses. Given this timeframe criteria the response rate for this study was 100 percent.

# **RESULTS AND DISCUSSION**

This study made use of IBM's Statistical Package for Social Sciences (SPSS), version 28 to analyse the captured data. To affirm a valid research model various statistical techniques were employed to achieve this objective. The techniques used included outlier statistics, internal-consistency reliability, descriptive statistics, correlation analysis and structural equation modelling.

It is very seldom that a captured data set is 100 percent perfect in any research setting. As such, outlier statistics are performed to detect cases that appear relatively off from conventional cases. These cases may be either below or above the general populous' opinion (Pallant, 2013:127-128; Hair et al., 2010:65). Given the various methods

to detect these outliers, this study made use of the Mahalanobis statistic. As this study comprised seven variable constructs, any Mahalanobis statistic larger than 24.322 (chi-square value for  $\alpha=0.001$  at 7 df) was deemed an outlier and then subsequently deleted from the data set. The measuring constructs were set as independent variables and the case numbers were set as the dummy dependent variable. The results of the highest Mahalanobis distance statistics are presented in Table 1 below:

**Table 1: Outlier statistics**

	Case Number	Statistic		Case Number	Statistic	
Mahal. Distance	1	185	54.997	11	6	31.647
	2	128	54.997	12	434	30.616
	3	224	50.951	13	263	29.342
	4	400	46.663	14	152	28.284
	5	144	46.422	15	227	28.282
	6	341	43.162	16	413	27.280
	7	334	39.278	17	364	27.280
	8	179	35.575	18	408	26.790
	9	156	33.799	19	275	26.514
	10	291	33.547	20	160	24.860
				21	84	23.237

*Note: Bold cases were deleted.*

As Table 1 indicates, 20 of the top 21 Mahalanobis statistic values were greater than that of 24.322 (chi-square value for  $\alpha=0.001$  at 7 df). As such, these 20 cases exceeded the cut off level, they were subsequently deleted from the data set. This left 480 viable case responses for statistical analysis.

## Descriptive Statistics and Internal-Consistency Reliability

The makeup of the data sets characteristics was calculated using descriptive statistics. The Likert scale used a 6-point measuring system to capture the responses. The reliability of the proposed model was tested using the Cronbach alpha statistic. Cronbach alpha values above 0.70 indicates good reliability, whilst values between 0.80 and 0.90 represent excellent reliability. Values below 0.50 are considered unacceptable (Zikmund & Babin, 2013:257; Malhotra, 2010:319). The results of the descriptive statistics and Cronbach alpha analysis can be found in Table 2.

**Table 2: Reliability analysis and descriptive statistics**

	N	Means	SD	Items (n)	Cronbach alpha
Health consciousness	480	4.768	.975	3	0.844
Environmental knowledge	480	4.633	.841	5	0.844
Environmental concern	480	5.249	.671	3	0.701
Attitude toward organic food	480	4.938	.735	4	0.891
Subjective norms	480	4.795	.885	3	0.783
Perceived behaviour control	480	5.081	.705	5	0.808
Purchase intention	480	4.780	.879	3	0.882

The results of the descriptive analysis show that all constructs displayed means above 4.00. This finding indicates favourable inclinations towards each measuring constructs for Generation Y consumers in South Africa. The proposed measuring constructs all obtained Cronbach alpha values above 0.70, indicating a range of good to excellent reliability amongst the constructs. Attitudes towards organic food products received the highest value (0.891), whilst the lowest (0.701) was achieved by environmental concern of Generation Y consumers. Therefore, it may be inferred that the proposed measuring models constructs have good to excellent reliability and therefore, the measuring instrument has internal-consistency reliability.

## Correlations Analysis

A Pearson product-moment coefficient correlation matrix was constructed to establish nomological validity amongst the constructs as well as to ensure that no multicollinearity is present in the measuring constructs. The results are depicted in Table 3 below.

**Table 3: Correlation matrix**

Constructs	1	2	3	4	5	6	7
Health consciousness	1						
Environmental knowledge	.631**	1					
Environmental concern	.539**	.404**	1				
Attitude toward organic food	.440**	.566**	.384**	1			
Subjective norms	.489**	.602**	.214**	.543**	1		
Perceived behaviour control	.484**	.635**	.513**	.615**	.529**	1	
Purchase intention	.604**	.592**	.346**	.502**	.454**	.572**	1

*\*\*Correlation is significant at the 0.01 level (2-tailed)*

The results from Table 3 show that all measuring constructs have a statically significant positive correlation coefficient amongst each other at the  $p = 0.01$  level. Furthermore, these findings are indicative of the presence of nomological validity in the data set (Malhotra, 2010:321). As no coefficients exceeded 0.90 it may be safe to presume that no multicollinearity is present between the variables in the data set. Thus, with evidence of nomological validity and the absence of multicollinearity, the proposed model of organic food product intentions amongst Generation Y consumers in South Africa may be tested using structural equation modelling.

## Structural Equation Modelling Measurement Model Analysis

A seven-factor measurement model was specified and included the following factors, namely health consciousness (F1 – three indicators), environmental knowledge (F2 – five indicators), environmental concern (F3 – three indicators), attitude toward organic food (F4 – four indicators), subjective norms (F5 – three indicators), perceived behaviour control (F6 – five indicators) and purchase intention (F7 – three indicators). To identify the model, the first loading of each factor was set at a fixed value of 1.0. This led to 351 sample moments with 73 parameters to be estimated. Therefore, 278 degrees of freedom (df) outlined the over-identified model. The chi-square was significant at 718,027 with a probability level equal to 0.000. The results of the measurement model are tabulated in Table 4 below.

**Table 4: Estimates for proposed measurement model**

Latent factors	Std. loading estimates	Err variance est.	CR	AVE	$\sqrt{\text{AVE}}$
Health consciousness (F1)	0.817	0.378	0.783	0.645	0.803
	0.868	0.348			
	0.733	0.552			
Environmental knowledge (F2)	0.699	0.550	0.845	0.523	0.723
	0.739	0.544			
	0.796	0.467			
	0.672	0.663			
Environmental concern (F3)	0.703	0.500	0.706	0.445	0.667
	0.631	0.556			
	0.660	0.346			
	0.708	0.320			

	0.844	0.233			
Attitude toward organic food (F4)	0.828	0.254	0.894	0.678	0.823
	0.838	0.285			
	0.783	0.421			
Subjective norms (F5)	0.783	0.503	0.795	0.568	0.753
	0.609	0.461			
	0.849	0.371			
Perceived behaviour control (F6)	0.604	0.667	0.816	0.471	0.686
	0.675	0.455			
	0.710	0.323			
	0.751	0.383			
	0.683	0.519			
Purchase intention (F7)	0.859	0.245	0.884	0.717	0.846
	0.866	0.241			
	0.814	0.325			

No problematic estimates were distinguished in the proposed measurement model as can be seen in Table 4. The relationship between each indicator and latent factor were statistically significant. In terms of reliability all seven of the latent factors exceeded the 0.70 threshold for composite reliability, this asserts reliability of the model. All AVE values were above 0.50 indicating convergent validity, except for environmental concern and perceived behaviour control, this may be attributed to the large size of the SEM model. Furthermore, both constructs are closely approaching the 0.50 mark, hence no cause for real concern (Malhotra, 2010: 734). With reliability and convergent validity asserted for the model, the following step was to inspect the model fit indices of the proposed model. Always susceptible to sample size, the significant chi-square was calculated. However, alternative fit indices proved to be indicative of a good model fit. The proposed measurement model included the following indices, namely RMSEA = 0.057, SRMR = 0.051, IFI = 0.936, TLI = 0.924 and CFI = 0.935. All fit indices were above the recommended 0.90 and both the SRMR and RMSEA computed values below 0.08, indicating that the measurement model achieved good model fit (Hair *et al.*, 2014:631; Malhotra, 2010:732). The results show that the proposed model of organic food purchase intentions of Generation Y consumers in South Africa is a seven-factor structure comprising of the aforementioned factors. Therefore, it may be inferred that a structural model may be implemented for analysis.

## Conclusion

As the constant threat of mankind persists on the environment, humans will strive to better their personal self-health. This is clear in their product purchase intent for organic food products. This pro-environmental purchase intent may alleviate some environmental stress from the environment and natural ecosystems. The purpose of this study was to validate a potential organic food product purchase measurement model in the context of the South African Generation Y consumer. The future aim of this model is to predict the organic food purchase intentions of the Generation Y cohort. The results indicate that the proposed organic food product model is a seven-factor model comprising health consciousness, environmental knowledge, environmental concern, attitude toward organic food, subjective norms, perceived behaviour control and purchase intention. The model presented acceptable reliability and adequate fit. As such, the hypothesised model includes seven factors, namely health consciousness, environmental knowledge, environmental concern, attitude toward organic food, subjective norms, perceived behaviour control and purchase intention. Moreover, the proposed model is suitable to perform a structural equation model.

## Future Research

Based on the findings of this study, it is evident that there is a need to validate the structural model and subsequently test the structural model. The structural model will explore the intentions of Generation Y consumers regarding organic food purchases by measuring the relationships as set out in the literature review of this study. Once the structural model has been validated, researchers can use the proposed model to predict the purchase intentions of Generation Y consumers pertaining to organic food products. This may be utilised for organisations seeking to tap into a new product market and/or explore inventive profit-making structures.

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# SERVICE QUALITY AND CUSTOMER SATISFACTION IN PUBLIC BUS OPERATIONS IN ZAMBIA

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## ABSTRACT

*Public transportation systems are critical levers for sustainable urban development; hence, the need for empirical evidence to inform policies and interventions. Zambian transport policy 2019 shows that the transport sector is critical in facilitating economic and social activities. However, the absence of research in this area is one of the challenges highlighted in the transportation policy of 2019, and the advantageous location of Zambia remains unexploited. Given that Zambia is a landlocked nation, road transportation dominates. Moreover, about 46 per cent of the Zambian population lives in urban areas and depends on daily transit by road, mainly through inter-city buses. Therefore, the study investigates the relationship between customer satisfaction and service quality factors (tangibility, reliability, assurance, empathy, and responsiveness) of public bus operations. A quantitative cross-section survey design was used. Primary data from 262 students at a Zambian Public University. Descriptive statistics and multiple regression analysis were conducted. Correlation analysis shows that students' satisfaction was highly correlated with all independent variables, tangibility, reliability, assurance, empathy and responsiveness. Furthermore, after accounting for the control variables, a two-stage hierarchical multiple regression was used to analyse the association between the set of independent variables and the dependent variable. The final model shows that reliability did not statistically significantly affect student satisfaction with transport services. Furthermore, assurance, empathy, tangibility and responsiveness were statistically significant. The findings reveal the key antecedents for influencing public transport users' satisfaction from students' perceptions. The study also reveals critical elements of service quality that transport policymakers, and owners can leverage to improve service quality amidst heightened competition in the sector.*

**Keywords:** public transport, service quality, customer satisfaction.

## INTRODUCTION

Transporting people and goods via open-access group transit methods is referred to as public transportation. Most of the time, it is run according to a timetable on predetermined routes, and for each trip, a listed fare is charged (Banda, 2020). According to Amponsah and Adams (2016), the transport business has changed significantly over the past few decades, especially in the public sector. The mobility requirements of commuters living in urban and metropolitan areas are driven by a desire to engage in various activities triggered by physiological, psychological, and economic needs. Despite the critical role that public transport plays in metropolitan areas, its services are usually insufficient to fulfil demand. Even when they are, they are typically riddled with inefficiencies and, as a result, low productivity (Daramola, 2022).

Zambia is a landlocked country situated in Southern Africa. It has an overall land mass of 752 61A square km and an estimated population of 19 million people, which is projected to increase to 27 million people by 2035 (Ministry Transport & Communication, 2019). As a landlocked country, people depend more on Road Transportation than Rail due to the poor services offered and the considerable cost and access limitations associated with Air Transport (Sikazwe et al., 2020). Over 46 per cent of the Zambian population lives in urban areas, and their daily transit depends on inter-city buses (Ministry of Transport & Communication, 2019). However, the service offering is

relatively low quality and more expensive than regional standards (Ibid). Inter-city bus transport system plays a vital role in the mobility of travellers parallel to other modes of travelling because it aims to meet the need of passengers with ease of mobility (Rehman *et al.*, 2020). As an essential part of urban transport, bus service quality is an important factor that affects the choice of passenger travel modes, and there is, therefore, a need for bus service operators to provide better mobility to meet the satisfaction and perceived value of passengers (Ojo, 2019).

## Context

Following the liberalisation and privatisation of the Zambian economy in 1994, the state-owned urban bus company of Zambia (UBZ) was remarkably transformed into a private sector company (Ministry Transport & Communication, 2019). The liberalised economy operators emerged and have taken over the business successfully amidst a competitive business environment through different service offerings. Zambia's transport policy of 2019 shows that the transport sector plays a critical role in facilitating economic and social activities (Ministry of Transport and Communication, 2019). However, the Ministry argues that the absence of research in this area is one of the challenges highlighted in the transportation policy of 2019, and the advantageous location of Zambia remains unexploited (Ministry Transport & Communication, 2019). A rise in the provision of transport services following liberalisation does not necessarily translate into increased satisfaction (Sikazwe *et al.*, 2020). Therefore, Daramola (2022) argues that transport research should switch from a purely theoretical examination to an empirical approach to provide valuable tools to raise service quality.

According to Tiglaio *et al.* (2020), the quality of public transport is the discrepancy between the expectations of the passenger and the actual service received. Similarly, Ojo (2019) argues that service quality controls business operations to guarantee complete customer satisfaction on all fronts. Public transit differs from the manufacturing sector, where production has a distinct entry. The primary cause is the transportation service's intangibility, perishability, and interdependence. The qualities should therefore reflect the goals and consumer pleasure. Therefore, it highlights and explains the link between what a company does regarding its products and services and how its customers react (Fellsson & Friman, 2012). Regarding public transportation, satisfaction is defined as a customer's overall experience with a service compared to pre-defined expectations (Lieropa & El-Geneidya, 2016). In particular, improved customer satisfaction can potentially retain and attract new customers (Zefreh *et al.*, 2019). Therefore, improving service quality to increase customer satisfaction could be a competitive tool for bus service operators (Nguyen, 2019; Ibrahim & Borhan, 2020).

The critical market for long-distance buses in Zambia is the students from various higher learning institutions, which use this mode of transport frequently during school term breaks. Thus, this study aims to investigate the service quality offered by long-distance buses from the students' perspective at a Public University in Zambia. The research is motivated by limited studies on service quality and customer satisfaction with public buses highlighting a contextual deficiency that must be addressed. *Therefore, the research investigates transport service quality of public service buses and perceived customer satisfaction using the SERVQUAL dimensions of tangibility, reliability, assurance, responsiveness and empathy.*

## LITERATURE REVIEW AND HYPOTHESES

### Reliability and Customer Satisfaction

Service reliability includes the ability of the transport system to adhere to a schedule and a consistent travel time (Alam & Mondal, 2019). Prior studies have revealed that reliability is mainly related to schedule adherence and reduced travel time (Basfirinci & Mitra, 2015). Murad *et al.* (2019) studied the influence of service quality on customer gratification in Minicab Taxi services in Ghana. They found that comfort was the most highly correlated factor that impacted customer gratification, and affordability was the least influential factor. Furthermore, using structural equation modelling, Tiglaio *et al.* (2020) showed that reliability significantly affects satisfaction among paratransit users in Metro Manila. Against the preceding, the research hypothesises:

*H<sub>1</sub>: Reliability is positively associated with customer satisfaction in public service buses.*

## Assurance and Customer Satisfaction

Assurance is employees' knowledge and courtesy and ability to inspire trust and confidence (Laisak et al., 2021; Nadzmi et al., 2021). Previous studies examining the influence of service quality dimension and customer satisfaction revealed that assurance positively influenced customer satisfaction (Pakurár *et al.*, 2019). In another research, Nadzmi et al. (2021) focused on the relationship between service quality, fares, and safety with customer satisfaction of ferry service in Indonesia. The study revealed that assurance and fares positively impact customer satisfaction. In Ethiopia, similar studies showed that the commuters were significantly satisfied with the assurance dimension consisting of trustworthiness, courtesy, friendly approach, staff knowledge and a sense of safety among commuters (Zewdie, 2021). In India, Naveen and Gurtoo (2020) reiterate that luggage assurance significantly influences overall satisfaction with intercity bus transport. Furthermore, Sam et al. (2018) demonstrated how assurance is emphasised as a crucial aspect of the service quality of bus transportation in Ghana. Therefore, the research hypothesises that:

*H<sub>2</sub>: Assurance is positively associated with customer satisfaction in public service buses.*

## Tangibility and Customer Satisfaction

Tangible focuses on the visual appeal of physical facilities, equipment, employees and communication materials (Parasuraman et al., 1985). This means that customers will assess the physical amenities, such as seats, the spaciousness of the bus for passengers and ample legroom. Ojo (2014) argue that tangibility significantly influences customer satisfaction in public transport services. For instance, a service quality study of bus transit in Scotland revealed that reliability, assurance, and tangibility influenced customer satisfaction (Laisak et al., 2021). However, the study found only the tangibility dimension as the significant dimension that affected customer satisfaction (Laisak et al., 2021). Similar studies have evaluated service quality in the railway, public transport, and airline industries, converging that tangibility significantly influences customer satisfaction (Basfirinci & Mitra, 2015; Alam & Mondal, 2019; Chuenyindee et al., 2022). Therefore, we hypothesise that:

*H<sub>3</sub>: Tangibility is positively associated with customer satisfaction in public service buses.*

## Empathy and Customer Satisfaction

Empathy is the ability to provide clients with focused, tailored attention. According to Mulenga and Lusaya (2019), empathy is crucial in understanding and upholding positive customer service relationships. As a result, empathy aims to comprehend and share the experiences of others. Additionally, Naveen and Gurtoo (2020) contend that the dimension of empathy is favourably connected with general happiness with intercity bus transportation based on a study conducted in India. Additionally, Etuka (2021) examined service quality and passengers' satisfaction with public road transportation in Nigeria and found that empathy significantly affected passengers' satisfaction with public road transportation. Similar findings are reported in Ethiopia; for example, Bogale and Gizat (2021) investigated the service quality and customer satisfaction in Addis Ababa Light Rail Transit. The study showed that customers were fairly satisfied with assurance and responsiveness, while they were dissatisfied with affordability, tangibility, reliability, and empathy. Consequently, this study postulates as follows:

*H<sub>4</sub>: Empathy is positively associated with customer satisfaction in public service buses.*

## Responsiveness and Customer Satisfaction

Responsiveness includes attributes such as effective communication between the service providers and the customers, efficient service and employees' readiness to assist customers' service (Bogale and Gizat, 2021). Previous studies reveal that responsiveness significantly influences customer satisfaction in public transportation. In another research conducted in Indonesia, Ulkhaq *et al.* (2019) examined the service quality of bus rapid transit using the SERQUAL instrument. They concluded that responsiveness had the second highest customer expectation, with the tangibility dimension being the first. In Zambia, Mulenga and Lusaya (2019) investigated the relationship between service quality and customer satisfaction in the railway industry and showed that responsiveness greatly influenced customer satisfaction. Furthermore, Mushi (2013) conducted research to assess the influence of service quality on customer

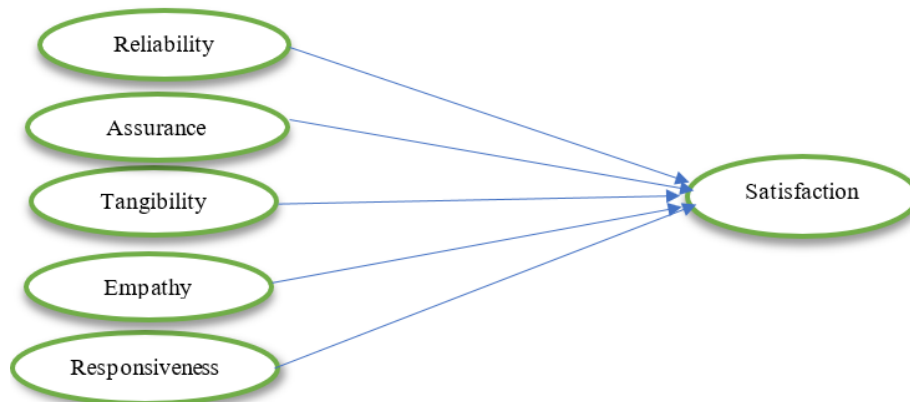
satisfaction in the transport industry in Tanzania, focusing on passenger transport, taking into Dar Express Bus service as a case study. Responsiveness significantly affects passenger satisfaction and is a good predictor of customer satisfaction. Therefore, this study hypothesises as follows:

*H<sub>5</sub>: Responsiveness is positively associated with customer satisfaction in public service buses.*

## SERVQUAL Model

The SERVQUAL model is widely used to measure service quality and customer satisfaction in several fields (Murad *et al.*, 2019). It comprises five dimensions of the service quality construct: tangibility, reliability, responsiveness, assurance and empathy (Parasuraman *et al.*, 1985). It is a multi-scale where the quality of service is measured from the customer or consumer's perspective by treating quality as a gap between the customer's expectations and perceptions (Parasuraman *et al.*, 1988). Applying the SERVQUAL method to assess service quality allows researchers to identify weak quality features and dimensions. It provides a basis to set a direction for improvement activities (Knop, 2019). The SERVQUAL approach has two elements-expectation and perception. Public transport is considered a service for demonstrating characteristics similar to a service. Consumers' subjective views regarding the superiority of a product or service are reflected in the perceived quality (Naveen & Gurtoo, 2020). SERVQUAL model enables researchers to identify and measure the elements of customer expectations in such a psychological state and views about how a service can be captured, analysed and understood (Ulkhaq, 2019; Laisak, 2021), as demonstrated in Figure 1.

**Figure 1: SERVQUAL Model conceptual framework**



## METHODS

The research used a cross-sectional quantitative research design to test the hypotheses established for the investigation. The service quality dimensions used in the SERVQUAL model created by Parasuraman *et al.* (1988) for measuring service quality were adapted for the study. While several models are used to study customer satisfaction, the SERVQUAL model has been widely used and validated (Parasuraman *et al.*, 1985, 1988). Primary data were collected from public university students who frequently use public buses during their school term breaks. Since they are frequent travellers, they were better placed to provide personal experiences of bus services. The five quality aspects of the bus service, namely, tangibility, assurance, reliability, empathy and responsiveness, formed the focus of the questionnaire. 262 questionnaires were successfully returned and analysed using multiple regression analysis.

## Questionnaire Design

The questionnaire had 41 questions derived from earlier research conducted in Ghana (Amponsah & Adams, 2016) and Japan (Sukhov *et al.*, 2021). The questionnaire comprised 22 common questions on the five aspects of the quality of the transport service. There was also one item regarding general customer satisfaction ("I am satisfied with overall public transport experience of long-distance buses"). Final item: "With my level of satisfaction, I would recommend this transport service to my peers." All of the items were scored using a Likert scale with a maximum of five points

(1 being "strongly disagree" and 5 being "Strongly Agree"). Before wide distribution, the questionnaire underwent a pilot test to ensure the questions were understandable and appropriately rephrased when required.

## RESULTS

### Response Rate and Demographic Information

A total of 262 responses were obtained from the 1000 questionnaires distributed online to students through a Google form. This represents a response rate of 26.2, comprising a total of 141 males and 121 females. Demographic information shows that the majority of respondents were 4<sup>th</sup>-year students (75, 28.6%), followed by 2<sup>nd</sup> years (62, 23.7%) and the least were 5<sup>th</sup>-year students (17, 6.5%). Furthermore, most respondents, (122; 47%), are from the Copperbelt and (97; 37%), are from Lusaka province, with the rest from other provinces representing 43 (16%), as shown in Table 1 below:

**Table 1: Summary of the demographics**

	<b>n</b>	<b>%</b>
<b>Gender</b>		
Male	141	53.8
Female	121	46.2
<b>Year of Study</b>		
1	55	21.0
2	62	23.7
3	53	20.2
4	75	28.6
5	17	6.5
<b>School</b>		
Business	95	36.3
Mathematics and natural sciences	61	23.3
Humanities	29	11.1
Built environment	22	8.4
Others	55	21
<b>Province</b>		
Copperbelt	122	47
Lusaka	97	37
Other provinces	43	16

### Factor Analysis

Factor analysis was conducted to determine the unidimensionality of constructs and whether the independent variables were valid. In particular, exploratory factor analysis using principal component analysis and Varimax rotation was conducted. The Kaiser-Meyer-Olkin measure of sampling adequacy was .927 (minimum value required 0.60), and Bartlett's Test of Sphericity was significant (Approximate Chi-square = 3394.917, df = 435, p = 0.000), demonstrating that the assumptions for factorability of the data were met. Table 2 shows the factor loadings that result in five distinct dimensions of service quality. Except for reliability, all Cronbach's Alpha values were above the required minimum of 0.70 (Field, 2009; Hair et al., 2014).

**Table 2: Factor analysis**

	Component (Variables)					
	1	2	3	4	5	6
<b>Reliability <math>\alpha=.60</math></b>						
R1	.542					
R3	.534					
R4	.539					
R5	.555					
<b>Assurance <math>\alpha=.788</math></b>						
A1		.638				
A2		.645				
A3		.527				
A4		.570				
A5		.564				
<b>Tangibility <math>\alpha=.824</math></b>						
T1			.623			
T2			.677			
T3			.694			
T4			.576			
T5			.659			
T6			.480			
<b>Empathy <math>\alpha=.743</math></b>						
E1				.686		
E2				.704		
E3				.633		
E4				.464		
<b>Responsiveness <math>\alpha=.754</math></b>						
RSP1					.420	
RSP2					.474	
RSP3					.597	
<b>Satisfaction <math>\alpha=.877</math></b>						
CS1						.576
CS2						.636
CS3						.569
CS4						.688
CS5						.786
CS6						.640
CS7						.689
CS8						.567

*Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization.*

## Correlations and Descriptive Statistics

Table 3 presents the correlations, means and standard deviations of the dependent variables (satisfaction) and independent variables (reliability, assurance, tangibility, empathy and responsiveness). Firstly, the dependent variable is significantly correlated with all the independent variables (.226 to .419,  $p < .001$ ). Additionally, the intercorrelations among independent variables are below .80 (.497 to .640,  $p < .001$ ). The results show that multicollinearity is not a significant problem (Hair et al., 2014).

**Table 3: Correlations and descriptive statistics**

		Mean	Std. Deviation	1	2	3	4	5	6
1	Satisfaction	3.1131	.81365	1					
2	Reliability	3.2824	.7715	.481**	1				
3	Assurance	3.1145	.821	.585**	.585**	1			
4	Tangibility	2.9103	.8533	.597**	.535**	.599**	1		
5	Empathy	3.4342	.8335	.573**	.509**	.529**	.538**	1	
6	Responsiveness	3.2621	.8705	.608**	.497**	.617**	.552**	.640**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

## Hierarchical Multiple Regression Analysis

Table 4 demonstrates how the dependent variable satisfaction was modelled against the independent variables, reliability, assurance, tangibility, empathy, and responsiveness. The control factors were gender, age group, year of study, school, and province. Multicollinearity was not a problem, according to statistics on collinearity, as evidenced by the variance inflation factor (VIF) for all the variables being less than 10 (Field, 2009). Furthermore, the Durbin-Watson value was 1.922, which indicates that there are no autocorrections that can distort the results in the regression analysis (Hair et al., 2014).

A two-stage hierarchical multiple regression was used to analyse the association between the set of independent variables and the dependent variable after accounting for the effects of the control variables. First, Model 1 displays the base model using the gender, age group, study year, school, and provincial control variables as predictors of satisfaction. Only one year of study showed a significant but negative relationship with satisfaction ( $t = -2.133$ ,  $p < .05$ ) and R square change of .023, explaining 2.3% of the variability in satisfaction. In model 2, all the independent variables are added in addition to the control variables, and a significant combination effect is observed. All variables except reliability a significant and positively associated with satisfaction. Assurance ( $t = 2.862$ ,  $p < .01$ ), Tangibility ( $t = 4.136$ ,  $p < .001$ ), Empathy ( $t = 3.005$ ,  $p < .005$ ) and Responsiveness ( $t = 3.365$ ,  $p < .005$ ). Furthermore, reliability did not show any significant effect ( $t = .609$ ,  $p = .543$ ). The total variance explained in Model 2 as a whole is 51.8%.

**Table 4: Hierarchical multiple regression and mediation analysis**

	Model 1		Model 2		Collinearity Statistics	
Control Variables	t	Sig.	t	Sig.	Tolerance	VIF
(Constant)	11.144	.000	1.65	.100		
Gender	-.943	.347	-.069	.945	.855	1.169
Age group	1.065	.288	.401	.689	.735	1.360
Year of Study	-2.133	.034	.055	.956	.765	1.307
school	-.463	.644	-1.801	.073	.977	1.023
Province	.208	.836	.204	.839	.995	1.005
Reliability			.609	.543	.556	1.798
Assurance			2.862	.005	.461	2.168
Tangibility			4.136	.000	.510	1.959
Empathy			3.005	.003	.496	2.016
Responsiveness			3.365	.001	.462	2.165
R	.151		.720			
R Square	.023		.518			
R Square Change	.023		.495			
F	1.195		27.003			
F Change	1.195		51.628			
Durbin-Watson						1.922

## Discussion and Conclusions

The study investigated the relationship between service quality factors (tangibility, reliability, assurance, empathy, and responsiveness) and customer satisfaction using a sample of students from a public university in Zambia. Correlation analysis shows that students' satisfaction was highly correlated with all independent variables (.226 to .419,  $p < .001$ ). Additionally, after accounting for the control variables, a two-stage hierarchical multiple regression was used to analyse the association between the set of independent variables and the dependent variable. The final model shows that reliability ( $t=.609$ ,  $p=.543$ ) was not statistically significant. The findings are consistent with Bogale and Gizat's (2021) findings on the service quality dimensions and customer satisfaction, which indicated that reliability, tangibility and empathy did not significantly affect customer satisfaction in the light rail industry. This is, however, contrary to other prior studies which significantly associate reliability with customer satisfaction. For example, Tiglaio et al. (2020) found that reliability had a significant effect on satisfaction among paratransit users in Metro Manila.

Furthermore, other variables show a significant and positively associated with satisfaction. For example, assurance ( $t=2.862$ ,  $p<.01$ ), tangibility ( $t=4.136$ ,  $p<.001$ ), empathy ( $t=3.005$ ,  $p<.005$ ) and responsiveness ( $t=3.365$ ,  $p<.005$ ). The total variance explained in Model 2 as a whole is 51.8%. The findings are consistent with similar prior studies within different transport subsectors. For example, in a study on public utility vehicles, Chuenyindee et al. (2022) found that COVID-19 protocols, tangibility, and assurance factors all had a substantial impact on public utility vehicle service quality and, consequently, customer satisfaction. Furthermore, Ulkhaq et al. (2019) reiterate that responsiveness had the second highest customer expectation, with the tangibility dimension being the first in the Bus Rapid Transit study. Additionally, Nadzmi et al. (2021) revealed in their study that Assurance and Fares have a positive impact towards customer satisfaction. Similarly, Naveen (2020) also argues, based on the study in India, that the dimension of empathy is positively associated with overall satisfaction with intercity bus transport.

The findings reveal the key antecedents for influencing public transport users' satisfaction from students' perceptions. The study suggests critical elements of service quality that transport policymakers and owners can leverage to improve service quality amidst heightened competition in the sector. Despite the above insightful findings, the research acknowledges some limitations. For example, the study was restricted to public passenger buses only. Therefore, future research may extend the SERQUAL model to cargo transport and explore the satisfaction of industrial clients.

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# EXPLORING ONLINE SHOPPING EXPERIENCES OF LOW-INCOME CONSUMERS IN AN EMERGING E-RETAILING MARKET

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## ABSTRACT

*This qualitative study sought to differentiate between low-income customers' intentions towards online and in-store purchases of FMCG retailers/brands in South Africa. Additionally, low-income consumers' perceptions of their holistic shopping journey with FMCG retailers/brands were evaluated. To achieve these objectives, in-depth interviews were conducted with low-income consumers with experience of online and/or in-store purchases of FMCG retailers/brands under a from a large study conducted following an exploratory-descriptive research design where literature review identified a deficit of knowledge which led to the justification for further research. The data collected from these interviews were analysed using to identify patterns and themes related to low-income consumers' shopping intentions and perceptions. The findings reveal that low-income consumers opt for online shopping because of the convenience it offers and the time and travel cost savings it provides. Low-income consumers also appreciate the mood benefits of online shopping, such as avoiding queues and crowds, primarily because of health concerns such as COVID-19. Regarding low-income customers' perceptions of their holistic shopping journey with FMCG retailers/brands, the study found that they were familiar with, trusted, and loyal to the retailers/brands they purchased. This study provides important insights into the online shopping behaviour of low-income consumers. This offers valuable information for FMCG retailers/brands to better understand this market segment. Retailers/brands can develop strategies to improve this consumer group's overall shopping experience by recognising the factors influencing low-income consumers shopping decisions and experiences.*

**Keywords:** online shopping, low-income consumer, fast-moving consumer goods, fast moving consumer goods, emerging markets.

## INTRODUCTION

Online shopping has become an integral part of the global retail industry due to the explosive growth facilitated by the rapid development of the Internet and the increased use of mobile devices (Stiehler-Mulder & Cunningham, 2022). With the continued digitisation of modern life, powered by the exponential mutating technologies of the fourth industrial revolution, retail consumers worldwide can now benefit from the advantages of online shopping (Alzoubi, Alshurideh, Kurdi, Alhyasat, & Ghazal, 2022). Furthermore, the trend towards online shopping is not limited to developed countries. Online shopping is increasing in emerging markets, driven by the proliferation of affordable smartphones and improved Internet connectivity. Additionally, Furthermore, the COVID-19 outbreak has hastened the acceptance of e-commerce, even among low-income consumers with limited access to online retail options (Alzoubi, Alshurideh, Kurdi, Alhyasat, & Ghazal, 2022; Eger, Komárková, Egerová, & Mičík, 2021; Salvietti, Ziliani, Kepler, Linz, Ieva, & Ranfagni, 2022; Trude, Lowery, Ali, & Vedovato, 2022).

The growth in online shopping in both developed and emerging markets has led to a significant increase in global e-commerce sales. E-commerce encompasses various products, including electrical and electronic devices, food and grocery items, fashion items, furniture, and footwear. Among these, the electrical and electronics, food and groceries, and fashion industries dominate in market value, comprising 24.5%, 20.2%, and 14.9%, respectively (Marketline, 2021b). According to Chevalier (2022), global e-commerce sales have steadily increased since 2014. Global sales are predicted to reach US \$ 7.3 trillion by 2025. Statista (2023) adds that the global e-commerce market will generate approximately US\$7.22bn in 2023 and grow at an annual rate of 12.54%, resulting in a market volume

of US\$11.58bn by 2027. Most revenue is expected to come from China, which is projected to have a market volume of US\$1,487.00bn in 2023. By 2027, eCommerce users are expected to reach 37.56m, with user penetration rising from 49.4% in 2023 to 59.7% in 2027. The average revenue per user is expected to be US\$242.00. The International Trade Administration (ITA) (2019) reported a substantial increase in South African online sales, with a growth rate of 66% from 2019 to 2020, resulting in a total revenue of over \$1.8 billion (ZAR30 billion). After data and airtime, the primary categories for e-commerce products in South Africa are clothing and apparel, followed by online entertainment. According to Thenga (2020), the notable change in consumer behaviour and expectations resulting from the COVID-19 pandemic is projected to trigger a 150% increase in e-commerce transactions in South Africa to reach R225bn by 2025.

Although several studies have investigated online shopping in South Africa (Pentz, du Preez, & Swiegers, 2020; Thenga, 2020), there are limited studies on low-income consumers and their online shopping behaviour. In South Africa, low-income consumers form a significant portion of the population (Stiehler-Mulder & Cunningham, 2022). Stiehler-Mulder and Cunningham (2022) assert that the rise of omnichannel retailing among low-income consumers, as reported by NielsenIQ (2021), presents a predicament for FMCG retailers. This is because there is insufficient research on the decision-making patterns of consumers in emerging markets, especially those from lower income brackets. The emphasis of current retail related research is mainly on developed nations, which can hinder the relevance of the findings in emerging settings where unique challenges exist (Stiehler-Mulder & Cunningham, 2022). Thus, understanding the shopping behaviour of low-income consumers from an emerging market can help retail businesses tap into this market's potential. By catering to the needs and preferences of low-income consumers in emerging markets such as South Africa, retailers can develop new offerings to meet the changing needs of this market. Prahalad (2004) concurs with Anderson and Markides (2007), and Mahajan and Banga (2005) that serving low-income consumers can be very profitable.

In view of the above, omnichannel platforms in the FMCG industry requires further investigation. However, a significant trend is an increase in low-income consumers engaging in omnichannel retailing (NielsenIQ, 2021). Salvietti et al. (2022) explain the omnichannel concept as a progression in retailers' approaches, characterised by the shift from relying on a singular channel to incorporating multiple channels and touchpoints.

## **AREAS OF EXPLORATION**

This study was aimed at exploring the online shopping experiences of low-income consumers in South Africa. To achieve the above main area of exploration, the following subareas of exploration were formulated:

- AoE 1: To distinguish between low-income customers' intentions to make online and/or in-store purchases at FMCG retailer/brands.
- AoE 2: To evaluate low-income customers' perceptions of their holistic shopping journey with FMCG retailers/brands.

Given these areas of exploration, it is essential to review the literature related to these two key aspects to understand the relationship between online shopping and low-income consumers. This literature explores relevant research and combs through crucial findings, highlighting the various factors that impact the online shopping behaviour of low-income consumers.

## **LITERATURE**

### **Online Shopping**

Makhitha and Ngobeni (2021) define online shopping as a form of e-commerce that enables customers to purchase goods or services directly from a seller through the Internet, using a web browser or mobile application. Compared to traditional shopping, online shopping is considered more convenient and offers consumers access to a diverse range of products. To find a specific product, customers can either visit a retailer's website or use a shopping search engine

to compare pricing and availability across different e-retailers. In South Africa, online shopping is a growing phenomenon (Pentz et al., 2020), but it is still in its early stages of development (Febel, 2015). A factor contributing to the growth in online shopping in South Africa is that Internet adoption has increased and is widely accessible by most South African consumers (Makhitha & Ngobeni, 2021). Currently, customers can access various online shopping devices, including desktop computers, laptops, tablets, and smartphones. Despite the growth and popularity of online shopping, the online shopping experiences of low-income consumers are yet to be fully explored from an emerging market perspective. As online shopping continues to experience significant growth, researchers have recognised the need to investigate the various factors that influence both companies and consumers in the online buying process (Tandon et al., 2018:58). In South Africa, statistics demonstrate that the number of online shoppers has increased, which highlights the importance of examining this phenomenon (eShopWorld, 2017). Additionally, the growth in the number of online retailers in South Africa, such as BidorBuy, Takealot, and Zando, among others, has been notable (MoneyToday, 2019).

## Low-Income Consumers

Low-income consumers present a potentially lucrative market for online retail shopping. Roy, Debnath, Mitra, and Shrivastava (2021) classify individuals who cannot afford “an adequate and socially acceptable standard of living as low-income consumers”. Despite facing financial hardships, this segment of consumers has significant buying power and is highly populous, as seen in successful examples such as Unilever in India and Vodafone in Kenya (Arunachalam, Bahadir, Bharadwaj, & Guesalaga, 2020). Arunachalam et al. (2020) contend that low-income consumers are not considered a significant target market. However, there is limited market research investment to comprehend their behaviour. Nonetheless, the authors argue that grasping the perceptions and challenges of low-income consumers is the essential factor in unlocking growth within this market. In emerging economies like South Africa, it is vital to address the unique needs and challenges of low-income consumers because they represent a significant portion of the population. Their limited purchasing power makes them sensitive to price changes and less likely to engage in discretionary spending. Retailers who understand their shopping experiences can identify potential areas for growth and development.

By addressing the challenges faced by low-income consumers, retailers can tap into this vast and largely untapped market, expand their customer base, and drive economic growth. To achieve this, it is essential to investigate the shopping experiences of low-income consumers in online shopping in emerging markets such as South Africa. Retailers should strive to create a more inclusive and equitable shopping environment that resonates with their cultural and linguistic preferences, elicits a positive response, and establishes a personal connection with the target audience.

## RESEARCH METHODOLOGY

This study emanate from a broader study conducted by Stiehler-Mulder and Cunningham (2022). The objective of this research was to investigate and characterise the holistic shopping journey through low-income customers' perceptions of their online/offline integration experience with FMCG retailers in South Africa. As such, the methodology employed in that broader study is the same as the methodology presented in this study.

**Research approach:** The study employed a qualitative research approach. A qualitative approach was deemed appropriate for this study due to its ability to explore and describe the phenomenon in depth. Moreover, it allowed for direct engagement with participants, which facilitated a better understanding of their perceptions. This approach also provided flexibility that enabled the researchers to adapt to the evolving research context (Chang, Chang, & Liao, 2020; Kelly & Cordeiro, 2020).

**Research design:** The research design for this study was exploratory-descriptive. This design was chosen due to a lack of knowledge identified in the literature, leading to the need for further research into low-income customers' holistic shopping journey with FMCG retailers. (Hunter, McCallum & Howes, 2019). The study employed purposive sampling, as recommended by Hunter et al. (2019), to ensure the sample matched the areas of exploration. This improved the study's rigour.

**Sample and sampling procedure:** The Culture Foundry Co., a research company, was contracted to collect data from a sample of individuals between 18 and 45 years old, earning between R4,417.00 and R8,913.00 per month before tax and deductions, with access to a microwave oven, television, the internet, and newspapers, and living in Gauteng. This sample description was provided to CF, as it fit the SEM profiles of Supergroups 1-3, being the low-income bracket. Campbell, Greenwood, Prior, Shearer, Walkem, Young, Bywaters and Walker (2020) recommend this method for exploratory-descriptive research designs. The sample for this study consisted of 25 individuals. In terms of age, most participants (10) fell into the 26-35 age bracket, followed by 8 participants in the 36-45 age group, and 7 participants aged 18-25. In terms of race, most participants (20) identified as Black, while 3 identified as Coloured and 1 as Indian/Asian. Only 1 participant identified as White, and none identified as Other. In terms of gender, the sample was nearly evenly split between male and female participants, with 12 identifying as male and 13 as female.

**Data collection:** The data for this study was gathered using CF's digital platform, designed specifically to address the challenges posed by the COVID-19 pandemic. The platform was user-friendly for both desktop and mobile users, and participants were presented with a questionnaire consisting of 19 open-ended questions. Participants were invited to provide extensive written responses and were offered a payment of R400 upon submission of a complete and detailed response.

**Data Analysis:** Regarding data analysis, an abductive approach was employed. The researchers used this approach to identify any information that supported or contradicted existing literature, as well as to discover new insights. The written responses were coded using the constant comparison principle, with both open and axial codes being created, as per the approach outlined by (Murphy, Klotz, & Kreiner, 2017). Open coding involved directly assigning codes to the written responses to determine their meaning, while axial coding involved grouping these codes according to their structural and logical similarities (Akbarpour, Haranaki, Mehrani, Gharibnavaz, & Ahmadi Sharif, 2020).

## FINDINGS AND RECOMMENDATIONS

This section provides the findings and recommendations related to two separate research areas of exploration: Sub-AoEs 1 and 2. The objective of Sub-AoE 1 was to distinguish the purchasing intentions of low-income consumers in terms of online and offline channels. In contrast, Sub-AoE 2 sought to assess the overall shopping experience of low-income consumers with FMCG retailers/brands, as perceived by them. Additionally, recommendations specific to each Sub-AoE are presented.

- Findings about Sub-AoE 1

### **Sub-AoE1 sought to distinguish between low-income customers' intentions towards online and/or in-store purchases at FMCG retailers/brands.**

Convenience emerged as the predominant theme in the interviews conducted, although the motivations behind seeking convenience were found to differ among the participants. While timesaving was a significant consideration, other factors that contributed to this preference included health concerns (to avoid contracting COVID-19), crowded physical stores, having an infant, mood, preference for solitary shopping, and a dislike of visiting malls. Interestingly, a few respondents highlighted that online shopping offered more cost savings compared to physical stores (specifically mentioning expenses incurred on transportation such as taxis, buses, or e-hailing services). While some participants were motivated by promotions, such as online sales and discounts, this was not a dominant theme.

P2: "At the time [my] baby was still small and it was more [convenient] doing online shopping to avoid crowded shops."

P10: "What motivated me is the fact that I knew I would get everything I wanted on their app, which also saved me the time and extra money to go to the store myself. I had to do other things as well so my time was saved."

P19: "The convenience, especially when I don't have time to stand in [queues] or I need quick groceries for a specific meal or when I'm just too lazy to get items. It is also cheaper than taking Uber or driving there. Gives me time to multitask. I'm also able to know when a product is out of stock before going to the shops."

The findings presented above are grounded in the literature from various studies. Blitstein et al. (2020) find that consumers engage in online grocery shopping for a range of reasons, from economising to expressing aspects of their social identity. Specifically, the benefits most often cited by consumers from this study include functional needs such as saving time and money and greater product availability and accessibility. Other studies, such as that by Zheng, Chen, Zhang, and Wang (2020), indicate that competitive prices are a crucial motivator for online fresh food shopping. Additionally, Blitstein et al. (2020) found that the factors influencing consumers' willingness to shop for groceries online include awareness of benefits, convenience, and trust in the distribution channel. According to the findings of Khan, Rizvi, & Zubair (2019), various factors significantly influence the inclination to buy groceries online, including but not limited to, the desire for variety, trustworthiness of the seller, user-friendliness of online payment methods, convenience, purchase decision involvement, and preference for global products. Additionally, Lakshmi and Harisha (2020) identified privacy, responsiveness, and contact as significant determinants that contribute to consumers' positive attitudes and perceptions towards online grocery shopping.

The desire to save time by avoiding queues and crowds appeared to be a common theme among the participants in this study. This could also explain why online shopping became more popular in South Africa during the COVID-19 pandemic, as people tried to reduce their exposure to crowded public spaces (Marketline, 2021b). This is consistent with other studies related to online shopping during Covid-19. Eger, Komárková, Egerová, and Mičík (2021) found notable changes in consumer behaviour patterns emerging from the beginning of the second wave of the COVID-19 pandemic in Czech Republic. The research found a connection between fear appeal, including both health and economic concerns, and modifications in customer behaviour, influencing both traditional and online shopping. Specifically, concerns regarding health were linked to the proliferation of COVID-19, resulting from overcrowding, and the study postulated that a higher level of fear could lead to more significant changes in shopping behaviour.

Taken together, findings from these studies suggest that online grocery shopping is driven by a variety of factors. All these factors chime with findings of the present study. The studies cited provide evidence that consumers engage in online grocery shopping for a range of reasons, such as economising, expressing social identity, saving time and money, and greater product availability and accessibility. Competitive prices, convenience, trust, and willingness to shop for groceries online are also important factors influencing consumers' online shopping behaviour. Furthermore, the desire to save time and reduce exposure to crowded public spaces during the COVID-19 pandemic has contributed to the increased popularity of online shopping.

### **Recommendations on Sub-AoE1**

In view of the findings above, it is recommended that retailers should focus on providing convenience. Convenience is a significant driver with a positive impact on online grocery shopping (Khan et al., 2019). Thus, retailers should focus on making online shopping experiences as convenient as possible by availing easy-to-use interfaces, flexible delivery options, and a variety of payment methods. In their marketing communications, retailers can also highlight the benefits of online shopping such as saving time, avoiding queues and crowds, and greater product availability and accessibility. This helps customers make more informed decisions about their shopping preferences.

The managerial implications of the above is that retailers should prioritise convenience in their online shopping experiences and offerings. This can be achieved by providing user-friendly interfaces, flexible delivery options, and multiple payment methods. Additionally, retailers should create an environment of time savings, avoidance of crowds, and greater product availability and accessibility. By promoting these benefits in their marketing communications, and in practice, retailers can attract and retain low-income customers. The theoretical implication is that convenience is a significant driver of online grocery shopping, which aligns with the existing literature reviewed.

### **Sub-AoE 2 To evaluate low-income customers' perceptions of their holistic shopping journey with FMCG retailers/brands.**

Under this sub-AoE, four questions were explored. The findings pertaining to these questions are as follows.

- The questions were asked and interpreted.

Q1: How do you feel about a retailer/brand before online purchasing?

Under this sub-AoE, a common finding was the emergence of two predominant themes, familiarity and trust. According to the interview results, most participants reported feeling at ease when engaging in online shopping with a particular retailer or brand. Their comfort levels were attributed to factors such as prior knowledge of the brand, satisfactory in-store experiences, products quality, and the brand reputation. Moreover, some participants mentioned their loyalty to the brand, which made the transition to online shopping a seamless process. However, the study also identified a small theme of scepticism, with two participants expressing concerns about paying in advance before receiving goods and the security of their personal information.

P2: "I was always satisfied with their service hence me purchasing from them online."

P3: "I've always trusted the brand way before online shopping."

Q2: How do you feel about a retailer/brand after online purchasing?

Under this question, the prominent theme that emerged was that most participants reported feeling content, pleased, and satisfied with their online shopping experience. This was primarily due to their perception that everything was well organised, from the timely arrival of their order to the products selected. Furthermore, some participants expressed a sense of relief, while one individual described being "amazed" at discovering something beneficial to their daily life. Additionally, one participant reported feeling confident after successfully placing and receiving their order for the first time.

P4: "AMAZED and thought to myself, where have you been this whole time. I was amazed; it was Checkers and now here I am a loyal fan."

P7: "I felt great, even completed their online survey about the products I had purchased."

Q3: In what ways did the experience of shopping online with a particular retailer or brand differ from visiting and engaging in physical shopping at their brick-and-mortar store or location?

In response to this question, this study reveals three important findings. First, online shopping was perceived to be a time-saving activity that also saved time by avoiding queues and social interactions, as frequently mentioned by the participants. Second, participants noted that offline shopping often led to overspending, while online shopping facilitated wiser purchasing decisions. Finally, offline shopping is preferred because of its immediacy, whereas online shopping often requires waiting for delivery. Two participants also reported that they found online customer service to be superior to the service they received in-store.

P5: "Personally i feel in-store is better because you can get what you buy immediately."

P9: "To be honest, both of the retailers made me feel [more] special ... than when I am physically at the store cos sometimes you don't get the customer service you need at the store. So, I think it's better to order online sometimes to get that best customer service we deserve."

P23: "It meant I didn't have to go to a mall or shopping centre, find parking, watch out for lots of people, wait in a line to pay. Although I had to pay for delivery the whole experience felt like it costed me less."

Q4: Can you provide your opinion on whether the online advertisements, social media posts, and online store of a particular retailer/brand accurately portray the physical store's appearance, atmosphere, and customer experience (offline image)? Do you think the online and offline images are similar or different? Kindly share your thoughts on your experience with both the online and offline images.

The interviews revealed a clear division among participants regarding the consistency of online and offline images of certain stores, such as DisChem and Woolworths. Some participants believed that there was a strong alignment between the two, as the products were well-organised both in-store and online, and the overall appearance



of the different platforms was the same. Additionally, these participants reported that the level of cleanliness was consistent across both platforms and that the products looked the same. On the other hand, other participants perceived inconsistency between the online and offline images of these stores. They noted that the online platform appeared more appealing than physical stores in terms of cleanliness, the actual appearance of the products, and the level of service provided by the staff.

P20: “I don’t follow woolies on social media but from what I see from the app and the store, the feel, efficiency, user friendly, neat and clean aesthetic is carried both in store and online shopping via the app.”

P14: “The brand image of Dischem is consistent in terms of looks and feelings, both online and offline. The experience of online shopping and physical store shopping is different because you’re able to choose for yourself the products. Everything about Dischem’s image is consistent.”

P4: “I can’t say I’ve been to a Checkers recently, but I would have never really considered them before unless it was the one in Mall of Africa. Every checkers I go to seem to be dirty, lack of design and style as well as bad customer service.”

**Table 1: Summary of AoE 2 findings**

<b>Sub-AoE 2</b> To evaluate low-income customers’ perceptions of their holistic shopping journey with FMCG retailers/brands	
<b>Areas explored</b>	<b>Key findings</b>
Feelings about retailer/brand before online purchase.	<ul style="list-style-type: none"> <li>Familiar; Trust; Brand loyal</li> </ul>
Feelings about retailer/brand after online purchase.	<ul style="list-style-type: none"> <li>Happy, good, and satisfied</li> </ul>
Feelings about online shopping experience at a retailer/brand compared with visiting and physically shopping at the retail store/brand.	<ul style="list-style-type: none"> <li>Time and energy saving (online); Controlled shopping (online – offline overspend); Immediacy (in-store vs online waiting)</li> </ul>
Feelings about online adverts / social media posts etc., as well as the online store of a retailer/brand (the online image) and how these reflect how the physical store looks, feels and is experienced (offline image)	<ul style="list-style-type: none"> <li>Consistent image – look and feel the same, products well-categorised, feeling of cleanliness.</li> <li>Inconsistent – online product images flashier, customer service difference, cleanliness difference</li> </ul>

The findings regarding “trust” and “brand loyalty” align with those of previous research. For instance, Kumar and Yadav (2021) found that trust is influenced by factors such as the e-retailer’s ability, benevolence, and perception, as well as the online familiarity of users. Additionally, Vásquez’s (2020) revealed that both product brand perception and store brand perception significantly impact trust and intentions within a web store. Similarly, various other investigations in the realm of online shopping (Cherrett, Dickinson, McLeod, Sit, Bailey & Whittle, 2017; Han & Kim, 2017; Deloitte, 2021) have also highlighted the importance of trust in the retailer as a significant factor.

### **Recommendations regarding Sub-AoE2**

It is recommended that developing a sense of familiarity, trust, and brand loyalty should be prioritised and cultivated through in-store experiences, as it has been recognised as a pivotal initial step for customers transitioning to the omnichannel experiences and embracing online shopping in this particular market segment. As pointed out by Alharthey (2020), trust plays a vital role in online grocery shopping. To establish trust, it is imperative to provide transparent and comprehensive information about product offerings, delivery procedures, and return policies.

The managerial implication of this insight is that FMCG retailers/brands need to focus on building trust and loyalty with low-income consumers through in-store experiences. This can be an important first step in driving them towards omnichannel experiences and online shopping. Retailers/brands should also prioritise transparency and provide comprehensive information about their product offerings, delivery procedures and return policies to build consumer trust. The theoretical implication of this finding is that trust plays a crucial role in online grocery shopping and is a key factor driving online shopping adoption among low-income consumers.

## CONCLUSION

The global retail industry has experienced a significant shift towards online shopping. This study explored the experiences of low-income consumers in the FMCG market in South Africa. Through in-depth interviews and inductive thematic analysis, the study revealed that low-income consumers opt for online shopping for convenience, time and travel cost savings, and mood benefits such as avoiding crowds and queues. Consumers perceive their complete shopping journey with FMCG retailers/brands as satisfactory, expressing loyalty, trust, and happiness with their shopping experience. The study highlights the importance of understanding the factors influencing low-income consumers' shopping decisions and experiences for FMCG retailers/brands to improve their overall shopping experience. These insights can help retailers/brands develop strategies to serve this market segment better and enhance their industry competitiveness.

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# STUDENT-UNIVERSITY IDENTIFICATION: A BRAND PERSONALITY REFLECTIVE NARRATIVE PERSPECTIVE

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## ABSTRACT

*This qualitative study explores student-university brand identification and brand personality to determine suitable themes for higher education institutions' (HEIs) brand communication. Thematic analysis is done on reflective narratives from postgraduate students in a workshop at a single HEI, using Rauschnabel, Krey, Babin and Evan's (2016) university brand personality scale (UBPS) dimensions. The study's major findings include the following: First, it highlights students' active congruence desire between their self-identity and brand personality. Second, brand personalities indicated by students offer insights into their student-university identifications. HEIs should recognise the importance of student involvement in co-creating brand value to differentiate HEI brands through authentic, student-inspired brand communication.*

**Keywords:** university brand personality, student-university identification, student-university congruence, brand communication.

## INTRODUCTION

Literature has documented a significant expansion in brand management research, whereby concepts and practices undergo continuous adaptation to reflect the evolving landscape of contemporary social, theoretical, and managerial thought. To address the challenges presented by markets characterised by disruption, which demand changing business models, brand management must engage in timely and practical research while also considering relevant social and real-world issues. Notwithstanding some scepticism regarding the importance of branding endeavours for HEIs (Naheen & Elsharnouby, 2021), Pringle and Fritz (2019) maintain that the universities' brand remains essential in eliciting impressions, sentiments and connotations. This underscores the importance of managing a unique university brand. Consequently, according to Struweg and Wait (2022), various studies emphasise HEIs' need to cultivate dynamic and robust brand identities to distinguish themselves from their rivals.

University education is widely recognised as a unique service wherein the recipient of the service undergoes continuous evaluation throughout the provision of the service and is required to invest the necessary effort to achieve a favourable outcome. HEI brands encompass the holistic collection of stakeholders' experiences and emotions linked to an institution due to specific brand engagement. Dajani, Yaseen and Baker (2021) agree that the process of university identification holds important implications for student behaviour, such as their intent to advocate, provide suggestions for improvement, affiliate with the university, and develop a strong attachment to it. Balaji, Roy and Sadeque (2016) relate university identification by students to social identification assigned by their sense of belonging, commitment and attachment to the university brand. To foster the idea of "value complementarity" among stakeholders (Bakirtas & Demirci, 2022), the establishment and preservation of a brand's identity and image hold considerable significance (Spry, Foster, Pich & Peart, 2020). This task is achieved by cultivating emotional ties via identification, a central aim for HEIs. Notably, university identification represents a unique social identification manifestation that enables students to enhance their self-image through affiliation with their HEI. Individuals tend to exhibit sustained support for the institution, fostering a long-term relationship with the brand (Bakirtas & Demirci, 2022).

However, the rising scrutiny of HEIs has led researchers to contend that branding represents a valuable means of cutting through the noise and effectively communicating an HEI's value proposition to students. Branding may significantly impact self-identification congruence with the HEI, fostering student loyalty and encouraging them to act as ambassadors for the institution (Wilkins & Huisman, 2013). Naheen and Elsharnouby (2021) highlight, based on HEIs' unique audiences, that brand complexity is inherent to all universities. HEIs must determine the most suitable themes in their communication endeavours when targeting their heterogeneous audience to establish a distinctive brand image and foster a strong identification with the university brand. Farquhar (1989) has demonstrated that brand personality can assist in simplifying a brand's complexity by maintaining a consistent image in marketing endeavours. Brands are frequently imbued with human qualities by individuals (Aaker, 1997) who relate to them as they do with friends (Rutter, Lettice & Nadeau, 2017). Conversely, consumer-brand relationship theories commonly operate under the premise that individuals tend to imbue brands with human qualities through a phenomenon known as anthropomorphism. This notion has been explored in depth by brand personality researchers, for example, Aaker (1997), Parker (2009) and Davies, Rojas-Méndez, Whelan, Mete, and Loo (2018), among others.

Four significant studies have investigated student-university identification and university brand personality, all from a positivistic paradigm. First, Naheen and Elsharnouby (2021) empirically investigated the influence of university brand personality and student-university identification on student citizenship behaviour and participation. Second, Balaji et al. (2016) investigated university brand personality, university brand knowledge, and university brand prestige for increased student-university identification, while Bakirtas and Demirci's (2021) study, thirdly, replicated Balaji et al.'s (2016) work. Fourthly, Dajani et al. (2021) examined the antecedents of university identification – focusing on university brand knowledge, brand personality and identity. Against limited brand personality and student-university identification studies, this study aims *to qualitatively discover student-university brand identification and brand personality to determine the most suitable themes for HEIs' brand communication endeavours through postgraduate students' reflective narratives*.

This paper's contribution is three-fold. First, it explores brand personality from a qualitative research approach, where most brand personality literature (see Radler, 2018; Carvalho, Demo and Scussel, 2021) is studied through a positivistic, quantitative lens. Second, it contributes to one of Radler's (2018) five identified research clusters of brand personality literature, namely "Application of brand personality to related areas", in that this study looks at brand personality specifically within an HEI context. Thirdly, the data collection uniquely consisted of a storytelling workshop to produce a data set of reflective narratives by the participants.

The rest of this paper is organised as follows: The discussion starts with a literature review, followed by the study's exploration areas. The research methodology is then described, and the data analysis results and findings are presented. The paper ends with the conclusion, implications of the study and suggestions for future research.

## LITERATURE REVIEW

### University Brand Personality

Aaker's (1997) influential brand personality research, defining it as "the set of human characteristics associated with a brand" (p. 347), has served as a source of motivation and direction for numerous scholars engaged in the investigation of the constructs of product and service brands. Fournier (1998) posits that brand personality encompasses a comprehensive set of trait inferences that customers form through actual brand experiences and behavioural observations exhibited by the company managing the brand. As a service brand, higher education centres around human interaction and involves primarily intangible activities (Spry et al., 2020). This, therefore, means that the HEI service brand necessitates long-term and formal relationships with stakeholders, requires a high degree of personalisation and judgment, experiences relatively stable demand concerning supply, and functions through one or more service delivery locations. The brand associated with the higher education experience confers a certain level of social status, enabling graduates to identify themselves as lifelong members of an HEI brand community (Balaji et al., 2016). In this way, the brand serves as a means of self-identification for individuals beyond just being considered customers.

Despite a wealth of literature on marketing and branding in higher education, research on brand personality has not been fully developed, particularly within the framework of comprehensive branding models (Ghorbani,

Karampela & Tonner, 2022). Effectively managing a brand is multifaceted and intricate, necessitating a thorough understanding of its value and the factors influencing its performance. When overseeing the well-being of a brand, university marketing practitioners must consider a range of factors, including the brand's personality, as highlighted by Mirzaei, Webster and Suiki (2021). In this regard, it is essential for university marketing professionals to thoughtfully plan and execute a strategic approach to brand personality development that is integrated with broader considerations such as brand equity and overall marketing efficacy (Chapleo, 2010). Brand personality, therefore, serves as a measure that can effectively establish the stakeholders' attachment to and identification with the university. By incorporating brand personality into higher education research, Davies et al. (2018) assert that institutions can cultivate brand distinctiveness and differentiation. To elevate brand personality in HEIs' marketing, Rauschnabel et al. (2016) introduced the university brand personality scale (UBPS), which forms an integral part of the study's data collection framework.

Rauschnabel et al. (2016) highlighted the criticisms of Aaker's (1997) conventional scale in rationalising the creation of the personality scale. They emphasised the importance of a measuring tool that accommodates diverse contexts, precisely the higher education context. Chapleo (2010) also cautions against commercial branding methods without adjusting them specifically to other contexts, such as higher education. Therefore, Rauschnabel et al. (2016) introduced a theory-based scale to assess brand personality in higher education contexts based on six university brand personality dimensions and describing each dimension with related words, namely: 1) Prestige (accepted, leading, reputable, successful, considerable); 2) Sincerity (humane, helpful, friendly, trustworthy, fair); 3) Appeal (attractive, productive, special); 4) Lively (athletic, dynamic, lively, creative); 5) Conscientiousness (competent, structured, effective); 6) Cosmopolitan (networked, international, cosmopolitan). Rauschnabel et al.'s (2016) work was chosen for this study because of two key factors. First, the theoretical framework posits a distinctive underlying support for student-university identification congruence and university brand personality. Secondly, this study's findings build upon earlier university branding studies by exploring the student-university congruence and brand personality based on students' narratives. Consequently, this prior work offers valuable insights that can serve as a foundation for developing integrated theoretical models.

Establishing an attractive and consistent HEI brand personality contributes to the institution's brand image (Struweg & Wait, 2022). Similarly, Balaji et al. (2016) agree that a positive HEI image can promote students as advocates through student-university identification congruence. Individuals must clearly understand their self-concept to identify with a brand and its brand personality. Thus, when students positively evaluate a HEIs personality, they are likelier to feel a strong sense of belonging to the institution and increased university-student identification. This university-student identification process can elicit a corresponding identification of self-recognition, perceived image, self-concept and personality among students who associate themselves with a particular institution.

## University-Student Identification

University-student identification pertains to the congruence degree between the identity of the student and that of the HEI, as Balaji et al. (2016) noted. According to Wilkins and Huisman (2013), identification manifests a sense of affiliation towards and unity with the institution, its staff, and its actions stemming from this organisational context. In the context of universities, identification represents how students perceive themselves regarding their affinity with their respective HEI. Given the multicultural and diverse HEI campus environments, Yao, Martin, Yang and Robson (2019) argue that there is a growing need for research to offer nuanced understandings of the brand identification contributing factors among current students and various factors that shape self-identification. Although it appears that Mael and Ashforth (1992) were the first to explore "identification" in the context of universities, claiming that students with a strong identification with their HEI are more likely demonstrating higher commitment levels and support, there is a limited body of research dedicated to examining the outcomes of student-university identification on students' behaviours and attitudes (Balaji et al., 2016; Yao et al., 2019), more specifically the brand personality that students attach to their universities. Mael and Ashforth (1992) argue in their social identity theory that entities tend to categorise others into different social groups based on age, gender, profession, and social class. When identification occurs towards a particular group, there might be a positive tendency toward that group (Tajfel, 1978) to enhance their self-identity. Thus, drawing upon Tajfel's (1978) social identity theoretical framework, students who possess a strong identification congruence with their university are more likely to exhibit supportive attitudes towards the institution's brand image and are also more prone to engage in high-intensity behaviours such as advocating on behalf of the university, fostering connections with the institution, and establishing a student-university brand linkage. Similarly,

empirical evidence presented by Wilkins and Huisman (2013) suggests that students are more likely to be drawn to HEIs that effectively communicate a coherent and distinct identity aligned with the characteristics that students value.

## University Brand Communication

Managing an HEI's brand communications is vital to the overall student experience, indicating the institution's ability to deliver on its brand promises (Rutter et al., 2017). Moreover, according to Parker's (2009) research, a strong brand image is vital to an institution's success in attracting new students. This aligns with signalling theory and is particularly relevant in brand personality and university-student identification studies (Davies et al., 2018; Struweg & Wait, 2022; Rutter et al., 2017). Signalling theory offers a framework to understand universities' conveyance of brand messages in establishing a distinctiveness as a brand to attract and retain students. In the context of university branding, the signalling theory focuses on the following elements: the sender as the message's source, the receiver as the intended target of the message, and the signal as the message encoding. (Struweg & Wait, 2022). The receiver of the signal assesses the message and interprets its meaning, which may differ from the intended message. Thus, the sender needs to receive feedback from the receiver to determine if the signal was understood as expected. In an HEI context, this feedback can be indirectly retrieved by considering student choice statistics or more directly from communication with prospective students. This study, however, focuses more on message encoding. A deeper understanding of how students create meaning through encoding the HEI messages could be valuable in guiding the themes from the perceived brand personalities students assign to their HEI's brand. The literature on university brand communication focuses on how higher education institutions market their brand internally and externally (Chapleo, 2010). Some scholars propose that universities utilise relationship marketing strategies to communicate their brand and that their efforts are focused on creating brand associations rather than simply promoting their offerings (Rutter et al., 2017). To ensure the brand's success, the values espoused in themes of the marketing materials must be related to the university-student identification to deliver brand communication to stakeholders.

## AREAS OF EXPLORATION

Against the backdrop of the aim of the study and existing literature, the areas of exploration of the study are:

- To explore the prominently selected UBPS dimensions from the students' reflective narratives regarding their HEI's brand personality.
- To describe the interpretation of the two most prominently selected UBPS dimensions identified through the students' reflective narratives that could contribute to the marketing communication endeavours of this HEI.
- To describe the self-identification with the brand personality linkages from the students' reflective narratives about their HEI's brand personality.

## METHODOLOGY

### Study Setting

From several bibliometric reviews (Radler, 2018; Lara-Rodríguez, Rojas-Contreras, & Oliva, 2019), indicators (Llanos-Herrera & Merigo, 2018), systematic reviews and scientometric analysis (Vicencio-Ríos, Rubio, Araya-Castillo, & Moraga-Flores, 2023), quantitative research dominates the study of brand personality. Therefore, in contrast, this study follows qualitative research as the mode of inquiry which emphasises the complexity and subjectivity of human experience and values the aspects of meaning-making (Leedy & Ormrod, 2020) related to HEI brand personality, university-student identification and brand communication. Therefore, based on interpretivism, this study suggests that humans are the primary instruments in the study - the researcher and study participants. Interpretivist assumptions suggest that there are no universal, static "Truths" but multiple situated truths and perspectives (Ørngreen & Levinsen, 2017). For these reasons and based on Ghorbani et al.'s (2022) request for exploratory-qualitative research on brand personality, this study deliberately selected a qualitative approach to explore brand personality.

According to Cho, Grenier and Williams (2022), quality in qualitative research involves fostering creativity, innovation, and discovery while promoting rigour and accountability. In this regard, Scârneai-Domnisoru (2021) argues that innovation can be a driving force for advancing existing qualitative research within a field. Similarly, Lê

and Schmid (2022) state that introducing and applying new ideas and procedures designed to benefit a study can be regarded as the core of innovation in qualitative research. Cho et al. (2022) explain further that innovation in research methods is not limited to modifying the content of a method by adapting it to a new theoretical or empirical; instead, it also involves reshaping the research tool and its usage in the process. Therefore, this study used a narrative approach to qualitative inquiry in discovering student-university brand identification and brand personality to determine the most suitable themes for HEIs' brand communication.

## Data Collection

The data for this study was obtained from a sample of 34 participants in their fourth year of studying Marketing Management. These individuals volunteered to participate in the research, indicating a willingness to contribute. The data collection process occurred within a workshop's structure, described by Ørngreen and Levinsen (2017) as a structured environment that facilitates learning, knowledge acquisition, and innovation in a specific domain. The workshop focused on student-university identification and brand personality. According to Frisina (2018), the researcher's role in such a workshop setting is that of a facilitator, guiding the process while allowing the participants to generate the data actively. The workshop setting provided a conducive environment to optimise the participants' ability to provide reflective narratives based on their experiences. Workshops offer an opportunity for in-depth and detailed descriptions, enabling the collection of rich qualitative data. Additionally, using field notes or "workshop notes" during the workshop further enhanced the potential for the transferability of findings, as proposed by Lincoln and Guba (1985).

The initial step in organising the workshop was influenced by the work of Frisina (2018), who followed the guidelines proposed by the Dutch facilitator, Jac Geurts, who emphasises the significance of proper, prior, and planning (the "3Ps") for the successful execution of a workshop. To initiate the workshop, an invitation was disseminated via the digital learning management system to all fourth-year Marketing Management students. The invitation outlined specific criteria that prospective participants had to meet. Firstly, participants were required to be in their fourth year of Marketing Management studies, ensuring a certain level of proficiency in writing ability among the participants. Secondly, participants were expected to express their willingness to engage in the workshop activities, which included composing a reflective narrative from a brand personality perspective (based explicitly on Rauschnabel et al.'s (2016) dimensions in the UBPS). This second criterion aimed to provide participants with a clear understanding of the content-related expectations associated with the writing task. By implementing these selection criteria, the workshop organiser sought to establish a homogeneous group of participants in terms of writing proficiency while also ensuring that participants had a grasp of the thematic focus of the reflective narrative. This deliberate approach facilitated the collection of data-rich reflective narrative pieces, employing purposive sampling to select participants who met the specified criteria. According to Shufutinsky (2020), reflective narratives possess a wealth of richness and detail conveyed through their language. This rich and detailed description contributes to the credibility and trustworthiness of the study (Lincoln & Guba, 1985).

## Data Analysis

The participants' handwritten reflective narratives were captured electronically and subjected to meticulous verification processes to ensure accuracy and facilitate subsequent analysis. Following the traditional six-step process of deductive thematic analysis, as delineated by Braun and Clark (2020), the data analysis underwent a series of critical stages. These stages encompass familiarisation with the data, creating a preliminary framework based on previously known themes (in this case, the dimensions of the UBPS), indexing and sorting, reviewing, data summarisation, category construction, and identification of links and patterns. Within the context of deductive thematic analysis, commonly called theoretically driven coding, an organising framework was employed to guide the coding process (Elo, Kääriäinen, Kanste, Pölkki, Utriainen, & Kyngäs, 2014). This framework, called a "code manual" by Crabtree and Miller (1999), anticipated core concepts that may emerge from the data. To enhance the confirmability of the study's trustworthiness, it is imperative to clearly explain the meaning of the concepts in data analysis, as Elo et al. (2014) emphasised. A deductive code list was meticulously established to align with the areas of exploration and Rauschnabel et al.'s (2016) UBPS dimensions. The code list, presented in Exhibit 1, comprised a label for each code, a detailed description, and associated words (including possible synonyms) for each code. This predetermined code list ensured that the analysis remained firmly rooted in the relevant theoretical framework and facilitated consistent interpretation across the entire dataset.



**Exhibit 1: Code list consisting of code labels, description of each code label and associated words**

Code label	Description of code label	Other words
Appeal	The perceived desirable attributes that actively contribute to the institution's appeal among stakeholders. It signifies the distinctiveness and captivating nature of the benefits that prospective stakeholders can effectively harness, thereby garnering admiration for their affiliation with the university.	Attractive Unique Productive
Conscientious	The perception of the university's systematic and organized approach when stakeholders engage with the institution. At an administrative level, this dimension of the University Brand Personality Scale (UBPS) is evident in the efficiency of processes and the behavioural competence demonstrated by administrators. From an academic standpoint, conscientiousness is closely linked to the perceived quality and structure of teaching and learning, facilitated by qualified and capable academic staff.	Competent Organised Effective
Cosmopolitan	Personifies the higher education institution's external relationships, including its external scholarly relationships with other universities, and its corporate and government relationships. It is a reflection of the openness or closedness of the university as a system in its relationships. On a practical level, these personality traits could signal international staff and student exchanges, research opportunities, foreign study programmes, and employment opportunities for students through the university's networks.	Networked Multicultural International
Lively	Closely tied to the institution's innovativeness, spiritedness, and creativity. It signifies an institution that is at the forefront of advancements, firmly rooted in a progressive strategy to maintain its relevance. Furthermore, Rauschnabel et al.'s (2016) interpretation of the term "lively" can also be associated with the athletic identity of a university, creating a connection between the institution and the success of its sports teams.	Athletic Creative Dynamic
Prestige	The total reputation of a university encompasses perceptions of its success and its allure in terms of "snob appeal". The concept of "snob appeal" is closely associated with such universities, emphasising their exclusivity and rigorous admission standards that limit access to a select group of students. A university with a prestigious reputation exhibits a discerning approach in selecting individuals and institutions that value ostentation. This is often exemplified by the pursuit of prestigious rankings or status, positioning the university as a leading institution.	Reputable Leading Successful
Sincerity	Pertains to the extent of helpfulness and thoughtfulness displayed by a higher education institution in its interactions with stakeholders. It signifies a university that upholds values of trustworthiness and fairness in its engagements. This dimension of the UBPS places significant emphasis on fostering personal interactions, exemplified through acts of philanthropy and a commitment to utilitarian principles.	Fair Helpful Trustworthy

*Source: Own conceptualisation based on Rauschnabel et al. (2016, 3081-3084)*

The digitally captured reflective narratives were then imported into Atlas.ti (version 8), using this code list to code the participants' reflective narratives independently. In vivo analysis was selected in Atlas.ti offering the advantage of direct access to quotations and enabling continuous context-based verification of participants' assigned meanings to the selected UPBS dimensions, thus maintaining contextual grounding throughout the analysis process.

## FINDINGS

### The Prominently Selected UBPS Dimensions

The study's data collection indicated that participants were asked to select and indicate the Rauschnabel et al. (2016) brand personality dimension. However, eight of the 34 participants (4.25 per cent of the sample) did not pertinently indicate the selected brand personality dimension on which their brand story was based. As per Figure 2, the most popular UPBS scale dimension (Rauschnabel et al., 2016) used by participants in guiding their brand reflective narratives of their HEI was "lively" (26.47 per cent), followed by "prestige" (17.65 per cent), "appeal" (14.71 per cent) and "sincerity" (11.76 per cent). The "cosmopolitan" (2.94 per cent) and "conscientiousness" (2.94 per cent) dimensions were the least prominent choices of participants to guide their brand personality reflective narratives of their HEI. However, because such a large percentage of participants did not indicate the actual brand personality dimension selected from the UBPS, the In Vivo coding through Atlas.ti was also considered to create a better manifestation of occurrences of the brand personality dimensions in the reflective narratives, based on the quote prevalence as per the code list used. The quotation prevalence of each of the dimensions according to the Atlas.ti findings confirmed that the "Prestige" and "Lively" dimensions were the most prevalent in the reflective narratives of participants, although, based on the number of quotes from the Atlas. According to the participants' indications, "Prestige" was the most prominent, not "Lively".

## Interpreting the Most Prominently Selected UBPS Dimensions

For many participants, “Prestige” as a brand personality dimension was equated to a sense of self-achievement and perseverance in the reflective narratives. Central to participants’ reference to “Prestige” is overcoming significant challenges, which was included in 14 quotes in the narratives. It is emphasised that, through hard work and dedication, self-prestige is achieved in graduating from a reputable HEI and achieving a sense of prestige within society. The following quotations relate to this category of self-prestige: *“The education I have obtained at my institution... has made me prestigious.”*; *“...and being the first graduate in my family make[s] me prestigious”*; *“He eventually found himself as a high-quality individual recognised as brilliant and prestigious.”*

How “Prestige” is described in the code list, specifically in terms of the importance of the “reputation” of the HEI, was evident in most of the quotes for this dimension. A selection of quotes illustrating this manifestation of “Prestige” include: *“... is a maestro, it is a master that has shaped me to be the person I am.”*; *“The University ... is a force to be reckoned with...”*; *“The University of ... is well managed and highly reputable.”*; *“...I’m on the right path because of the quality education they’ve given to me.”* Although the code description (in line with Rauschnabel et al.’s (2016) account of prestige) in the code list refers to an exclusivity element, no evidence could be found in the reflective narratives of such interpretations of prestige.

“Lively” was the second most referred to UBPS dimension in the reflective narratives. The interpretation of this dimension was strongly aligned with the code description in the code list. “Lively” could broadly be categorised in three ways. First, concerning “energy”, with quotes supporting this idea, such as: *“...continue to feed them this energy.”*; *“... it has an energy that can uplift a person’s mood.”*; *“...and attracting positive energy.”* Secondly, “Lively” was interpreted to have an evolutionary focus, with quotes like: *“...a place where life begins.”*; *“...coming to life.”*; *“to create a future.”* Interestingly, the third category in the “lively” dimension referred to creating hope. This is evident in the following quotes: *“...for being living is to never lose hope.”*; *“I am always prepared to finish, which I hope, one day, inspires someone in a similar situation.”*

## Self-Identification and Brand Personality Linkages

University identification (self-identification by students in this study) represents a distinctive form of social identification that empowers students to enhance their self-perception through their affiliation with the academic institution (Bakirtas & Gulpinar Demerci, 2022). Consequently, this affiliation prompts individuals to endorse and sustain their commitment to the institution, fostering enduring relationships. Therefore, drawing on the principles of self-congruity theory, value congruence refers to the cognitive assessment of consumers regarding their agreement or disagreement with the entity's values and value system (Tuškej & Podnar, 2018). Within an organisational context (such as HEIs), prior research has demonstrated that alignment between HEI values positively influences their affective commitment to the organisation (Rutter et al., 2017). In the narrative reflections, some participant quotes indicated a strong self-identity brand relationship value congruence about the selected UBPS brand personality. These include: *“...life in itself has many unexpected hells that we as humans experience. It can be your social life, your relationships, your spirituality and finally your academics. All these four factors have come into play with my building and becoming the UJ brand I am still working on today....”*; *“I’m grateful for having this experience of expression myself for who I am and who my university is and to discover the importance of values that needs to be aligned....”*; *“As I began to get closer, I imagined a bright light of charisma and confidence.... I tapped him on the shoulder. He turned around and greeted me with a smile. I asked him, “How do you do it? How have you survived?... He answered, “I went to UJ” which fulfilled my dreams beyond expectations and self-worth.”*

## CONCLUSION

This paper investigated the intangible associations of university brand personality and self-identity about an HEI brand among postgraduate marketing students using Rauschnabel et al.’s (2016) UBPS dimensions. Self-identity and brand personality congruence are two central elements that determine the success of an HEI brand in today's competitive marketplace. When students connect with their HEI brand on a deeper level, as evident from the findings in the study, they often seek a sense of alignment between their self-identity and the personality projected by the brand. This HEI-student congruence fosters a strong emotional bond, leading to brand loyalty and advocacy. From the findings, it is

evident that participants are drawn to the HEI brand that mirrors their values, beliefs, and aspirations, as it reaffirms their self-concept and helps them express their identity to the world. Consequently, HEI brands that invest in understanding their students' self-identities should craft a brand personality that resonates with them to establish a robust and enduring connection, resulting in long-term success and differentiation in the market. It is, therefore, essential for HEIs to use these values and brand personality perceptions of students in the brand communication of the HEI, as it will resonate with existing students in maintaining their relationships with the HEI brand and will most likely also appeal to prospective students. The findings demonstrate that the personalities ascribed by students offer valuable perspectives on student-university identification and contribute to the augmentation of brand relationships through authentic alignment with the higher HEI's brand. Against this background, this study makes valuable linkages to the current body of knowledge, which include:

- The combination of the *social identity theory* and *self-congruity theory* to elucidate university brand personality through a student-university brand relationship identification lens appears to be unique.
- This study underscores possibilities inherent in integrating *signalling theory* through students' reflective narratives and practical implementation in HEI brand communication to cultivate a distinctive brand personality for HEIs.
- It accentuates that HEIs can achieve brand differentiation by engaging students in collaborative brand value co-creation, thereby fostering an authentic comprehension of their social and self-congruency with the brand to establish a robust basis for brand communication differentiation.
- It highlights the importance of actively seeking internal feedback and allocating resources to generate shared identity and brand value for HEIs and students, thereby contributing to *resource integration theory*.
- The motivation stemming from the yearning for affiliation and identification with their educational institution drives students to action. As a result, their voices assume a strategic role in collaboratively shaping brand value through positive word-of-mouth, supporting long-term, impactful relationships with HEI and sustaining a profound identification with the HEI brand throughout their lifelong learning journey, thereby contributing to *stakeholder theory*.
- This active engagement cultivates a deep-rooted congruency with the HEI brand, firmly grounded in its unwavering dedication to excellence, thereby contributing to *relationship theory*.

This study carries practical implications beyond integrating students' lived experiences into the institution's brand communication. They also hold strategic significance for *HEIs brand strategies*. Based on the findings of this study, the following brand strategy considerations should be highlighted for HEIs:

- By aligning the university brand with the prominent UBPS dimensions identified by students, the institution can establish a compelling, unique brand positioning. Neglecting these dimensions, resembling student-university congruence, may result in potential students, employees, and other stakeholders resorting to alternative sources of brand communication when evaluating the brand.
- This study makes a noteworthy contribution by merging the notions of brand personality and student-university identification congruency in informing HEI brand strategies. This integration can bring the HEI brand to the fore for brand managers and internal stakeholders.
- The focus of the HEI brand strategies should be redirected towards student-university brand identification congruence, as it can enable the HEI brand personality to assume a pivotal role as a primary inspiration source for brand value co-creation through brand communication efforts, exerting influence over all branding decisions made within the institution.
- By adopting a brand strategy centered around personality, HEIs can fully leverage the potential of student-university identity congruence in its brand communication.

## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Brand personality for HEIs can unify diverse stakeholders such as employees, management, council members, alumni and the like. A limitation of this study is that the self-identification congruence and brand personality manifestations of only postgraduate students were included. Future research could therefore include reflective narratives of other HEI stakeholder groups to compare brand personality interpretations towards informing a more well-rounded university brand personality which could, more accurately, be used in authentic brand communication differentiation but still grounded in shared brand value co-creation for the HEI.

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# FACTORS CONTRIBUTING TO ROAD CRASHES IN THE CITY OF TSHWANE, SOUTH AFRICA

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## ABSTRACT

*Motor vehicle accidents have adverse socioeconomic and health effects on people at the national, community and individual levels in South Africa. This article unpacks the contributory factors to road traffic crashes in the City of Tshwane municipality, South Africa. A mixed-method approach was adopted for the study. Findings from the study (amongst others) pointed to both the involvement and significance of human, road, law enforcement and vehicle factors as key contributors to road traffic crashes. The study makes recommendations from the research findings.*

**Keywords:** road crashes, motor vehicle, Tshwane, South Africa.

## INTRODUCTION

Motor vehicle accidents are common occurrence in virtually all parts of the world, including South Africa. Concerns about the spate of the phenomenon in many parts of the world have resulted in the development of strategies and mechanisms to combat its prevalence (*see* International Transport Forum, 2017). South Africa has also developed several mechanisms at addressing the extent of motor vehicle crashes in the country (Road Traffic Management Corporation, 2016). Unfortunately, all attempt seemed not to have yielded the desired results. Instead of decreasing, the rate of vehicle crashes in the country is increasing (*see* Road Traffic Management Corporation, 2021). Hence, there is a need for urgent intervention!

The study from which this current article is drawn evolved from more specific key issues about road crashes in South Africa. Notably, efforts at strengthening road transport in South Africa require a special focus at countering the country's comparatively poor road traffic safety records, given the substantial evidence that road traffic crashes and related casualties slow socio-economic development in a wide-ranging manner (*see* Verster & Fourie, 2018). However, inadequate knowledge, research, and managerial base, however, complicate counteraction. This article, consequently, is focused on providing pointers for strengthening current efforts at reducing road traffic crashes. Taking cognizance of the wider conceptual context of road traffic safety management, this paper specifically intends to contribute towards conceptual thinking on road traffic safety in the City of Tshwane (Pretoria), South Africa.

## Nature of Road Traffic Crashes in South Africa

The nature of road traffic crashes in South Africa varies. It ranges from fatal crashes to damage-only crashes (Road Traffic Management Corporation, 2016). The Road Traffic Management Corporation (RTMC) (2016) defines road traffic crashes as "an event, collision between two or more vehicles, a vehicle and a train, a vehicle and a cyclist, a vehicle and a pedestrian, a vehicle and a pedestrian, a vehicle and an animal, a vehicle and a fixed object or a single vehicle that overturned on or near a public road. This definition entails "a single road traffic incident, regardless of the number of vehicles or persons involved" (Road Traffic Management Corporation, 2016, p. 6). It further that damage-only crashes refer to crashes in which "no one was killed or injured and resulted in damage to the vehicle or vehicles and/or other property" (Road Traffic Management Corporation, 2016, p. 6).

In their description, Verster and Fourie (2018) note that there were 10 613 fatalities in 2015 which resulted in 12 944 fatalities. This implies that the severity of the fatalities is 1.2. Road Traffic Management Corporation (2021) also notes that from 2018-2021 the severity of crashes has been 1.203. Verster and Fourie (2018) also note that the severity of fatal crashes is highest on Fridays, Saturdays, Sundays, and Mondays in comparison to other days of the

week. In addition, the Department of Transport (2016) predicts that the rate of fatal crashes will decline at a rate of 1.49% annually without interventions aligned with the National Road Safety Strategy. With road traffic safety interventions aligned to the National Road Safety Strategy, the Department of Transport predicts that fatal crashes will reduce by 4% annually. Despite this positive prediction, Verster and Fourie (2018) revealed that 80-90% of road traffic fatal crashes are due to human factors. The authors also note the slow progress in South Africa to reduce fatal crashes.

Verster and Fourie (2018) like the Road Traffic Management Corporation (2016) also note the occurrence of major road traffic crashes. The author revealed that motor vehicle major crashes account for at least 4,8% of the total road traffic crashes in South Africa. The Road Traffic Management Corporation (2016) describes major non-fatal crashes as entailing a collision “in which one or more persons are seriously injured and can include slight injuries. Verster and Fourie (2018) also indicate that major crashes account for at least 22.9% of the total cost of road traffic crashes. Machetele and Yessoufou (2021) also reveal that major crashes result in at least 93 531 injuries annually in 2019. The Road Traffic Management Corporation (2016:7) also describes the type of injuries that characterise major crashes, the agency describes *serious* injuries occurring such as “fractures, crashes, concussions, internal injuries, severe cuts and lacerations, severe shock that require medical treatment, hospitalization and/or confinement to bed”.

## Contributors to Road Traffic Crashes and Related Casualties

The RTMC (2016) identified three main factors that contribute to road traffic crashes. These factors are environmental factors, human factors, and vehicle factors. It is important to note that road traffic safety agencies and policymakers generally take cognisance of these types of contributors to road traffic crashes when designing and implementing road traffic safety measures. Human contributors to road traffic crash generally focus on the behaviour and attitudes of road users and road traffic safety managers. Rolison, *et al* (2018) note that among younger drivers’ human contributors to road traffic crashes include a lack of skill, risk-taking behaviour, and inexperience. Among older drivers, the authors attribute the causation of road traffic accidents to visual, cognitive and mobility impairments.

Other human factors such as poor human enforcement and/or implementation of road traffic safety regulatory measures and inadequate or lack of road traffic safety training and education of road users contribute to road traffic crashes (Jadaan *et al.*, 2018). Jadaan *et al.*, (2018) further explain that traffic law enforcers in developing countries have additional responsibilities of controlling traffic instead of enforcing traffic laws in comparison to developed countries. (Jadaan *et al.*, 2020) also highlight the issue of inadequate training of traffic law enforcers in developing countries which contributes to road traffic crashes.

Ahmad et al, (2021) in their study that explored the contributors to road traffic crashes noted human contributors of increasing age, speeding drowsiness, pedestrians crossing at undesignated crossing points and drowsiness as major contributors to severe road traffic crashes. Similarly, Jogenrud *et al.*, (2020) noted that the issuance of speeding tickets is positively correlated to the occurrence of road traffic crashes. In South Africa, Road Traffic Management Corporation (2021) reveals that 5.9% of all speeding infringements are in the city of Tshwane, notably, this is in comparison to 92.8% issued in the City of Johannesburg Metropolitan Municipality.

Road Traffic Management Corporation (2021) further notes that speeding infringements are mostly (79.5%) issued to light motor vehicles. To curb such speeding infringements, (Adeleke et al., 2020) emphasise the need for law enforcement in reducing speeding to prevent road traffic crashes. Yadav and Velaga (2020) also posit that speeding alone may not solely contribute to the occurrence of road traffic crashes. The authors note that intoxication with alcohol or other substances is a human factor that coupled with speeding lead to road traffic crashes. The authors further expand that by noting that road traffic crashes most likely occur on urban roads than on rural roads when drivers are intoxicated and speeding.

Environmental contributors to road traffic crashes include below standard or inadequate and poorly maintained road infrastructure such as the road surface). They can also include below standard or inadequate road traffic safety regulatory measures such as policies, strategies, legislation, road signs and markings, and thirdly poor weather conditions. Verster and Fourie (2018) also note the day of the week and the time of the day as critical environmental factors contributing to the occurrence of road traffic crashes. The authors in their study cite the Department of Transport, which notes that most road traffic crashes occur Fridays, Saturdays, Sundays and Mondays.

In terms of the time of the day, Verster and Fourie (2018) assert that at least 40% of road traffic crashes occur between 1600hrs and 2200hrs.

Vehicle contributors to road traffic crashes include issues such as unsafe vehicle design/manufacturing, and un-roadworthy or unfit vehicles. Road Traffic Management Corporation (2021) in their study results on vehicle make and design and involvement in road traffic crash found that the most common vehicle in South Africa involved in road traffic crashes was the Volkswagen Polo Vivo, the second was the Toyota Hilux and thirdly the Toyota Quantum. Road Traffic Management Corporation (2021) further elaborate that 43.2% of all fatal crashes in South Africa involved the Volkswagen Polo, Toyota Hilux, or Toyota Quantum.

Verster and Fourie (2018) also note that non-roadworthy or unfit vehicle issues also contribute to road traffic crashes, and this includes defective tyres, brakes, steering and lights and poor general maintenance of vehicles. The authors also reveal that at the end of 2015, there were at least 1 013 278 non-roadworthy vehicles in South Africa. Road Traffic Management Corporation (2021) on the issue of the roadworthiness of vehicles concurs with (Verster & Fourie, 2018) by highlighting that vehicles between the ages of 5 and 20 years are most likely to be involved in a road traffic crash. RTMC 2021 also concedes that the issue of vehicle colour requires further research in the South African context given that most vehicles in South Africa are white consequentially most road traffic crashes involve white vehicles (56.2%). The South African Department of Transport (2015) underpin that illegal vehicle speeds' contribution to road traffic crashes and casualties is not only interrelated with other human factors, but also with the vehicle and environmental factors. For example, drinking and driving and/or walking with a general tendency towards lawlessness and inadequate road infrastructure.

Although the above reports show evidence of the prevalence of road crashes in South Africa, however, there are silent on specific provinces or locations in the country. Such gap cannot be jettisoned because an effective response to a social problem of this magnitude will undoubtedly require contextual approach to resolve. Put differently, it will be more effective to address social phenomenon at a micro-level. There is the possibility that solutions will be more effective at that level than when they are addressed nationally. Hence, the objective of this article is to unpack the contributory factors to road crashes in the City of Tshwane, South Africa. The goal is to help provide a framework for law enforcement agencies to use in their daily practise to reduce and curb incidences in the city of Tshwane. The findings of the study will inform policy reforms and effective response to road crashes in the city of Tshwane.

## **Methods**

This study adopts a mixed-method approach based on an exploratory/descriptive research design to explore and describe the contributory factors to road traffic crashes in Tshwane, South Africa. This approach benefits the study as it ensures that positive aspects of both the quantitative and qualitative approaches are incorporated into it. The design was considered appropriate as it will help explain what is known and expose what is unknown in relation to the subject of discourse. It will also help set the pace for the development of a viable model.

## **Research Location**

The research site of the study was City of Tshwane, in the Gauteng Province in South Africa. The site was considered because of (1) its comparatively high day-to-day road traffic volumes, (2) the fact that it is an economic hub in South Africa and (3) the fact that the area is easily accessible and well-known to the researcher.

## **Study Population, Sampling Technique and Sample Size**

For this study, the population of interest was divided into two – the quantitative study population and the qualitative study population. For the quantitative study, the population of interest consisted of persons who were licensed drivers, primarily residing in Tshwane and drove any type of motorized vehicle. For the qualitative study, the population consisted of traffic law enforcement officers of all ranks from the Tshwane Metropolitan Police Department (TMPD). A combination of both simple random sampling technique and purpose sampling technique were adopted for the study. While purpose was adopted for the qualitative aspect of the study, simple random technique was used to select participants for the quantitative aspect of the study. The sample size for this study was 454 respondents for quantitative and 29 respondents for qualitative. This size was considered adequate in representing the number of drivers in



Tshwane based on the sample size table by Taherdoost (2017:237). A minimum of 384 sample units is required to represent 1 million populations at a 95% confidence level and a 5 % margin of error (Taherdoost, 2017: 237). The study's sample size is representative of the Tshwane driving population which is estimated to be below 1 million drivers. This estimation is based on Tshwane's total population of 2.9 million (Statistics South Africa, 2021:1). Saunders, Lewis, and Thornhill (2014) define saturation as a point where no additional new insights can be obtained from the sample.

## **Data Collection Instruments and Procedure**

Data for this study was collected using a combination of a survey and interview method. The survey was applicable to the quantitative dimension of the mixed method, while interview was used in the qualitative arm of the mixed method approach. The process was adopted in respect of each of the two dimensions of the research samples.

Before data was collected, the primary research had secured the authorisation of relevant authorities, particularly of the Tshwane Metropolitan Police Department (TMPD) to allow their officials participate in the interview. After authorisation has been secured and ethical clearance obtained from Tshwane University of Technology (TUT), the primary researcher was able to recruit participants for the study.

## **Data Analysis**

For the quantitative data, after retrieving the survey from participants, data were coded and analysed using the Statistical Package for the Social Sciences (SPSS). The following statistical tests and analyses were performed on the data, simple frequency analysis using totals and percentages, mean/average scores for Likert scale questions, skewness and kurtosis and standard deviation. Additionally, data from the qualitative aspect of the study were analysed using thematic analysis. This was done after the data had been coded. The outcome of the coding thus paved way for the researcher to identify the resonating themes.

## **Limitations of the Study**

The first limitation was the use of purposive sampling technique in data collection. The sampling technique may have excluded other key players in traffic safety in the City of Tshwane, these key players include the management of public sector transport such as taxi associations and public bus operators who are key influencers in road traffic safety. A second key limitation is a focus on one municipality in South Africa which impacts the generalizability of the study findings to other areas.

# **RESULTS**

## **Causes of Road Crashes: Human Factors**

The study pointed out that human factor a major contributor to road crashes that included illegal speed, driver fitness, fatigue, reckless driving and drunk driving and non-compliance with speed and general road regulations. The interviews identified the main human factors behind speeding as attitude and behaviours, competence, and corruption.

## **Causes of Road Crashes: Road-Related Factors**

The participants generally agreed that poor maintenance of infrastructure contributes to road crashes and that most road crashes occur on national roads and provincial roads. In the quantitative study, the strong road-related factor behind road crashes was rated as poor road maintenance. In the qualitative study, road engineering issues were also highlighted as key causative factors of speeding and crashes. Poorly engineered roads forced drivers to overspeed to manage time while long stretches without any speed breaks or other speed-reducing technologies also encouraged illegal speeding and crashes.

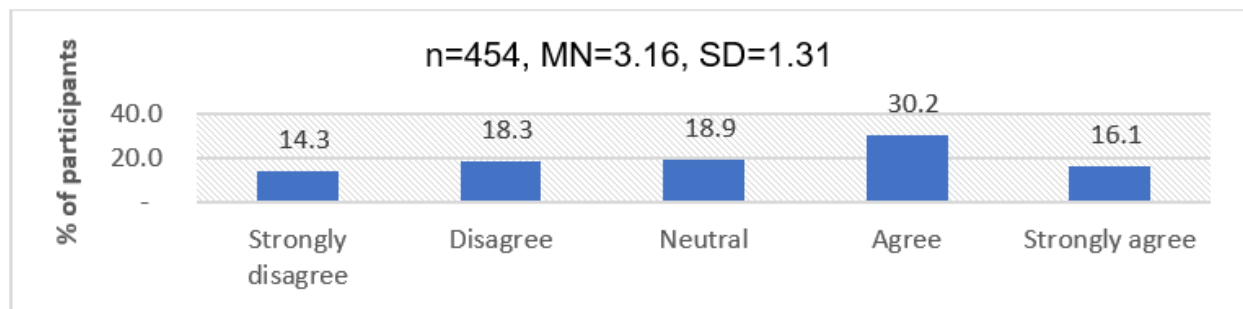
## Road Safety Education and Awareness

This study pointed out that the intensification of road safety education and focused awareness campaign quantitative study results show that most of the participant drivers were not fully aware of the city's speed limit laws as expected. The study strongly points to poor knowledge of speed limits among drivers as a critical challenge for the city's speed management efforts. Limited speed knowledge was also discussed as a problem in the qualitative study.

## Causes of Road Crashes: Vehicle-Related Factors

As noted, the participants drove various types of motor vehicles – both private and commercial. The respondents in the survey responded to the statement, *the vehicle that one drives influences the choice of speed on the roads*. This discussed taxis as high crash risk vehicle. In the interviews, there were views that taxi drivers were generally non-compliant with regulations and had little tolerance for other road users. However, in this study, the sample did not emphasise the ageing taxi fleet and overloading as key road crashes factors. Rather it was association between vehicle type and human behaviour that eventually determined crash risk.

Figure 1: Causes of road crashes: Vehicle-related factors.



Out of 454 participants, 30.2% agreed that the type of vehicle one drive influenced speeding while 18.9% were neutral, 18.3% disagreed and 16.1% strongly agreed with the same statement. On average, the participants were neutral to this view (MN=3.16, SD=1.31).

## Causes of Road Crashes: Human Factors

The table above shows the mean scores on statements relating to the causes of road crashes. Skewness and kurtosis alphas for all the statements except for statement 8 were within the -2.50 to 2.5 range indicating closeness to a normal distribution and hence reliable usability of mean scores for interpreting data analysis results. These intervals were also applied to all questions and statements that used mean scores to rate responses.

Theme 5 relates to the study's third objective - To investigate the contributory factors to illegal vehicle speed in South Africa. Under this theme, the type and nature of vehicles were associated with both illegal speeding issues and road crash risks. On vehicle nature, much of the discussions centred on non-road worthy vehicles. These are motor vehicles that would not have met the safety and quality standards required of them. Non-road worthy vehicles found themselves on the road due to corruption in the qualification of such vehicles as stated by Interviewee 24: *"Corruption activities such buying of driving licenses, registration of not road worthy vehicles"* (Interview 24, August 2021)

17 mentioned that some vehicles were simply too "Old" to be "roadworthy" and motorists simply insisted on keeping them on the road. Thus, in some instances, corruption facilitated the existence of *"non-road worthy dangerous vehicles"* (Interview 7, August 2021) on the roads to the endangerment of society.

In addition to the above challenge with the roadworthiness of motor vehicles, there were issues with vehicle specifications and performances that also enhanced road crashes in Tshwane. There were concerns over the production

of high-powered engines whose speed ranges and performances were beyond the current road designs. Interviewee 10 was among the interviewees who expressed this concern stating that:

*“The manufacturing of power engineer vehicle allowing the driver to drive at above 180km/hr” (Interview 10, August 2021)*

The problem with high-performance engines was that most drivers operating them were not trained to do so. There was a general assumption that being able to manoeuvre regular engines enabled one to operate these high-acceleration engines:

*“Drivers not having proper skills and or training to operate high-performance vehicles” (Interview 29, August 2021)*

Also, the temptation to test the performance of high-speed engines was high among drivers who often abused freeways to test these engines increasing the risk of road crashes:

*“Main arterial routes especially N3, N1 people are tempted to test the speed of their powerful vehicles” (Interview 25, August 2021)*

The issue of high-performance engines was also strongly associated with drag racing which is a disturbing road behavioural phenomenon on the Tshwane roads. This is discussed under a different subtheme.

## Road and Route Environment

According to Interviewee 28, a *“good speed management system is one that resonates with the environment and road environment”*. Thus, road designs must contain adequate speed management systems that among other things include “speed humps” and “traffic circles” to force drivers to reduce speed in certain environments (Interview 20, August, 2021). Interviewee 3 and Interviewee 18 also mentioned speed cameras as deterrent measures as well as aids to prosecution provided, they are put at the right places:

*“Establishment of permanent speed cameras after every 5 km as well as putting CCTV cameras at intersections of the road” (Interview 18, August 2021)*

Road features did not always have to force drivers to reduce speed, but they must also accommodate situations where speed and transportation efficiency is required. Thus, it must create a balance between efficiency and safety. Measures that support this include improving road conditions and increasing road lanes.

Interviewee 9 shares an almost similar view advocating for a balance between the engineering need for transportation efficiency and society’s needs for safety:

*“It is where engineers’ and the society’s (needs) are accommodated” (Interview 9, August, 2021).*

Other road environment issues include road maintenance which is also an engineering matter that affects the efficiency of a speed management system.

## Road Safety Education and Awareness

The quantitative study results show that most of the participant drivers were not fully aware of the city’s speed limit laws as expected. The study strongly points to poor knowledge of speed limits among drivers as a critical challenge for the city’s speed management efforts. Limited speed knowledge was also discussed as a problem in the qualitative study.

# DISCUSSION

The purpose of this study was to identify and describe contributing factor to road traffic crashes in the City of Tshwane, South Africa. We established that the purpose is to help to provide a framework for law enforcement agencies to use in their daily practise to reduce and curb incidences in the city of Tshwane. We also indicated that there is a dearth of literature on specific contributory factors to road crashes in the city of Tshwane. The current study found that human factors a major contributor to road crashes resonate with various views in the literature. This view is also captured in South Africa’s relevant reports including those produced by the RMTTC (Road Traffic Management Corporation 2005, 2010, 2015, 2016b) notes that human factors remain the highest contributors to road crashes. The RMTTC maintains this view from reports dating as far as 2005 indicating that this is a continuing problem.

The common human sub-factors discussed in the literature include intoxication and general lawlessness which is more of an attitudinal problem (Road Traffic Management Corporation, 2005:7-9). In the study, on average participants believe that non-compliance with road traffic regulations by drivers is the key contributing factor to traffic

crashes. Thus, while there were many other contributory factors to road crashes in Tshwane, the general non-compliance attitude towards speeding and road regulations was perceived as the single-largest problem that authorities needed to deal with as a way of reducing road crashes. A study by Forward (2013) shares a similar view albeit from a global rather than South African perspective. Forward (2013:1) notes that non-compliance with road regulations is more of a behavioural problem driven by various psychological and behavioural aspects that authorities needed to identify and address as a way of curbing road crashes.

The study, like Ratau (2008) identified specific human factors as part of a biopsychosocial model that can explain road crashes. The model consists of biological factors such as gender, age and fitness, psychological factors such as emotions, personality and attitude issues and sociological factors such as community and social norms one is institutionalised in. While this study's participants did not directly refer to this model, their conceptualisations of human-related behaviours that cause illegal speeding and road crashes capture all its three core elements. In this researcher's view, this points to the human-related factors behind illegal speeding in the direction of the behavioural sciences. Impacting behavioural change in road use entails reaching out to these interlinked, complex aspects suggesting the significance of training road users at a young age.

From this study, it emerged that road engineering needed to consider movement efficiency by ensuring that roads in high-traffic zones were able to optimally accommodate traffic volumes without increasing the risks of road crashes. The study, like several conducted before, found a link between road crashes and vehicle type. This study discussed taxis as high crash-risk vehicles. In the interviews, there were views that taxi drivers were generally non-compliant with speeding regulations and had little tolerance for other road users. In a study by Verster and Fourie (2018: 66), this view was also highlighted. Thus, this association between vehicle type and behaviour was a common feature between this and Verster and Fourie's study. However, in this study, the sample did not emphasise the ageing taxi fleet and overloading as key road crashes factors. Rather it was the association between vehicle type and human behaviour that eventually determined speeding and crash risks. In a study by du Plessis, Jansen and Siebrit (2020:4) vehicle-related factors were widely discussed as a significant contributory factor of road crashes, like this study's law enforcement model, du Plessis, Jansen and Siebrit (2020) highlighted a causality link between weal law enforcement systems and vehicle-related factors. Effective law enforcement systems including the administrative aspects of such systems, among other things should be able to curb vehicle-related crash factors by identifying and deregistering unfit vehicles (du Plessis, Jansen and Siebrit, 2020:5).

This study, like Ratau (2008) also saw the need for the intensification of road safety and anti-speeding campaigns as well as the enhancement of driver training processes. Both studies pointed at the importance of driver training and regular safety campaigns in behavioural change. However, there were contrasting views to the assertion that increased awareness will have a major positive impact on road crashes. Barry (2017:1) as cited by Venter and Fourie (2018) is adamant that the current behavioural and attitudinal factors can yield the desired impact unless they are supported by a stronger regulatory measure that included compulsory insurance schemes that had a punitive effect on errant drivers.

In the study, there was also a small element of scepticism about whether training and awareness were effective considering the view that most errant drivers were generally not keen on learning anything that would drive them to change. This view was driven by some interviewees who noted that among the negative behavioural traits displayed by illegal speedsters was a disregard for knowledge of road safety. In other studies, du Plessis, Jansen and Siebrit (2020) also note that strong social norms disempowered road safety teaching efforts and diminished the power of road penalties in positively modifying driver behaviour. This study, however, made a stronger leaning towards the view that training and awareness can improve road safety based on the views expressed in both the quantitative and qualitative findings.

## CONCLUSION

This study was designed with the purpose to identify, describe contributing factors to road traffic crashes and help to provide a framework for the law enforcement agencies to use in their daily practise to reduce and curb incidences in the City of Tshwane. The main objective of the study was to investigate the factors contributing to road traffic crashes in the City of Tshwane. The study limitations is that, it focused on one municipality in South Africa which impacts on the generalisability of the study findings to other areas. The study strongly highlighted the dominance of human

behaviour as a major causative of road crashes, followed by vehicle factor, poor road environment and route factors as key input components into the problem. It also emerged trends in so-called performance vehicle were also linked with road crash problem.

The study recommended that increasing police visibility on the roads to reduce the road crashes and area specific studies could be more effective in identifying causes of road crashes. The study concluded that there is a need to address the factors contributing to road crashes by providing enforcement technology to correct the challenge current study notes the existence of three main contributing factors to road traffic crashes. These are human factors, road, and route factors as well as vehicle factors. Furthermore, from this study it emerged that road engineering needed to consider movement efficiency by ensuring that roads in high traffic zones were able to optimally accommodate traffic volumes without increasing risks of road crashes. The study concluded that there is a need to address the factors contributing to road crashes, by providing enforcement technology to correct the challenge.

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# AN INVESTIGATION OF CULTURAL EXPECTATIONS AND STANDARDS AS CONTRIBUTORS TO DOMESTIC VIOLENCE PERPETUATED AGAINST MEN: A CASE STUDY OF LIMPOPO PROVINCE

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## ABSTRACT

*Intimate partner violence (IPV) is a complex social problem, and an obstacle to social and economic progress in developing regions of the world (South Africa not exempted). Generally, intimate partner violence occurs in the private sphere of the family and poses serious risk to lives and the broader society. This article was prompted by the paucity of data on the growing problem of IPV against men in Limpopo province of South Africa, particularly the narrow focus on cultural norms and standard towards men. It examines the impact of cultural values on IPV against men. Furthermore, the article evaluates what changes may be implemented within cultural norms and standards to include male as victims of domestic violence. A qualitative method was adopted to garner participants' perceptions of IPV against men. Face-to-face interviews were conducted with ten members of the House of Traditional Leaders. Findings indicate that instances of Intimate Partner Violence against men in Limpopo province are primarily influenced by the cultural norms, values, language, and other traditional factors. The implication of the findings on efforts at combating IPV against men are discussed.*

**Keywords:** Intimate Partner Violence, cultural norms, societal standards.

## INTRODUCTION

Sociocultural norms are rules or expectations of behaviour and thoughts based on shared beliefs within a specific cultural or social group. While often unspoken, norms offer social standards for appropriate and inappropriate behaviour that govern what is (and is not) acceptable in interactions among people (WHO, 2009). Sociocultural norms are highly influential over individual behaviour in a broad variety of contexts, including violence and its prevention, because norms can create an environment that can either foster or mitigate violence and its deleterious effects.

Different sociocultural norms influence how individuals react to violence. Researchers have hypothesized that the sociocultural norms that lead to the tolerance of violence are learned in childhood, wherein a child experiences corporal punishment or is witness to violence in the family, in the media, or in other settings (Abrahams and Jewkes, 2005; Brookmeyer, Henrich, & Schwab-Stone, 2005; Lansford and Dodge, 2008; WHO, 2009). Religion influences social conventions and forms cultures as well as social, political, and economic lives.

Societal perceptions of IPV as a predominantly female issue have led to the development of research perspectives, frameworks, measures, and methodologies unable to capture the full scope of male victimization (Walker, Lyall, Silva, Craigie, Mayshak, Costa, Hyder, and Bentley, 2020). Women's violence against men has mainly gone unnoticed for a variety of reasons (Tshoane, 2022). Firstly, being a victim who is perceived by society to be strong because of societal expectations carries a stigma for men (Tshoane, 2022). African cultural traditions and patriarchal societal expectations all contribute to men's reluctance to report situations of emotional, psychological, and physical abuse at the hands of their female partners. Because of societal pressure, the pandemic of domestic violence against men persists (Thobejane, 2019).

Patriarchy has been embedded in history at multiple layers across global societies (Malik & Nadda, 2019). Although the primary understanding of patriarchy puts men at an advantage position over women on a one-down position. It reflects “man-dominance,” and it is quite easy to extricate its defeatist impact on men (Malik & Nadda, 2019).

Research on the relationship between cultural expectations and domestic violence is limited in the literature on domestic violence in South Africa. To address this gap, the current research explores the link between cultural expectations, standards and domestic violence in South Africa. The study attempts to answer this pertinent question: how do cultural expectations and standards in the African cultural context influence domestic violence against men? Although academics have given much attention to Intimate Partner Violence (IPV) in recent years, there has been little focus on cultural expectations and standards on the phenomenon particularly as it affects men. These cultural factors are ingrained in men from birth, and can play major role in either ending or perpetuating violence. Additionally, the legal system and the society have failed to perceive men as victims and women as perpetrators because of the culturally pervasive gender stereotype.

## **LITERATURE REVIEW**

The victimisation of men by their female partners is a serious social problem; it is underreported (Wright, 2016) and largely ignored by society (Shuler, 2010; Park, Bang & Jeon, 2020). Violence against men is being regarded as a family problem, which does not require legal assistance. Consequently, it becomes normalised and many cases of violence remain largely unreported (Srivastava, 2016).

Men are subjected to psychological abuse, economic violence and controlling behaviour from their female partners. This includes mild to severe physical violence, psychological violence, threats, material violence and sexual harassment (Lien & Lorentzen, 2019). Results from Walker, Lyall, Silva, Craigie, Mayshak, Costa, & Bentley, 2019, further revealed that men experienced physical, sexual and verbal abuse, coupled with manipulative and controlling behaviours from their intimate partners. Participants also reported secondary abusive experiences, with police and other support services responding with ridicule, doubt, indifference and victim arrest.

There are relatively few studies in literature that concern disclosure of violence among male victims. Male victimisation in IPV situation has long been a neglected phenomenon in academic research and is rarely mentioned in social service provision. Intimate partner violence against men remains an invisible occurrence. This is due to the reluctance of society to support them, because men are culturally perceived to be masculine and strong (Simon and Wallace, 2018).

Studies show that men do not want to admit that they are victims of intimate partner violence due to masculine standards and their fragile self-image. It is evident that most male victims of IPV prefer to hide their situations with the hope of protecting themselves from eroded self-esteem (Adebayo, 2014; Lien & Lorentzen, 2019). These victims are often exposed to socio-cultural stereotypes of masculinity. Men who experience intimate partner violence in the hands of their female partners prefer to suffer in silence because of societal pressures placed on them. The society is likely to accept female aggression against men and condemn male aggression against women. This leads men not to see themselves as victims and therefore conceal intimate partner violence (Robertson & Murachver, 2009; Kumar, 2012; Adebayo, 2014). Despite all of this, there is a scarcity of study on cultural expectations and standards as contributors to domestic violence against men in South Africa. As a result, this research is necessary. The objective of this article is to fill in the gaps in knowledge about domestic abuse against men in South Africa. The purpose is to provide personal knowledge about societal expectations and standards that contribute to domestic abuse against men in South Africa.

## **RESEARCH DESIGN AND METHODOLOGY**

This article adopted a qualitative research design to garner men's perceptions of cultural expectations and standards as contributors to domestic violence perpetuated against men, which enables an in-depth understanding of how cultural norms and standards perpetuate Intimate Partner Violence against men. The study adopted a qualitative research approach. The approach was found appropriate, considering the nature of the study that requires an in-depth knowledge and experience sharing the phenomenon under study. Qualitative research approach also allows for a robust



understanding of participants' views of a phenomenon, which may not be thoroughly explained using a survey approach.

## **Research Site**

Limpopo province, South African, was the site of this study. Although South Africa has nine provinces, however, this one province was selected as a representative of the country, as Limpopo is rooted in its culture. Limpopo is one of South Africa's nine provinces and the fifth largest. Limpopo Province is South Africa's northernmost province, which shares borders with Mozambique, Zimbabwe and Botswana.

## **Selected Study Sample**

A convenience sampling procedure was used to recruit 10 men aged 18 years and above, these criteria include factors such as those men who had experienced of dealing with domestic violence within communities. Participants for this study were drawn from house of the traditional leaders. A sample of ten participants, drawn from this organisation, were invited to participate in this study. A major criterion used in selecting participants for the study was their years of experience within the organisation and their involvement – whether directly or indirectly in domestic violence and how it affects men. Specifically, sampled participants from the above indicated institutions or organisations had a minimum of 15 years of active engagement and experience in domestic violence matters, and how it affects men in South Africa.

## **Sampling Technique**

A convenience sampling procedure was used to recruit 10 men aged 18 years and above, these criteria include factors such as those men who had experienced physical, verbal, emotional, financial, legal, Reproductive/ sexual abuse and who have suffered humiliation at the hands of their women as intimate partners, and discrimination from the hand of the police officials. For sampled participants who were officials of an organisation, it was only those who met certain criteria that were selected. Data was collected through interviews and analysed using thematic content analysis to bring meaning to the large amount of collected data into a readable document. These men were contacted and requested to participate in the study. Additional data was obtained from key informant interviews and supplemented by information from secondary sources including published and unpublished studies, journal articles, and online resources.

## **Data Collection Techniques**

The study required the participants to be able to express their views and perceptions freely, therefore, it utilised interviews to collect data. Interviews are a method of gathering information through an oral transformation using an interview schedule. Shneiderman and Plaisant (2005) highlight that using interviews allow for the obtaining of detailed information, as well as a direct contact with the participants leads to specific and constructive suggestions. The study used a semi-structured interview schedule as it allowed the researcher to use the pre-planned schedule, and for elaborate discussions between the participants and the researcher. The interviews were in-depth and done on a one on one this was done to illicit detailed information. The interviews took place at locations that were chosen by the participants and the duration ranged from 30-40 minutes, this was dependent on how much information the participants were willing to share.

## **Ethical Considerations**

The consideration of ethics in research, and in general, is of growing importance. This study was guided by the following ethics: Informed consent, and confidentiality, avoidance of harm, and avoidance of deception, amongst others. The first ethic that has been considered in this research is informed consent. This ensures that each participant has a complete understanding of the purpose and methods used in the study, the risks involved, and the demands of the study. Obtaining informed consent implies that all possible or adequate information on the goal of the investigation; the expected duration of the participant's involvement; the procedures which will be followed during the investigation; possible advantages; disadvantages and dangers to which respondents may be exposed; as well as

the credibility of the researcher are communicated to the participants. The researchers informed the participants so that they fully understood knowledge of what the study entailed, and that they had the right to withdraw from the study if they so wished. Informed consent essentially entails making the subject fully aware of the study, its possible dangers and the credentials of the research.

## FINDINGS AND DISCUSSIONS

The qualitative data from the interviews served establish societal expectations and standards as contributors to domestic violence against men. The analyses in this part are based on the 10 interviewed Participants who were selected from the study population. The letter 'P' and a number represent the opinions of the selected participant. It is vital to note that the study's findings were presented using a thematic/narrative approach. The technique became necessary due to the nature of the study and the requirement to give thorough information on the study participants' perspectives. The credibility of our data contributed to its validity, as it adequately represented the perspectives of the participants. Beyond ethical considerations and participants' consent to participate in the study, the fact that the study was conducted solely for academic purposes serves as a motive for participants to provide vital information that is critical to the achievement of the study's objective.

### **The first question sought to establish whether cultural norms and standard are contributing to domestic violence perpetuated against men.**

*P1- Men who come forward to admit that women are abusing them are judged harshly for failing to control them (women).*

*P3, p7 and p9, shared the same sentiment, that men are expected to be breadwinners and to be strong, over women. Consequently, this cultural expectation forces men to be providers irrespective of whether they are working or not.*

*According to P10, male children are groomed from an early age to be strong, act like men, and not cry when they are hurt.*

*According to P2, shame of victimization and cultural gender stereotypes are hurdles to r "I just feel intimidated by the whole thing."*

*P5- "if people find out that I am abused, especially by a woman I do not know how I will cope from being a joke. People do not respect weak men and I do not want to carry that label. This will just ruin my name. Culturally am expected to be strong and handle of hardships and pain like a man."*

*P6- "The society expects us men to be strong and to control our wives instead. Besides feeling ashamed I feel like no one would believe me just because I am a man."*

*P8- "I'm in agony, yet I'm embarrassed to talk about it. We say in our culture, 'Monna ke nku o llela teng,' which means that as a strong man, I should suppress the pain no matter how terrible the circumstance is. If I confess that my wife is assaulting me, people will be surprised, they will think less of me, and guys would no longer want to associate with me. No man would befriend someone who has been abused by his wife; this will have an impact on my other relationships. A Pedi guy should be capable of resolving his problems. So I'm still exploring for safer solutions to this."*

*P4- "As an African man, I am compelled to remain silent." I am referring to the Sepedi proverb "Monna ke nku o llela teng." Yes, I see that I am in pain, but I cannot jeopardize my manhood simply to assert that my wife is the man in this family. That is impossible for a man who launched African processes. I am telling you; even my ancestors may abandon me. In our society, a man who sheds tears in public is not a real man."*

### **Lastly, to evaluate changes which may be implemented within cultural norms and standards to include male as victims of domestic violence.**

*P6-Recognizing men's vulnerability throughout society and through chieftaincies, as the majority of Limpopo settlements are still administered by chiefs. Traditional leaders of the country trying to eradicate violence should increase awareness of violence inflicted against men in order to modify perceptions that perceive men as solely perpetrators of violence. It exists, and people must recognise it.*

*P8- "Since the South African government has made a name for itself in the fight against violence against women, why not try to strike a balance between the genders as the South African government's policies strive for gender equality?" The gender equity paradigm must be implemented; Men wants to see it so that they can feel safe."*

These views correspond with findings by Tsui (2014), who noted that services could be improved through increased awareness of IPV against men and through advocacy tailored at gender inclusive practice. Laws and policies must be reviewed, and there should be increased availability of resources. McCarrick, Davis-McCabe, & Hirst-

Winthrop, (2016) further add that the development of more services that are accessible to men to increase support and tailored to respond to their needs is important.

## Discussion

This qualitative study sought to explore the growing problem of IPV against men in Limpopo province of South Africa, particularly the narrow focus on cultural norms and standard towards men. Abovementioned, findings demonstrated that instances of Intimate Partner Violence against men in Limpopo province are primarily influenced by the cultural norms, values, language, and other traditional factors. The implication of the findings on efforts at combating IPV against men are discussed. Findings indicated that cultural perceptions and expectations are major contributors of intimate partner violence against men in Limpopo province. Cultural norms, values, and practices encourage men to bottle their grief and hardships since it is traditionally believed that a real man does not weep, which causes men to bottle their emotions out of fear of being undermined and viewed as less of a man. Furthermore, findings indicated that there is a need to address the cultural expectations and standards that influence the perpetration of men abuse and disclosure of their experienced violence, as well as to confront men's preconceptions about masculinity and vulnerability.

Traditional Leaders reach thousands of people in their communities through “lekgotlas” or community dialogues; they advise government on traditional affairs and influence policy making that affects the lives of millions of people in mostly rural populations. Traditional leaders are required to guarantee that community members live in harmony with one another by emphasising the relevance of traditional culture and common history. Having said that, traditional leaders have the potential to affect society's perceptions and the influence to affect how community members regard men victims of intimate partner violence.

## CONCLUSION

It is important to state that this new focus is in no way intended to minimize the experiences of female victims, but rather to develop a more rounded and complex view of the subject that accounts for a diversity of experiences. However, in order to educate society on how our culture influences how we do things on a daily basis, as well as how we perceive others and ourselves. It has an impact on our values—what we regard to be right and wrong. This is how our society shapes our choices. However, our decisions can have an impact on others and ultimately help shape our society. It is necessary to establish a comprehensive plan to affect change at multiple levels in society in order to improve outcomes for this under-served population (male victims).

Men, too, are clearly victims of domestic abuse perpetuated through cultural norms and gender expectations. However, their situation is not highlighted as much as that of female victims. The study demonstrated that cultural norms and standards contribute to domestic violence against men.

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# CONSUMING AND ENGAGING WITH NEWS IN SOCIAL MEDIA: DO ALL USERS HAVE SIMILAR MOTIVES?

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## ABSTRACT

*Social media has become an indispensable part of our daily lives in today's world. As it permeates various aspects of users' lives such as building and keeping social interactions, shopping or spending leisure time, a very prominent use of social media, following and sharing news, strikes out as an increasingly popular activity deserving special attention. This study has been designed to understand people's behavior in this specific context and their motivations regarding consuming and engaging with digital news. For this purpose, uses and gratifications theory (UGT) of Katz et al. (1973) has been used in the study since this theory is generated specifically to understand media consumption. Although a number of studies exist in the literature using the UGT model to understand news consumption and sharing behavior in social media, approaches to the topic encompass alternative perspectives such as studying the context for specific platforms or consumer groups. Besides, different combinations of uses and gratifications have been used in studies to understand what drives people to engage with news in the digital context. In this study, an exploratory approach has been preferred in order to understand news consumption behavior over social media in Turkey, which is yet under-investigated, as well as profiling and segmenting news consumers according to their behavior. For this purpose, the study first provides a general picture of social news consumption and engagement behavior through descriptive findings on a sample of 386 social media users. This entails users' frequency of reading news in social media, following various news subjects, and preferences for different types of digital sources and platforms. As for engagement behavior, people's propensity to read, like and share news; make, read and respond to comments about news, and search for the accuracy or follow the source accounts for news have also been investigated. Regarding the uses and gratifications perspective incorporated in the study, relevant gratifications that have been encountered in previous studies have been compiled and the importance of five different gratifications (information seeking, passing time, status seeking, entertainment, and socialization) have been asked to digital news consumers to understand their consumption and engagement styles. Based on the exploratory nature of the study, a factor analysis has been conducted using the measurement items for these gratifications and accordingly, two dimensions, namely, the socialization motive and the utilitarian motive for sharing news have been extracted. Ultimately, a cluster analysis has been run with the objective of identifying user groups that have different levels of these two motives in their news sharing and engagement behavior and three distinct clusters with significantly different attitudes regarding the socialization and utilitarian motives have been discovered. Comparative discussions of the clusters have been done and implications offered based on the findings of the study.*

**Keywords:** news consumption, sharing news, social media, uses and gratifications theory, cluster analysis.

## INTRODUCTION

The revolutionary impact of social media in people's lives is so paramount that these digital networks have become essential environments for many daily activities like socializing, shopping or spending leisure time. According to the Digital 2023 Global Overview Report (DataReportal, 2023), the top three primary reasons for using social media are keeping in touch with friends and family (47.1%), filling spare time (36.2%), and reading news stories (30.3%). In other words, although the most conspicuous use of social media is building and keeping social interactions, following and engaging with news content is also a very important reason to keep constant contact with social networks.

With increased accessibility of the internet and widespread usage of smart phones, social media platforms are not just supplementary sources of news anymore. Statistics from various research news and organizations clearly show the imminent rise in the consumption of news from social media channels. At the global level, the most pervasive source of statistics for the digital news industry is the Reuters Annual Digital News Report from the Reuters Institute for the Study of Journalism at Oxford University studying the attitudes and habits of news audiences. According to the 2023 report, between 2018-2023, the proportion of people that reach news by direct access to news websites and apps have decreased from 32% to 22% while those who use social media to follow news has increased from 23% to 30% making social media the main gateway to access news now (Newman, 2023).

The dynamism in the digital news industry is very high and preferences for various social media channels to access news fluctuate on a year-by-year basis. Facebook was and still is the most commonly used network for accessing news although there are important differences regarding channel choice among age groups. However, Facebook is also the only channel that is experiencing a significant decline as a news source compared to other social media networks. While Facebook's popularity for news decreased from 36% to 24% from 2014 to 2023, YouTube's proportion increased from 16% to 20%, Twitter from 9% to 11%, WhatsApp from 7% to 16% and Instagram from 2% to 14% (Newman, 2023).

According to the country-based shares of adults who use social media as a source of news, there are significant differences between countries. While this share is very high in some countries (i.e. Nigeria (78%), Thailand (75%), Malaysia (74%), South Africa (73%)), there are moderate shares (i.e. Hong Kong (55%), Turkey (54%), Taiwan (52%), US (48%)), and much lower shares in others (i.e. Denmark (40%), U.K. (38%), Germany (29%), Japan (23%)).

However, there is also a very dilemmatic side of the social media news consumption issue. While social media usage is generally high and on the rise as a news source at a global level, the trust placed in these channels as news sources is also quite low. According to the Reuters Report, proportion concerned about what is real and what is fake on the internet when it comes to news is quite high all around the world (Europe (53%), Asia Pacific (56%), Latin America (62%), North America (65%), Africa (77%)) (Newman, 2023). Thus, these statistics show that although people are quite skeptical about the news content they encounter in the digital environment, they regularly keep on using these channels to reach news, especially social media, which can be considered as a side-door access when compared to looking for news in more direct channels like the original news agency sites and accounts.

As these statistics show, there is a rapidly growing tendency to use social media as the mainstream source for news at a global level. This trend generates an important route for researchers to study people's news consumption behavior and how they engage with news content in social networks. Although a lot of attention has been directed to studying people's socializing or shopping behavior through social media in the literature, the behavior of consumers as news audience also deserves imminent attention. In light of this need, this study aims to shed a light on individual's tendency to read, follow, comment on and share news in social networks in the Turkish market, which uses and gratifications are witnessed in this context and whether there are different user profiles regarding news consumption and engagement behavior in social media. More specifically, this research attempts to find answers to the following research questions:

- 1) What are the general facts about news consumption behavior in social media in Turkey regarding news reading frequency, platform choice, popularity of news topics and various engagement behavior?
- 2) At what level do individuals benefit from various uses and gratifications of engaging with news content in social media? Can higher-order uses and gratifications be identified?
- 3) Is it possible to identify different consumer groups displaying diverse behavior in terms of the uses and gratifications they value regarding news engagement behavior in social media environments?

## THEORETICAL BACKGROUND

In conformity with the statistics that clearly show the conspicuous rise in the consumption of news in social media environments, numerous studies in the literature also reflect the rising interest in this topic, especially in the last decade. Studies conducted in a variety of countries and with various types of samples have paved the way to understand individuals' motives regarding reading or engaging with news in digital networks. While there are parallel findings between studies in some cases, dissimilar results can also be observed for different contexts or user groups. Therefore, many studies are still needed to reach a satisfactory level of understanding in this domain.

One of the most important reasons in the increasing popularity of news consumption in social media is the opportunity of continuous and convenient exposure to news content in these environments. Since a very large part of the news audience continuously spend time in social media for various purposes, they usually 'come across' news content without intentionally looking for it, which is called *incidental consumption*, ultimately leading to what is termed as the "*News-Find-Me (NFM)*" *perception*. NFM can be briefly defined as individuals' belief that their peer network and connections in social media will naturally bring them relevant news content about current events without their personal effort (Strauß, Huber & Gil de Zúñiga, 2021). Park and Kaye (2021) have shown that incidental news exposure directly leads to the News-Find-Me perception, which decreases individuals' needs to intentionally look for and consume news in traditional and online media. In their study which examines the practices that instigate incidental news consumption among young people in Argentina, Boczowski, Mitchelstein & Matassi (2018) have identified the pervasive use of mobile devices, instant connection to social media platforms, being able to reach news anytime and anywhere and the sociability impact of reading news shared by their immediate network as the most influential motives for this behavior. Even though sociability appears as one of the motives driving NFM, it is important to underline that this is a strictly passive state of news consumption. This is evidently seen in Segado-Boj, Díaz-Campo & Quevedo-Redondo's (2019) study which has found that NFM perception is positively correlated with news internalizing (consuming news) but not correlated with news externalizing (sharing news).

Segado-Boj et al.'s (2019) study signals the importance of differentiating between understanding what makes people consume news in social media and what makes them share news with others. In the literature, there are examples of exploratory studies handling the motives behind each of these two types of behavior. In one such example, Pentina & Tarafdar (2014) have conducted a qualitative content analysis of a large number of interview transcripts from a diverse cross-section of US news consumers and have discovered an abundant number of factors influencing news consumption in social media. According to this study, some aspects of this behavior are more practical such as the need to avoid a large clutter of news, filter news based on relevance, reduce the number of information sources and information volume, and seek news timeliness. Another set of motives are more relevant with the personalizability of news consumption in social media as indicated by the benefits of categorizing and sorting news topics, sources, channels and content in a customized way. There are also trust-based issues such as the need to evaluate source and content reliability; socialization-based issues such as seeking social legitimacy and support, and benefits related with the diversity and independence of social media from institutional media among the long list of motives behind news consumption in social media delineated in this study. In another exploratory study, Wong & Burkell (2017) have similarly used a qualitative approach employing interviews and focus groups to discover the motives behind sharing news in social media. Findings of this study show that motives behind consuming news and sharing them are different in many ways and sharing news in social media has a social side as well in addition to the more utilitarian benefits of consuming them. They state that sharing news has an informative side aiming to raise awareness about a current issue or problem while it also might have an entertaining side aiming to amuse people while informing them about something. The other main drives concealed in this study in addition to the informative and entertaining purposes of sharing news are: 'maintaining connection' with others by sharing a news item that they might be interested in, 'changing people's minds' about an important issue by promoting certain causes or voicing concerns, 'distinguishing oneself' with the motivation to be the first to post trending news, and 'being part of the crowd' by re-sharing news content to belong to a community.

While such exploratory studies benefiting from the interpretive nature of qualitative data analysis are very valuable, another solid approach in the relevant literature is using the Uses and Gratifications Theory (UGT) to understand individuals' motives for consuming and engaging with news in social media. UGT is an all-embracing model, which studies the gratifications sought by audiences of various media and does not necessarily hold on to a standard set of input variables to explain the needs satisfied by media consumption. This versatility rests on the fact



that media content and channels might appeal to a diverse set of uses and gratifications. This is emphasized in the original work of Katz, Blumler & Gurevitch (1973) who provide an overview of uses and gratifications research from a theoretical angle. They state that “audience gratifications can be derived from at least three distinct sources: media content, exposure to the media per se, and the social context that typifies the situation of exposure to different media” (Katz et al., 1973, p.514). Therefore, many alternative applications of the UGT model can be seen in the literature.

UGT has been a popular model in the literature to test the uses and gratifications sought from various social networking platforms at a general level. For example, Raacke and Bonds-Raacke (2008) have used it for MySpace and Facebook; Quan-Haase and Young (2010) for Facebook and instant messaging; Park, Kee & Valenzuela (2019) and Hsu et al. (2015) for Facebook; and Gan and Wang (2015) for microblog and WeChat. However, more specifically, there are studies that have employed this model to study the main motives for news consumption or news sharing in social media as well. Wohn and Ahmadi (2019) identify six key motivations for the consumption of micro-news on social media as social utility (having something to talk about with others), passing time, entertainment, local information-seeking, salient information-seeking, and financial information-seeking. Lee & Ma (2012) have studied the role of four gratification factors in explaining users’ news sharing intention on social media. Among these four factors, sociality, informativeness, status seeking were found to be influential while entertainment did not produce a significant effect on sharing news. In a comparative study, Hanson and Haridakis (2008) have investigated the impact of leisure entertainment, information seeking, interpersonal expression and companionship motives on sharing traditional and comedy news on YouTube. They have found that information seeking is influential only on viewing while interpersonal expression is the main motive for sharing both types of news. While leisure entertainment affected viewing and sharing of comedy news, companionship was not found to have any significant effect on viewing or sharing neither news type. In Apuke and Omar’s (2021) study, the UGT model has been utilized for a more specific context, that is, sharing fake news during the COVID-19 period. The study has shown that information sharing, socialization, information seeking, passing time and altruism predicted the sharing of false information about COVID-19 while entertainment had no significant impact.

In light of the suitability of the UGT model to study consumers’ consumption of and engagement with news in social media, coupled with the evident need for further studies to explore the motives behind these types of behavior in different contexts, this research aims to employ five main uses of news consumption and sharing by social media users in Turkey. For this purpose, the five main motivations adopted in this study are *information seeking, passing time, status seeking, entertainment, and socialization*. However, this research has an exploratory nature as well and further aims to understand whether these constructs converge around higher-order motivations and whether different audience types can be identified according to their tendencies toward benefiting from them. Thus, this study contributes to the existing literature in two specific ways. One main contribution is testing the applicability of commonly used motives in existing studies for the Turkish social media news audience. The other one is identifying audience clusters with alternative tendencies to news consumption and sharing gratifications, which is a novel approach in the sense that previous studies have provided a more mass perspective with all-encompassing findings for media consumers in general.

## METHODOLOGY

Data for the study has been collected through an online questionnaire with a convenience sampling approach. There were no strict qualifications required to participate in the survey other than being 18 or older and being a social media user. There were also not any established quotas regarding demographic variables like gender, age, education or income. Therefore, it was possible to reach the targeted respondent profile by using the social circles and academic and business networks of the researchers that were contacted through various social media platforms. Initially, a total of 400 fully completed questionnaires were gathered. However, 14 of the respondents marked the “Never” option for the question asking the sample to state their frequency of following news through social media. Since their responses to the other questions would distort the findings, they were eliminated from the raw data set and the analyses were conducted with the remaining 386 respondents. As shown in Table 1 and Table 2, the final sample has a satisfactory profile in terms of the distribution of demographic and technographic characteristics.

**Table 1: Demographic Profile of the Sample**

Gender	Male	Female			
	170 (44%)	216 (56%)			
Age	18-25	26-35	36-45	46-55	56+
	73 (18.9%)	85 (22%)	99 (25.6%)	94 (24.4%)	35 (9.1%)
Education	High school and below	University Degree	Post-graduate Degree		
	38 (9.8%)	228 (59.1%)	120 (31.1%)		
Personal Income (Monthly)	≤\$880	≅\$880-\$1,760	≅\$1,760-\$2,640	≥\$2,640	Unanswered
	110 (28.5%)	134 (34.7%)	76 (19.7%)	60 (15.5%)	6 (1.6%)

**Table 2: Technographic Profile of the Sample**

	Never	Rarely	Sometimes	Frequently
Facebook Usage	114 (29.5%)	102 (26.4%)	95 (24.6%)	75 (19.4%)
Instagram Usage	43 (11.1%)	43 (11.1%)	73 (18.9%)	227 (58.8%)
Twitter Usage	111 (28.8%)	91 (23.6)	92 (23.8%)	92 (23.8%)
LinkedIn Usage	156 (40.4%)	75 (19.4%)	90 (23.3%)	65 (16.8%)
Daily time spent on social media	< 1 hour	1-2 hours	3+ hours	
	106 (27.5%)	180 (46.6%)	100 (25.9%)	
Frequency of checking social media accounts	Irregularly	Once a day	Several times during the day	
	65 (16.9%)	189 (49%)	132 (34.2%)	

The questionnaire used to collect data included questions that aim to draw the behavioral profile of the social media news audience in general as well as their responses to the scale items that aim to assess their attitudes toward the five main motives handled in this study. In constructing the scale items, we focused mainly on examining the items used in previous UGT-based studies about social media news consumption and sharing, mainly Lee & Ma (2012) and Wohn & Ahmadi (2019) although UGT-based studies for other contexts were also examined. Scale items were selected, adopted and reworded such that they best reflect the gist of the construct in the translated language. The total of the news sharing motives scale consisted of 15 items (information seeking-3 items; passing time – 2 items; status seeking – 6 items; entertainment – 1 item; socialization – 3 items).

## FINDINGS

### Descriptive Findings about News Consumption and Sharing Behavior

One of the research objectives tackled in this study is to draw a general picture of the facts about news consumption behavior in social media in Turkey regarding news reading frequency, platform choice, popularity of news topics and various engagement behavior. After deleting 14 respondents who have selected the ‘never’ choice regarding reading, listening to or watching news on social media, from the initial data set of 400 people, we ended up with a sample of 386 respondents who followed news in social platforms at different levels of frequencies. The majority of the sample, 233 respondents (60.4%) said they ‘frequently’ consumed news in social media, while 115 (29.8%) said they ‘sometimes’ did and a very small group of 38 respondents (9.8%) said they rarely did so. When asked to rank their preferences for social media platforms to follow news from 1-mostly preferred to 4-least preferred, the overall rankings for four most commonly used social networks were found to be as follows (Table 3):

**Table 3: Rankings of Four Main Social Platforms for Following News**

	Rank 1	Rank 2	Rank 3	Rank 4
<b>Facebook</b>	90 (23.3%)	84 (21.8%)	96 (24.9%)	116 (30.1%)
<b>Instagram</b>	116 (30.1%)	111 (28.8%)	87 (22.5%)	72 (18.7%)
<b>Twitter</b>	155 (40.2%)	75 (19.4%)	70 (18.1%)	86 (22.3%)
<b>Linkedin</b>	50 (13%)	72 (18.7%)	84 (21.8%)	180 (46.6%)

These figures show that Twitter and Instagram are currently the two most preferred social media environments to follow news while Facebook and LinkedIn have comparatively less popularity. Actually, this picture is in a way parallel to the *Reuters Institute Digital News Report 2023* (Newman, 2023) which shows that Facebook is on a steep decline as a news source, although it is still the leading platform on a global basis, while Twitter and Instagram are on the rise. The differences between the rank orders might be attributed to the fact that two-thirds of the sample in this study is younger than 45, and as many studies and research findings show, Facebook is losing its popularity for the relatively younger population in general, while Instagram and Twitter are trendier among them.

As for the types of news content followed on social media (Table 4), findings show that the most popular types of news content in social media are daily news, world news, economy, politics, culture and art, and technology, closely followed by education and health. Comparatively, sports and magazine and tabloid news are less popular. These figures show that the main tendency to follow news in social media is to catch up with current events in general while the more leisurely benefits of social media news remain secondary.

**Table 4: Frequency of Following Different Types of News Content in Social Media**

	Never	Rarely	Sometimes	Frequently
<b>Daily News</b>	10 (2.6%)	20 (5.2%)	88 (22.8%)	268 (69.4%)
<b>World News</b>	7 (1.8%)	35 (9.1%)	164 (42.5%)	180 (46.6%)
<b>Economy</b>	19 (4.9%)	69 (17.9%)	115 (29.8%)	183 (47.4%)
<b>Politics</b>	28 (7.3%)	71 (18.4%)	123 (31.9%)	164 (42.5%)
<b>Sports</b>	114 (29.5%)	115 (29.8%)	72 (18.7%)	85 (22%)
<b>Culture &amp; Art</b>	17 (4.4%)	71 (18.4%)	158 (40.9%)	140 (36.3%)
<b>Magazine &amp; Tabloid</b>	135 (35%)	139 (36%)	70 (18.1%)	42 (10.9%)
<b>Health</b>	36 (9.3%)	110 (28.5%)	134 (34.7%)	106 (27.5%)
<b>Education</b>	23 (6%)	79 (20.5%)	150 (38.9%)	134 (34.7%)
<b>Technology</b>	14 (3.6%)	73 (18.9%)	158 (40.9%)	141 (36.5%)

**Table 5: News Consumption and Engagement Behavior in Social Media**

News Consumption	Frequency	%
Read	211	54.7%
Like	97	25.1%
Share (retweet, repost)	98	25.4%
Make comment	47	12.2%
Read comments	144	37.3%
Respond to comments	33	8.5%
Check other sources for accuracy	138	35.8%
Follow source account to check accuracy	86	22.3%

Findings about respondents' behavior regarding the consumption of and engagement with news content in social media (Table 5) show that the most frequently displayed types of behavior are the more passive ones where the audience is more submissive rather than actively engaged with the content. The most prevalent behavior patterns are reading the news and the comments about the news and checking the same news from different sources to confirm its accuracy. This result shows that the social media news audience has an interrogative approach rather than directly digesting the content immediately. Additionally, a small part of respondents display more engaged reactions as shown by the lower frequencies of liking and sharing the news and following the source accounts of the news. Making comments and responding to comments, which are the most active displays of engagement, are even rarer as seen in Table 5.

One of the most attention-grabbing part of the descriptive findings of this study are the low average figures seen for different types of engagement behavior toward social media news. As seen in Table 6, the only item with an above average level of agreement on a five-point interval scale is also the only item that represents the most passive level of engagement, which is just following news through social media. The rest of the motives about sharing news for information seeking, passing time, status seeking, entertainment and personalization are all below average. This result is consistent with the frequencies about news consumption and engagement behavior in social media, where respondents display a much more favorable attitude toward reading news and what others say and think about them, while they prefer to stay much more discreet when it comes to displaying more active behavior such as sharing and commenting about news.

**Table 6: Averages for the Main Motives for News Engagement in Social Media**

	Mean	St.Dev.
<b>Information Seeking</b>		
INS1: I regularly follow current news from my social media accounts.	3.36	1.29
INS2: I share news on social media to learn new information from people.	2.17	1.18
INS3: I share news on social media to learn the views of different people.	1.83	1.04
<b>Passing Time</b>		
PST1: I share news on social media, when I have time.	2.26	1.19
PST2: Sharing news on social media is a habit for me.	1.85	1.00
<b>Status Seeking</b>		
STS1: I share news a news story on social media because it is shared by many others.	1.80	0.95
STS2: I share news on social media because people care about my posts.	1.92	1.06
STS3: I share news on social media to increase the number of my followers.	1.55	0.87
STS4: I do news sharing on social media to be one of the first to share.	1.56	0.91
STS5: I share news on social media to express my ideas.	2.40	1.33
STS6: I share news on social media to increase my reputation.	1.67	0.97
<b>Entertainment</b>		
ENT1: I share news on social media because I find it funny/entertaining and interesting.	2.52	1.31
<b>Socialization</b>		
SOC1: I share news on social media to interact with people of different perspectives.	1.78	1.03
SOC2: I share news on social media to interact with people of the same opinion.	1.94	1.11
SOC3: I share news on social media to be part of a particular group.	1.72	0.98

*\*Items were asked with a 5-point Likert scale (1-strongly disagree to 5-strongly agree)*

Individuals' unwillingness to engage in active sharing of news in social media can be attributed to their hesitation about the trustworthiness and credibility of the content they encounter which is the most important challenge for the digital news industry as also shown and mentioned in the statistics about the low level of trust placed in social media channels as news sources in the *Reuters Institute Digital News Report 2023*. This implies that people find news encountered in social media to be questionable rather than immediately acceptable, which hinders their tendency to share and publicly react (through comments or re-sharing) to this kind of content.

Although the general inclination of the social media news audience seems to be highly cautious, further analyses are conducted in this research to understand whether there might be consumer groups with alternative predispositions. For this purpose, first, an exploratory factor analysis is done to discover a broader perspective of news engagement motives, followed by a cluster analysis aiming to discover whether different audience types with dissimilar motives can be identified.

## Extracting Higher-Order News Engagement Motives

In addition to drawing the general picture of social media news consumption and engagement behavior, another important objective of this study is to explore whether a broader categorization of motives for news engagement can be determined by a componential aggregation of the 15 items listed in Table 6. For this purpose, an exploratory factor analysis has been run, which produced satisfactory results bringing this larger set of items together under two main factors with a substantial total explained variance of 67.8%. Only one of the items (*Sharing news on social media is a habit for me*) was dropped because of double loading. The KMO measure, assessing the adequacy of the sample for factor analysis is .929, which is in the 0.8-1 interval, indicating a very high level of suitability for factor analysis. Bartlett's test of sphericity, which also judges the suitability of the data by assessing coherence among the items based on correlations, is also strongly indicative of a potentially good factor solution with a significance at the 0.01 level. Table 7 shows how the 15 individual motives have been grouped into two main factors.

**Table 7: Factor Analysis Findings for News Engagement Motives**

<b>F1: Socialization Motive</b> (Eigenvalue: 7.937) Cronbach's $\alpha$ : 0.942	<b>Loadings</b>
I do news sharing on social media to be one of the first to share. (STS4)	.885
I share news on social media to increase the number of my followers. (STS3)	.878
I share news on social media to be part of a particular group. (SOC3)	.826
I share news on social media to increase my reputation. (STS6)	.821
I share news on social media to interact with people of different perspectives. (SOC1)	.750
I share a news story on social media because it is shared by many others. (STS1)	.714
I share news on social media because people care about my posts. (STS2)	.713
I share news on social media to learn the views of different people. (INS2)	.709
I share news on social media to interact with people of the same opinion. (SOC2)	.704
<b>F2: Utilitarian Motive</b> (Eigenvalue: 1.558) Cronbach's $\alpha$ : 0.833	
I share news on social media, when I have the time. (PST1)	.767
I share news on social media to express my ideas. (STS5)	.737
I share news on social media because I find it funny/entertaining and interesting. (ENT1)	.728
I regularly follow news from my social media accounts. (INS1)	.691
I share news on social media to learn new information from people. (INS3)	.670

According to these results, the first dimension has been named as the *socialization motive*, since it includes statements about individuals' tendencies to share news in the digital environment in an effort to seek status, reputation, interaction and popularity. On the other hand, the second dimension, named as the *utilitarian motive* encompasses a more functional approach and converges around items regarding sharing news simply for keeping up with the current agenda, expressing personal opinions and learning from others without necessarily having an intention to interact with others in an active way. This analysis shows that two main driving factors that have completely different foundations for news engagement behavior can clearly be identified, which raises the further question of whether alternative consumer groups may have different levels of each drive. A cluster analysis is performed to answer this question.

## Classifying Social Media Users According to News Engagement Motives

In order to identify characteristically different news audience groups, the total sample of 386 social media news consumers have been classified through K-means method of clustering. Clustering attempts have been made with two, three and four groups and the most meaningful and differentiating results have been achieved with the three-group solution. This attempt reached convergence with eight iterations. A clustering attempt converging in less than 10 iterations shows that significantly different groups can be specified precisely. This is further supported by the very large F values that denote strong differentiation between clusters at the 0.01 significance level for both factors. Relevant findings can be seen in Table 8.

**Table 8: Final Cluster Centers of Three Groups for Two News Engagement Motives**

	<b>Cluster 1: Self-Reliant Audience n = 162 (42%)</b>	<b>Cluster 2: Resistant Audience n = 185 (47.9%)</b>	<b>Cluster 3: Communicative Audience n = 39 (10.1%)</b>	<b>F Value</b>
<b>F1. Socialization Motive</b>	1.88	1.24	3.63	507.223**
<b>F2. Utilitarian Motive</b>	3.14	1.71	4.01	533.067**

\*\*significant at the 0.01 level (*Cluster center averages are over 5.*)

The final cluster centers seen in Table 8 display three significantly diverse news audience groups. The first cluster is called the *self-reliant audience*, which has a slightly above average utilitarian motive but a low level of socialization motive. This indicates that this group follows and shares news in social media from a more personal angle, according to their own convenience, to express their personal opinions and tastes and to learn from this environment rather than engaging with this social circle in an interactive way. They are a sizeable group representing 42% of the total sample. The second group called the *resistant audience*, is the largest cluster in terms of size representing 47.9% of the total sample and they have very low average scores for both motives. They are strongly distant from any type of sharing and engagement behavior neither from a personal nor from a social perspective. This group can directly be identified as the skeptical segment that has a firm hesitation to share news in social media considering its risks such as unreliability and lack of source credibility. Their strongly negative attitude scores might also be a reflection of their general disposition toward sharing any content at all at a personal or impersonal level in digital contexts. The third group, called the *communicative audience*, have above average and the highest scores for both motives. This segment displays an open profile toward sharing and engaging with news both at a personal level and from an interactive standpoint. In addition to expressing themselves, they also have positive tendencies to share news for status seeking, socialization, reputation and collective belonging purposes. Although the size of this group is much smaller compared to the other two representing 10.1% of the total sample, this cluster analysis has shown that they should be targeted in a totally different way by social media news content providers. Similarly, different strategies are required to reach the very resistant and self-reliant groups who all have diverse attitudes toward news engagement in social media.

## DISCUSSION AND CONCLUDING REMARKS

This study highlights a number of important findings about consumers' news consumption and engagement behavior in social media. One of the important findings is that, while people spend a lot of time in social media on a daily basis which makes them encounter a large amount of news content in this environment, their engagement behavior, mainly 'sharing news in social media', falls much behind their tendency to follow and consume news content. This finding might be typical of social media users in general and not specific to news content in that people in general consumer much more content than they share in social networks. However, in the case of news, there are additional concerns that may raise further reluctance to hinder sharing behavior since it is usually second-hand content and might come from unreliable sources just as much as credible ones. Furthermore, spreading news, especially if it is misinformation or fake news, puts a heavier burden on users' and erodes their reputation since it is viewed as irresponsible behavior. There are many studies in the literature approaching the fake news perspective of the issue, which is not necessarily emphasized in this research. Studies show that people might share fake news in order to create immediate awareness about an issue without checking its authenticity, while others may take corrective action when they encounter misinforming content (Talwar et al., 2020). However, as people become more news literate, meaning being more

Careful and skeptical about the creditability of content on social media, their news consumption, and especially news sharing tendency decreases (Vraga & Tully, 2021). Meanwhile, adopting such a meticulous approach is a difficult task and results in social media fatigue among users (Islam et al., 2020). Both the fake news phenomenon and other possible reasons behind consumers' unwillingness to share news can be investigated further as one possible future research avenue.

Another prominent finding of this study is that motives for news engagement behavior in social media might be fragmented. Our attempt to explore whether higher-order motivations can be discovered stemming from the five main news engagement drives included in this study (information seeking, passing time, status seeking, entertainment, and socialization) produced the utilitarian and the socialization motives as two broader themes. This further led to the identification of three different news audience segments with different levels of these drives. This is an important contribution and paves the way for further segmentation attempts, which is a currently immature research area in this domain. One such study has been conducted by Lottridge & Bentley (2018) where they have discovered three main types of news sharing practices as those who shared to all (public, social, and private) channels, those who did not share at all, and those who shared only to their own private and social circles. A larger variety of attempt with alternative segmentation variables can contribute more to the literature.

The main limitations of this study, which might be overcome in further research, are the heterogeneous nature of the sample, lack of consideration of the impact of individual traits in news engagement and approaching news content as an umbrella term rather than more specific types of news streams. Further research about more specific audience groups such as young consumers or consumer groups segmented according to other variables such as gender, education or cross-country comparisons can be very valuable. Individual traits and personality characteristics in addition to demographic segmentation can also bring new insights into the domain. Finally, more specific research attempts can be made handling specific types of news content such as politics, technology, or more niche areas to discover whether audience motives or segments change in different contexts.

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# THE LEGAL RESPONSIBILITIES OF LOCAL GOVERNMENTS IN THE ADAPTATION AND MITIGATION OF CLIMATE CHANGE IN SOUTH AFRICA THROUGH THE PRINCIPLE OF SUBSIDIARITY

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## ABSTRACT

*This paper examines an overview of the foundation and evolution of climate change awareness in local governments in South Africa. Municipalities in South Africa have a constitutional obligation to promote and protect the environment and thereby to take action to mitigate and adapt to climate change. The author explores the idea that to be more sustainable as a municipality and to provide an environment that is not harmful to present and future generations, the evolving legislation should be interpreted and applied. Local governments in South Africa are bound by national legislation as well as various environmental and local government laws. South African municipalities are subject to Schedule 4(B), read with section 156(1), of the Constitution, which states that municipalities (local government) have the power to execute law-making and executive powers. The duty to provide every person with an environment that is not harmful to his or her health or well-being of the benefit for present and future generations is prolonged in section 4 of the Local Government: Municipal Systems Act 32 of 2000 (hereinafter the Systems Act). Arguably, climate change adaptation will be best managed by provinces and local governments. This can be achieved by the adoption of the Principle of Subsidiarity. The Principle of Subsidiarity means that the national government should not exercise functions that can be exercised best by a smaller and lesser body such as a local government. This principle can be explained to stipulate that governance should take place as close as possible to the citizens. Therefore, when implementing the Principle of Subsidiarity, the state shall only take action in so far as the objectives of the proposed action cannot be effectively performed by the communities. Legislation and case law must be understood within the context of mitigation and adaptation in the climate sector and how local government with the Principle of Subsidiarity can achieve this objective. The paper presents the environmental impact of climate change and how the local government dispensation can address this phenomenon through the notion of developmental local governments.*

**Keywords:** adaptation, climate change, environment, mitigation, Principle of Subsidiarity.

## INTRODUCTION

The Constitution of the Republic of South Africa, 1996 (hereinafter the Constitution) strives for a fundamental subjective environmental right (section 24). The environmental right in the Constitution, which has an essential nature, has as its goal for the state to strive towards a safe, healthy, clean, and protected environment for its citizens in general (Republic of South Africa [RSA], 1996, section 24). Therefore, the inference that can be made is that there will be some common characteristics, features, and meanings, such as a sustainable development environment and fundamental right, that are found in terms of international documents in the application thereof in South Africa.

The constitutional dispensation divides South African governance into three spheres of government, namely national, provincial, and local, and these spheres are distinctive, interdependent, and interrelated with each other (RSA, 1996, section 40). Furthermore, the three spheres of the government system have their constitutionally entrenched powers, duties, and responsibilities which differ from each other; and moreover, the local and provincial government have their own limited autonomy. Local governments, or municipalities, in South Africa play a prominent role in

protecting the environment as per the constitutional mandate. During the apartheid era, the role of local government was seen mostly as service-providing; but in the new constitutional dispensation, the role has dramatically changed and now aims to be developmental. The crucial role of municipalities is encompassed in the notion of “developmental local government”. The latter seeks to maintain that municipal services are provided in a financially and environmentally sustainable manner, ensuring the deepening of the democratic culture within local governments. Langa J, captured the idea of “developmental local government” in the following excerpt:

The overall constitutional mandate for local government is to provide a healthy and safe environment for citizens ... Local government’s prime focus will revolve around the planning and provision of a safe and healthy environment. It will function as the primary development vehicle for metropolitan, urban and rural communities. Defined this way, the responsibilities of local government sound simple enough – but the obstacles will be great. Finance will always be limited; there may not be enough time to develop adequately responsive systems and a constant tension will exist in the prioritisation of services to historically disadvantaged rural communities as opposed to the more affluent urban and metropolitan centres. The practical challenges facing local government are thus enormous (quoted in Gutto, 1996, p. 9–10).

It is generally agreed that the natural environment is deteriorating; the focus is thus placed on strategies, debates, and agreements in international and national fields, which include legal organisations and all spheres of government, to stop or minimise the deterioration (De Young, 1999, p. 223–224). The term “environment” can be broadly defined as all that is natural on the earth as well as the interrelationship between social settings, built environments, learning environments, and informational environments. When interpreting problems that involve human-environment interactions, both globally and locally, a model of human nature that predicts the environmental conditions under which humans behave in a decent and creative manner must be used (De Young, 1999, p. 223–224). Interpreting the term “environment” in South Africa according to section 1 of the National Environmental Management Act (NEMA) 107 of 1998 (RSA, 1998), means:

The surroundings within which humans exist and that are made up of – (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing (section 1).

The term “environment” must be understood within the context in which a local government has to function. An integrated environmental management approach should be adopted by the municipal manager, as well as the subordinate of the municipal manager, to address the objective as set out by NEMA (Nealer, 2009, p. 77). The municipal manager who is appointed by the municipal council is the link between the council and the administration of the municipality. Not only should the municipal manager account for a municipality’s income, expenditure and assets, but also to the adherence of legislation that is applicable to municipalities (Overstrand Municipality, 2023, p. 1). Therefore, the municipal manager is responsible for the implementation and interpretation of the environment on the local level of governance.

Environmental concerns such as climate change are relatively new, and the South African common law contains little that is directly concerned with the conservation of the environment and the regulation of climate change. According to Kidd (2008, p. 20), the greater part of environmental law consists of legislation and the interpretation thereof, and primarily deals with specific environmental issues, such as water, air, climate change, wildlife, and protected areas. This article provides a broad, contextual overview of local governance, and the essential nature of distinctness of local government with reference to climate change and the Principle of Subsidiarity. This includes the legislative framework of local government, namely municipalities, within the jurisdiction of the Constitution.

## **SOUTH AFRICA AND CLIMATE CHANGE**

South African is vulnerable to the phenomenon known as “climate change”. The latter is not only felt in South Africa but across the globe, and commonly manifests in droughts, floods, bush fires, and other extreme weather events. Climate change is the long-term change in temperature and extreme weather patterns. Although these changes may be

natural, they may very well also be unnatural caused by human activities; for example, due to the burning of fossil fuels like coal, oil, and gas. The burning of fossil fuels generates greenhouse gas emission, which in turn acts as a blanket around the earth, trapping the sun's heat and thereby raising temperatures (United Nations, 2022).

South Africa is generally warm, with cooler temperatures in high altitude regions. Over the last few decades, South Africa's minimum and maximum temperatures have become more extreme; the coastline is impacted by heavy waves and storm surges. South Africa is also prone to the fact that it has water availability challenges, which is due to the warmer temperatures. Furthermore, South Africa's greenhouse gas emissions are mainly caused by electricity and heat generation (Climatelinks, 2022). The effects of climate change were greatly experienced in Cape Town. Cape Town recorded its highest temperature in the last 100 years which was 42°C and it contributed to the worst fires Cape Town has seen. Moreover, South Africa has seen a 2 to 4 degree Celsius rise in temperature which threatens farming, dam levels, and the natural environment. This in turn influences the biodiversity, food security, water security, and the economy (Western Cape Government, 2022).

Two words are closely associated with climate change, namely “mitigation” and “adaptation”. *Mitigation* to climate change means that humans respond by reducing and stabilising the levels of heat-trapping caused by greenhouse gases. It involves reducing the flow of heat-trapping greenhouse gases into the atmosphere. The objective of mitigation in climate change is to avoid significant human interference with the earth's climate. In terms of *adaptation* to climate change, humans adapt to the problems/causes of climate change. Humans should adapt to life by adjusting to the actual or expected future climate, which also includes reducing humans' risk from extreme weather events. Although climate change is global, it is felt on a great scale locally. Therefore, local governments will be in the forefront of adaptation (NASA, 2022). Local governments can join the mitigation process by developing policy responses to analyse greenhouse gas emission and prioritise areas to reduce the emissions. Local governments may also update or develop strategies, or framework and implementation plans, that align with economic growth ambitions for the local government while achieving the objectives of mitigating greenhouse gas emissions. However, it should be noted that although the local governments should achieve the objectives by implementing plans, strategies and policies, the essence lies in the fact that it should be implemented on a daily basis and continuously monitored.

South Africa on a national level requires significant and unparalleled changes in order to mitigate climate change and reduce greenhouse gas emissions. In addressing the mitigation on the national level, the Presidential Climate Commission was established as an independent, statutory multistakeholder body to oversee and facilitate a just and equitable transition towards a low emission and climate resilient economy.

South Africa is mitigating the impact of climate change by reducing greenhouse gas emissions and implementing and adopting different policies and plans. These policies and plans will support the transition to a more sustainable society, as listed below,

- *The Presidential Climate Commission*: The Commission is an independent, statutory, multistakeholder body that is established by the current president, Cyril Ramaphosa. The purpose of the Commission is to oversee and facilitate a just and equitable transition to a low carbon and climate resilient economy (Presidential Climate Commission, 2023).
- *Climate Change Bill*: The Bill was developed not only to enable an effective climate change response but also a long-term just transition towards a low-carbon and a climate resilient economy as well as society for South Africa within the context of sustainable development (RSA: Department of Forestry, Fisheries and the Environment, 2021).
- *Carbon Tax Act*: The Carbon Tax Act is to enable the imposition of a tax on carbon dioxide (CO<sub>2</sub>) equivalent of greenhouse gas emissions (RSA, 2019).

It should be noted that the above policies are not the only measures adopted by South Africa in an effort to transform to a climate resilient economy. Furthermore, not only is national government bound by these policies, but so are local governments through the implementation and promotion of these policies and plans.

# CONSTITUTIONAL, LOCAL GOVERNMENT AND ENVIRONMENTAL RIGHTS IN SOUTH AFRICA

The Constitution enshrines on South African citizens a number of national human rights. The state is mandated to fulfil these human rights that are found in Chapter 2 of the Constitution, which include, *inter alia*, that everyone is entitled to a clean and healthy environment, as per section 24 (Currie & De Waal, 2005, p. 159). The Constitution is the supreme law of South Africa, and any other law that is inconsistent with the Constitution is invalid.

The founding provisions of the Constitution direct that the governing approach to the interpretation of the Constitution and the Bill of Rights is that they should be treated in a holistic rather than a piecemeal fashion. As such, the Constitution's clauses and sub-clauses should not be read in isolation from the overall structure of the document and the moral and political values that it is expressly designed to promote. In this spirit, the Bill of Rights does not erect a hierarchy of rights. The socio-economic rights contained in the Bill of Rights enjoy equal status with all other fundamental rights (Stein, 2005, p. 284).

One of the fundamental rights contained in the Constitution is that all individuals have the right to an environment that is not harmful to their health or well-being, and that the environment is protected for the benefit of present and future generations (section 7(2) read in conjunction with subsection 24(a) and (b) of the Constitution). The state is mandated to give effect to these rights. According to section 7(2) of the Constitution, the state has a positive and negative (a duty to cease) duty to respect, protect, promote, and fulfil the rights as indicated in the Bill of Rights of Chapter 2 of the Constitution (Brand & Heyns, 2005, p. 257–258). In order to fulfil section 7(2) of the Constitution, the state, which includes municipalities, must respect, protect, promote, and fulfil the right to a clean and healthy environment that is not harmful to the health or well-being of the citizens and to ensure that present and future generations have this right to the environment.

South African municipalities are bound by the Constitution, national legislation, and various environmental and local government legislation and policies. Schedule 4(B) read in conjunction with section 156(1) of the Constitution, states that all local governments have the power to execute a law-making function, but also have executive powers. Section 4 of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) (hereinafter the Systems Act) entails that the Council has the responsibility to give effect to the duty to provide everyone with an environment that is not harmful to their health or well-being for the benefit of current and future generations. When interpreting section 4(2)(f) of the Systems Act, local government must provide services to the local community in a manner that is financially and environmentally sustainable (*Residents of Joe Slovo Community; Western Cape v Thubelisha Homes and others* (Centre on Housing Rights and Evictions and Another, *Amici Curiae*) 2010 (3) SA 454 (CC) para 348). The right to a safe and healthy environment within the jurisdiction of the municipal boundaries must be promoted (section 4(2)(i) of the Systems Act). Municipalities, together with the national and provincial organs of state, must progressively realise the fundamental rights – specifically section 24 of the Constitution in accordance with section 4(2)(j).

The environmental legislative and policy framework for the implementation and promotion of sustainable development is found in NEMA. NEMA, applies throughout South Africa, and section 2 sets out principles which apply to all organs of state in the promotion of sustainable development. The principles of section 2 further serve as a general framework in which environmental management and implementation plans must be considered by all organs of state (section 2(1)(a) and (b) of NEMA). These principles and the objectives of NEMA give effect to section 24 of the Constitution by providing an environment for current and future generations that is not harmful to the health and well-being of all individuals, and to develop a framework for the integration of environmental management through the diverse developmental activities of all organs of state. The principles of section 2 further provide for sustainable development through local governments in the promotion of the fundamental right as determined by section 23 of the Constitution (RSA, 1996: Preamble).

A direct duty is placed on the state, which includes local governments, to respect, protect, promote, and fulfil the social and economic rights as determined by Chapter 2 of the Constitution (RSA, 1998, section 2(1)(a)). This duty is also seen in section 2 of NEMA. The principles of section 2 of NEMA indicate that South Africa has further committed itself to the reduction of greenhouse gas emission which can be seen as a positive step by the state in

achieving the direct duty. The Climate Change Bill (RSA: Department of Forestry, Fisheries and the Environment, 2021) must be considered in conjunction with the NEMA and is seen as a specific environmental management Act which binds all organs of state (including municipalities). The above-mentioned Bill is committed to mitigation strategies in South Africa as listed herewith:

South Africa will build the climate resilience of the country, its economy and its people and manage the transition to a climate-resilient, equitable and internationally competitive lower-carbon economy and society in a manner that simultaneously addresses South Africa's over-riding national priorities for sustainable development, job creation, improved public and environmental health, poverty eradication, and social equality.

In this regard, South Africa will effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic, and environmental resilience and emergency response capacity, especially on the local level.

The environmental framework legislation, NEMA, which governs all environmental matters in South Africa, is founded on the foundation set out by section 24 of the Constitution and the environmental principles which govern environmental management in Chapter 1 of NEMA. NEMA provides further for cooperative governance by different spheres of governments for fair decision making, the promotion of cooperative governance as well as the procedure to coordinate environmental functions that are exercised by different organs of state (Algotsson & Murombo, 2009, p. 22). NEMA also essentially regulates climate change in South Africa by the regulatory scope that is covered in the spectrum of the term "environment". Municipalities must be guided by the principles as set out in section 2 of NEMA, which serve as binding guidelines concerning environmental governance in South Africa. The Court reaffirmed the binding principles to municipalities in *Fuel Retailers Association of Southern Africa v Director General*:

NEMA principles 'apply . . . to the actions of all organs of state that may significantly affect the environment'. They provide not only the general framework within which environmental management and implementation decisions must be formulated, but they also provide guidelines that should guide state organs in the exercise of their functions that may affect the environment. Perhaps more importantly, these principles provide guidance for the interpretation and implementation not only of NEMA but any other legislation that is concerned with the protection and management of the environment. It is therefore plain that these principles must be observed as they are of considerable importance to the protection and management of the environment (*Fuel Retailers Association of Southern Africa v Director General; Environmental Management, Department of Agriculture Conservation and Environment, Mpumalanga Province 2007 6 SA 4 (CC) para 67*).

The principles of section 2, which are binding on all organs of state and municipalities, have a statutory force, although the principles only apply to the actions of government and not those of the private sector (Feris & Kotzé, 2014, p. 7). The importance of the principle of sustainable development is also implicitly mentioned in Section 24 of the Constitution and section 2 of NEMA. The sustainable development principle must be interpreted to understand whether South African inhabitants can claim an absolute right.

The sustainable development principle is promulgated in the Report of the World Commission on Environment and Development (WCED): Our Common future, which is also known as the *Brundtland Report* (WCED, 1987). The *Brundtland Report* contains ideas, information, and guidelines to address the environmental challenges that are connected to the sustainable development and growth of our cities. The *Brundtland Report* is not oblivious to the problems that are currently facing the world such as environmental degradation, deteriorating infrastructure, and climate change. Du Plessis (2006, p. 78) is of the opinion that these problems are dependent on the political and social changes rather than on the means and resources available. The *Brundtland Report* defines sustainable development as follows:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987).

The *Brundtland Report* suggests that the developmental impact on the natural environment should be established, and then limitations should be placed on further developments once the effects are known. When the

impact and limitations are known, the needs of present generations are reached, and future generations will then have the same environment as the present generations. Bouillon (2003, p. 63) argues that sustainable development must be understood in two contexts, namely: first, that sustainable development must focus on the needs of people; and second, that the technology and social organisation must have the view to ensure that the environment meets the needs of present and future generations. The impact of climate change on cities can't be separated from sustainable development in environmental management. There is a causal link between the envisaged sustainable development goal and the impact climate change poses to the environment. The Department of Water Affairs (n.d.) states that:

Despite the innovative transformation brought about by new water policy and legislation in the history of water management in South Africa, the challenges that face us are enormous to say the least. Managers, scientists, engineers, government officials, must harness all our creativity and energy to ensure sustainable water use now, and in the future.

In order for a municipality to reach the objectives, developmental orientated planning must be undertaken by adhering to the developmental duties that are set out in the Constitution (RSA 2000, sections 152–153). It further includes the progressive realisation of the fundamental rights that are contained in section 24 of the Constitution (RSA, 2000, section 23(1)). The causal link that can be seen is that local governments must undertake developmentally orientated planning to give effect to the progressive realisation of *inter alia* the right to an environment that is not harmful to current and future generations' health and well-being. It should further be noted that environmental issues must be included in a municipal integrated development plan (Van Wyk, 2012, p. 270–271).

In terms of the above-mentioned, it is clear that local governments have environmental duties, and planning must be conducted within the scope of their duties for the fulfilment of section 24 of the Constitution. In the case of *Holomisa v Argus Newspapers Ltd 1996 9 BCLR 836 (W) 863 J*, it was stated that the legal thought and decision-making has changed drastically as a result of the Constitution. It must be noted that the post-apartheid government comprises of three different spheres of government (national, provincial, and local), and each has its own constitutional powers, duties, and responsibilities. Schedule 4 (B) and 5 (B) of the Constitution contains the area of competence for municipalities, and although the “environment” *per se* does not appear as an area of competence under Schedule 4 (B) and 5 (B), a municipality still has a positive duty to fulfil section 24 of the Constitution. It should further be noted that local governments are co-responsible with the other two spheres of government in fulfilling the fundamental rights as entrenched *inter alia* in terms of section 156 of the Constitution (Section 24 and section 152(1) of the Constitution).

Arguably, climate change adaptation will be best managed by provinces and local governments. This can be achieved by the adoption of the Principle of Subsidiarity. The Principle of Subsidiarity means that the national government should not exercise functions that can be exercised best by a smaller and lesser body such as a local government. This principle can even be explained to stipulate that governance should take place as close as possible to the citizens. Therefore, when implementing the Principle of Subsidiarity, the state shall only take action in so far as the objectives of the proposed action cannot be effectively performed by the communities.

## PRINCIPLE OF SUBSIDIARITY

The term “subsidiarity” determines that governance should take place as close as it is possible to the community (De Visser, 2008, p. 16–17). Arguably, local governments are closest to the citizens and can make more “intelligent” decisions on what the citizens need and the problems of the community. This in essence will protect the lower sphere of government (the municipalities) against the undue interference of the national and provincial sphere of government for the giving of alternative functions and powers to municipalities where possible. It should be noted that although the Constitution is influenced by the Principle of Subsidiarity, it is not explicitly mentioned in the Constitution. De Visser (2008, p. 16–17) asserts that when the Principle of Subsidiarity is implemented, the lower sphere of government, or municipalities, is the sphere that is closest to the citizens, which can then establish and distinguish the needs of the community and address them as they arise.

A specific provision that may be understood under the context in the light of the Constitution is found in section 156(4) which protects local government and encourages the other two spheres of government – national and provincial – to transfer the functions to local governments where it is possible. This entails that the national and provincial spheres of government may not interfere in the matters of local governments without good reasons. This

notion of governance aligns with the Principle of Subsidiarity. Not only is this seen as the independence of the local sphere of governance, but will in essence also promote the goal of developmental local governments. A question that arises when interpreting the Principle of Subsidiarity is whether it is legally enforceable. No South African court has delivered a judgement on the question and whether the Principle of Subsidiarity is enforceable; however, the courts have interpreted section 156(4) of the Constitution and stated that section 156(4) is not enforceable as a self-standing ground for the implementation of legal action (Community Law Centre, 2008).

As indicated above, South African courts have not made reference to the Principle of Subsidiarity, yet there are references to reflect the perception of the Principle of Subsidiarity, for example, as seen in the *S v Mhlungu and Others* 1995 (7) BCLR 793 (1995) (3) SA 867 (CC) para 59. South African academics have distinguished between different types of Subsidiarity. Institutional Subsidiarity, according to Du Plessis (2006, p. 207–219), means:

An force in societal life constraints any more encompassing or superordinate institution (or body or community) to refrain from taking for its account matters which a more particular, subordinate institution (or body or community) can appropriately dispose of, irrespective of whether the latter is an organ of state or a civil society.

This means that governance systems that constrain, or superordinate institutions, must refrain from fulfilling the obligations for which a more specific subordinate institution can more appropriately dispose of, irrespective of whether it is an organ of state or civil society. Du Plessis (2006, p. 212) further states that Institutional Subsidiarity will enhance the centrifugalisation of the power of social institutions *vis-à-vis* one another. The decentralisation of responsibilities and powers from the more central sphere of government (national) to the local municipality is concerning for Institutional Subsidiarity due to the fact that the Institutional Subsidiarity will not have an effect if there is an absence of other social institutions in the spheres of government.

The Constitution clearly distinguishes between the different division of powers and functions of the three spheres of government. This does not only include the original powers and functions, but also the transfer of additional powers between the three spheres of government. Section 156(4) of the Constitution states that:

- (4) The national government and provincial governments must assign to a municipality, by agreement and subject to any conditions, the administration of a matter listed in Part A of Schedule 4 or Part A of Schedule 5 which necessarily relates to local government, if—
  - (a) that matter would most effectively be administered locally; and
  - (b) the municipality has the capacity to administer it (RSA, 1996, section 156(4)).

The rationale for section 156(4) of the Constitution, according to De Visser (2008, p. 91), is the Principle of Subsidiarity. Du Plessis (2006, p. 209) opines that Strategic Subsidiarity interpreted legally supposes that if two or more legal norms are applicable to a situation, the external directing may instruct one of the legal norms to lower itself to the other norm. When interpreting Adjudicative Subsidiarity, it can be seen as an instance of Strategic Subsidiarity and it will guide the adjudication of substantive issues pertaining to the law. This means that there is a nuance, non-absolutist understanding of the supremacy of the Constitution. This is also seen in section 2 of the Constitution:

This Constitution is the supreme law of the Republic; law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled (RSA, 1996, section 2).

As mentioned above, the Bill of Rights (or Chapter 2 of the Constitution) is supreme, and it regulate all laws, statutes, common and customary law, and it further binds the executive, legislature, judiciary, and all organs of state; in other words, all three spheres of government. Therefore, as stated by Du Plessis (2006, p. 232), Adjudicative Subsidiarity has the potential to steer the development of non-constitutional law in the direction of the objectives as set out in terms of the Constitution. Therefore, when using Adjudicative Subsidiarity to promote the mitigation of climate change, the lower levels of government, namely municipalities, will have to apply it and can start implementing mitigation procedures.

The Principle of Subsidiarity in terms of South African law, case law, and section 156(4) of the Constitution, is not explicitly discussed; however, De Visser (2008, p. 100) contends that South Africa does not have a closed system of values in the Constitution, and that the Principle of Subsidiarity will be one of the systems of values. If

followed, municipalities as a government organ are the closest to the community and will have a hands-on approach to climate change and the effect climate change has on the community. The following section highlights the challenges faced by municipalities in South Africa.

## **CHALLENGES FACED BY MUNICIPALITIES**

There are numerous challenges that are faced by municipalities when implementing legislation in the mitigation of climate change. There is an absence of accountability regimes among the three spheres of government. This includes the allocation of budgets and resources that are aligned with plans, decisions, and the coordination and accountability amongst the three spheres of government. Additionally, this includes whether there is sufficient human resource capacity amongst the spheres (Thornhill, 2011, p. 53–54). There is also a challenge with efficient decision-making when working with all three spheres of government that goes hand-in-hand with the hierarchical government structures. These challenges can be prescribed to the lack of policy guidelines as well as the division of functions, responsibilities, and accountability between the spheres (Thornhill, 2011, p. 54).

Municipalities in South Africa are confronted with the inability to financially sustain themselves. This challenge may be created due to failure to institute proper mechanisms to ensure that the municipalities collect their revenue accordingly. Municipalities render different services to communities which communities must pay for. If the service is not paid for, municipalities struggle to meet the basic needs of the community which includes the mitigation and adaptation of climate change. This capacity to deliver services is exacerbated by the unethical practices of local governments. This can be seen where a municipal manager appoints service providers who are influenced by politics (Madumo, 2015, p. 163).

## **CHALLENGES WHEN CLIMATE CHANGE IS LEFT UNATTENDED**

Climate change is a global challenge due to the evolutionary focus on the here and now, and does not necessarily focus on the benefits of the future. This is because humans need to focus on the here and now and the ability to survive today; there is therefore little or no reason to plan for the future. However, because there is no focus on the future, the problem of addressing climate change becomes even more challenging (Weber, 2015, p. 566). Climate change has greatly affected the weather and weather patterns all over the world. This is caused by an increase of greenhouse gas concentrations in the air, which ultimately raises the temperature of the atmosphere. The consequences of the latter include hurricanes becoming more aggressive; oceans having warmer water; and the atmosphere holding more water vapor, which results in heavy and intense rains (Kaddo, 2016, p. 6).

Ice sheets and the melting of ice are also directly related to climate change. The consequence of melting ice is a rise in sea level which in turn endangers islands, causing them to disappear or shrink. To put this into perspective, ice sheets in the Antarctic are melting at an average rate of about 125 billion tons per year. Populations and communities living at or around sea level are exposed to a range of related hazards (Kaddo, 2016, p. 6).

Water quantity and quality, and drinking water, are negatively impacted by climate change (Kaddo, 2016, p. 7). Climate change will increase the frequencies of flooding and droughts. Land use management and the influence on society, health, and the economy indicates that catchment water resources will be negatively affected if the climate were to become drier due to extreme weather patterns (Ziervogel et al., 2014, p. 6).

Climate change influences the biodiversity sector, species, and ecosystems. This increases temperatures and gives rise to greenhouse gas concentrations. The biome that is most under threat due to climate change is the grasslands. The increase in greenhouse gas concentrations will cause woody vegetation in the grasslands. Other biomes that will be directly affected by climate change, specifically in South Africa, include the Nama Karoo biome, Indian Ocean coastal belt, the Fynbos biome, and the Forest biome (Ziervogel et al., 2014, p. 5).

The agricultural sector will also be negatively affected by climate change. Since temperatures are rising due to the increase of greenhouse gas concentrations in the atmosphere, it will impact the demand in irrigation. Summer



rainfall regions will negatively impact cereal crops, whereas winter rainfall regions will impact wheat production. South Africa and the continent more broadly will see an increase in pests and pathogens in the agricultural sector, which in essence will negatively affect agriculture as well as the cost included when buying pesticides to control the pests and pathogens (Ziervogel et al., 2014, p. 6).

The impact of climate change on health is also of great concern. Heat stress, diarrhoea, and respiratory and cardiovascular health problems are caused by the increase of temperature. Droughts have shown to influence morbidity and mortality due to the high precipitation. Not only does the vector-borne disease such as malaria increase with climate variability, but also the health risk associated with food insecurity, hunger and malnutrition, natural disasters, air pollution, communicable disease, high injury burden, and mental health (Ziervogel et al., 2014, p. 7).

## CONCLUSION AND RECOMMENDATIONS

Local government spheres remain a significant role player in ensuring that sound and solid economic growth, developmental environmental services, and climate change problems are addressed in South Africa. The country is well informed about the problems brought about by climate change as well as the challenges faced by municipalities. The Constitution, together with the local government and environmental legislation, could be interpreted that each local government must establish and implement a framework on how to ensure that an approach to climate change is taken in its area of jurisdiction. It may be an option that the community should be able to hold individuals and municipal managers within, as well as the local government as a whole, jointly and severably (the municipal manager/mayor in their own capacity) responsible in the event that a climate change response implementation plan is not implemented and managed. It can be argued that adaptation should preferably take place at local government level (not only at local government level), since the communities can escalate climate change problems much faster to the local governments through the Principle of Subsidiarity. This means that local governments must establish and implement a framework within their area of jurisdiction to address the problems that are associated with climate change to achieve the objectives stated in the Constitution and other legislation.

South Africa is making significant progress in, firstly, understanding the impacts of climate change, and secondly, realising the implementation and evaluation of adaptation responses by local governments. Uncertainty exists with climate change projections at local levels, the complexity of local economic development, political and social contexts as well as other possible climate change impacts. Challenges faced by local governments in adapting to climate change include the authority held by environmental departments. Local governments are mandated to address climate change; however, different policies indicate that municipalities are not reflected in municipal finances. Smaller municipalities, like local and district municipalities, have almost no capacity to act and address climate change, but metropolitan municipalities have received international funding initiatives.

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# GENDER DISPARITIES IN BEHAVIORAL INTENTION TO USE UNIVERSITY WEBSITES AMONG GENERATION Y STUDENTS

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## ABSTRACT

*In recent years, there has been growing interest in the role of university websites in higher education. University websites are an important source of information for students, providing access to course materials, academic support services, and campus resources. Generation Y students, who are digital natives, are expected to be proficient in using university websites. However, research has shown that there may be gender disparities in the behavioral intention to use university websites among this population. As such, the purpose of this paper was to explore whether Generation Y male and female students differed in their intentions to use university websites in a South African context. The factors that influence their behavioral intentions included perceived system quality, information quality, trust, and attitude. These antecedents of behavioral intention were tested using two regression models, one for male students ( $n = 154$ ) and the other for female students ( $n = 163$ ) as well as an independent samples  $t$ -test. The regression analysis results reveal that, for Generation Y female students, 45 percent of the variance in their behavioral intention to use university websites is explained by the independent variables, compared to 35 percent for male students. In addition, the regression model applicable to females shows that trust and attitude have a statistically significant influence on their behavioral intention, whereas for males, only attitude has a statistically significant influence on their behavioral usage intention. The independent samples  $t$ -test further suggests that Generation Y female and male students differ in their attitude towards university websites and their behavioral intention to use university websites. These findings have implications for the design and implementation of university websites and e-learning environments, particularly in terms of considering gender differences in the needs, preferences, and motivations of male and female students. Future research could explore how cultural and contextual factors influence gender disparities in the use of university websites among Generation Y students.*

**Keywords:** gender, world wide web, behavioral intention, Generation Y, university websites.

## INTRODUCTION

In recent years, university websites have become an integral part of the academic world, providing students, faculty, and staff with access to important information and resources. With the increasing reliance on technology and the growth of digital platforms, universities have embraced the use of websites as a means of effective communication, interaction, and learning. This has led to a shift towards e-learning and online resources, which has been particularly important in light of the COVID-19 pandemic (Musa et al., 2021). University websites serve several important functions, such as providing access to course materials, academic support services, and campus resources. In addition, they allow for effective communication between students, faculty, and staff, enabling easy access to information and the ability to communicate with others in a timely and efficient manner. Moreover, university websites can aid in the recruitment of new students and the promotion of the institution's brand and reputation (Sun et al., 2008; Wang & Sun, 2013).

Research has shown that the quality of university websites can significantly impact the user's experience and their behavioral intention to use the site (DeLone & McLean, 2003). Behavioral intention to use university websites refers to a student's level of willingness and readiness to use university websites as a tool for academic and administrative purposes. It reflects their motivation and commitment to engaging with digital resources provided by the university. Behavioral intention to use university websites is critical for effective communication, interaction, and learning in a digital era (Liu & Chen, 2016). Factors such as system quality, information quality, trust, and attitude

have been identified as important predictors of behavioral intention to use university websites (Suki & Suki, 2021; Wei et al., 2019). Furthermore, research has highlighted gender disparities in the behavioral intention to use university websites among Generation Y students (Chen & Li, 2021; Mohiuddin et al., 2020). As such, the purpose of this paper was to analyze gender variances in the behavioral intention of Generation Y students toward using university websites.

The Generation Y student population has become a significant demographic in higher education and was specifically targeted as their university website usage intention is important for several reasons. Firstly, Generation Y students, who are also known as digital natives and millennials, have grown up with technology and are expected to be proficient in using digital tools, including university websites (Oblinger, 2003). Secondly, these students are often early adopters of new technologies and have high expectations for the usability and functionality of technology in their education and websites (Peng & Wang, 2006; Huang & Li, 2017), and the university website is no exception. Furthermore, they represent a large population of current and prospective students, making up the majority of the undergraduate student body in many institutions (Zhang et al., 2019). Moreover, research has shown that Generation Y students are more likely to choose universities that offer flexible and personalized learning experiences, including the use of digital resources such as university websites (Alzahrani & Clutterbuck, 2019). Lastly, the use of university websites can improve students' academic performance and engagement, as well as their satisfaction with their educational experience.

The success of universities in preparing students for the digital world and meeting their technological expectations can impact the institution's reputation and brand image (Maringe & Foskett, 2012). Understanding and meeting the needs and expectations of Generation Y students is critical for universities to remain competitive and maintain their status as leading institutions. Universities that effectively utilize technology and offer user-friendly websites are more likely to attract and retain Generation Y students.

## LITERATURE REVIEW

The effectiveness of university websites in facilitating communication, interaction, and learning is largely dependent on the users' behavioral intention to use the site. Several studies have identified factors that influence the behavioral intention to use university websites among students. One critical factor is system quality, which refers to the extent to which a website is user-friendly and technically reliable. Research has shown that system quality significantly impacts the user's experience and their behavioral intention to use university websites (Al-Qaysi, 2020; Shahzad et al., 2017; Wu et al., 2019). In addition, information quality, which refers to the accuracy, relevance and completeness of the content provided on the website, has also been identified as an important predictor of behavioral intention to use university websites (Al-Qaysi, 2020; Wu et al., 2016). A website that is easy to use, fast, and responsive and that provides accurate, relevant, and up-to-date information enhances the user experience and increases the likelihood of repeated use.

Trust is another crucial factor that influences behavioral usage intention of university websites. Trust refers to the user's confidence in the website's ability to protect their personal information and provide accurate information (Al-Qaysi, 2020; Wu et al., 2016). Research has shown that trust has a positive effect on behavioral intention to use university websites (Shahzad et al., 2017). Attitude is also an important predictor of behavioral intention to use university websites. Attitude refers to the user's overall evaluation of the website and their perception of its usefulness (Al-Qaysi, 2020; Wu et al., 2016; Wu et al., 2019). Positive attitudes toward university websites have been shown to increase the user's intention to use the site (Shahzad et al., 2017).

Furthermore, several demographic factors have been found to influence the behavioral intention to use university websites, including gender, age, and academic discipline (Wu et al., 2016). Given the purpose of this paper, focus is directed at the influence of gender on behavioral usage intentions and whether males and females differ in their intentions to use university websites. Research has highlighted gender disparities in the behavioral intention to use university websites, with male students showing a higher intention to use university websites than female students (Khan & Khalifa, 2016). In another study, the findings suggest that females tend to have a higher intention to use university websites than males (Chen et al., 2017). These differences could be due to differences in perception, motivation, and social norms related to the use of technology.

Gender differences in information quality of university websites have been studied extensively. Research has shown that female students tend to perceive information quality to be a more critical factor in their behavioral intention to use university websites compared to male students. A study conducted by Al-Rahmi and Othman (2015) investigated the impact of information quality on the behavioral intention to use university websites among Malaysian students. The study found that female students were more likely to be influenced by information quality compared to male students. Another study by Farooq et al. (2020) examined the impact of information quality on the intention to use university websites in Pakistan. The study found that female students had a higher perception of information quality compared to male students. These findings suggest that there are gender differences in the importance placed on information quality in relation to the behavioral intention to use university websites. As such, universities should pay attention to the quality of information provided on their websites to ensure that it meets the needs and expectations of both male and female students.

In terms of system quality, a study conducted by Al-Harbi and Alshumaimeri (2019) found that male students had a significantly higher perception of system quality than female students in Saudi Arabian universities. Similarly, a study by Lian and Yen (2014) found that male students in Taiwan had a higher perception of system quality than female students in relation to e-learning portals. Furthermore, in their study, Islam and Brewster (2016) found that female students had a lower perception of system quality compared to male students in the context of Australian universities. The study also highlighted that male students were more likely to use the university website for academic purposes than female students.

Research has shown that gender differences exist in the level of trust that students have in university websites. For example, the Sirdeshmukh and Bhandari (2014) study suggests that female students tend to have higher levels of trust in university websites than male students. Other studies by Chang and Wu (2013) and Zhang et al. (2020) also discovered that female students had higher levels of trust in university websites than male students. Similarly, a study by Ali and Ahmad (2016) found that female students had higher levels of trust in the security of university websites compared to male students. Another study by Al-Rahmi and Othman (2013) found that female students had a more positive attitude toward the security and privacy of university websites than male students.

Studies have found that gender can also influence attitudes toward the use of university websites. For example, one study found that female students had a more positive attitude toward using online course materials compared to male students (Gheisari, 2015). Another study found that male students were more likely to use technology for entertainment purposes, while female students were more likely to use it for academic purposes (Kim & Lee, 2006). Conversely, a study by Lin and Lu (2011) found that male students had a more positive attitude toward using university websites for academic purposes than female students. Similarly, a study by Goh and Tor (2018) found that male students were more likely to perceive university websites as useful for academic purposes compared to female students.

Overall, the literature suggests that university websites play a critical role in the academic and administrative experience of students, faculty, and staff. The use of university websites can significantly impact the user's experience and their behavioral intention to use the site. Factors such as information quality, system quality, trust, and attitude can influence the behavioral intention of university website usage. Although gender differences in behavioral usage intention of university websites are not a universal finding, as other studies have found mixed or no significant gender differences in attitudes towards university websites, it is still important for universities to consider gender when developing and designing their websites, to ensure that they are accessible and appealing to all students, regardless of gender. Further research is needed to explore the complex interplay between gender, attitudes, and behavioral intention to use university websites. The literature highlights the importance of designing and maintaining university websites that are user-friendly, reliable, and provide high-quality information to all users, regardless of their gender or demographic characteristics. By doing so, universities can promote engagement, learning, and satisfaction among their student body and contribute to the achievement of their academic goals.

## **METHODOLOGY**

This study utilized a descriptive research design and focused on the target population of Generation Y students aged 18 to 24 years who were enrolled at South Africa's 26 public higher education institutions. A judgement sample of two campuses in Gauteng was selected, including a traditional university campus and a university of technology

campus. The study recruited 400 participants, with 200 students selected from each campus using the convenient sampling method. Fieldworkers distributed the questionnaires using the mall-intercept survey technique, and the participating students completed the survey on a voluntary basis.

The researchers gathered data from the participants by distributing a self-administered questionnaire consisting of two sections. The first section requested demographic information, while the second section measured various factors, such as information quality, system quality, trust, attitude, and behavioral intention to use university websites, using scales adapted from previously published studies. The researchers measured information quality using three items from Liu and Arnett's (2000) study, and system quality using three items from Ahn et al. (2007) and Sindhuja and Dastidar (2009). Attitude towards university websites was measured using three items each from Ahn et al. (2007) and Van der Heijden (2003), while trust in university websites was measured using three items adapted from Flavián et al. (2006). Additionally, the researchers used three items from Ahn et al. (2007) to measure behavioral intention to use university websites. To collect the responses, a six-point Likert-type scale was utilized.

The study's data analysis was carried out using the IBM Statistical Package for Social Sciences (SPSS), Version 27 for Windows. The statistical techniques employed for analysing the data set included descriptive statistics, reliability and validity tests, correlation analysis, regression analysis, and an independent samples t-test.

## RESULTS

Out of the 400 self-administered questionnaires distributed, 81 were either incomplete or not relevant to the target population. This resulted in 319 completed questionnaires, leading to an approximate response rate of 80 percent. The participants were between the ages of 18 and 24 years, with the majority being 20 years old. Most of the participants were female and belonged to the black ethnic group. First-year students comprised the largest proportion of the sample. Table 1 provides a breakdown of the sample's demographic information.

**Table 1: Demographic characteristics of the sample**

Age	n	Gender	n	Ethnicity	n	Academic level	n
18	65	Female	163	Black	281	Year 1	159
19	55	Male	156	Coloured	8	Year 2	35
20	77			Asian	2	Year 3	85
21	51			White	28	Year 4	34
22	36					Post-graduate	6
23	21						
24	14						

Descriptive statistics, Cronbach alphas and correlation coefficients were computed for all the variables. Cronbach's alpha values were used to evaluate the internal consistency reliability of each variable, while Pearson's product-moment correlation coefficients were used to assess the relationships between the variables. The means ( $\bar{X}$ ) for each gender, standard deviations (SD) for both females (F) and males (M), Cronbach's alpha ( $\alpha$ ) values, and correlation coefficients are presented in Table 2.

**Table 2: Gender means, construct reliability and correlation analysis**

Variables	$\bar{X}$ - F	$\bar{X}$ - M	SD - F	SD - M	$\alpha$	Pearson correlations				
						IQ	SQ	TRU	ATT	BI
IQ	4.54	4.62	0.99	0.80	0.84	1				
SQ	4.12	4.24	1.25	1.00	0.79	0.45*	1			
TRU	4.42	4.43	1.09	1.05	0.83	0.44*	0.53*	1		
ATT	4.07	4.49	1.15	1.07	0.84	0.43*	0.47*	0.66*	1	
BI	4.07	4.36	1.20	1.01	0.81	0.28*	0.30*	0.52*	0.63*	1

\* Correlation is significant at the 0.01 level (2-tailed)

Note: IQ: information quality; SQ: system quality; TRU: trust; ATT: attitude; BI: Behavioral intention

Table 2 shows that all variables had mean values of 3.5 or higher for both genders. Notably, male students reported higher means for all five variables namely, information quality, system quality, trust, attitude, and behavioral usage intention, indicating that they more strongly agreed with the statements measured in these variables.

The Cronbach alphas for each variable exceeded the acceptable threshold of 0.70, providing evidence of internal consistency reliability (Malhotra, 2020). Positive relationships between each pair of variables were statistically significant ( $p \leq 0.01$ ), suggesting nomological validity (Malhotra, 2010). Moreover, no apparent issues of multicollinearity were observed, as all correlation coefficients were below the threshold of 0.90 (Pallant, 2020). Given the correlation analysis results, multivariate linear regression analysis was undertaken.

Multivariate linear regression analysis was done for both female and male participants to uncover whether information quality, system quality, trust and attitude have a statistically significant influence on their behavioral intention to use university websites. The results of this analysis can be found in Table 3.

**Table 3: Model summary and ANOVA**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>F</b>	<b>p-values</b>
<b>Model 1 (BI among females)</b>	0.67	0.45	0.43	37.710	0.001
<b>Model 2 (BI among males)</b>	0.59	0.35	0.33	19.648	0.001

Table 3 displays the predictions made by Model 1 and Model 2 for the behavioral intention to use university websites among South African Generation Y female and male students, respectively. The R<sup>2</sup> values for Model 1 and Model 2 are 0.45 and 0.35, respectively, indicating that 45% and 35% of the variation in Generation Y females' and males' behavioral intention can be explained by the models. This implies that there are other factors beyond the variables considered in the models that influence the behavioral intention of both males and females, leaving opportunities for future research. Table 4 presents the contribution of each independent variable to the prediction of Generation Y females' and males' behavioral intention to use university websites as part of the multivariate linear regression analysis.

**Table 4: Regression model coefficients**

<b>Independent variable</b>	<b>Model 1 - Female</b>			<b>Model 2 - Male</b>		
	<b>Std. beta coefficient</b>	<b>t-value</b>	<b>p-value</b>	<b>Std. beta coefficient</b>	<b>t-value</b>	<b>p-value</b>
<b>IQ</b>	-0.037	-0.505	0.614	-0.023	-0.322	0.748
<b>SQ</b>	-0.043	-0.540	0.590	-0.087	-1.163	0.247
<b>TRU</b>	0.302	3.583	0.001	0.131	1.368	0.173
<b>ATT</b>	0.471	5.572	0.001	0.530	6.110	0.001

The results in Table 4 demonstrate that trust ( $\beta = 0.302$ ,  $0.001 < 0.05$ ) and attitude ( $\beta = 0.471$ ,  $0.001 < 0.05$ ) have a significant impact on Generation Y female students' behavioral intention to use university websites. The attitude variable ( $\beta = 0.471$ ) has the highest beta coefficient and the largest contribution to predicting female students' usage intention. However, for Generation Y male students, only attitude ( $\beta = 0.530$ ,  $0.001 < 0.05$ ) has a significant effect on their behavioral intention to use university websites. The larger beta coefficient for males suggests that attitude is a more influential factor in explaining their behavioral intention compared to females. These findings are consistent with the literature review.

In addition, an independent samples t-test was performed to test for differences in these variables between female and male students. The results are outlined in Table 5.



**Table 5: Independent samples t-test**

Variable		Levene's Test for equality of variances		T-test for equality of means				
				t	df	Significance		Mean difference
		F	Sig.			One-sided p	Two-sided p	
IQ	Equal variances assumed	4.951	0.027	-0.819	315	0.207	0.413	-0.083
	Equal variances not assumed			-0.824	307.960	0.205	0.410	
SQ	Equal variances assumed	9.374	0.002	-0.923	315	0.178	0.357	-0.117
	Equal variances not assumed			-0.928	307.011	0.177	0.354	
TRU	Equal variances assumed	0.002	0.960	-0.077	315	0.469	0.939	-0.009
	Equal variances not assumed			-0.077	314.941	0.469	0.939	
ATT	Equal variances assumed	0.389	0.533	-3.380	315	0.001	0.001	-0.421
	Equal variances not assumed			-3.387	314.950	0.001	0.001	
BI	Equal variances assumed	3.249	0.072	-2.290	315	0.011	0.023	-0.285
	Equal variances not assumed			-2.302	310.649	0.011	0.022	

As seen in Table 5, the mean scores of Generation Y female and male students are significantly different for attitude and behavioral usage intention of university websites. More specifically, male students' attitudes toward and behavioral intention to use university websites are higher than their female counterparts (refer to mean scores in Table 2). These findings also echo the findings outlined in the literature review.

## IMPLICATIONS FOR THEORY AND PRACTICE

Based on the results of the study, it was found that there are differences between male and female students in their behavioral intention to use university websites. In particular, male students reported higher means for information quality, system quality, trust, attitude, and behavioral usage intention, suggesting that males are in higher agreement with the statements measured in these variables. The study also found that for Generation Y female students, trust and attitude have a statistically significant influence on their behavioral intention to use university websites. On the other hand, for Generation Y male students, only attitude has a statistically significant influence on their behavioral intention to use university websites.

These differences may be due to various factors, such as gender roles and expectations, personal experiences and preferences, and cultural differences. Therefore, it is important for universities and other educational institutions to consider these differences in designing and implementing their website strategies and marketing campaigns. Some possible managerial implications of these findings include, tailoring website content and design to meet the needs and preferences of both male and female students. For example, female students may prefer more detailed and visually appealing content, while male students may prefer more concise and straightforward information. Moreover, institutions should address trust issues among female students by ensuring the security and privacy of their personal information and online transactions. Furthermore, institutions should take note of the importance of attitude and user experience in promoting website usage among both male and female students. In addition, further research should be conducted to explore the underlying factors that influence the behavioral intention to use university websites among male and female students, such as socio-cultural, economic, and technological factors.

## CONCLUSION

In conclusion, the study aimed to examine the factors influencing the behavioral intention to use university websites among Generation Y students in South Africa. The results indicated that both trust and attitude have a statistically significant influence on the behavioral intention to use university websites among Generation Y female students. On the other hand, only attitude was found to have a significant influence on the behavioral intention to use university websites among Generation Y male students. These findings suggest that there are differences in the factors that drive the behavioral intention to use university websites between male and female students. The study also found that the behavioral intention to use university websites of both male and female students is influenced by other factors not captured in the models, implying that future research opportunities exist to identify these additional factors.

The managerial implications of the study suggest that universities should focus on building trust and improving students' attitudes towards using university websites to increase their usage. Additionally, universities should tailor their marketing efforts and communications to appeal to male and female students differently to increase the effectiveness of their campaigns. Overall, the study provides valuable insights into the factors that influence the behavioral intention to use university websites among Generation Y students in South Africa and offers practical implications for universities seeking to increase their website usage.

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# SUCCESSOR SCHOOL FOR HIGHER EDUCATION STUDENTS WITH FAMILY BUSINESS BACKGROUND – A PEDAGOGICAL CASE STUDY

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## ABSTRACT

*Higher education institutions are increasingly recognizing the importance and relevance of teaching entrepreneurship and entrepreneurial teaching. The unspoken assumption in most of our lessons about entrepreneurship is that to become an entrepreneur, you must start your own business. The alternative, taking over an existing business, is rarely recognized. Taking over a family business is also an entry mode into entrepreneurship. The objective of the paper is to describe through a case study, how a higher education institute can support with a successor school concept students' continuation processes in their own family firms and decision-making processes when considering their future careers.*

**Keywords:** family business, succession, higher education student, entrepreneurship education, small and medium sized enterprises.

## INTRODUCTION

Higher education institutions (HEIs) are increasingly recognizing the importance and relevance of teaching entrepreneurship and entrepreneurial teaching. However, the unspoken assumption in most of our lessons about entrepreneurship is that to become an entrepreneur, you must start your own business. Entrepreneurship is thus strongly associated with starting up. The alternative, taking over an existing business, is rarely recognized, although business takeovers outperform starters in terms of survival (Xi et al., 2020; Van Teeffelen, 2012; Meijaard, 2007). Another point of view not often considered it that the students in higher education with a family business background have, from childhood on, been immersed in an entrepreneurship learning environment. Research on entrepreneurial intentions has long recognized the influence of role models (Chlosta et al., 2012; Laspita et al., 2012; Joensuu-Salo et al., 2015), and recently Joensuu-Salo (2022) demonstrated that role models are also linked to entrepreneurial competences. Furthermore, students with family business backgrounds are more likely to have business takeover intentions (Joensuu-Salo et al., 2021). Taking over a family business is also an entry mode into entrepreneurship, but qualitatively very different from starting a new business or buying an existing business with no connection to one's family. Taking over through family succession entails a level of commitment to maintaining the socio-economic wealth internalized in the business (Berrone et al., 2012; DeTienne & Chirico, 2013; Makó et al., 2018), and calls for dealing with family dynamics.

The fact that family businesses, too, would need successors from within the family is often overlooked. Traditionally, about a quarter or third of family businesses have a successor in sight within the family (e.g. Varamäki et al. 2021). However, this cannot be taken for granted, and more systematic work is required to get more successors inside the family. Family businesses, too, require awareness raising activities aimed at making them aware of the issue. In most cases, whether the successor is found within the family or not has depended on family-internal discussions and upbringing. Finnish family businesses are plagued by a culture of silence, in which the children's and parents' wishes are not discussed but problems are expected to be solved spontaneously. In the worst case, this leads to decades of bitterness.

Universities are a natural place to implement awareness raising activities for students, as many of them come from a family business background. Previous studies strongly indicate that students with a family business background

generally have higher entrepreneurial intentions (e.g., Carr & Sequeira, 2007; Zellweger et al., 2011; Hahn et al., 2021). The objective of the paper is to describe through a case study (see Eisenhardt 1989), how a higher education institute can support with a successor school concept students' continuation processes in their own family firms and decision-making processes when considering their future careers.

The Successor School has, at the time of writing this, been running for one and a half year in the authors' HEI. Seinäjoki University of Applied Sciences has a more than 20-year experience in the research, development and training in business transfers, and the University of Applied Sciences boasts exceptionally many experts in business transfers. Consequently, it was most natural to start building an operations model for the Successor School at Seinäjoki University of Applied Sciences. Moreover, entrepreneurship in general is both as a part of Seinäjoki University of Applied Sciences strategy and vision and entrepreneurial spirit is also one of the key values in the university, and thus it is natural to also have the Successor School at the university.

## THE AIMS OF THE SUCCESSOR SCHOOL

The Successor School is meant for family entrepreneurs' children studying in higher education, and it is equally open to students from all fields of study. This has proven to be a good solution, because the challenges and strengths of family businesses are the same regardless of the field, and students usually do not have enough natural opportunities for multidisciplinary work with each other.

The societal goals of the Successor School are to promote the continuity of family businesses by (a) providing family entrepreneurs' children with opportunities to consider the succession of the family business as a viable career option, (b) providing them with competences and tools for a possible future transfer of knowledge, management, and ownership, and (c) preparing them for the processing and management of the dynamism between family, work and ownership, and providing them with tools for the creation of an open conversational culture at family businesses.

From the perspective of the successor candidate of the family business and of the student, the aim of the Successor School is to provide:

- Encouragement and a growth process for the student's own career thinking.
- A basis for the management of a thriving family business.
- Competences for the planning and implementation of a succession.
- Tools for open discussion within the family about the future of the business and of the family members.
- Peer support, congenial company, and new perspectives to the operations of the student's own family business.
- Visiting experts and successor stories.
- An opportunity to engage in confidential conversations with experts.

An essential element in the marketing of the Successor School is to recognize the students with a family business background. In Seinäjoki University of Applied Sciences we have used in this process *Entre Intentio* tool. This measurement tool of entrepreneurial intentions among students has been in constant development since 2008 (e.g. Varamäki et al. 2013; Varamäki et al. 2015; Joensuu-Salo 2022) and been complemented with specific family business-related questions (e.g. Joensuu-Salo et al. 2022). The same tool allows finding out about students' other entrepreneurial intentions, and the tool can be used to recognise the students with a high level of entrepreneurial intentions, to provide them with different support measures. Naturally, students with a family business background and their preliminary interest in the succession of family businesses can be identified using other surveys, too.

It is advisable to conduct a survey to identify students with a family business background as early as the beginning of their studies. After the survey, it is advisable to invite the students with preliminary interest in successions to a face-to-face meeting for the presentation and marketing of the Successor School. As other marketing actions, the Successor School could be mentioned to students on courses in entrepreneurship, or on other business courses. It is important that marketing for the Successor School will be done among the students of all years because a student can join the Successor School at any stage of their studies and attend as long as they wish.

# THE CONTENT OF THE SUCCESSOR SCHOOL

The Successor School consists of the following elements: monthly appointments, writing a learning diary, preparation of a preliminary succession plan, and discussions with experts.

Each of the monthly appointments has a certain theme, and the duration of each appointment is 2 to 2.5 hours. The appointments work best as face-to-face appointments, but during the Covid pandemic they were also arranged over Teams or as hybrid implementations. Naturally, hybrid implementations facilitate the participation of those living further away.

The appointments may have, e.g., the following structure:

- (1) a fact section, which may comprise, e.g., previous research knowledge and literature, or an expert's personal experience,
- (2) a practical case story, which could primarily be presented by the Institution's own alumnus with a family business background,
- (3) a joint conversation about the theme,
- (4) an independent learning assignment

The Institution's own alumni are excellent examples when telling the story of their family business and about the process and path they went through before ending up at the family business, how they implemented the succession, and, above all, what lessons they can share from their story to the students.

Themes for appointments organised during one semester:

- 1) Would I become an entrepreneur and the successor of a family business?
- 2) What are the special characteristics of a family business and what impacts do they have?
- 3) What is ownership? What is a good owner like?
- 4) How to create an open conversational culture at a family business?
- 5) What is a successful succession like?
- 6) How to take a transfer of knowledge and management at a family business?
- 7) How to transfer ownership also taking different tax reliefs into account?
- 8) What documents and agreements are needed for a succession?
- 9) What are the special characteristics of the successions of agricultural and forestry holdings?
- 10) How to cope with your siblings?
- 11) How can a succession be financed?
- 12) How to create successful Board of Directors?
- 13) What different meaningful roles can be offered to the withdrawing entrepreneur parents?
- 14) What kind of network of experts can be utilised in the planning and implementation of a succession?

Next, a few examples of learning assignments are presented:

*Learning assignment 1. The entrepreneur unexpectedly falls ill or passes away.*

- Think of three things that would be first assigned to you at your family business if your entrepreneur parents unexpectedly fell seriously ill, or even passed away?
- What competences would you currently have to take care of these things?
- How can you improve your own abilities / competence in relation to these things?

*Learning assignment 2. The culture of talking at family businesses*

- What kind of interactional culture does your family have?
  - How do you discuss, how do you bring up matters, and what do you talk about, in the first place?
  - How do you act in difficult, emotional situations? How do you argue and resolve your differences?
  - How does the above-described approach show in the operations of the family business: what pros and cons does it have?
- How are you in person as an interactor, co-operator, and communicator?

- What is of particular importance for you about the interaction between the family and the family business?
- In relation to that, what are your own strengths, and in what do you want to develop?
- What mutual mode of action (interactive culture) do you want to maintain and strengthen? What do you want to develop or to improve?

### *Learning assignment 3. Ownership*

- Do you think management also requires the ownership of your family business: does the owner also have to be CEO, or can the CEO also be someone from outside of the family?
- Should the successors or all the family members working for the business own the business with equal shares?
- Can some of the family members be owners of the business even if they do not work for the business?
- What liabilities and rights does the ownership of the family business give you?

It is important that the students also can propose themes by themselves. The students' entrepreneur parents can also be invited to attend some of the theme appointments.

The Successor School may produce 3–5 credits, depending on the output required of the student, but students can take part in the Successor School also without completing credits.

At Seinäjoki University of Applied Sciences, the concept of the Successor School was built and piloted by a team of four experts. A good team allowed the brainstorming ideas and the mutual division of tasks. As a permanent operations model, a Successor School like the one described requires annual total resource of some 150–200 hours. This may be shared, e.g., between to experts. Time is needed for the search of potential students and marketing, the planning of appointments, the mapping of experts and entrepreneur alumni and agreeing on their visits, the appointments themselves, the processing of the learning assignments, and discussions with the students.

## **CONCLUSIONS**

Focus on starting a business in HEI entrepreneurship teaching is understandable and perhaps unavoidable: starting a business resonates more strongly with the idea of entrepreneurship than does taking over an existing business, and is easier to see as part of becoming more entrepreneurial in all working life roles. To develop an entrepreneurial mindset, one needs to work on new ideas and value creation. Yet, as European entrepreneurs age, successor from within and without the family are increasingly needed if viable businesses are not to be closed for the lack of a successor. For higher education students to at least be aware of the possibility is important.

For students with family business background, the case is somewhat different: they are probably aware of the possibility of continuing the family business. For them the HEI can provide a growth process, conceptual tools, practical information, and the opportunity to reflect among their peers on issues relating to family business. Having a business in the family is an opportunity that only a few have – helping students to realize this, whether or not they eventually choose to take advantage of that opportunity, is a worthwhile goal in itself. A successor school shows promise in bridging the gap between family business offspring lived experience and HEI entrepreneurship teaching. On societal level, one small successor school is not likely to make much difference, but if the practice spreads, it will help ensure qualitatively better family communication and successions and thus contribute to economic growth and resilience.

## **Societal and Managerial Recommendations**

When planning the awareness raising activities for business transfers, more attention should be paid to small and medium-sized companies that consider themselves as family businesses. Family businesses should be woken up early enough to plan for a succession in order to ensure the continuity of the company either with an internal or external successor.

It would be desirable for universities to identify potential successors of family businesses among students and enable them to complete their studies taking into account the needs of family businesses and students as potential



successors. It would also be great if universities could offer separate Successor Schools that support the growth of continuing family businesses and offer peer support from students in a similar situation. Entrepreneurship education usually focuses on starting a company, and it would be absolutely important to consider buying companies and continuing family businesses as an alternative.

Together with the Successor School, Seinäjoki University of Applied Sciences has also established the Buyer School, aimed at people interested in buying a company or its business operations, i.e., at students interested in the option of embarking on entrepreneurship by buying an already established business or by growing their current business by buying more.

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# REASONS WHY FIRST-YEAR STUDENTS SELECTED A BUSINESS COLLEGE AT A UNIVERSITY: POST-PANDEMIC INSIGHTS FROM SOUTH AFRICA

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## ABSTRACT

*Recruiting and retaining students is increasingly challenging in a highly competitive higher education arena. Various external factors influence first-year students' choices of career and preferred higher education provider. Determining first-year students' prior knowledge and reasons for making these choices could help higher education institutions to understand first-year student cohorts better and inform appropriate marketing strategies and content. This study explores first-year students' prior knowledge of higher educational institutions, various qualification offerings, reasons for selecting a college at a university as a higher education provider, and reasons for selecting a particular qualification. The study was conducted in a specific business college at a comprehensive university in South Africa. Most of these first-year students are first-generation students from lower-income communities and public high schools. A qualitative research method guided this study. An online survey with 28 open-ended questions concluded the data collection. The findings were analysed through inductive content analysis and indicated that many first-year students make uninformed and unguided choices about their career-based qualification and higher education institution. This study contributes to the body of knowledge by providing a pan-African perspective on first-year students' prior knowledge of study and career opportunities and higher education institutions, and on their reasons for selecting specific career qualifications and a college at a university as their preferred choice for higher education studies.*

**Keywords:** higher education institution, prior knowledge, university choice, preferred qualification choices, career choices.

## INTRODUCTION

After high school, decisions about the next level of education are a huge responsibility and have a long-term impact on individuals' futures and lives (Alonderiene & Klimavičiene, 2013; Saif, Nipa & Siddique, 2016). First-year students' selection of a career, qualification, and higher education institution (HEI) is significant, but it is often complicated by the individual's social and economic factors and environment (Som, 2016) – and it has an impact on the student and the education provider. Students have many views on why it is vital to enter higher education studies. In poorer and developing economies, one perception that influences young people's choices is that higher education studies are a gateway to a better future, good career opportunities, and success. Fajčíková and Urbancová (2019) emphasised higher education institutions' responsibility to meet students' needs and expectations to receive a high-quality education that will give them a competitive advantage in the labour market when they enter it. With the growing numbers of students entering higher education. Dao and Thorpe (2015) emphasised that it is vital for universities to understand what influences students' choice of their further studies. Higher education institutions must understand their student cohorts better to inform a successful marketing strategy and content.

Higher education has changed significantly because of more public and private education opportunities, globalisation, digitisation, and the Fourth Industrial Revolution (4IR). Greater and easier access to higher education

and to local and international study opportunities, and changed modes of teaching and learning require HEIs to rethink their future student recruitment and intake (Dao & Thorpe, 2015). Despite all the higher education provider options, HEIs face many challenges with student financial support and resources, especially in developing economies. Making the wrong choices can have an unconstructive and long-term impact on individuals (Kazi & Akhlaq, 2017) – and on the university. Therefore, HEIs must understand their students and why they choose specific institutions and careers. In doing this, universities could ensure best practices in their future marketing strategy, content, initiatives, and dissemination of information to attract, retain, and support quality students who could complete their studies in the minimum time.

Factors contributing to higher education's changed landscape and to the challenges of the 21st century include the global financial decline that caused the downward spiral of stable economies and put developing economies under even more pressure. Another factor has been the impact of digitisation caused by the Fourth Industrial Revolution (4IR). The year 2020 also saw the global Covid-19 pandemic; and, faced with lockdown restrictions, universities had to show resilience and agility and quickly review their marketing strategies and programme offerings. The Covid lockdown forced all higher education online, away from traditional face-to-face lecturing. Dhawan (2020) has argued that Covid-19 opened an opportunity for innovation and digitisation in higher education's contributions and strategies. Thus, universities need to take responsibility for understanding the changing demands.

This exploration of a pan-African and developing economy context is essential, therefore, for HEIs to comprehend first-year student intake profiles better and to discover first-year students' prior knowledge of specific HEIs and qualifications, and how and why they made their choices. The broad question that this research attempted to investigate was why first-year students select a particular business college at a university as their preferred choice for higher education studies. In achieving the aim of the study, the following areas were explored and described:

1. Students' knowledge of South African HEIs before applying and registering.
2. Students' knowledge of the various qualification offerings before application and registration.
3. Students' reasons for selecting a business college at a university as a higher education provider.
4. Students' reasons for selecting a specific qualification.

This study contributes on two levels. First, it contributes to the body of knowledge on first-year students' prior knowledge of HEIs in a pan-African context. Second, it contributes on a managerial level: the findings could support a better understanding of first-year intakes to improve the marketing strategy of universities and of specific colleges to attract the correct student profile and to produce a successful student cohort. Many scholars support the interpretation of university students' reasons for choosing an HEI, qualification, and career path for future institutional marketing and student success (Fajčíková and Urbancová, 2019; Dao & Thorpe, 2015; Alonderiene & Klimavičiene, 2013; Rudhumbu, Tirumalai & Kumari, 2017).

To follow this introduction, a literature review provides context and insight into first-year students' selection of a specific HEI and career choice. The study followed a qualitative, explorative, and descriptive approach, as explained in the research methodology. Data collection was done online using a survey containing 28 open-ended questions distributed to first-year management, financial, and economics students in a business college at a university in South Africa. After describing the findings, the implications, the limitations, and further research, the study ends with its conclusions.

## LITERATURE REVIEW

Choosing an HEI and a specific qualification as a career option is vital for students and can have a life-long impact. It is influenced by many factors, and must be considered carefully (Agrey & Lampadan, 2014; Saif *et al.*, 2016; Nyamwange, 2016). On the other hand, higher education has become very competitive owing to the range of study opportunities. Attracting sufficient achieving students has become a challenge (Dao & Thorpe, 2015; Agrey & Lampadan, 2014; Fajčíková & Urbancová, 2019). This section reviews multiple opinions in the academic literature that focuses on global perspectives on the factors that influence the choice of university and study programme. Specifically, the literature review introduces the South African educational environment and the context of this study. Then it explores perspectives on students' knowledge of HEIs and various career choices, and on their reasons for selecting a specific qualification and HEI.

## Context of the Study

Abe and Chikoko (2020) note that South Africa spends a large proportion of its national resources on education. The South African higher education landscape accommodates an estimated one million students. Its HEIs consist of six focused vocational universities of technology, six comprehensive universities that offer degrees and diplomas with both academic and vocational focuses, and 11 traditional universities that offer university qualifications without a vocational emphasis. Thousands of students are registered at more than 50 higher technical vocational education training colleges (TVET) and numerous private HEIs (Tjønneland, 2017). This study took place in a specific college at a comprehensive university in Gauteng Province, one of nine provinces in South Africa.

## Students' Knowledge of HEIs Before Applying and Registering

In his book *Meditationes Sacrae* (1597), Sir Francis Bacon referred to knowledge as power. This expression possibly indicates that to have and share knowledge is an essential influencer that empowers people to make choices and to achieve (Azamfirei, 2016). Njoko (2018) states that, compared with urban schools, rural schools in developing economies find it difficult to access university information because of their lack of available resources and of educated career guidance. Altbach, Reisberg and Rumbley (2009) argue that, contrary to belief, a high school's location and region often contributes to unequal access to information and entrance into higher education studies. Even modern technology is not always easily accessible or available to these students. Moody (2020) confirms that students believe that the availability of technology makes it possible to gain knowledge about and to identify and quickly choose an institution. Technology is essential to acquiring information, and students prefer emails, not social media, as a helpful and necessary communication medium to obtain knowledge and information (Moody, 2020).

## Students' Knowledge of the Various Qualification Offerings Before Application and Registration

Before enrolling as a first-year student, high school students constantly interact with various interrelated influences and influencers to collect information that contributes to their career choices. Career guidance at school must assist high school students to discover and develop their potential (Gbenga & Toyin, 2014; Mabula, 2012) and support students in exploring their options (Lazarus & Chinwe, 2011). According to Sefora (2016), high school students do not focus on collecting information and making sensible plans, but rely on personal preferences, interests, capabilities, and parents' education to make their career choices. Peer influence and individuals' knowledge also contribute significantly to high school students' knowledge of career options (Mtemeri, 2017). Nyamwange (2016) reminds us that adequate information about careers is vital, because students' perceptions of career choices are often rooted in their favourite subjects at school and their perceptions of the ideal job, given their social and economic environments.

## Students' Reasons for Selecting a Specific College at a University as a Higher Education Provider

Our review of the research on students' reasons for selecting a specific HIE indicated a number of shared influencing factors. The literature review confirmed that institutional image and reputation significantly affect the choice of college, university, or other HEI. Jafari and Aliesmaili (2013) give four reasons for students' selecting a particular university: personal economic circumstances during and after education, customer centredness and support, academic reputation and resources, and parental influence and personal interest. When students choose an HEI, Fajčíková and Urbancová (2019) argue that its activities and facilities, the competitive advantage of the HEI compared with other institutions, a quick and successful application acceptance, and practical experience during studies are essential.

Saif et al (2016) argue that, although selection criteria are varied, a university's reputation and its available and functional online services are two top priorities in students' choice of university. Moody (2020) suggests that the HEI's academic and faculty reputation and its sporting reputation influence the choice of institution. Moody (2020) adds that location, proximity to the student's home, quality of housing, and legacy influence the choice of institution. In more developed economies, campus accommodation is not as important as the institution's proximity to students' homes (Jafari & Aliesmaili, 2013); but, in developing economies, available on-campus accommodation is important

(Agrey & Lampadan, 2014). Cost and available financial support are also significant choice factors (Ming, 2010; Dao & Thorpe, 2015; Sarkodie, Asare & Asare, 2020).

## **Students' Reasons for Selecting a Specific Qualification**

The factors influencing students' career choices are varied, and a wide range of research studies have discussed them. Most importantly, students do not make their career choices in isolation (Agrey & Lampadan, 2014). Choosing a career is a complex decision that is guided by many factors. Shumba and Naong (2012) identified the contributing factors that affect students' career choices, such as significant family influence and the student's cognitive ability; and teachers are another essential contributing factor. Bandura *et al.* and Watson *et al.* in Shumba and Naong (2012) add other factors that influence students' career choices, such as their living context, aptitudes, educational success, and financial support.

Similarly, Sefora (2016) argues that resources and opportunities such as financial support, job availability, and opportunities to work abroad are significant career choice influencers. Mtemeri (2017) proposes that parents' education and careers, reassurance, and guidance influence students' choice of career. Besides parents, schools, the location of their schools, teachers, and subject choices also influence students' career choices. Kazi and Akhlaq (2017) add that young people are impressionable and are often influenced by their peers, the media, and social media when they choose a career. Comparing numerous studies, the contributing factors of career choice also include inter-personal relationships, the student's cognitive ability and personal preferences, their socio-economic background, job opportunities and cost, and financial support (Ming, 2010; Salimon, 2012; Shahzad, Zahra & Ahmed, 2014; Kazi & Akhlaq, 2017).

In summarising the literature, many factors influence first-year students' career choices and choice of an HEI. These factors range from geography to resources, background, personality, people, and the media. This literature review provided the information that was necessary for the data collection process (Kyngeäs, Mikkonen & Kääriäinen, 2020). The research methodology is described next.

## **RESEARCH METHODOLOGY**

### **Study Approach**

Qualitative research is a process with various repetitive stages that questions and makes distinctions about a phenomenon to improve our understanding of it (Aspers & Corte, 2019). Qualitative research is adaptable, open, and responsive to context (Busetto, Wick & Gumbinger, 2020). The qualitative research methodology was the most appropriate research approach in this study. It explored first-year students' real-live experiences, reasons, and perceptions, and aimed to understand their experiences of and meaning-making in their choice of study institution and career (Creswell, 2014). Nieuwenhuis (in Maree, 2014) states that qualitative research as a methodology explores 'why' questions and is concerned with processes and behavioural patterns. Ethical clearance for the study was obtained.

### **Sampling and Setting**

Appropriate sampling enhances the rigour of qualitative studies. In qualitative studies, there is no pre-defined sample size before data collection begins, and data collection is completed with data saturation (Kyngeäs *et al.*, 2020). The sampling method in this study used convenience and purposive sampling techniques because of the study's qualitative paradigm and its aim. The sample in this study was first-year students in a business college at a university. Participants were purposively selected, as the sample aimed to understand first-year students' perspectives best and to increase the significance of the information obtained (Creswell, 2014; Cohen, Manion & Morrison, 2011). The participants included all of the students in three study disciplines: marketing management, public management, and governance and accountancy with financial management as a module. The study was concluded in Gauteng Province, one of nine provinces in South Africa.

## Data Collection and Data Analysis

Data collection and data analysis interconnectivity compelled the researcher to analyse participants' data responses during the collection process in order to be alert to data saturation. Data saturation was achieved when participants' online responses became repetitive and no new information was derived (Kyngäs *et al.*, 2020). Twenty-eight first-year students completed the online qualitative survey. The content validity of the questions in the survey resulted from the theoretical perspectives from the literature review. The inductive content analysis formed the theoretical components, as they arose from the collected data (Armat, Assarroudi, Rad & Sharifi 2018; Graneheim, Lindgren & Lundman, 2017). Different phases of coding occurred in the study.

The study described the real-life experiences and perceptions of first-year students of a specific phenomenon. It used inductive content analysis, which was applicable because it allowed for a methodical and unbiased description of the findings with concepts, categories, and themes. Inductive content analysis was also appropriate because the previous knowledge concerning this study's specific research question and aim was fragmented (Kyngäs *et al.*, 2020). Kyngäs *et al.* (2020) also described an inductive content analysis as including the following phases: reducing the data, grouping the data, and forming the concept from the data to answer the research question. Thus, the method of inductive concept analysis summarises the main categories, concepts, and themes, and indicates possible theoretical relationships.

## Data Trustworthiness

The study's qualitative inquiry adhered to Lincoln and Guba's (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.
- Neutrality is confirmed by confirmability.

The trustworthiness of this study's inductive content analysis was checked and cross-checked during the preparation phase, during the data collection and selection of the unit of analysis, during the organisation phase (including categorisation and interpretation), and during the reporting phase (Elo, Kääriäinen, Kanste, Pölkki, Utriainen & Kyngäs, 2014). Peers checked the coded data, and the researchers considered the subject experts' feedback.

## FINDINGS AND DISCUSSION

Choosing a career qualification and higher education provider has significant implications for young people (Alonderiene & Klimavičiene, 2013; Kazi, & Akhlaq 2017). It is often a complex and difficult task owing to a lack of access to information, inadequate and fractured information, and different sources of information (Kazi & Akhlaq, 2017; Njoko, 2018; Moody, 2020). Making the wrong choices impacts both the student and the HEI (Som, 2016).

This study first explored and described first-year students' knowledge of South African HEIs before they applied and registered. The central theme revealed schools and the internet as the most important sources of information. Participants identified their sources of knowledge as their high school, high school teachers, and digital searches – for example:

I found the information on Google and from my high school teachers. (P1)

I did my research online about it. (P12)

I found out about higher education institutions through my high school teachers. (P21)

These findings showed that students depend on adequate information from their high schools and teachers and on access to technology to obtain knowledge about public and private HEIs. A study by Alonderiene and Klimavičiene (2013) found that sources of information such as the internet and specialised printed material significantly influenced students' choice of qualification and higher education provider. Similarly, Tang, Fouad and Smith (1999) found that students' awareness of HEIs influenced their selection. Dao and Thorpe (2015) stated that direct university communication with students through various media was essential.

After exploring students' knowledge of HEIs, participants were asked to explain what they wanted to know before selecting a HEI. The emerging theme was the demand for sufficient comprehensive information about higher education and an HEI's expectations. The participants identified a significant gap, caused by the lack of appropriate information and communication, between their expectations of the higher education environment and higher education realities. Participants' responses included these:

I wish I would have known that varsity is not for the faint-hearted, it is the survival of the fittest, and that commitment is vital. (P4)

I wish I would have known that there are a lot of processes to go through after I finish high school to be accepted into a high education institution. (P12)

That the workload is a lot, and the deadlines sometimes clash by 2 or 3 days apart. (P2)

That you need to come prepared, I mean with a different mindset, you need to know that you're not coming here to play around. (P24)

I wish I'd known that it was this hard. (P28)

The findings correlate with Hassel and Ridout's (2018) statement that the move from high school to university impacts students in more ways than one. What students think is often quite different from the reality that they encounter and can cause confusion and distress if HEIs do not address it appropriately. Domínguez, Álvarez, and López (in Areces, Rodríguez-Muñiz, Suárez-Álvarez, & De la Roca, 2016) confirmed that students do not receive proper guidance from schools and universities about how universities operate and about what they offer in order to make informed decisions. In Hassel and Ridout (2018), Murtagh argues that a considerable challenge is that students come from controlled and teacher-centred schools to higher learning in an environment of large classes and of taking responsibility for one's own education and success.

Second, the study explored and described first-year students' knowledge of the various qualification offerings before applying and registering. The central themes revealed schools and the internet to be the most important sources of information: Participants' responses included the following:

I found the information on Google and from my high school teachers. (P1)

By doing research online. (P24)

Research on the internet. (P22)

Although participants mentioned their schools and technology as primary sources of knowledge, Hoa (2018) argues that collecting information on careers and qualifications remains a real challenge for high school students. The problem of gaining sufficient knowledge is not one-dimensional or easy but involves a process of finding and decision-making (Kazi & Akhlaq, 2017).

In questioning the students further, it became evident that they had generic knowledge about available qualifications and career opportunities; and that the information they had was not always adequate for them to make the correct choices, as can be seen in the responses below:

I knew that it is part of the humanities world where we work with people. (P7)

That it deals with people undergoing radical change and the ongoing technological revolution that needs critical thinkers. (P15)

It will teach me the information I need to become a marketer. (P20)

I knew that, after graduating, I would probably work in the state. (P3)

Eriksson, Högdin and Isaksson (2018) argue that high school learners generally do not receive sufficient knowledge and information about the various industries. They also receive inadequate and unclear information about available education programmes and how those programmes might lead to careers (Eriksson, et al., 2018). The lack of proper information and knowledge may leave students unsure of what they want to do in the future.

After exploring students' knowledge of the various qualification offerings before application and registration, participants were asked to explain what they wanted to know and what universities could put in place to support them before they select a qualification. Participants did not mention any career guidance support in making their qualification choice. The participants overwhelmingly indicated the need for sufficient information, communication, and personal interaction to assist them in making informed and correct career and qualification choices:

I wish I would have known that the qualification is complex. (P4)

Much more information than available. (P1)



More information on website. (P27)

Showcases where the varsity goes to various schools and tells the students what they need. (P10)

Info on opportunities, courses in demand, and passion for the course. (P27)

Maree (in Shumba & Naong, 2012) found that many high school students do not receive any career guidance, which leads to the wrong qualification choices. The proper career guidance at high schools could significantly impact students' career and qualification choices (Shumba & Naong, 2012). Similarly, Domínguez, Álvarez and López (in Areces *et al.*, 2016), argue that students' unsuitable and incorrect career choices are the result of not receiving sufficient guidance at high school level.

Third, the study explored and described first-year students' reasons for selecting a college at a university as their higher education provider. The central theme derived from the survey was the importance of institutional and college reputation:

This higher institution is one of the best in South Africa and it maintains its standard in terms of pass rates. (P5)

The institution is the best worldwide, meaning [lecturers] do their best work and student have good results. (P15)

It is a huge institution that is in the top 5 institutions in South Africa, and it is known for giving the best education when it comes to Marketing. (P21)

Numerous studies have underscored the importance of institutional reputation when students choose a provider of higher education studies (Alonderiene & Klimavičiene, 2013; Saif *et al.*, 2016; Rudhumbu *et al.*, 2017). The study also explored what participants wanted to know before choosing a specific college at a university in South Africa. The central theme was that information was adequate. The participants made informed decisions when they chose this business college at a university in South Africa:

I knew enough. (P6)

I did my research; I basically knew what I needed to know. (P8)

There is nothing I would've wanted to know. (P24)

Still, even though participants chose the college and institution on its reputation, and found all the information adequate to make decisions, some participants indicated the need for information and assistance on arrival at the chosen university:

The physical on-campus area. (P3)

I would have wanted to know how things actually work here in terms of choosing modules and all that stuff. (P5)

that you need to make bookings for most activities that are done online, e.g., Clinic. (P3)

First-year students can find it challenging to adjust to the new environment, and it is the university's responsibility as the principal service provider to assist students in adjusting to the new environment, the operating system, the facilities, and the resources to which they are exposed (Ang, Lee & Dipolog-Ubanan 2019). Additional observations were reported by Hassal and Ridout (2018): that moving from high school to university can be difficult and stressful, especially for first-generation students and students from a marginalised background.

Fourth, the study explored and described first-year students' reasons for selecting their specific qualifications. In the context of a pan-African university with a majority of first-generation and public high school students, an overwhelming yet disturbing response was that participants did not have sufficient information about available qualifications, and made uninformed qualification choices:

When I applied, I didn't know much about the course; all I knew was that it involves politics and matters of the Government. (P5)

The little bit of information that is given to students doing Accounting in high school. (P26)

I practically knew nothing. But I knew it was a step closer to achieving my dreams. (P15)

Kazi and Akhlaq (2017) argue that career choices are made with little awareness of real-world realities, and are often made without relevant information and proper guidance. Participants' responses also overwhelmingly reflected personal preferences that were based on subject selections in high school when choosing their qualifications:

I loved business studies in high school, so me furthering it was just perfect. (P8)

I love learning about everything that has to do with the corporate world. (P18)  
I very much enjoy working with numbers; I could not see myself anywhere else. (P24)

Kazi and Akhlaq (2017) argue that interest in a specific field is essential when students decide on their future professions. Here too, participants' responses overwhelmingly reflected their aspirations for future economic advancement as reasons for choosing their qualifications:

Route to take in order to have a qualification regarding the job you want. (P14)  
One thing I knew is that higher education studies come in handy when you are looking for a job. (P21)  
The economic status of black people. (P9)

Titan, Ardelean, Manea, Boboc and Andreea (2015) found that future students believed that a higher education qualification would secure jobs. Likewise, Kazi and Akhlaq (2017) argue that the extrinsic factors that influence students to study towards higher education qualifications include salary, employment access, and job security.

## MANAGERIAL IMPLICATIONS

This study has contributed on two levels. The first is to the body of knowledge, from a pan-African and developing economy perspective, about first-year students' prior knowledge of HEIs, their reasons for studying at a specific institution, and their choice of a particular qualification. Second, on a managerial level, the findings contribute to a better understanding of the first-year intake to a college at a university.

The following suggestions arose from the study. Its findings could have implications for career guidance and support at high school level and for ongoing support among first-year students in a pan-African and developing economy context. In gaining insight into why students make their specific HEI and career choices, and their expectations of the higher education environment, an effort could be made to guide students towards a more realistic understanding of higher education and towards more realistic and suitable career choices. The findings of the study could also have implications for higher education marketing information, strategies, and recruiting efforts and methods. Rudhumbu *et al.* (2017) conclude that the choice of marketing strategy influences students' choice of HEI. The findings about first-year students' knowledge of South African HEIs and their prior knowledge of the various qualification offerings before applying and registering identified students' dependence on adequate information and access to technology at their high schools and from their high school teachers as their main sources of information about and knowledge of public and private HEIs. This finding points to a greater responsibility on the part of high schools, especially in a pan-African and developing economy perspective, to support, inform, and guide students to make informed and suitable choices for further study (Sarkodie, Asare & Asare, 2020). Schools need to provide accessible sources of information and career counselling and need to guide and assist high school students in their search relating to higher education and their specific career aspirations (Kazi & Akhlaq, 2017). Since students' selection and accurate knowledge of the qualification choices is directly related to the information that students have about their career prospects (Saif *et al.*, 2016), HEIs' marketing strategies must include in-person interaction and information sessions at schools that provide combined career and course explanations, advice, and guidance (Kinash, Crane, Capper, Young & Stark, 2017). Nyamwange (2016) underscores the importance of prior knowledge in making career choices that will benefit both the student and their future employers.

The findings about first-year students' reasons for selecting a business college at a university as a higher education provider suggest the importance of institutional reputation. Similarly, Saif *et al.* (2016) urge a critical focus on reputation and on easy and accessible online information and services to increase students' first choice of HEIs. Institutional image and reputation are closely linked to quality staff, quality academic programmes, and student employability after completing their studies (Rudhumbu *et al.*, 2017).

The finding of this study was that first-year students' reasons for studying a specific qualification were linked to passion, jobs, and economic freedom. Hussin, Muhamad, and Sukor (2019) confirms future career and passion as two contributing factors. Akosah-Twumasi, Emeto, Lindsay, Tsey and Malau-Aduli (2018) found that salary was one of the strongest external influencers of the career choice decision, and that earning an income was regarded as a very important factor.

## **LIMITATIONS AND FUTURE RESEARCH**

This research focused on only one of the many comprehensive universities in one province of South Africa, and so the results cannot be generalised. The study was limited in its scope to first-year students in a specific business and economics college, and to only three business and economics fields of study at that university. However, the findings might demonstrate reasons that apply to other HEIs in the same fields of study.

This study might direct future studies to increase insight into and understanding of first-year students' reasons for choosing specific universities and qualifications in a pan-African and developing economy context. Future research focuses are suggested below:

- Research that involves all first-year business and economic students and includes other South African HEIs.
- Comparative research studies of similar faculties and HEIs in South Africa.
- Comparative research studies of similar faculties at HEIs in Africa.
- Quantitative studies of those mentioned above with a more significant sample, which could provide measurables and greater insight.

Such studies could provide a more comprehensive picture of students' knowledge of and reasons for choosing a university, qualification, and career in pan-African and developing countries. Therefore, these studies could yield a better understanding of students' needs and expectations that would also inform HEIs' marketing and strategies better.

## **CONCLUSION**

This study explored why first-year students selected a business and economics college at a university in South Africa as their preferred HEI provider. Arising from the study's findings, which were corroborated by prior scholarly research, it became evident that there is a gap between what first-year students know about higher education and qualifications for specific careers on the one hand, and reality on the other. First-year students based their qualification decisions on personal preferences and their expectations of future earnings and relied on word-of-mouth and online searches. In a pan-African and developing economy context, public high schools need to revisit their career guidance and support for their students so that their choice of a career qualification reflected their true value and aptitude. HEIs need to review the real needs and expectations of their student cohort and high school target market to inform their recruitment and institutional support strategies. Notably, the reputation of a college and an HEI emerged as a dominant influencer of students' choices. Prior knowledge, access to comprehensive and adequate information on higher education requirements, available careers, and matching qualifications, and proper guidance at a high school level are critical for informed decision-making and final choices for further study. Additional research is required to explore this topic in a comprehensive university and a South African context, with findings from a pan-African and developing country perspective.

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# DEFINING PRODUCT SELLING AND SOLUTION SELLING: A MULTI-METHOD QUALITATIVE STUDY

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## ABSTRACT

*Sales in its basic form is quite simple, but in a constantly changing business environment, it has become multifaceted. New types of specialized sales categories are emerging, such as product selling and solution selling, with various consumer involvement decisions, such as low-, medium-, and high-involvement decision-making. Specialized sales categories are defined from different perspectives, which creates confusion. This study aims to define product selling and solution selling in a business-to-consumer environment from the perspectives of salespeople and academics. This study used an innovative multi-phased qualitative plan by utilizing several sequential methods to gather and analyze data. The study used a two-rounded Delphi technique to gather information and inductive content analysis and the 5Ws and 1H method for analysis. The main findings indicate that salespeople over various categories (low, medium, and high) have different opinions about the job, which can provide better congruence between salespeople and managers. This study contributes on three levels: academically, it closes the literature gap by providing a salesperson perspective on product selling and solution selling; practically, it provides managers with an understanding of how salespeople see their job; and methodologically, it provides an innovative way to gather and analyze data.*

**Keywords:** product selling, solution selling, multi-phased qualitative plan, Delphi technique.

## INTRODUCTION

Sales is part of the marketing mix (i.e., the 4Ps), forming part of the promotion of marketing, and in its basic form is defined as the exchange of a product, commodity, service or delivery for money (Kotler et al., 1990). However, the world of selling has changed. Strong global competition, slow growth in markets, and demanding customers are forcing organizations to change their selling strategies. A product's success in the marketplace largely depends on the efforts of the salesforce. Many organizations use their existing salesforce to perform product selling and to provide solution selling to customers. Given the increasingly rapid introduction of next-generation products and the increase in demanding customers insisting on better solutions, salespeople face a complex portfolio (Van der Borgh & Schepers, 2018). There are several academic definitions of product selling (Diara & Mokwenye, 2019; Sharma & Sagar, 2018) and solution selling (Koponen et al., 2019; Rangarajan et al., 2018). However, herein lies a conundrum, as academic definitions are written from the perspective of the authors. If the authors have a financial interest, their definition will reflect financial importance (Lambert & Burduroglu, 2000; Maciejowska et al., 2019), and when the authors have a marketing interest, the definition will reflect such (Schwartz & Woloshin, 2019). Moreover, there is the difference of selling in a business-to-business (B2B) and business-to-consumer (B2C) environment wherein these definitions can cause further confusion (Ali et al., 2019).

To add to this predicament, within these different sales strategies (product selling and solution selling), various categories of salespeople operate depending on the consumers' involvement in the decision-making process of the purchase, the so-called low-, medium-, and high-involvement decision-making (Jain, 2019). This study loosely draws on involvement theory, which is based on the concept that consumers use various decision involvement when making a purchase.

Literature was reviewed extensively (Koponen et al., 2019; Sharma & Sagar, 2018) and there seems to be an academic gap in the various salespeople categories (low, medium, and high), where scholars give their own opinions on the construction of sales definitions and if there a difference in the definitions over the various categories. Consequently, this study aims to construct a definition of product selling and solution selling from the perspective of

various salespeople categories working in the retail environment and retail academics. To achieve this, the study's aims were:

- To construct a product selling definition relevant to the various sales categories and academics;
- To construct a solution selling definition relevant to the various sales categories and academics; and
- To conclude if congruency prevails in the definitions of the various sales categories.

This study contributes on three levels. Academically, the study offers a salespeople-centered perspective to current literature by providing selling definitions of the various decision-making categories. Practically, the study provides managers with insights on how salespeople see their roles and functions and therefore better execution of their function in a B2C working environment. Salespeople furnish an understanding of their expectations of their functions and roles, providing better congruence between managers and salespeople on the expectation of the sales role. On a research level, the study uses an innovative method to gather and analyze the data. The multi-method process is used to meticulously answer the constructivist aim of this study.

The literature review provides context for product and solution selling. The study follows a constructivist research paradigm with a qualitative approach, as explained in the research methodology. Data collection was done using a two-rounded Delphi technique targeting academics and salespeople in various sales jobs. After describing the findings, the implications, the limitations, and further research, the study ends with its conclusions.

## LITERATURE REVIEW

To provide basic understanding of the study's various concepts, the following definitions were sought from *Oxford Learner's Dictionaries*.

- Sell: "is to give something to somebody in exchange for money" (Oxford Learner's Dictionaries, n.d.-a);
- Sale: "an act or the process of selling something" (Oxford Learner's Dictionaries, n.d.-b);
- Product: "a thing that is grown, produced or created, usually for sale" (Oxford Learner's Dictionaries, n.d.-c);
- Solution: "a way of solving a problem or dealing with a difficult situation" (Oxford Learner's Dictionaries, n.d.-d); and
- Solve: "to find a way of dealing with a problem or difficult situation" (Oxford Learner's Dictionaries, n.d.-e)

According to content analysis of the above, the following definitions are constructed:

- Product selling is the act of giving a thing that is grown, produced or created to somebody in exchange for money; and
- Solution selling is the act of solving a problem or dealing with a difficult situation in order to give something to somebody in exchange for money.

### Product Selling

Product selling can also be referred to as merchandise selling or retail selling (Wood, 2020). Consumers are involved with a routine (low), limited (medium), and extensive (high) decision-making process when buying a product/service. This level of involvement depends on various factors, such as the time it takes to make a decision (short to long), financial implication/cost of the product/service (low to high price tag), depth of information search, and number of alternatives available (one, few or many) (Tibebe & Ayenew, 2018). If consumers make a routine purchase, it is called a low-involvement product, which requires low decision-making involvement, as these products are familiar and need little time to research or search for, are low cost to purchase, and there are few alternatives available (e.g., bread or milk). Contrastingly, high-involvement decisions carry a higher risk to buyers if they fail, are complex, and/or have high price tags, such as cars, houses, and insurance policies (Foti & Devine, 2019). High-involvement purchase items are not purchased often, but are relevant and important to the buyer. Consumers do not engage in routine response behavior when purchasing high-involvement products, instead, they engage in what is called extended problem-solving, where they spend a lot of time deciding whether to purchase a service/product (Tanner & Raymond, 2010). Moreover, there is a time delay in high-involvement and complex purchase decisions in comparing different aspects, such as the features of the products, prices, and warranties (Rajasekhar & Makesh, 2013). Foti and Devine (2019) concurred that these decision processes are vastly different. Table 1 outlines the sampled articles' definitions of product selling.



**Table 1: Sampled articles' definition of product selling**

Source	Definition
MBA Skool Team (2020)	"Product sales is an act of selling a product or service in return of money or compensation or service. Product sales is when a customer buys a product/service which will fulfil a need of theirs. The number of products sold in a given time period helps in determining the product sales. It is a critical parameter in understanding the business of a company."
Sharma and Sagar (2018, p. 295)	"Product selling can be defined as those activities undertaken at the operational level involving activities, such as developing the sales model, training the sales force, creating sales strategy, preparing sales pitches, identifying key-decision-makers, educating customers on the new product features, communicating value, expediting orders, providing after-sales support and visiting prospects."
Van der Borgh and Schepers (2018, p. 858)	"Product information as the extent to which salespeople within a unit are collectively provided with timely, relevant, and accurate information on how the new product addresses customer needs."
Diara and Mokwenye (2019, p. 2)	Product selling "refers to the activity of selling goods or trying to sell them, by advertising or displaying them."

*Source: Authors*

## Solution Selling

Solution selling can also be referred to as relationship selling (Arli et al., 2018), value-based selling (Kienzler et al., 2019), and key account selling (Singh et al., 2019). As per Ulaga and Kohli (2018), solution selling is a complex process that is the evolved result of selling in a changing business environment.

Increasing demands for solution selling call for a better understanding of the competence required of salespeople. The solution selling environment has become an increasingly complex and global environment. In solution selling, salespeople aim to build appropriate solutions in long-term relationships with key customers, whilst achieving profitable sales via successful collaborative sales processes. Solution selling has moved towards relationship selling, which perceives sales as a process of concentrating on securing, building, and maintaining long-term relationships with profitable customers (Koponen et al., 2019). Hartmann et al. (2018) lamented that solution selling ascribes to increasingly complicated buyers and buying processes, which emphasize the importance of salespeople providing buyers with information, helping buyers discover and understand needs, determining and providing adequate and often customized solutions, performing non-selling tasks (e.g., planning, analysis, preparing proposals), and involving additional personnel in sales efforts. Table 2 details the sampled articles' definitions of solution selling.

**Table 2: Sampled articles' definition of solution selling**

Source	Definition
Moore (2021)	"Solution selling refers to the philosophy or practice of uncovering a customer's pain points and then providing products and services that address the underlying business problem."
Indeed Editorial Team (2020)	"Solution selling is the process of identifying a customer's need and providing them with a product or service solution that addresses that need. It requires sales professionals to use empathy and active listening to understand each individual customer's problems and develop a personalized solution that works best for them. The solution selling methodology uses a problem-led sales process that involves identifying a customer's issue prior to introducing a product or service to them, rather than beginning with an explanation of its benefits."
Koponen et al. (2019, p. 238)	In solution selling, "salespeople aim to build appropriate solutions in long-term customer relationships with key customers and achieve profitable sales via successful collaborative sales processes."

Source	Definition
Rangarajan et al. (2018)	Solution selling is “a set of customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post deployment customer support, all of which are aimed at meeting customers’ business needs.’ While the sales function is critical in the first two stages; the service function is critical in the fourth stage; the operations management function is critical for the second and third stages.”
Böhm et al. (2020)	“Solution selling comprises four distinct processes: (1) customer requirement definition, (2) product customization and integration, (3) deployment of solution offers, and (4) post-deployment support.”

*Source: Authors*

## Consumer Involvement Theory

According to consumer involvement theory, consumers’ involvement depends on the degree of relevance of the purchase to them (Kotler, 1997). For instance, if consumers want to buy tea, they do not feel very involved, because the lifespan of the product is very short and is usually purchased often. If customers are dissatisfied, another brand will be purchased next time (Jain, 2019). If customers buy, for instance, a car, refrigerator, air conditioner, furniture, or house, they are forced to use it for a long period and cannot change easily. If customers decide to dispose of the purchase, there is a big loss, hence there is a high degree of involvement in these products. Consumers make these decisions after serious deliberations – for example, insurance policies can be a lifetime commitment and consumers have to live with their choices. Alhoqail and Floyd (2020) agreed, stating that high-involvement product purchases suggest consumers do not buy suddenly, but make a choice after a thorough search and evaluation of the available alternatives. In other words, it takes time and comparison with other similar offerings. Contrarily, low-involvement products seemingly do not take much time in decision-making and consumers do not need to seek out various evaluations. This purchase involvement occurs in minutes.

It is evident that different academic authors define product selling and solution selling from varying perspectives. In Table 1, product selling is defined from the perspective of the act of selling, from an operational perspective, and from a salesperson’s perspective. In Table 2, solution selling is defined from the perspective of an overarching business philosophy, a salesperson’s perspective, and an operational perspective. Academically, this creates confusion concerning which definition is correct. Furthermore, with so many varied definitions, salespeople are unlikely to know how to execute their jobs correctly and understanding of their job role/function can be problematic. These different perspectives are nothing new and, as Niar (2022) stated, the compilation of definitions depends on the reference. Finance places a financial importance on the definition, as the concern lies with profitability and, as Fuciu and Dumitrescu (2018) stated, marketing’s idea of product selling represents the idea of selling and buying a certain product. This study set out to create a product and a solution selling definition from the perspective of the people performing the jobs as set out below.

## RESEARCH METHODOLOGY

### Research Paradigm

Paradigm comes from the Greek word for pattern and in the context of research signifies “a way of seeing the world that frames a research topic” (Kamal, 2019). This study followed a constructivist research paradigm as it best fits the research aim of creating definitions for product selling and solution selling. Constructivism refers to the cumulative process of knowledge building and this study used several phases of constructing knowledge. A constructivist research paradigm also considers social reality as subjective, meaning that each participant understands the world differently (Saldaña & Omasta, 2022).

## Research Approach

This study employed a sequential multi-method qualitative approach consisting of several phases, namely extracting content from literature, gathering data via a two-rounded Delphi technique, analyzing data by using the 5Ws and 1H method and inductive content analysis in order to formulate new definitions, and concluding with a triangulation of the various samples' findings to determine if congruence exists over the various new definitions for product selling and solution selling (see Figure 1). Saldaña and Omasta (2022, p. 2001) defined qualitative research as:

*a wide variety of approaches to and methods for the study of natural social life. The information or data collected and analysed is primary – but not exclusively – non-quantitative in character, consisting of textual material such as interview transcripts, filed notes and / or visual material such as artefacts, photographs, video recordings and internet sites that document human experience about others and / or one's self in social action and reflexive states.*

Multi-method qualitative approaches are beneficial as they illustrate how using multiple interpretive methods can help gain more in-depth versions than when obtained with a single method. One method can capture what the other cannot (Rocha, 2022).

## Sampling and Site Selection

This study used a multi-case sampling strategy (Saldaña & Omasta, 2022) by exploring participants' opinions on several retail sites/domains and different sales categories. Four different samples with 10 participants – in total, 40 participants – were probed regarding their opinions on product selling and solution selling. The sample comprised 10 academics from higher education institutions across South Africa who are considered retail specialists and 10 salespeople selling products requiring high-involvement decision-making. The inclusion criteria centered around expensive, very important or emotionally significant products, such as houses and cars. The samples included people like “Bandile”, a retail car salesperson for Volkswagen Baron, and “Ntandazo”, a real estate agent in Cape Town. Another sample comprised 10 salespeople selling products requiring medium-involvement decision-making. The inclusion criteria centered around simpler decision-making made in the store and not over a long period. The sample included people like “Maphili”, a financial services (short-term insurance) salesperson for Old Mutual, and “Kenny”, an appliances sales agent at Hirschs. In addition, 10 salespeople selling products requiring low-involvement decision-making were included in the sample. The inclusion criteria focused on little, if any, information gathering and any evaluation of alternatives is relatively simple and straightforward. This sample included people like “Yanga”, a retail fashion salesperson for H&M, and “Kim”, a salesperson for PayJoy in the food retail sector.

Multi-case sampling adds depth and richness to data analysis through the exploration of various aspects of a study's aim (Farrugia, 2019). The study's participants were purposively selected, meaning judgment was used in their selection. Purposive sampling provides justification to make generalizations from the sample to the population (Sharma, 2017)

## Data Collection and Analysis

In step one, literature was reviewed and four definitions of product selling and five definitions of solution selling were obtained. Refer to Tables 1 and 2. In step two, these definitions were submitted for analysis using the 5Ws and 1H method, which analyzes a given problem by answering: what, where, when, who, why, and how. These questions are open-ended, thus none can be answered dichotomously with a “yes” or “no”. This method focuses on various aspects of the problem under investigation and shows different “sides of the coin”. The 5Ws and 1H method alone will not solve the problem, but it creates the conditions for the proper identification of the problem under analysis (Basuki & Kusuma, 2018; Knop & Mielczarek, 2018). See Table 3.

**Table 3: Example of the 5Ws and 1H were used for this study**

<b>Definition</b>	<b>What</b>	<b>Who</b>	<b>Why</b>	<b>When</b>	<b>Where</b>	<b>How</b>
Solution selling is “‘a set of customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post deployment customer support, all of which are aimed at meeting customers’ business needs.’ While the sales function is critical in the first two stages; the service function is critical in the fourth stage; the operations management function is critical for the second and third stages” (Rangarajan et al., 2018).	Customer-supplier relational processes	Customer-supplier	At meeting customers’ business needs	N/A	N/A	“Customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post deployment customer support, all of which are aimed at meeting customers’ business needs.”

*Source: Authors*

In step three, all the defined categories (5Ws and 1H) of the nine definitions were submitted for inductive content analysis to determine the dominant theme. This was done separately for the product selling and solution selling streams. A proposed definition for product selling and solution selling resulted from this exercise (see Table 4). Saldaña and Omasta (2022) opined that most qualitative research is done via inductive inquiry because researchers begin with open-ended questions for investigation, rather than a fixed hypothesis.

**Table 4: Definitions obtained from literature**

<b>Product selling</b>
Product selling is all about the organization’s various products and the promotion of these products or services to customers. The salesperson should educate the customer on the products. The selling of products must be profitable for the organization.
<b>Solution selling</b>
The purpose of solution selling is to figure out and understand what the client’s problem is and then to provide a specific solution to that problem. This solution must add value to the client and the process must be seamless. The solution must be profitable for the organization.

*Source: Authors*

In step four, the two proposed definitions were submitted to the Delphi panel for feedback. The Delphi process consists of two rounds in which a panel of experts, through an anonymous forum, provide their opinions on the matter at hand. This technique is very effective in getting consensus on a topic (Roberts & Kovacich, 2018). Antonini et al. (2018) agreed, stating that the Delphi is an iterative, structured consensus process that allows for eliciting and refining a group’s opinions. The Delphi process has been widely used to achieve congruence of opinion from a panel of experts. The participants were asked to rate the accuracy of the definitions by using a Likert scale (1 = “disagree” to 7 = “totally agree”) and explaining their rating.

In step five, the feedback was reworked as per steps three and four to obtain revised definitions. A similar study was done by McKee et al. (2020), who used the Delphi technique to get consensus on a concept definition. In step six, the revised definitions were re-submitted to the Delphi panel for feedback.

**Table 5: Examples of participants' feedback**

<b>Participants</b>	<b>Likert scale rating: solution selling</b>	<b>Please provide an explanation for why you chose this rating.</b>	<b>Likert scale rating: product selling</b>	<b>Please provide an explanation for why you chose this rating</b>
1	7	“Solution selling has a salesperson or sales team use a sales process that is a problem-led approach to determine if and how a change in product could bring specific improvements that are desired by the customer.”	7	“Products offer a uniform solution to customers’ problems. Product selling is an art form that requires many different tools and talents. Identifying people who are interested in buying your product, also known as “leads”, represents only the first step. Convincing them to buy your product requires a forward-thinking marketing plan.”
2	7	“Selling is about seeing the big picture and meeting your customers where they live.”	7	“Selling is about seeing the big picture and meeting your customers where they live.”
3	1	“The best way for consumer satisfaction is to uncover the needs in order to have seamless service.”	1	“Products are specific to different consumers or customers. So product knowledge is key in this instance.”
4	6	“Selling solutions means thinking beyond the immediate and it also takes into consideration of the company’s KPIs [key performance indicators].”	6	“Because with product selling you focus your energy on highlighting the pros of the product/service to convince your potential client/customer to buy your product.”
5	6	“The description given was quite accurate. There is a salesperson trying to understand the customers’ needs but at the same time often salespeople are given a product to sell and they must also try convince the buyers on why they need this product”	7	“This statement is accurate. The salesperson does need to supply the buyers with all the necessary information.”

*Source: Authors*

In step seven, after round two, the feedback was reworked as per steps three and four to obtain the final definitions for product selling and solution selling. The findings are discussed below. In step eight, the triangulation of the different groups’ findings took place. By triangulating the collected data, a more complete account of the phenomenon in question is provided (Rocha, 2022)

## Methods of Rigor

This study utilized several methods to increase research rigor. Research confidence was obtained using the multi-case sampling strategy, which also increases the analytic generalizability of the findings through representative samples of a population (Farrugia, 2019). Since participants are purposefully selected for their experience and ability to contribute to a research topic, Campbell et al. (2020) opined that purposive sampling is the matching of the sample to the aims and objectives of the research. This improves the rigor of the study and the trustworthiness of the data and results.

Qualitative research must create works that are credible. This resulted in the so-called “Holy Trinity” of the concepts of reliability, validity, and generalization. One of the most popular ways of seeking confirmation in qualitative research is through triangulation which, among other aspects, advocates for the use of multiple methods (Abdalla et al., 2018)

## ETHICAL CONSIDERATION

This study’s ethical clearance was provided by the University of Johannesburg via ethical committees and according to approved policies. Consent for participation was obtained and confidentiality was assured as part of the data gathering. The clearance certificate is available on request.

## FINDINGS AND DISCUSSION

An interesting finding is that after round one, the nine academics and 10 high-involvement participants scored 4.5 and higher on the proposed solution selling and product selling definitions. They accepted the proposed definitions outlined in Table 6.

**Table 6: High-involvement salespeople’s and academics’ definitions**

<b>Product selling</b>
Product selling is all about the organization’s various products and the promotion of these products or services to customers. The salesperson should educate the customer on the products. The selling of products must be profitable for the organization.
<b>Solution selling</b>
The purpose of solution selling is to figure out and understand what the client’s problem is and then to provide a specific solution to that problem. This solution must add value to the client and the process must be seamless. The solution must be profitable for the organization.

The medium- and low-involvement salespeople submitted scores ranging from 1 to 7. Their feedback was considered and the definitions were reconstructed and re-submitted for another round of scoring and feedback. After the second round of Delphi, these participants scored higher than 4.5 on the Likert scale and the definitions were accepted, as stated in Table 7.

**Table 7: Medium- and low-involvement salespeople’s definitions**

<b>Product selling</b>
Product selling is the promotion of products or services to customers by focusing on supplying the customer with product information and educating the customer about the product or service.
<b>Solution selling</b>
Solution selling is a sales process or methodology applied by a salesperson to uncover a customer’s needs or problems and then offering a customized solution that solves the customer’s needs or problems – in return providing the customer with value and the company with profit.

From the data, it is evident that different categories of salespeople and academics see product selling differently. The high-involvement salespeople approached the product definition from an organizational well-being viewpoint using concepts like the “organization’s various products” and “profitable for the organization”.

Contrastingly, the medium- and low-involvement salespeople constructed a simpler definition by focusing more on the marketing principles and using words like “promotion” and “product information”. Interestingly, the groups agreed on two concepts, namely education by using words like “educate the customer” and “promotion” of the product.

On the solution selling definition, there was congruence in opinions and the definition was mainly written from a client’s perspective. Both groups and the academics agreed that solution selling involves understanding or uncovering clients’ problems or needs to offer specific or customized solutions to create value. Both groups mentioned that this process should be profitable to organizations.

Even though salespeople and academics were asked to define product selling and solution selling, it is interesting to note that no group defined the concepts from their own sales jobs’ perspective. This finding ties in with extant literature (Diara & Mokwenye, 2019; Koponen et al., 2019).

## **MANAGERIAL IMPLICATIONS**

This study contributes on a managerial level, as the findings add to a better understanding of the sales job as performed by the incumbent. This should provide for congruence in thinking between managers and salespeople. The study’s findings could have implications for career guidance and support on the execution of the various sales jobs, such as product selling and solution selling within the context of an emerging economy. In gaining insight into the understanding of career choices and its expectations of the sales job, an effort could be made for better congruence in the understanding of the job function between incumbents and managers.

## **LIMITATIONS AND FUTURE STUDIES**

The current study focuses on salespeople’s and academics’ opinions of the construction of product selling and solution selling. Therefore, the results should not be generalized outside of this arena. To provide more depth to this research topic, the following warrants future research:

- A multidimensional investigation that incorporates various subject domains, such as finance, marketing, and operations to construct the sales definitions. This should expose thoughts on sales from different perspectives.
- Another study could also be undertaken to determine if salespeople with a degree versus salespeople without a degree opine the same on the sales definitions.
- This research was conducted within an emerging economy and it would be interesting to see if a similar study will render the same results in a developed economy.
- This study was conducted in a B2C environment, thus a similar study could be conducted in a B2B environment.

## **CONCLUSION**

This study’s aim was to construct a definition of product selling and solution selling from the perspective of various salespeople working in the retail environment and retail academics. A constructivist design and an innovative qualitative methodology were used to formulate these two sales definitions, drawing on Kotler’s involvement theory. The findings are interesting as they align with previous studies, since the sales definitions are still constructed from various perspectives and not from the perspectives of the salespeople doing the job. This study is an imperative first step to further understand the complexity in formulating sales definitions. However, it can provide managers with a go-to guide to performance-manage salespeople.

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# SKILLS REQUIREMENTS FOR GRADUATES IN INFORMATION TECHNOLOGY TO ENTER THE INDUSTRY 5.0 LABOUR MARKET IN SOUTH AFRICA

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## ABSTRACT

*Modern industries depend on effective computer systems and a highly skilled digital workforce. As such, economic work sectors in South Africa such as manufacturing, financial services and digital systems need to adapt in order to comply to evolving demands following on the introduction and application of new technologies. Industry 4.0 had a major impact on many aspects of the business world with the main priority to create smart factories by merging digital technologies and the physical world of manufacturing into Cyber Physical Systems (CPSs). The implementation of Industry 4.0 technologies resulted in automation with the purpose of promoting mass production using robots. Currently a paradigm shift towards a human-centric approach in manufacturing introduced the Industry 5.0 concept. Industry 5.0 promotes a collaborative relationship between humans and robots with the establishment of super smart factories. In Industry 5.0 super smart factories, AI and advanced robotics are applied in an innovative and creative way to manufacture unique customized products. Industry 5.0 requires workers with an in-depth understanding of AI and the latest trends in advanced digital technologies. To this effect Higher Education Institutions (HEIs) fulfill an imperative role in the development of skilled professionals in the field of Information Technology (IT) to support companies in their quest towards the implementation of new technologies. However, HEIs are known to be slow to adapt to change which results in a lack of knowledgeable and skilled workers in IT. As a result, a skills gap between industry requirements and HEI graduates has been reported on in a range of fields of study which includes engineering and computing causing companies to be hesitant in moving towards the implementation of smart and super smart factories. The objective of this study was to identify core Industry 5.0 skills requirements for employees in IT at South African companies. The study used qualitative research methodology. Purposive sampling was used to identify companies who employ workers in the field of IT. In-depth, semi-structured interviews were conducted with a total of 12 IT employees/managers. Participants were selected based on their knowledge and experience in IT within a business/manufacturing environment. Results were recorded, transcribed, and reported on in the format of Industry 5.0 skills requirements for IT graduates at South African HEIs to meet the demands of IT companies. The study revealed that skills specific to technologies employed at the different companies are required. Furthermore, soft skills such as self-determination and a problem-solving and inquisitive mindset are regarded to be imperative for graduates to be successfully employed in the Industry 5.0 IT workplace.*

**Keywords:** Industry 5.0, Information Technology, digital technologies, skills requirements, Higher Education.

## INTRODUCTION

The competitive nature of the manufacturing industry requires improvement of production by optimizing manufacturing processes (Saniuk et al., 2022:3). To this effect, the fourth industrial revolution has expanded the boundaries of what companies can provide as value to customers with the establishment of smart factories (Zizic et al., 2022:2). These factories entail systems that are able to make intelligent decisions in real-time during the manufacturing process with the aid of AI and advanced communication technologies (Xu et al., 2021:530; Zizic et al., 2022:1). Intelligent decision making in real-time allow flexible production of personalized products which was not

possible during the Industry 3.0 era of automated mass production (Zizic et al., 2022:2). Industry 4.0 technologies made it possible to integrate intelligent resources (machines and equipment) and advanced digital and communication technologies to produce these personalized products fast and effectively (Saniuk et al., 2022:2). Moreover, industry 4.0 technologies make interconnection of resources possible via cyber-physical systems (CPSs) and include Internet of Things (IoT), cloud computing, intelligent computing, and AI (Alojaiman, 2023:1; Saniuk et al., 2022:2). Using these technologies in manufacturing progressed into realising the initial goal of eliminating humans from the production process, as humans are prone to errors and therefore regarded as a weak point in production processes (Alves et al., 2023:8). As a result the role of humans were reduced with automated manufacturing processes being employed in smart factories (Lampropoulos, 2023:2102). The impact of the gradual elimination of humans from the manufacturing process raises concerns about the social sustainability of Industry 4.0 (Zizic et al., 2022:2).

According to Alojaiman (2023:2), societies adapted technological innovation and advancements during industrial revolutions in the past, as the significance of using technology towards efficiency and effectiveness in many fields of application was recognised. However, focussing on technological developments for the benefit of economic growth without considering the impact on society and the environment is a serious limitation of Industry 4.0 (Alves et al., 2023:1). This is evident from the fact that the well-being of workers and the environment was neglected while the widespread adoption of Industry 4.0 technologies brought about economic growth in industries such as insurance, financial services, medical services. This automation caused humans to be reduced and even become redundant in these and other fields of application (Alojaiman, 2023:2; Alves et al., 2023:1). A drive towards restoring the role of humans in manufacturing was inspired by the Society 5.0 movement that came about in 2018 (Savanevičienė et al., 2019:212). The goal of the Society 5.0 movement is to improve people's lives by using digital technologies to solve social problems in an aging community in Japan (Alojaiman, 2023:3; Huang et al., 2022:425). The Society 5.0 movement resulted in the European Commission (EC) formally publishing the Industry 5.0 concept in January 2021 (Alves et al., 2023:1). In their publication the EC describes Industry 5.0 as a human-centric approach to manufacturing which focusses on the well-being of workers. The authors state that this human-centric approach is the way forward in addressing the societal and environmental challenges of Industry 4.0 (Alves et al., 2023:1; Xu et al., 2021:533).

Industry 5.0 focuses on changing the relationship between humans and intelligent systems creating synergy between humans and machines while working in full collaboration towards efficient production processes (Alves et al., 2023:6). It aims to combine the power of Industry 4.0 technologies with humans' creativity and problem-solving abilities to create a more sustainable manufacturing industry (Chakraborty et al., 2023:3296; Zizic et al., 2022:2). Skilled workers and highly qualified professionals are required to establish a co-operative and collaborative workspace for successful and meaningful interaction between cognitive computing and human intelligence (Saxena et al., 2020:360). There is an expectation from educational systems to deliver graduates who are employable within the global digital industry (Chitkara et al., 2020:45). However, a skills gap between higher education and industry in computing has been reported for more than a decade by many countries all over the world (Draus et al., 2022:6; Pattanapairoj et al., 2021:56; Sahin & Celikkan, 2020:360; Taylor-Smith et al., 2019:128). Wermann et al. (2019:303) claim that there has not been much progress in the implementation of Industry 4.0 technologies in the manufacturing and other industries as there are still challenges in terms of learning, applying and working with Industry 4.0 and Cyber-Physical Systems (CPS) amongst experts and industrialists, even though we are on the verge of Industry 5.0. In South Africa the gap between IT graduates' skill sets and skills required by industry has been identified as one of the reasons why IT graduates are often not employed in their field of study (Calitz et al., 2015; Oluwajodu et al., 2015:3). Calitz et al. (2015:11) urge South African HEIs to address the skills gap to ensure that graduates are employable in the ICT industry. A survey on ICT skills in South Africa conducted in 2019 shows that the skills gap is growing due to a lack of skills related to Industry 4.0 technologies (Schofield & Dwolatzky, 2019:45). This brought about concerns about the ability of industries to progress towards Industry 5.0. Therefore Industry 5.0 technologies and skills requirements need to be investigated to ensure that the knowledge and competency levels of graduates meet the demands of Industry,

## **LITERATURE REVIEW**

The review of literature examines the concept of Industry 5.0, Industry 5.0 technologies and skills and Industry 5.0 in IT education.

## Industry 5.0

Industry 5.0 is a manufacturing model that enhances collaboration between humans and machines (Alojaiman, 2023:11). It is marked by the integration of human intelligence with advanced Industry 4.0 technologies such as AI, the IoT, and automation to create Human Cyber Physical Systems (HCPS) (Saniuk et al., 2022:2). These intelligent human-centric systems aim to retain human capacity in manufacturing by promoting enhanced human-machine interaction (Skobelev & Borovik, 2017:307).

The focus area of Industry 5.0 is AI in the field of robotics with humans and robots working as collaborators towards sustainable development (Akundi et al., 2022:1; Demir et al., 2019:688). Industry 5.0 is therefore associated with systems enabled by Industry 4.0, which strengthen the relationship between “man and machine,” referred to as cobots (Alojaiman, 2023:5). Apart from the primary goal of Industry 5.0 to deploy human–robot co-working environments, it also aims to support the establishment of smart societies (Alojaiman, 2023:3). Figure 1 shows retaining the sustainability of the manufacturing industry by following a human-centric approach in smart factories to the benefit of society and the environment.

**Figure 1: Schematic representation of an Industry 5.0 human-centricity smart factory**



Source: Adapted from (Alves et al., 2023:11)

The Industry 5.0 concept is still being shaped (Alves et al., 2023:7; Leng et al., 2022:283). Alojaiman (2023:3) describes Industry 5.0 as a movement to restore the human connection to the manufacturing sector while Nahavandi (2019:3) defines Industry 5.0 as a synergy between humans and autonomous machines working in close collaboration in the manufacturing environment using the brainpower of humans to create intelligent systems. Leng et al. (2022) compiled a comprehensive definition which states that Industry 5.0 “places the well-being of the workers at the center of the manufacturing process by making production respect the boundaries of our planet and the harmonious symbiosis between humans and machines, to achieve societal goals beyond jobs and economic growth, and further achieve sustainable development goal of super-smart society and ecological values, which will become a robust and resilient provider of prosperity in an Industrial Community of Shared Future” (Leng et al., 2022:283).

## Industry 5.0 Technologies and Skills

Industry 4.0 technologies remain key in realizing the goal of establishing a human-centric super smart society (Savanevičienė et al., 2019:212). As such, Akundi et al. (2022) argue that Industry 5.0 is founded on principles rather

than technologies as Industry 4.0 enabling technologies are applied within the human-centric Industry 5.0 paradigm (Akundi et al., 2022:3). Human intelligence applied within CPSs, one of the core Industry 4.0 technologies (de Lacalle & Posada, 2019:4322), provides the opportunity to create Human Cyber Physical Systems (HCPS) with humans being the most active, creative and flexible contributor to the system (Huang et al., 2022:427). CPS technology implements interconnectivity to integrate the real world with the virtual world by monitoring and controlling physical processes (Stăncioiu, 2017:75). In the Industry 5.0 paradigm, robotics and cobots (collaborative robots) are used in manufacturing by applying AI and machine learning as enabling technologies for the purpose of enhanced human-machine collaboration (Nahavandi, 2019:3). These technologies allow machines to perform routine tasks autonomously and to learn and improve over time and for example, make predictions about maintenance required and process improvements (Nahavandi, 2019:3).

In addition to technical skills related to AI, IoT, and automation, Industry 5.0 also requires soft skills such as creativity, critical thinking, and collaboration. As machines take over routine tasks, humans need to focus on more complex and creative tasks, such as design and innovation (Saxena et al., 2020:360). Therefore, Industry 5.0 requires a workforce able to work collaboratively with machines as new technologies are integrated into manufacturing processes.

## **Industry 5.0 in IT Education**

It is expected that new jobs will be created within the Industry 5.0 paradigm of human-machine interaction (HMI) (Saniuk et al., 2022:4). It involves jobs with higher levels of skills compared to Industry 4.0 since intellectual professionals working with machines in an innovative way are required (Maddikunta et al., 2022:2). Some of the most critical areas in which jobs will be created include intelligent systems, AI and robotics, machine programming, machine learning, maintenance, and training (Saniuk et al., 2022:4). Furthermore, soft skills are required in the context of Industry 5.0 which include skills such as effective communication and collaboration, leadership and endurance, curiosity, comprehension, and critical and creative thinking (Saxena et al., 2020:360). Educational systems are obligated to deliver graduates who are employable within the global digital industry (Chitkara et al., 2020:45). For HEIs to ensure that the knowledge and competency levels of graduates meet the demands of Industry 5.0 technologies and skills requirements need to be investigated which this research attempts to do.

## **METHODOLOGY**

The study applied a qualitative approach.

### **Data Collection**

Purposive sampling was used to identify employees/managers at IT companies. The companies are all based in South Africa although some of them have branch offices in other countries or their mother company is based in another country. This contributed to the value of the data that was collected as it reflects a holistic view of the matter at hand. In-depth, semi-structured open-ended interviews were conducted with a total of 12 IT employees/managers. Participants were selected based on their knowledge and experience in IT within a business/manufacturing environment. The questions addressed the research problem and allowed for better understanding of current and future trends in the field of IT and the skills required for employees to be effective and valuable contributors in the workplace. The two interview questions were provided to the interviewees via email on confirmation of their willingness to participate in the study. The research specifics and ethical conduct were communicated with the interviewees and permission was obtained from them to use their responses for research purposes. All the interviewees were made aware that confidentiality and sound ethical conduct will be adhered to. A total of seven one-on-one interviews were conducted via a virtual platform, four telephonically and one in person. Approval for the recording of the interviews was requested from the participants before the interviews commenced. Each interview lasted between 20 and 40 minutes, which gave participants the opportunity to discuss several issues in depth. Following the initial coding, a second interview was scheduled with some of the participants to provide additional information on digital technologies mentioned during their original interview.

## Measures

The trustworthiness of qualitative research findings encompass credibility, transferability, dependability, and conformability (Polit & Beck, 2010:106). To achieve trustworthiness in this study member checking, methodological triangulation, and disclosing the researcher's bias are the strategies that were applied, as recommended by (Villiers & Fouché, 2015:130). Credibility accentuates how accurate the researcher's findings represent participants' responses and worldviews (Polit & Beck, 2010:492). Credibility creates confidence in the truth of the findings and is achieved by ensuring that the responses of interviewees are documented and reported on accurately in this study.

In qualitative research, confirmability indicates that the data accurately portrays participant voices and is devoid of the researcher's bias (Villiers & Fouché, 2015:130). To this effect responses from participants were recorded and were listened to repeatedly to ensure accurate reporting on what was said. Morse (2015:587) highlights the importance of saturation as a component of rigor in qualitative research. In this study data saturation was reached after a total of 11 participants were interviewed since no new information were obtained from additional interviews. The conclusions of this study were derived from a review of the literature, observations, and interviews.

## STUDY FINDINGS

The purpose of the study was to identify the skills that graduates in IT should have to meet the demand of the Industry 5.0 labour market in South Africa. Two key aspects relevant to the Industry 5.0 labour market comprise digital technologies used, and skills required to implement those technologies. The participants were asked two questions: (1) What are the current/future digital technologies used in the IT industry from the perspective of your company? And (2) What skills should prospective employees in the field of IT have to be employed at your company? The data was of a qualitative nature. Therefore, open coding was used as the data analysis method to find themes in the data. This step was followed by axial coding with the purpose to link properties related to specific themes. The final step was to apply selective coding to identify categories with the purpose of grouping related themes together in categories.

### Digital Technologies in IT

Participants reported on IT technologies that they currently use as well as technologies that could be employed at their companies in future. Table 1 provides a summary of the findings from the data analysis.

**Table 1: Digital technologies in IT - Codes assigned to data analysis**

Code	Example answers
Cloud computing (10 occurrences)	<i>"Cloud computing is a must!"</i> (P2) <i>"Cloud computing is used ... it is cost-effective"</i> (P8) <i>"Cloud hosting technologies ... one of the key IT technologies used"</i> (P6) <i>"Everything is in the cloud"</i> (P10) Other responses linked to this code from (P1) (P3) (P4) (P7) (P5) (P9)
AI (AI) (8 occurrences)	<i>"AI for automation for example to develop customer services such as chatbots"</i> (P1) <i>"We use OpenAI to speed up software development"</i> (P2) <i>"AI is used to do tasks better and faster than humans ... without errors"</i> (P4) <i>"AI is applied at different levels in companies ... very important"</i> (P7) Other responses linked to this code from (P3), (P5), (P11), (P10)
Cybersecurity (7 occurrences)	<i>"Cybersecurity is extremely important for any company to protect data"</i> (P1) <i>"Knowledge of cybersecurity principles is crucial"</i> (P5) <i>"Cybersecurity knowledge is a requirement"</i> (P6) <i>"Security is always important ... data must be protected."</i> (P4) <i>"Must keep cybersecurity in mind while developing code"</i> (P11) Other responses linked to this code from (P5) (P9)
Data Analytics (6 occurrences)	<i>"Big data analytics helps in making data-driven decisions"</i> (P1) <i>"A lot of data must be analysed. Data analytics techniques are required to do this"</i> (P4) <i>"Predictive analytics is used more and more in the banking industry"</i> (P8) <i>"Data analytics tools are used for data warehousing and to provide data and stats"</i> (P2) Other responses linked to this code from (P5), (P11)
Frameworks	<i>"Tools such as AI/ML frameworks and web development frameworks"</i> (P1)

(5 occurrences)	<p><i>"Web development frameworks are important for building web application in a day or two. Development frameworks are preferred ... work in a low code environment"</i> (P2)</p> <p><i>"Web development tools"</i> (P6)</p> <p><i>"Web development frameworks and tools to compile a working web application quickly"</i> (P11)</p> <p><i>"Java based frameworks for developing apps"</i> (P3)</p>
Version control software (5 occurrences)	<p><i>"Version control extremely important to keep track of modifications in code"</i> (P2)</p> <p><i>"Version control is a must for developers to compare earlier versions of the code ... helps to fix the mistakes"</i> (P3)</p> <p><i>"Any software developing company must use version control software"</i> (P7)</p> <p><i>"Version control software is important in software development"</i> (P11)</p> <p><i>"Version control software is an essential tool to see pervious versions on code"</i> (P4)</p>
Database technologies (4 occurrences)	<p><i>"Databases are used by almost every system"</i> (P3)</p> <p><i>"A system is always connected to a database"</i> (P6)</p> <p><i>"Data must be stored. Database technologies are important"</i> (P11)</p> <p><i>"Database technologies are major in the banking industry"</i> (P8)</p>
System Integration (4 occurrences)	<p><i>"Different parts of a system onsite must be able to communicate with parts in the cloud – must be in sync. For example, use WorkForce as technology to do this"</i> (P4)</p> <p><i>"Must be able to integrate different parts of a system"</i> (P3)</p> <p><i>"API as integration technology for example to pull data from the sensors and feed it to a database"</i> (P11)</p> <p><i>"The integration of automation, data exchange, and IoT technologies is transforming industries towards smart manufacturing"</i> (P5)</p>
Machine learning (3 occurrences)	<p><i>"Machine learning as part of automated services"</i> (P1)</p> <p><i>"Machine learning as applied in data analytics"</i> (P5)</p>
Business intelligence (3 occurrences)	<p><i>"Business intelligence is a key concept for businesses in the future, specifically predictive modelling/analytics to find the correct product for the correct client"</i> (P8)</p> <p><i>"BI to key to process data and provide result in a business"</i> (P3)</p> <p><i>"BI is important for companies. We use PowerBI"</i> (P9)</p>
Internet of Things (3 occurrences)	<p><i>"IoT for smart systems"</i> (P1)</p> <p><i>"The Industrial Internet of Things (IIoT) for industrial developments"</i> (P5)</p> <p><i>"IoT is important to obtain data"</i> (P11)</p>
Quantum computing (1 occurrence)	<p><i>"Still in its early stages but holds potential for solving complex problems"</i> (P1)</p>
Virtual machines (Digital twins) (1 occurrence)	<p><i>"Virtual machines are important for industrial companies to emulate computer systems"</i> (P6)</p>
Robotics and Automation (1 occurrence)	<p><i>"Robotics is a rapid growing field ... should be a factor in the near future"</i> (P5)</p>

Current/future digital technologies in IT regarded as important by the majority of participants: Cloud computing, AI, Data analytics, Cybersecurity, Frameworks, Version control. Other IT technologies: Database technologies, System integration, Machine learning, Business Intelligence, Internet of Things, Virtual machines (Digital twins). IT technologies listed as future trends: Quantum computing, and Robotics and Automation.

## Skills Requirements for Prospective Employees in the Field of IT

Two categories emerged from the analysis of responses to this question, namely technical skills, and soft skills requirements. In the category technical skills requirements, two sub-categories emerged, namely skills requirements in using digital technologies, and software systems development skills requirements. Table 2 provides a summary of findings from the data analysis of the technical IT skills requirements.



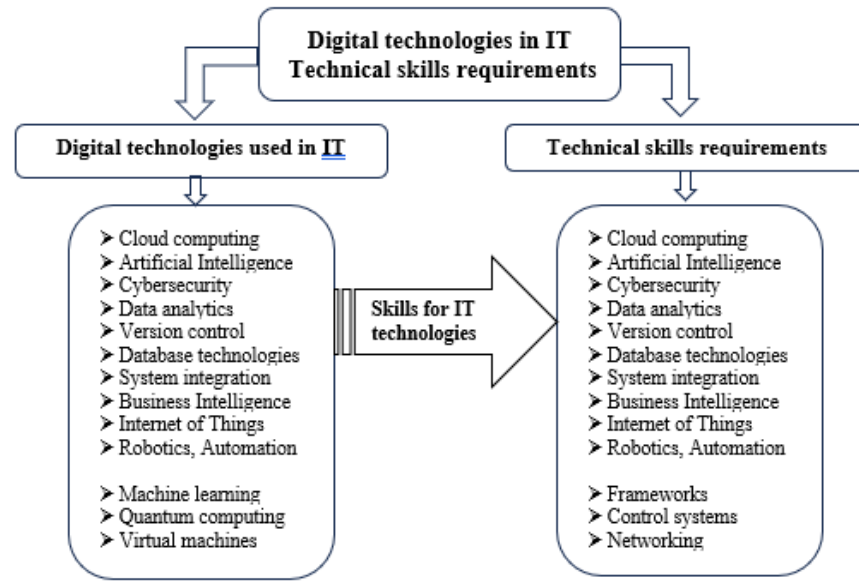
**Table 2: Technical IT skills requirements – Codes assigned to data analysis**

<b>Category 1: Technical IT skills requirements</b>	
<b>Sub-category 1A: Skills requirements in using digital technologies</b>	
<b>Code</b>	<b>Example answers</b>
Cloud computing (10 occurrences)	<p><i>“Skills in using cloud platforms” (P1)</i></p> <p><i>“Must have a good understanding of cloud computing” (P3)</i></p> <p><i>“Certifications for cloud computing skills are important for a future in IT. Must be regularly obtained as IT technologies change all the time” (P7)</i></p> <p><i>“Everything is in the cloud ... skills level required depends on the company” (P10)</i></p> <p><i>“Cloud computing is often managed by cloud platforms ... good understanding is required” (P2)</i></p> <p><i>with other responses link to this code from (P4), (P5), (P6), (P8), (P9)</i></p>
AI (8 occurrences)	<p><b>OpenAI as a tool</b></p> <p><i>“Must have experience in using OpenAI to speed up software development” (P2)</i></p> <p><i>“Must be able to use OpenAI as a tool to generate code quickly” (P3)</i></p> <p><i>“Be familiar with OpenAI and how it can help you to solve problems” (P7)</i></p> <p><i>“Must be able to solve problems using OpenAI” (P10)</i></p> <p><i>“Should know how to use OpenAI software such as ChatGPT to assist in generating code but you must understand and be able to integrate the code into your system” (P11)</i></p> <p><b>AI and Control</b></p> <p><i>“Must understand AI and machine learning to create smart systems” (P1)</i></p> <p><i>“Experience in combining AI techniques with control systems can lead to more adaptive and intelligent control strategies” (P5)</i></p> <p><i>“Need to know how to use AI tools applicable to company based projects” (P4)</i></p>
System Integration (6 occurrences)	<p><i>“Must be able to integrate different parts of a system” (P3)</i></p> <p><i>“Skills in working with integration technologies such WorkForce” (P4)</i></p> <p><i>“Using API as integration technology” (P11)</i></p> <p><i>“Understand how to integrate control systems with other components such as sensors, actuators, and data acquisition systems” (P5)</i></p> <p><i>“The integration of automation, data exchange, and IoT technologies is transforming industries towards smart manufacturing. Embracing these concepts and being able to implement advanced control systems in this context is highly valuable” (P6)</i></p> <p><i>“Understand when to use specific Ind 4.0 technologies for integration” (P7)</i></p>
Frameworks (5 occurrences)	<p><i>“Familiar with web development frameworks and tools” (P1)</i></p> <p><i>“Able to create “Progressive WebApps using web development frameworks” (P2)</i></p> <p><i>“Must know how to develop apps in a low code environment using frameworks” (P3)</i></p> <p><i>“Have experience in building progressive web application” (P6)</i></p> <p><i>“Experienced in using frameworks” (P11)</i></p>
Version control (5 occurrences)	<p><i>“Must be able to use one of the version control tools e.g., GitHub” (P2)</i></p> <p><i>“Experience in using version control software” (P3)</i></p> <p><i>“Companies will provide training, but you have a huge advantage if you at least have used version control software before” (P7)</i></p> <p><i>“Must be able to use version control when developing software” (P11)</i></p> <p><i>“Skilled in using version control software, specifically in a team project” (P4)</i></p>
Data Analytics (4 occurrences)	<p><i>“Ability to work with data and perform data analysis” (P1)</i></p> <p><i>“Skills in predictive analytics is a must as it is being used more and more” (P8)</i></p> <p><i>“Skills in data analytics and machine learning can be a game-changer. Being able to extract valuable insights from data, perform predictive maintenance, and optimize control strategies can lead to significant improvements in system performance and efficiency” (P5)</i></p> <p><i>“Skills in using data analytics tools are important to obtain stats from data” (P2)</i></p>
Cybersecurity tools (3 occurrences)	<p><i>“Skills in using cybersecurity tools are required if you are employed in this domain” (P1)</i></p> <p><i>“Cybersecurity is often dealt with by cloud platforms but should know the risks” (P6)</i></p> <p><i>“Must have some experience of cybersecurity risks for defensive coding” (P11)</i></p>
Control systems (3 occurrences)	<p><i>“Expertise in control systems for renewable energy sources, such as wind turbines or solar power plants, is in high demand” (P5)</i></p> <p><i>“Skills in control systems for autonomous vehicles, navigation algorithms, and vehicle-to-vehicle communication can be highly valuable” (P6)</i></p> <p><i>“Must know when to implement control systems” (P7)</i></p>
Internet of Things (2 occurrences)	<p><i>“Skill to establish communication with IoT device. Also, how to obtain and process data obtained from IoT devices” (P11)</i></p>

	<i>"Coding Industrial Internet of Things (IIoT) for industrial developments will become a sought-after skill in future" (P5)</i>	
Networking (2 occurrences)	<i>"Understand the concepts networking" (P1)</i> <i>"Experience in /know how industrial networking protocols (e.g., OPC-UA, MQTT) works" (P5)</i>	
Business intelligence (1 occurrence)	<i>"Experience in BI software" (P8)</i>	
Database technologies (1 occurrence)	<i>"Database management skills" (P8)</i>	
Robotics and Automation (1 occurrence)	<i>"Familiarity with robotic control systems, industrial robotics programming, and automation technologies (e.g., PLC programming) can open up new opportunities and enhance your value in the industry." (P5)</i>	
Programming languages	<i>"HTML and JavaScript"</i> <i>"Python"</i> <i>"Java and C++"</i> <i>"JavaEE"</i> <i>"SQL"</i>	(P1) (P2) (P3) (P8) (P11) (P10) (P3) (P1) (P8) (P10) (P1) (P8) (P3) (P3) (P1) (P8) (P9) (P10) (P11)
<b>Sub-category 1B: Software development skills</b>		
Problem-Solving (8 occurrences)	<i>"Must have problem-solving skills" (P1)</i> <i>"Problem solving skills are major" (P6)</i> <i>"Deep knowledge of how to solve a problem ... number one skill to have" (P10)</i> <i>"Problem-solving mindset" (P9)</i> <i>"Must be able to analyse a problem and suggest a suitable solution" (P8)</i> Other responses linked to this code from (P3), (P7), (P11)	
Programming skills (7 occurrences)	<i>"To be able to code is key ... language depends on the company or framework" (P2)</i> <i>"Must be able to code – language is not that important" (P7)</i> <i>"Must be able to write pieces of code in an existing framework" (P4)</i> <i>"Being able to develop code is the most important skill" (P11)</i> Other responses linked to this code from (P1), (P3), (P10)	
Debugging Techniques (5 occurrences)	<i>"Ability to troubleshoot and debug software" (P1)</i> <i>"Effective debugging skills" (P7)</i> <i>"Can apply debugging techniques" (P11)</i> <i>"Be able to debug software effectively" (P10)</i> <i>"Debugging techniques are essential" (P8)</i>	
Analytical thinking (3 occurrences)	<i>"Analytical thinking to assess complex problems, break them down into manageable parts" (P1)</i> <i>"Able to analyse data with insight" (P8)</i> <i>"Being able to analyse a problem quickly and effectively" (P3)</i>	
System analysis and Design (2 occurrences)	<i>"Must be able to design before you develop" (P7)</i> <i>"Systems design" (P6)</i>	
Project management (1 occurrence)	<i>"Project management skills" (P6)</i>	

Technical skills requirement from Table 2 corresponds largely with the technologies from Table 1 as shown in Figure 2.

**Figure 2: Digital technologies and related skills requirements**



Software developments skills required include programming, problem-solving, debugging techniques, analytical thinking, systems analysis and design, and project management.

Various soft skills requirements emerged from the data analysis. In addition, attitude and personality traits emerged as a sub-category. Table 3 provides a summary of the findings on soft skills requirements and attitudes and personality traits from the data analysis.

**Table 3: Soft skills requirements – Codes assigned to data analysis**

<b>Category 2: Soft skills requirements</b>	
<b>Sub-category 2A: Soft skills</b>	
<b>Code</b>	<b>Example answers</b>
Teamwork (6 occurrences)	<i>"Collaborative mindset to work well in cross-functional teams"</i> (P1) <i>"Software development is 100% a team sport"</i> (P2) <i>"Be able to work with other people on a project"</i> (P6) <i>"Must be able to work with different types of people in a group"</i> (P4) <i>"Must know how to work effectively in a group"</i> (P7) <i>"Teamwork is important"</i> (P10)
Communication skills (5 occurrences)	<i>"Ability to present ideas, solutions, and project updates confidently and professionally"</i> (P1) <i>"Must be able to communicate well with clients"</i> (P3) <i>"Ability to explain solutions to clients"</i> (P4) <i>"Can communicate technical detail"</i> (P7) <i>"Effective communication skills to convey technical information clearly"</i> (P11)
Time management (4 occurrences)	<i>"Ability to manage time efficiently"</i> (P1) <i>"Productive amidst competing priorities"</i> (P2) <i>"Must meet deadlines"</i> (P4) <i>"Discipline is important"</i> (P9)
Accountability (4 occurrences)	<i>"Accountability in work-related responsibilities"</i> (P1) <i>"Take responsibility for projects to be done correctly"</i> (P4) <i>"Take responsibility"</i> (P9) <i>"Trust each other, be accountable"</i> (P10)
Creative thinking skills (2 occurrences)	<i>"Ability to think creatively"</i> (P1) <i>"Innovation is important to contribute to the company"</i> (P7)
Active listening skills (2 occurrences)	<i>"Active listening skills to understand requirements"</i> (P1) <i>"Listen and understand requirements"</i> (P4)

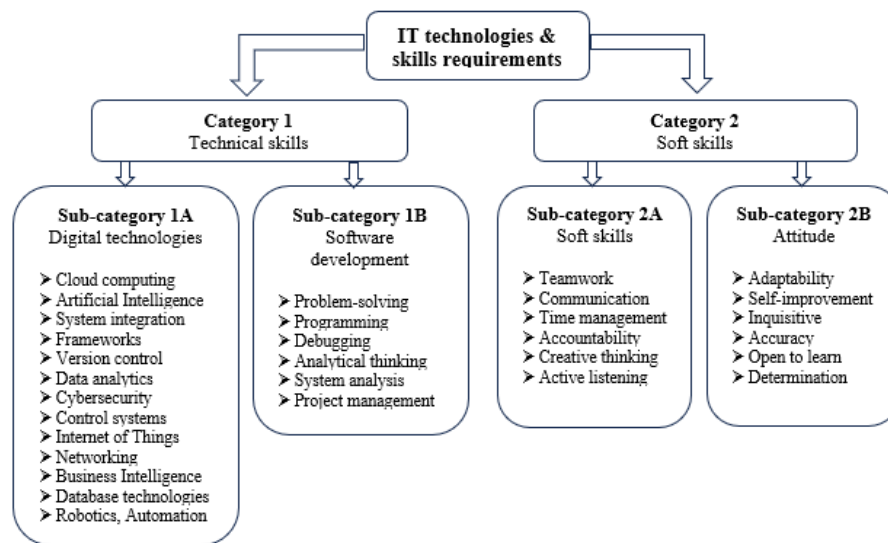
<b>Sub-category 2B: Attitude and personality traits</b>	
Adaptable (6 occurrences)	<i>"Seamlessly adapt to new technologies, tools, and methodologies"</i> (P1) <i>"Open to change"</i> (P3) <i>"Flexibility to handle changing project requirements"</i> (P2) <i>"Must be able to work with different types of personalities"</i> (P4) <i>"Can adapt to change"</i> (P10) <i>"Must adapt and be able to fit into the company and its culture"</i> (P7)
Self-improvement (5 occurrences)	<i>"Proactive attitude towards self-improvement and staying updated with industry trends"</i> (P1) <i>"Take the initiative to improve their knowledge and skills on their own"</i> (P2) <i>"Take responsibility for own growth"</i> (P7) <i>"Additional courses ... willing to upskill"</i> (P10) <i>"Willingness to upskill"</i> (P6)
Inquisitive (4 occurrences)	<i>"Exploring new technologies"</i> (P1) <i>"Inquisitive"</i> (P2) <i>"Investigate new trends"</i> (P7) <i>"Enquiring mindset"</i> (P9)
Accuracy (4 occurrences)	<i>"Attention to detail and accuracy in task execution"</i> (P1) <i>"Accurate but not to perfection"</i> (P10) <i>"Self-efficacy"</i> (P9) <i>"Attention to detail"</i> (P8)
Open to learn (3 occurrences)	<i>"Willingness to learn"</i> (P1) <i>"On a continuous learning journey"</i> (P2) <i>"Must have the drive to learn"</i> (P3)
Determination (1 occurrence)	<i>"Keep on trying until a problem is solved"</i> (P8)

Soft skills requirements from the findings included teamwork, communication skills, active listening, and time management. Furthermore, accountability and integrity were identified as requirements. Personality traits being inquisitive, open to learn, adaptable, self-improvement, accuracy and determination were identified as requirements from the data analysis.

## DISCUSSION

A lack of skills in Industry 4.0 technologies as identified in a survey conducted on ICT skills in South Africa in 2019 raised concerns for future development in the field of ICT (Schofield & Dwolatzky, 2019:45). A positive finding from the research for this paper is that IT companies in South Africa are currently employing Industry 4 such as cloud computing, AI, machine learning and Internet of Things. These technologies were listed by participants as shown in Table 1. Furthermore, participants mentioned quantum computing, virtual machines (digital twins) and robotics and automation as technologies to be employed in the near future. The fact that IT companies in South Africa are exploring these technologies is positive for future development in IT in the country as Akundi et al. (2022) state that AI applied in the field of robotics is the focus area for Industry 5.0.

**Figure 3: IT technologies and skills requirements**



Findings from the data analysis on digital technologies and skills requirements are presented in Figure 3. It shows the two categories, each with two sub-categories. The technical skills requirements listed in Table 2 correlated with the digital technologies being used at IT companies listed in Table 1. For graduates to be employable at IT companies, HEIs in South Africa need to ensure that graduates have a thorough understanding of Industry 4.0 technologies and are skilled in using these technologies. Industry 4.0 technologies remain key as we move towards Industry 5.0 and a human-centric super smart society (Savanevičienė et al., 2019:212). An important observation from participants' responses on skills requirements is using the word "understand" in terms of almost all the technical skills requirements as shown in Table 2. One participant even used the phrase "... have a deep understanding of ...". Findings from the data analysis suggest that IT programmes at HEIs should keep a sound balance between knowledge and skills. Being skilled in using technologies should be complemented by knowledge and a solid understanding of how these technologies work.

Another observation from the findings on technical and software development skills requirements is a shift towards rapid application development of software, as the majority of participants indicated that frameworks are used for fast and effective software development rather than creating software systems from scratch. This implies a low code approach in software development where programming code is written only to add features to a system that was developed using a framework. The rapid application software development approach should be noted by HEIs as IT graduates should understand and gain experience in using frameworks with low coding during their studies.

Apart from the expected software development skills requirements listed in Table 3 such as problem-solving and programming skills, debugging skills were emphasised strongly by almost all participants. They explained that IT employees often work on existing code which implies having to correct logical and other errors. Companies prefer code to be debugged rather than rewriting code. Several participants (P1, P7, P8, P10, P11) reported that graduates are often lacking effective debugging techniques.

Communication skills emerged in the findings on soft skills requirements listed in Table 3 as an important skills requirement. This corresponds with Industry 5.0 soft skills requirements (Saxena et al., 2020:360). Software developers often need to communicate with clients on system requirements or with team members on the technical details of projects. Participants voiced their concern that effective communication skills are lacking among IT graduates. A sub-category that emerged unexpectedly from the data analysis was personality traits. All the participants indicated that personality traits such as adaptability, being inquisitive and open to learn, and staying up to date with new IT trends and technologies are some of the personality traits regarded as a deciding factor in being appointed at an IT company.

## CONCLUSION AND FUTURE RESEARCH

Findings from this study show that the IT industry in South Africa is embracing Industry 4.0 technologies as we rapidly progress towards Industry 5.0. The IT industry need workers in skilled digital technologies relevant to Industry 4.0 and Industry 5.0, which include technical skills as well as software development skills. The digital technologies and skills requirements that emerged from the findings of this study need to be investigated as the next step towards a possible framework for Industry 5.0 IT education at HEIs. Technologies such as frameworks, system integration and robotics could be challenging to be included in a practical way into IT programmes. IT qualifications at HEIs in South Africa needs to be investigated and adapted to ensure that graduates obtain all necessary skills for the Industry 5.0 challenge.

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