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*discernibly discussed the methods to treat such biases over and was done with expert advice. It is concluded that the behavior of an investor to buy and sell the assets depends on future expectations predicted by prominent antecedents, which are the fundamental causes for herding that may lead to market abnormalities. Moreover, rational analysis of the past and current scenarios is also important.*

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# EDITORIAL

The **first paper** by Oleksandr Golovashevych, Artem Kotenko, Igor Krynytskyi, & Mykola Kucheryavenko offers a comprehensive comparative analysis of the tax dispute resolution strategy employed in Great Britain, with implications for enhancing tax administration in Ukraine. The authors delved into the distinctive features of the British approach, emphasizing the harmonious blend of economic and legal perspectives in tax dispute resolution. The autonomy granted to Her Majesty's Revenue and Customs (HMRC) emerges as a key asset, allowing HMRC to navigate the boundaries of its discretionary powers effectively. Furthermore, the authors highlight the critical role of transparency in tax administration, drawing parallels between HMRC and Ukraine's State Tax Service.

The study paid particular attention to the British tax dispute resolution management strategy, first introduced in 2014 and updated in 2017. This strategy outlines internal mechanisms for supervisory authorities, offering insights into the decision-making process for tax dispute resolution. Golovashevych, Kotenko, Krynytskyi, & Kucheryavenko underscored the paramount importance of impartial and honest consideration of disputes—a guiding principle embraced by both taxpayers and HMRC. When disagreements arise between taxpayers and HMRC, taxpayers have the option to seek resolution through administrative review, tribunals, or courts.

The LSS, implemented in 2007 and subsequently refined in 2017, plays a pivotal role in resolving tax disputes related to all types of taxes in Great Britain, regardless of their legal nature or category (e.g., direct/indirect taxation, property/income taxes). Within the LSS framework, the definition of a "dispute" is broadened, encompassing not only formalized tax disputes but also cases where the supervisory body requires additional information to assess the legality of a taxpayer's actions. The economic dimension takes center stage, recognizing that any dispute elevated to court proceedings incurs substantial financial costs for both taxpayers and supervisory bodies. Integrating a tax dispute resolution model akin to the British approach holds promise for Ukraine, offering the potential to alleviate the burden on judicial authorities. The formation of a clear, standardized strategy for resolving tax disputes to be adopted across all tax authority divisions is pivotal in harmonizing Ukrainian tax legislation with European standards.

The authors conclude that the British tax dispute resolution strategy, distinguished by its amalgamation of economic and legal perspectives, serves as a model that offers valuable insights for Ukraine's tax administrators and policymakers. It advocates transparency, economic prudence, and fairness in resolving tax conflicts, ultimately contributing to bolstered fiscal stability and compliance. Understanding the nuanced distinctions and shared objectives of these approaches can pave the way for a more efficient, consistent, and equitable tax dispute resolution framework, benefiting both taxpayers and the state.

The notion that the world has entered a fourth industrial revolution is fast taking hold. Commonly referred to as 4IR, Klaus Schwab, founder and chairperson of World Economic Forum (WEF), popularized this notion in his book with the same title published in 2016. Although there are still arguments on whether or not the world is actually already in a 4IR or a third industrial revolution, the notion has sparked several research in different fields. Regardless of ongoing debate, the world has transited to a world of fast-paced digital technologies where digitization, is fast giving way to digitalization. The multinational enterprise, a product of the industrial revolution, and the pace of internationalization of businesses, have increased with each new industrial revolution. Just as multinational enterprises begin to emerge from Africa, the world seems to be changing fast with new digital technologies such as Artificial Intelligence (AI) set to change the way people live, work, and conduct business. Through a discursive analysis, the **second paper** by Ebess Esho & Grietjie Verhoef explores how emerging African Multinational Enterprises (MNEs) should respond to 4IR.



Specifically, the authors clarify the concept of 4IR which is sometimes misconceived as industry 4.0 and other related terms in much of the literature on the fourth industrial revolution. Although both concepts are closely connected to a new emerging industrial revolution, they are distinct and have different meanings. Industry 4.0, originally “industrie 4.0” in the German language, was coined in Germany and refers to new emerging technologies in the manufacturing sector. Therefore, industry 4.0 is a narrower concept and predates 4IR which is more encompassing as an industrial revolution that goes beyond just the manufacturing industry. The paper delves into the nature of all industrial revolutions and presents a historical context of the different industrial revolutions by showing their summary characteristics. As MNEs are closely connected with past industrial revolutions, the paper subsequently discusses some of the inherent opportunities and emerging challenges for African business presented by the 4IR era and its associated technologies. African businesses wishing to expand their businesses across international borders will need to embrace 4IR and the technologies. The article presents suggestions to home-grown African multinational companies which have hitherto been regarded as small in comparison to other multinational companies from other parts of the globe. Summarily, the paper also contributes by clarifying the 4IR implications for business and MNEs in Africa.

The concept of 4IR is only relatively recent, and uncertainties still surround the concept, and the reality of its emergence. Therefore, conceptual and empirical studies relating to 4IR in international business are still scarce. Studies relating to African businesses and MNEs are also still rather scarce. In addition to contributing through the discursive analysis on 4IR, industrial revolutions, and internationalization of African businesses, Esho & Verhoef also contribute by making suggestions and recommendations for possible research directions that will advance extant understanding of emerging African MNEs and 4IR. The benefits of embracing 4IR remain an assumption without substantiating empirical evidence. The authors therefore encourage empirical studies into African businesses in general, and African MNEs in particular, in relation to 4IR, using both quantitative and qualitative research methods. In this regard, in-depth case studies of African firms already embracing 4IR technologies, especially in the international expansion of their business, will be worthwhile.

Student-led clinics (SLCs), sometimes described as student-assisted or student-run clinics, are healthcare settings or services where students are engaged in the direct delivery of health care under supervision. Their history is most extensive in the United States, where the first such clinic opened in 1967 and a Society of Student Run Free Clinics now includes 150 clinics. SLCs have subsequently been established in many countries, including Ireland, the UK, mainland Europe, as well as Australia and New Zealand. A growing body of evidence shows the benefits such clinics offer to clients (in terms of health outcomes) and students (learning outcomes). Studies have shown measurable improvements for clients in areas as diverse as diabetes, hypertension, functional health, substance use, weight loss, hospital utilisation, and health screening and vaccination rates. For students, improvements have been found in clinical skills, interprofessional skills, empathy/compassion, and leadership.

While SLCs provide valuable clinical learning and interprofessional educational opportunities, particularly in the context of global health workforce shortages and limited clinical placement opportunities, and an opportunity to improve links between students, higher education providers, community organizations and the community at large, financial viability and sustainability remains a common challenge. Clinics often find themselves ‘caught in a gap’ between government funding streams of health funding intended to fund provision of health services versus education funding allocated for teaching and learning (or research) purposes. Even where they are demonstrating positive outcomes, clinics often struggle to access funding streams as educational facilities offering health services. The key reason is that educational entities are not funded as health service providers and health service providers are not funded to establish, trial and deliver educational innovations.

The **third paper by Patrick Broman, Sharon Brownie, & Leon de Wet Fourie** highlights financial considerations in establishing and running student-led clinics, in two differing contexts of Australia and New Zealand. The authors consider the costs associated with student-led clinics (including budgets of operative clinics in each country: at Waikato Institute of Technology in New Zealand and Swinburne Institute of Technology in Australia) to show the relative expense of SLCs compared to traditional student placement settings. SLCs in these context poses financial challenges not necessarily experienced in the United States, where most SLCs are located and the uniquely piecemeal structure of the healthcare system means a wider range of funding sources are available (such as grants, philanthropic foundations, and government 'safety-net' funding).

To be successful, SLCs in countries like Australia and New Zealand with publicly funded health and education systems must offer a value proposition extending beyond the existing funding portfolio. Broman, Brownie, & Fourie explore possible options for structuring such clinics, including being owned and run by educational providers, being structured as community partnerships, or health service-operated entities. Each model has unique strengths and weaknesses, which must be carefully considered. The authors conclude that SLCs require cross-sector collaboration and subsidization, but this is difficult to achieve in an environment where health agencies are buying health services, and education buying education services. Collaboration of these portfolios is needed to best utilize the now well-proven SLC model in the development of the future health workforce.

An interesting development in the retail industry in recent years is the emergence of online marketplaces. These platforms vary in what they offer, from specialized platforms that sell specific types of products (such as Netflix) to general platforms with different product categories (such as Amazon). Online platforms simplify the search and purchase process by providing the ability to compare similar products, access user-generated feedback, obtain additional product information that is difficult to obtain during the traditional purchasing process, and most importantly, keep informed about product availability. This has led to the emergence of online product networks where a large number of related products displayed on a website are linked by hyperlinks. Links between any two products are usually created using recommender systems using collaborative filtering algorithms. That is, the Recommender creates and displays a list of products deemed relevant based on historical data of "purchased" products. The most famous examples of this type of recommendation system are "frequently bought together" or "customers who viewed this item also viewed this item". There is also a type of recommendation system, which is not only based on user-generated data, but also recommends products on the Internet that are more system-generated. That is, the platform itself creates a network of products that are assumed to be related to the focused product. But recommended products are the result of system evaluation criteria, not user behavior. For example, we might refer to "Sponsored products related to this item" on Amazon.

One of the fundamental decisions to make when offering a product to potential customers in a brick-and-mortar store or online commerce platform is the value of the product. Knowing the full value of products, brands, and even product categories can help managers make decisions about offering the best product basket and deciding which products to promote and how to price them. But the existence of inbound and outbound connections of the focal product causes the true value of the focal product to be confused with the true value of other products in the product network. The network value of the product must also be considered. Network value refers to the excess revenue generated by traffic redirected to key products and the revenue generated by traffic redirected to other products in the network.

Most studies on the impact of product networks or product recommendations focus on the impact of these networks on demand for focal products. They use an econometric model to capture the impact of individual attributes of the focal product as well as the cumulative impact of other nodes in the network. In fact, the way network effects are integrated is more the aggregation effect of individual nodes than network properties such as degree distribution, preferential binding, or network evolution. Despite every

effort to elucidate the network-driven contributions of recommenders and product networks to product demand, almost all studies have addressed network effects in terms of their presence or absence. However, few studies have integrated network features to predict fluctuations in demand. Product recommendations are basically a filtering system that tries to predict and display items that a user might want to buy. It might not be completely accurate, but if it's showing you something you like, then it's working. This set of recommended products is called a system-generated network. The goal of the **fourth paper by Ali Dehghan** is to capture the evolution of product networks in terms of link formation and removal as a consequence of any of the above suggestions by taking into account the strength of nodes in the network. The results show that while user-generated recommendations have a strong impact on link formation and rank distribution in product networks, system-generated networks have no significant effect.

E-commerce significantly contributes to the national economic structure. E-commerce increases the access of businesses and individuals to global markets and also helps to increase labour productivity, reduce costs and improve business efficiency. E-commerce has also dramatically changed consumers buying behaviour, giving them access to a wide selection of products and services while reducing the time and cost of commuting to stores. In an e-commerce business model, customer feedback is vital, especially in online sales. These responses can positively or negatively affect purchase intention, brand reputation, and e-WOM influence.

Analyzing these factors helps companies understand the factors that need improvement to formulate appropriate solutions to improve product and service quality, customer satisfaction, and increase sales. Customer feedback is that the recorded data is translated into positive and not positive information on the e-commerce platform. Currently, the e-commerce sector has grown very rapidly from scale to the platform of digital technologies. The types of business established on the trading platform also follow standard business principles. Customer feedback is the comments that contribute to improving the quality of products and improving the provision of services. The e-commerce platform more clearly expresses the interactions between the seller and the direct buyer, who has decided to purchase the customer's product. The **fifth paper by Nguyen Van Ninh, Nguyen Quoc Cuong, & Nguyen Thi Thanh Nhan** analysed factors related to customer feedback, follow-ups, sales times, ratings, number of product reviews, ratings, levels of reviews, and seller engagement. The study aimed to find connections in the operation of sales shops, from which there are implications for selling on e-commerce platforms. Initially analysed, the results also showed that in the shops selling electronic goods and food, the interaction rate affects the number of sales, the response rate and the level of star rating. These results provide evidence for business departments to consider the business strategy in selling on e-commerce platforms. Regarding to limitations, the study was specifically focused on Vietnam and results can not be generalised. Vietnamese e-commerce platforms have specific features which may not exist in other platforms worldwide. Vietnamese consumer behavior also differ from other emerging e-commerce markets so business strategy for trading practices may online be effective in Vietnam.

The **sixth paper by Zakia El Yamani** explores the intricate relationship between a salesforce and brand performance within the context of direct selling, particularly in the dynamic market of Morocco. The central thrust of this research is examining how a motivated and well-trained salesforce can profoundly influence a brand's success by crafting robust brand salesforce relationships. The research, conducted within a leading direct-selling company in Morocco, unravels various findings that underscore the salesforce's pivotal role in contributing to brand performance. One of the primary insights from the study is the fundamental importance of the salesforce's ability to build and sustain strong relationships with customers. Through personalized interactions and a deep understanding of customer needs, the salesforce can foster a loyal customer base, bolstering the brand's success.

Effective communication emerges as another cornerstone of this symbiotic relationship. The study reveals that a well-trained salesforce can effectively communicate the brand's messages and values to customers. It enhances brand recognition and ensures that customers align their preferences with the brand's core values, resulting in a more enduring brand-customer connection. Moreover, the salesforce emerges as brand advocates, playing a pivotal role in promoting the brand's values and benefits to potential customers. Through their enthusiasm and in-depth knowledge of the brand, they become persuasive ambassadors capable of positively influencing customers' purchasing decisions. It contributes to increased sales and elevates the brand's image and reputation in the market.

One of the most intriguing findings of this research is the depth of the relationship between the salesforce and the brand. The study illuminates how the salesforce perceives the brand as an employer and a relational partner providing emotional and financial security. This unique bond fosters a dynamic identification between the salesforce and the brand, leading to heightened commitment. Such commitment translates into increased dedication and effort on the part of the salesforce to promote the brand's network. The study also culminates in a set of actionable recommendations for managers in the direct-selling industry. These recommendations span training and digital utilization, offering insights into how to harness the full potential of the salesforce and mitigate potential brand underperformance. By understanding the intricacies of this relationship and implementing the proposed strategies, managers can foster a more strong connection between the salesforce and the brand, ultimately leading to enhanced brand performance.

In summary, this research transcends the confines of traditional brand-salesforce dynamics, offering a holistic view of how a well-trained and motivated salesforce can be a linchpin in enhancing brand performance within direct selling. Its findings and recommendations carry implications for managers aiming to optimize brand-salesforce relationships, entrepreneurs contemplating entry into the direct selling industry, and policymakers seeking to promote ethical standards and consumer education. Ultimately, this study contributes to establishing more effective strategies, frameworks, and approaches for business management and marketing communication, fostering a more sustainable future for organizations in the direct-selling sector and beyond.

Influencer marketing has emerged as a prominent advertisement strategy which capitalizes on the social media presence of individuals with considerable followings. However, the effectiveness of influencer marketing has long been attributed to the sheer number of followers these influencers command. **The seventh paper by Pranjal Jain, Ajay Bamba, & Anju Jain** examines dynamics between influencer follower count and engagement with sponsored content. It presents a nuanced view, suggesting that the relationship is far from linear upward structure. The study provides the presence of multiple relationship structures between influencer following and user engagement such as an inverted U-shaped curve, where engagement initially rises, reaches a peak, and then gradually declines as follower count increases, V-shaped curve, inverted W-shaped curve and a linear downward curve. The study further emphasizes the role of content customization and brand familiarity in shaping this relationship.

Therefore, this study challenges the assumption that with higher follower counts automatically translate to better engagement rates bringing increased benefits for the sponsoring brand. While an influencer's follower count does extend the reach of sponsored content, the actual depth of engagement often weakens as follower count soars. It is suggested that a balance needs to be maintained by advertisers when selecting influencers. The objectives should be to determine a point where the number of followers transition from passive observation to genuine engagement. Content customization suggests that as influencers tailor content to resonate more intimately with their audience, the engagement curve tends to flatten. Therefore, heightened customization can sustain user engagement levels even at higher follower counts. Brand familiarity suggests that when the audience is already familiar with the brand, the user engagement curve's decline is lesser as compared with the case when target consumers are less familiar

with the brand. This suggests that building a strong brand presence and nurturing familiarity can offset the dip in engagement associated with increasing follower counts.

The study performs hypothesis testing with multi-level modelling, observational analysis, eye-tracking studies and experimental testing to confirm the robustness of the research model. It defines influencer following as indegree and performs examination at points of low-indegree, medium-indegree and high-indegree. By adopting a nuanced approach that considers the spectrum of influencer follower counts, the research advances beyond prior work in the field. It not only builds upon existing studies but also identifies and addresses critical gaps in the literature, aiming to provide insights that are directly aligned with the current and evolving needs of the influencer marketing industry. This methodological breadth and depth underscore the study's commitment to producing reliable and actionable findings that can inform and shape the practices of advertisers and marketers in the dynamic landscape of influencer marketing.

This research thus provides actionable insights for managers seeking to optimize their influencer marketing strategies. The findings suggest that, instead of fixating solely on high follower counts, advertisers should focus on tailoring content to connect with audiences on a more personal level. The need for customization becomes more apparent as the follower count increases, as influencers who prioritize these genuine connections can offset the decline in engagement. The importance of brand familiarity in maintaining engagement highlights the significance of building a strong and recognizable brand presence.

Vietnam has recently experienced a rapid and profound shift towards digitalization, presenting significant economic opportunities across diverse sectors. Notably, this transformation has had a substantial impact on the tourism and restaurant industries. In response to the challenges posed and the emerging prospects within the digital landscape, the restaurant sector has strategically embraced this shift. By leveraging online platforms, restaurants aim to broaden their customer outreach and improve operational efficiency. To increase understanding of the digital transformation process and explore the intricate dynamics of digital technology adoption within the restaurant sector, the **eighth paper by Nguyen Van Ninh & Lukáš Danko** employs a cross-sectional research approach. The integration of established frameworks, such as the Technology Acceptance Model (TAM) and Customer Relationship Management (CRM), serves as the theoretical foundation. In the context of digital transformation and online advertising, TAM allows the research to examine how businesses and consumers perceive and adopt digital technology and online advertising platforms.

The study focuses on critical factors, including usefulness, ease of use, attitude, and behavioral intent, that impact the adoption and effectiveness of online advertising and, consequently, sales effectiveness for restaurants. A specific emphasis is placed on Customer Relationship Management to enhance sales effectiveness. This theory underscores the importance of managing and cultivating customer relationships to elevate satisfaction, foster loyalty, and improve sales efficiency. In pursuing these research objectives, a non-probability convenience sampling method is employed to ensure a diverse yet representative sample of 393 respondents from various segments within the restaurant industry. The study delves into the dynamics of digital transformation within restaurant operations, emphasizing connections between ease of use, facilitating conditions, and the adoption process. Assessing end-users, including customers and staff, the research explores perceptions of digital technologies in daily interactions and investigates conditions that hinder or enhance adoption in restaurant settings. However, an elusive correlation between digital transformation and digital marketing emerges, rooted in the unique nature of digital transformation within the gastronomic landscape. To address this, the study scrutinizes digital marketing strategies employed by restaurants, aiming to discern patterns and effectiveness within the context of digital transformation.

The research outcomes provide valuable insights into the transformative potential of digital technology within the restaurant industry. The study underscores the pivotal role of crafting resilient digital marketing strategies tailored to the idiosyncrasies of the restaurant business. Furthermore, it highlights the significance of nurturing customer engagement through online channels as a key component for optimizing restaurant sales effectiveness amidst the evolving landscape shaped by digital transformation and the growing influence of e-marketing. In summary, the impact of these findings extends beyond the immediate scope of the restaurant industry, emphasizing their augmentative role in the broader panorama of digital transformation. By elucidating the intricacies of digital technology adoption and its correlation with marketing strategies in the restaurant sector, the study by Nguyen & Danko contributes valuable knowledge applicable to diverse industries navigating the challenges and opportunities presented by the evolving digital landscape. This scholarly contribution underscores the critical importance of robust digital marketing strategies and proactive customer engagement as indispensable catalysts for success in the continually evolving landscape shaped by the forces of digital transformation.

The **ninth paper by E.H. Redda & N.E. Shezi** focuses on sports footwear branding influencing consumer attitude and purchase intentions in South Africa. Sports brand manufacturers are struggling to understand what the important features are to add to their sports footwear brands in order to survive in the market of sports brands. The literature presented many features that can be used as factors influencing consumer attitude and purchase intentions among South African consumers.

The study followed a descriptive research design and implemented a quantitative method. The target population for this study was full-time Generation Y students between the age of 18-25 years old. The study utilized data collected from a sample of 378 Generation Y students. SPSS version 28 was used for data analysis. The descriptive analysis confirmed that all constructs are generally important in predicting sports footwear brands as all mean values were above 3.5. In addition, the Cronbach alpha values were all greater than 0.06 ranging from 0.63 to 0.81, indicating that the scales used in the study had internal consistency reliability. A correlation analysis was conducted to assess the linear relationship between variables before testing causality through multivariate regression analysis. The results of the correlation matrix showed a positive relationship exists between each pair of variables after determining the direction tested in this study, lending support to the measurement theory's nomological validity. Therefore, no multicollinearity because none of the coefficients were greater than 0.90.

After testing the linear association between the variables of the study through correlation analysis, the next step was to determine the influence (effect) of the independent variables on the dependent variables. The collinearity statistics showed that there was no collinearity problem because the tolerance values were greater than 0.10 and the variance inflation factor of the variables was less than 10.00. After determining the absence of collinearity issue, a multivariate regression analysis was performed to identify the factors relevant to sports footwear branding and to assess their influence in building consumer attitudes and purchase intentions of sports footwear brands.

Four branding predictors (factors) namely brand image, brand association, brand name and brand endorsement were entered as independent variables, and consumer attitude was entered as a dependent variable. all four factors, brand image, brand association, brand name and brand endorsement, were found to have a statistically significant influence on brand loyalty; therefore, the research hypotheses were supported. The second part of the study's objective was to determine whether consumer attitude influences the purchase intentions of sports footwear brands among Generation Y. Consumer attitude was found to have a statistically significant influence on the purchase intentions of sports footwear brands among Generation Y.

The study concluded by highlighting the future expectations for the sports footwear market in South Africa. Emphasising that the sports footwear market in South Africa is growing at a faster pace. The

profit from this market is expected to grow significantly in the coming few years. As a result, the market is attracting more new sports footwear brands. The existing sports brands such as Nike, Adidas, Puma, Kappa, Asics and Umbro were the most identified or preferred brands among the participants. In other words, these brands dominated the study. Sports footwear brands that are not part of this study must start to develop stronger marketing strategies that will increase brand awareness for their brand. Sports footwear brands that dominated in this study have to maintain their marketing strategies to remain relevant to the market and to keep their space for a lucrative market share within the sports footwear market in South Africa.

In the context of stock markets, "herding behavior" describes an investor's or trader's propensity to mimic the behaviors of their peers rather than making their own decisions based on research and analysis. In a herding environment, people frequently make judgements without a strategy and act in the same direction as the majority of the people around them, because practically everyone invests in the same stock. In the market, non-informational trading is frequently the foundation of herding behavior. Many researchers propose that herding behavior happens when individuals make homogeneous decisions similar to those made by others in the market without giving their choices much thought. This typically happens when people are not thinking things through, when they are overly optimistic about their investments while ignoring risk, when the prices of particular stocks are unusually high, and when the majority of investors are making the same stock or direction. Herding behavior, which has its roots in Thorstein Veblen's theory of the leisure class, postulates that individuals imitate the financial behaviors of particular social classes; in other words, herding symbolizes unsettling conformity in which groups act in unison while disregarding individuality.

The **tenth paper by Muhammad Awais, Rabia Saghir, & Ismail Nasir** looks at how people interpret market investment choices in the context of other behaviors, showing that herding is a common occurrence in life and isn't just related to stocks. Specifically, this study looks into how people make individual investment decisions, how they interpret market anomalies, and what causes abnormal market fluctuations. In contrast to single-country research, the study focuses on the United States, Turkey, and Pakistan. The body of research on herding behavior in financial markets lends support to the study. A thorough understanding of the topic is provided by the researchers' citations of numerous studies that have looked at this subject. The impact of herding bias on financial markets is the main topic of this study. Utilizing a subjective technique (qualitative methodology), the researchers interviewed 19 stock market experts from Pakistan, Turkey, and the USA in semi-structured interviews to learn more about herding behavior and its effects on financial markets. The development of artefacts and a report are two ways the study intends to disseminate its findings. In the long run, this will help create a greater understanding of herd mentality and how it affects financial markets, which will result in healthier markets and better investing choices.

The findings of the research present the opinions of specialists in the USA, Pakistan, and Turkey about a range of stock market dynamics topics, such as investor perceptions, trading behavior, and market efficiency. The authors discuss how the efficiency of the stock market's price-setting procedure and the coherence of a stock's position in the industry-based classificatory structure relate to each other. They propose that differences in interpretive models cause incoherent stocks to be exchanged more frequently, increasing volume and volatility. The efficient market hypothesis (EMH) is discussed; nevertheless, critics argue that it explains more trade and volatility than perfectly efficient markets should. A sociological framework that clarifies the behavior of financial markets is developed through the use of unorthodox perspectives. The authors also touch on the effects of money illusion on investor perception, the unpredictability of the U.S. stock market over the 20th century, and the effect of asymmetric volatility on individual stock returns. The authors also discuss how trust affects stock market transactions and how sensitive asset values are to economic events.

The study discovered that herding behavior is common in financial markets, with investors frequently following the example of others without undertaking a detailed investigation. This may result in a breakdown in analysis and bad investing choices. The authors note that herding behavior can occur when investors are ignorant of market optima. This ignorance may cause one to rely more on the views of others than on appropriate investigation and analysis. In summary, the study by Awais, Saghir, & Nasir offers insightful information about the part herding behavior plays in anomalies in the financial markets. The prominent antecedents of herding, which can result in irregularities in the market, include movements of macroeconomic variables as well as individual behavior, perception, forecasting ability, choice, and decision-making abilities. Generally speaking, an investor will purchase assets showing bullish tendencies and sell those showing negative trends. The price of assets can rise or fall based on expectations for the future that are forecast by significant antecedents. These antecedents are the main source of herding, which can result in irregularities in the market. Investors and other market players can make better judgements and support more stable financial markets by being aware of the elements that lead to herding behavior and the effects that result from it.

**N. Delener, Ph.D.**  
**Editor-in-Chief**



# NOTE FROM THE EDITORS

As an interdisciplinary indexed journal, *The Journal of Global Business and Technology (JGBAT)* serves academicians and practitioners in the fields of global business and technology management and their related areas. JGBAT is also an appropriate outlet for manuscripts designed to be of interest, concern, and applied value to its audience of professionals and scholars. Readers will note that our attempt to bridge the gap between theory and practice has been successful.

We cannot thank our reviewers enough for having been so professional and effective in reiterating to contributors the need to provide managerial applications of their research. As is now obvious, the majority of the articles include a section on managerial implications of research. We wish to reiterate once again our sincere thanks to JGBAT reviewers for having induced contributors to answer the “so what?” question that every *Journal of Global Business and Technology* article is required to address.

Thank you for your interest in the journal and we are looking forward to receiving your submissions. For submissions guidelines and requirements, please refer to the Manuscript Guidelines at the end of this publication.

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# COMPARATIVE CHARACTERISTICS OF APPROACHES TO RESOLVING TAX DISPUTES IN UKRAINE AND GREAT BRITAIN

*Oleksandr Golovashevych, Artem Kotenko, Igor Krynytskyi, and Mykola Kucheryavenko*

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## ABSTRACT

*The article considers certain aspects of building a strategy for resolving tax conflicts in Great Britain and compares it with the regulatory regulation of these processes in Ukraine. It is emphasized that the tax conflict initially manifests itself in the mismatch of interests of the taxpayer and the state, and its natural development becomes its development into a tax dispute, the traditional ways of solving which in the majority of countries of the world are administrative and judicial appeals. It is emphasized that the taxpayer can freely choose the appeal path immediately after receiving the tax notice decision. A significant emphasis in the article is made precisely on the foreign experience of resolving tax disputes, and the characteristics of legal instruments and constructions different from those available in Ukraine. A comparative analysis of the means of unifying approaches in resolving very similar tax disputes in Ukraine and Great Britain was carried out. The joint functional purpose of the precedent approach used in Great Britain and the institute of exemplary cases implemented in Ukraine in recent years is emphasized. The similarity of the purpose of the precedent approach and exemplary cases with the purpose of the mechanism of general tax consultations in the aspect of increasing the efficiency of resolving tax disputes is characterized.*

**Keywords:** tax conflicts, taxpayer, HMRC, foreign experience, legal regulation

## INTRODUCTION

Tax disputes regularly arise in many countries around the world. This situation is determined by the different attitudes of taxpayers and regulatory authorities to the tax consequences that occur as a result of different modeling of taxpayers' economic activities. The emergence of conflict situations in taxation arises from the very nature of taxes. Acting as one of the main sources of filling the budgets of various levels, they increase the economic burden on taxpayers. It is the importance of tax revenues, the importance of their receipt in time and in full that determines the fairly strict and structured legal regulation of tax relations in the vast majority of countries of the world (Wahab et al., 2023).

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Resolving tax disputes is an important and pressing issue for Ukraine, as it directly affects the integrity and effectiveness of its tax system. Having a fair and efficient tax system that ensures compliance, protects taxpayers' rights, and maximizes government revenues is critical to the country's economic development. In addition, the resolution of tax disputes in Ukraine has broader impacts on the country's overall economic stability and attractiveness to foreign investors. Investor confidence, foreign direct investment, and economic growth can be enhanced by a transparent and effective tax dispute resolution system.

The economic and legal trends observed in Ukraine in recent years necessitate the need not only to improve the regulatory regulation of tax dispute resolution procedures, but also to determine the possibility of implementing the positive experience of other countries into the national legal system. This need is also due to the integration processes that continue despite the ongoing military aggression against Ukraine. In this context, it is considered appropriate to carry out a comparative analysis of the methodology and strategies for resolving tax disputes in Ukraine and other countries of the world. This article is devoted to a comparative analysis of Ukrainian and British strategies for exiting tax conflicts.

A comparison between Ukraine and Great Britain in the context of tax dispute resolution is important because it provides insight into different approaches and practices. The use of precedent regulation in the British legal system is a significant difference between Ukraine and Great Britain.

The Ukrainian tax system can be improved based on the experience from the UK in terms of precedent setting, non-confrontational methods, and efficient dispute resolution strategies. Adopting best practices from other jurisdictions can help to improve the effectiveness, fairness, and efficiency of tax dispute resolution in Ukraine.

The purpose of the article is to conduct a comparative analysis of the strategies used by Ukraine and Great Britain to resolve tax disputes. The article aims to provide a detailed overview of the approaches used by these two countries to resolve tax disputes, highlighting the peculiarities of the subject composition of these relations, the doctrinal basis for regulating the functional purpose of their participants, as well as identifying the positive features of foreign regulatory structures and to identify the similarities and differences of their respective systems.

The target audience of this study may include various stakeholders involved in tax administration and policy making. While government is certainly an important audience, other stakeholders include policy makers, tax practitioners and professionals, the business community, academics and researchers.

The article followed a structured framework. Initially, we conducted a comprehensive review of the existing literature and established the conceptual groundwork. The methodology was then elucidated, and the ensuing results were subjected to thorough analysis. The paper's closure encompassed a discussion of the findings, accompanied by practical and theoretical implications as well as acknowledged limitations. Ultimately, we concluded by outlining potential avenues for future research.

## LITERATURE REVIEW

In scientific literature, the issue of resolving tax disputes is always quite relevant, which causes a significant number of scientific works devoted to this topic. They can be classified according to various criteria, such as geography of occurrence, type of taxpayer, reason for occurrence, solution path, consequences, and others. For example, a significant part of scientific works (Miller & Oats, 2006; Avi-Yonah, 2000; Dagan, 2004) is devoted to the elimination of double taxation. This category of works

discloses in quite detail the issue of building global mechanisms for the elimination of double taxation and only touches upon the procedures for resolving tax disputes in a procedural sense.

In Ukraine, such scientists as O.Y. Buchynskyi (2019), O.O. Golovashevych (2020), I. M. Berezenko (2020), A. V. Lohvyn (2020), O.M. Duvanskyi (2012), M.V. Zhernakov (2015), I.Ya. Olender (2020), A.A. Rozdaybida (2015), E.A. Usenko (2010), R.F. Khanova (2014) and others dealt with the issue of tax dispute resolution and tax debt repayment. In their works, the issue of the emergence of tax conflicts, their development, the transition to the state of a tax dispute and their resolution at the national level was investigated. At their works also attention is paid to the procedures for the application of national coercive measures, which are used in the process of harmonizing the positions of supervisory authorities and taxpayers.

It should be emphasized that, despite the considerable number of scientific studies of aspects related to the resolution of tax disputes, there is still a lack of comparative researches on the border of national regulation of these issues in Ukraine and other countries of the world. Certain aspects of building an effective system of bodies capable of efficiently, quickly and economically resolving tax disputes remain insufficiently researched. Among the numerous scientific works dedicated to the study of various aspects of the implementation of traditional administrative and judicial mechanisms for the resolution of tax disputes, there is a lack of research on the strategy of choosing the appropriate way of resolving tax disputes.

## MATERIALS AND METHODS

A comprehensive analysis of the rules of the tax system in Ukraine and Great Britain was conducted, providing reliable and well-supported information for further research or reference purposes, by using different methods. The first step was to clearly define the research objectives, which were to compare and analyze the tax system rules in Ukraine and Great Britain. An extensive literature review was conducted to gather information regarding the two taxing systems. Academic papers, government publications, reports from international organizations and reputable tax consulting sources were analyzed. To ensure the accuracy and credibility of the information obtained, several reliable and authoritative sources were selected and examined to extract relevant information regarding the tax system rules in Ukraine and Great Britain.

In order to facilitate a comprehensive analysis of the tax systems in Ukraine and Great Britain, it is necessary to evaluate them on the basis of the following key criteria: Types of Taxes, Tax Administration, Personal Taxation, Corporate Taxation, and Value Added Tax (VAT). Looking at these specific criteria will allow us to better understand the similarities and differences between the tax systems of the two countries. (see Table 1, *Source: formed by the authors according to Ukrainian Tax Guide, 2022; GOV.UK, 2022; PwC, 2021; Deloitte, 2021; Oxford University Centre for Business Taxation, 2020; Castagna, 2023*).

**Table 1.** The analysis of the rules of the tax system in Ukraine and Great Britain

Country Criteria	Ukraine	Great Britain
<b>Tax Types</b>	Ukraine has several types of taxes, including personal income tax, corporate income tax, value-added tax (VAT), excise tax, and property tax. These taxes are levied at different rates and play a significant role in generating revenue for the government.	In the UK there are several types of taxes that are levied on different aspects of the economy and the finances of citizens. The main ones are: Income Tax, Corporation Tax, Value Added Tax, Inheritance Tax, Estate Tax, Excise Duty, Capital Gains Tax, National Insurance,

## COMPARATIVE CHARACTERISTICS OF APPROACHES TO RESOLVING TAX DISPUTES

		Business Tax, Air Passenger Duty. These are just some of the main taxes that exist in the UK. The tax system may change over time depending on the economic and political situation.
<b>Tax Administration</b>	The State Tax Service of Ukraine is responsible for tax administration, including tax collection, enforcement, and taxpayer registration. The tax system in Ukraine has been reformed in recent years to increase transparency, simplify procedures, and reduce opportunities for corruption.	HMRC is responsible for administering the tax system. It collects tax, enforces compliance and provides advice to taxpayers. The UK tax system aims to strike a balance between efficient tax collection and taxpayer rights.
<b>Personal Taxation</b>	In Ukraine, there are personal income taxes such as personal income tax (PIT) and military duty. There are also additional taxes on certain types of income, such as winnings tax and others. PIT rates depend on income levels and are subject to change depending on changes in tax legislation. Ukraine provides certain privileges and exemptions from taxation for certain categories of the population, such as disabled persons and veterans. Personal income is subject to mandatory declaration and individuals are required to declare their income and file tax returns.	The UK has a more diverse system of taxation of individuals, including Income Tax, National Insurance, Capital Gains Tax, Inheritance Tax and others. Tax rates in the UK may also vary depending on the level of income and type of tax. The UK also provides certain exemptions and reliefs, especially for lower incomes, as well as for certain categories of workers, such as the self-employed. The UK also requires individuals to declare their income and pay their own taxes. However, the accounting system could be more developed and easily accessible.
<b>Corporate Taxation</b>	Corporate income tax: Ukraine has a corporate income tax system, where the main tax is the income tax. The corporate tax rate is 18%, but certain industries, such as agricultural production and IT, may benefit from lower rates or exemptions. Investment income tax: Ukraine provides certain incentives for investments and innovative projects, including tax credits and exemptions. Reporting system: Companies are required to report on their financial activities and tax liabilities by filing annual financial statements and tax returns.	Corporation tax is payable on the profits of companies operating in the UK. The main rate of corporation tax is currently 19%, but there are plans to increase this over the coming years. The UK tax system provides various incentives, allowances and reliefs to encourage business growth. Tax exemptions: The UK provides certain tax exemptions and credits for businesses engaged in research and innovation. Tax reporting: Businesses in the UK are also required to file annual financial statements and tax returns for reporting to the authorities.
<b>Value-Added Tax (VAT)</b>	Ukraine levies VAT on the supply of goods and services. The standard VAT rate is 20%, with reduced rates of 7% (VAT rate for medical devices, medicines, excursion services for museum visitors, screening of original works, adapted films, temporary accommodation services) and 0% (export rate) applicable to certain goods and services. VAT-registered businesses can generally deduct input VAT paid on purchases from their VAT liability.	The supply of goods and services is subject to the UK VAT system. The standard VAT rate is 20%, while for certain goods and services, such as tourism and accommodation, the rate is reduced to 5%. A zero rate applies to exported goods and most food products. There are exceptions for certain goods and services, and there are standard and reduced rates. VAT-registered businesses can claim input tax credits and must submit regular VAT returns.

Based on this analysis, it is necessary to examine the aspects of tax dispute resolution that may arise as a result of unsatisfactory decisions of supervisory authorities. This research will reveal the



different procedures and approaches to resolving tax disputes in Ukraine and the United Kingdom, allowing for a comprehensive comparison of their effectiveness and adherence to the principles of fairness and impartiality.

## **RESULTS**

### ***Aspects of resolving tax disputes that may arise as a result of a taxpayer receiving a decision from a supervisory authority that does not satisfy the taxpayer.***

The tax conflict initially manifests itself in the mismatch of interests of the taxpayer and the state or territorial community, which are usually represented by the authorized controlling bodies of the country. The natural development of such a conflict of interests is the formalization of the tax conflict and its development into a tax dispute, the traditional ways of resolving which in the vast majority of countries are administrative and judicial appeals against the relevant decision of the controlling body.

Ukraine is no exception in this case. Ukrainian tax legislation provides the possibility for taxpayers to appeal the decisions of controlling bodies in an administrative or judicial procedure. It's quite important in this case, that the taxpayer can freely choose the appeal way immediately after receiving the tax notice-decision (Britchenko et al., 2022). Unlike Ukraine, in some other countries, a judicial appeal can be applied only after using the administrative appeal mechanism. It is quite logical that if the payer is prohibited from going to court before going through the administrative appeal procedure, his constitutional right to judicial protection is violated, which is unacceptable in modern democracies.

Within the framework of this article, we will not detail and compare the procedures for conducting tax audits in Ukraine and Great Britain, but will focus specifically on the aspects of resolving tax disputes that may arise as a result of a taxpayer receiving a decision from a supervisory authority that does not satisfy him. At the same time, the main emphasis will be placed on the foreign experience of resolving tax disputes, the characteristics of legal instruments and constructions that are different from those available in Ukraine.

In Great Britain, both of the above methods of resolving tax disputes also apply. Since recently, HM Revenue & Customs (hereinafter HMRC) has been the main entity in this country dealing with tax compliance issues by taxpayers (GOV.UK, 2022). In fact, it is the UK's tax, payment and customs authority. It was established by an Act of Parliament in 2005 as a new department to replace the Department of Revenue, Customs and Excise. It must be distinguished from the ministerial department which was created under the Commissioners for Revenue and Customs Act (CRCA) in 2005 and which replaced the Revenue, Customs and Excise Department.

HMRC is accountable to Parliament and expenditure on its operation is controlled by the UK Chancellor of the Exchequer. At first glance, the activity of this body is similar in its direction to the activity of the State Tax Service of Ukraine. HMRC is authorized to carry out audits regarding the payment of any taxes, the proper implementation of accounting records, the formation and submission of tax reporting documents, etc (Reilly, 2023). At the same time, strategic tax policy is formed by the Treasury, and HMRC is engaged in its support and implementation.

In contrast to the designation of the State Fiscal Service of Ukraine, the HRMC is entrusted with significantly more functions. In addition to the direct administration of taxes and fees, which is carried out in the most efficient and taxpayer-oriented way, this organization is engaged in:

- a) administration of other mandatory payments (for example, payment for illness, payment for pregnancy and childbirth, etc.);
- b) administration of child benefit;
- c) promotion of legal international trade, protection of fiscal, economic, social security of Great Britain, etc.

In fact, HMRC's activities are guided by a number of priority tasks, which include facilitating the correct taxation and making it more difficult to break the tax law. HMRC oversees the fight against money laundering, supports the government's broad economic objectives through a robust, flexible system of tax administration, responsible for ensuring that almost all taxes and duties are fully collected. That is why the HMRC is also entrusted with the duties of consideration and resolution of tax disputes and tax conflicts.

It is significant that in Great Britain taxpayers are allowed to challenge a wider range of documents than in Ukraine. In addition to the direct decision on the need to pay an additional amount of tax and fines, it is allowed to appeal the decision on the application of a specific tax benefit or a request for information on economic activity in a separate procedure.

When a tax conflict is formalized and a tax dispute arises, HMRC uses a tax dispute resolution management strategy. It was first published in 2014 and updated in 2017 (HM Revenue & Customs, 2014). The strategy provides internal mechanisms for managing the activities of this body. As a result, the approximate order of decision-making regarding the resolution of tax disputes is summarized.

One of the main priorities when the participants in a tax dispute choose a method of its resolution is to ensure an honest and impartial consideration of it. This guideline is used by both taxpayers and HMRC. In the event of a disagreement between the taxpayer and HMRC, the former may apply an administrative review of HMRC's decision. Alternatively, they can appeal through a tribunal or court (HM Revenue & Customs, 2017)

It is worth emphasizing that HMRC specialists during the implementation of control measures give taxpayers the opportunity to correct the shortcomings of their activities without formalizing a tax dispute. However, disputes regarding the amount of tax or the timing of its payment are common and inherent in relations regarding tax administration. Often, they arise as a result of different views on the interpretation of life circumstances regulated by tax legislation. The vast majority of such disputes in the UK are resolved through negotiations between HMRC and the payer or through the administrative appeals process.

However, there are still a lot of cases that are resolved in court. For the clearest coordination of the actions of regulatory authorities and taxpayers in Great Britain in 2007 was adopted a Litigation and Settlement Strategy (LSS) (HM Revenue & Customs, 2011), which was improved and updated in 2017. This strategy is fundamental for resolving tax disputes between HMRC and the taxpayer. In this case, the controlling body applies civil legal processes and procedures in accordance with the legislation to resolve the tax dispute.

In fact, the LLS strategy is used to resolve tax disputes regarding the payment of any taxes in Great Britain, regardless of their legal nature and type (direct, indirect, property, income, etc.). At the same time, within the framework of this strategy, an extended interpretation of the "dispute" category is applied. This allows the supervisory body to call a "dispute" not only the consideration of formalized tax disputes when it does not have a single vision with the taxpayer regarding the time of payment or the amount of tax, but also cases of obtaining additional information by the supervisory body to form an idea about the legality of the taxpayer's actions.

In contrast to the Ukrainian approach to court appeals, Great Britain approaches the definition of the term "litigation" in a different way within the framework of the application of the LLS strategy. Traditionally, in Ukrainian legal doctrine, a judicial process is understood as the process of resolving a dispute between participants with an appeal to a special body – a court. In Great Britain, at first glance, as part of the judicial process, there is also an appeal to an independent authority to resolve a tax dispute, but in addition to the court, such an authority can be a tribunal. Common law actions or applications for judicial review are also included in the "litigation" category.

It is important to keep in mind that the LSS strategy does not address issues related to the conduct of statutory audits. It also does not apply to debt recovery disputes, employment or commercial litigation in which HMRC is a party.

Any dispute that went beyond the agreement of the positions of the controlling body and the payer to the level of court proceedings requires significant financial costs from both the taxpayer and the controlling body. In other words, resolving tax disputes in court is simply expensive. That is why one of the functional goals that were set during the development and implementation of the LSS strategy in HMRC's activities was the formation of conditions that significantly reduce the likelihood of situations that could lead to a dispute.

On the other hand, the purpose of controlling bodies in both Ukraine and Great Britain is to ensure the fiscal goal. This presupposes the focus of their activities on obtaining the best income of the state and territorial communities from the payment of taxes and fees. But in modern democracies, such activity must be fully and completely based on the requirements of the law, use the given powers fairly and consistently (Levchenko et al., 2021). From these points of view, the formalization of a tax dispute by a controlling body (giving the dispute the features of a tax dispute that must be resolved within the framework of one of the procedures provided for by the current legislation), its consideration and resolution contributes to ensuring the best practical profit for the state.

### ***The precedent regulation as a fundamental difference between Ukrainian and British legal regulation***

The fundamental difference between Ukrainian and British legal regulation is the application of precedent regulation in the latter case. HMRC experts emphasize: "The objective of ensuring the best return for the Treasury requires consideration not only of the tax in dispute itself, but also – in circumstances where a precedent may be set or where HMRC is trying to influence the behavior of entities – potential tax liabilities of the same or other subjects" (HM Revenue & Customs, 2017).

Unlike the British model of resolving tax disputes, where the very fact of a court decision is prejudicial to the resolution of similar cases in the future, in Ukraine this issue is resolved by other methods. Two legal mechanisms make it possible to achieve unification of approaches in resolving very similar tax disputes in Ukraine. The first of them is tax advice.

This mechanism has been used for a long time and is carried out on two levels – individual and consolidated (Sardak et al., 2021). At the individual level, the taxpayer applies to the supervisory authority for an official clarification on how he needs to act when taxing a specific transaction. In the event that his actions fully correspond to the individual tax advice provided to him by control bodies, but as a result it turns out that he acted illegally, he will not be penalized. In fact, the institute of individual tax consultations provides a protective function for the taxpayer.

In the course of further systematization of the legal positions reflected in individual tax consultations, the Ukrainian supervisory authorities issue general tax consultations, which have a wider range of subjects on which they extend their effect. In a certain way, the institute of tax consultations allows to achieve goals similar to countries with a precedent legal system. Moreover, this is done at an earlier stage of the development of tax conflicts – before the judicial review of the tax dispute.

The second mechanism, the purpose of which is to unify approaches in resolving very similar tax disputes, appeared relatively recently. It is about the Institute of Exemplary Cases, introduced in Ukraine in 2017. Ukrainian legislation defines a typical administrative case as exemplary, which is accepted for proceedings by the Supreme Court as a court of first instance for rendering an exemplary decision (Verkhovna Rada of Ukraine, 2005). In turn, administrative cases that meet a number of conditions are included in the circle of typical ones:

- 1) the plaintiffs stated similar demands;
- 2) the defendant is the same subject of authority;
- 3) the dispute arose on similar grounds in relations governed by the same rules of law (Verkhovna Rada of Ukraine, 2005).

In fact, the institute of model cases fulfills the function of unifying court cases and at the same time contributes to speeding up the consideration of administrative jurisdiction disputes. Thanks to its appearance, a 2.5-fold speedup of consideration of typical cases was achieved in comparison with the resolution of other administrative cases (Kuybida, 2021). It is also worth emphasizing that the institute of model cases is not a purely Ukrainian invention, because the idea of its introduction was born in 2009 during professional meetings of Ukrainian and German judges (The Center for Judicial Studies, 2009). The emergence and development of this institute in Ukraine shows the positive practice of involving foreign experience in resolving administrative, in particular, tax disputes.

In Great Britain, when considering tax disputes, HMRC implements the principle of economy. A similar principle exists in Ukrainian tax legislation and provides for the establishment of taxes and fees, the volume of revenues from the payment of which to the budget significantly exceeds the costs of their administration (Verkhovna Rada of Ukraine, 2010). A similar content is provided in the British LSS strategy, because the supervisory authority will not consider a tax dispute if it does not provide the best income for the Treasury. In line with this approach, HMRC tries wherever possible to resolve disputes non-confrontationally. The results of HMRC's activities show that in most cases cooperation with the taxpayer is the most effective way to resolve a tax dispute (Perrou, 2023).

In the exercise of its control powers, HMRC, on the one hand, promotes a non-confrontational approach to the payer, but on the other hand, this does not become an obstacle to the effective and efficient use of other means in the event that it is not possible to establish cooperation. In their work, HMRC specialists apply a consistent approach to dispute resolution. Considerable attention is paid to professional standards, regardless of the final result (a final settlement under an agreement or as a result of a court proceeding). In any case, the approach to resolving disputes is based on the weightiness of possible negative consequences. If there are grounds to qualify the taxpayer's behavior as tax evasion, HMRC considers the appropriateness of more stringent enforcement measures and the possibility of a criminal investigation.

The British strategy for resolving tax disputes involves taking into account both the substance and the form of transactions performed by taxpayers. When resolving disputes, the supervisory body must make sure that both the substance of any decision leading to the resolution of the dispute and the manner in which this decision is implemented are fully in accordance with the law (HM Revenue & Customs,

2011). The LSS strategy requires the mandatory consideration of several points when choosing a way to resolve tax disputes.

First, HMRC will consider both future and immediate income streams in order to ensure the greatest practical benefit to the state or local authority. At the same time, costs and the deterrent effect on non-fulfilment of requirements by payers must be taken into account. Secondly, the controlling body necessarily takes into account the distribution of its own load. This means that when choosing the means of resolving a dispute, HMRC takes into account the potential consequences of the transfer of other open or prospective disputes. Consideration is also given to the potential impact of resolving a dispute in a particular way in freeing up HMRC resources to work on other disputes. In other words, if there are other tax disputes that could potentially generate greater economic returns than the current dispute, more resources are allocated to another dispute.

However, regardless of the presence of the specified discretionary powers, the controlling authorities in the UK must be guided by the fiscal interest. The British tax dispute resolution strategy takes into account both the economic and the temporal aspects of the efficiency of tax dispute resolution and in a significant number of cases the mechanism of out-of-court reconciliation of the positions of HMRC and taxpayers by means of an appropriate agreement is used, which ensures quite high efficiency. However, the Litigation and Settlement Strategy Commentary states that “HMRC will not compromise its view of the law in order to reach a settlement, and in this context, there will be cases where litigation offers the most effective and efficient way to resolve disputes (HM Revenue & Customs, 2017; (Moramarco & Orlandoni, 2020). In our opinion, this is how discretionary boundaries are constructed at the sub-legal level.

HMRC differentiates between the method of resolving a tax dispute by entering into an agreement with the taxpayer and going to court to resolve a tax dispute based on an assessment of the likelihood of being proven right. In cases of presence of reasonable grounds to believe that legal proceedings will be successful, HMRC will not agree to an out-of-court settlement if such a settlement involves the payment of less tax and penalties. In other words, if the taxpayer disagrees with reasonable arguments of his wrongdoing and does not want to give in as part of the out-of-court settlement of the tax dispute, HMRC will try to resolve the tax dispute in court. Conversely, when HMRC professionals consider it impossible or unlikely to win legal proceedings, there is an attempt to "share the load" between HMRC's position and the taxpayer's position on the amount or size of the penalties.

## **DISCUSSION**

The research presented in this article contributes to the body of knowledge by providing a comprehensive analysis of tax dispute resolution strategies in Ukraine and Great Britain. By identifying the similarities and differences between these two countries, the study provides insight into the contextual factors that shape the effectiveness of tax dispute resolution policies.

Furthermore, the analysis identifies the role of trust and transparency in tax dispute resolution. By examining the importance of trust building measures between taxpayers and tax authorities, the study contributes to theoretical frameworks that emphasize the importance of interpersonal dynamics and relationships in tax administration.

The comparative analysis of Ukrainian and UK tax dispute resolution strategies has several practical implications for tax authorities in Ukraine. First, it is recommended to establish a dedicated tax dispute resolution mechanism that will provide a transparent and efficient process for resolving disputes

between taxpayers and tax authorities. This can help to reduce the pressure on the judicial system and provide a more expedient resolution for taxpayers.

Second, the introduction of alternative dispute resolution methods, such as mediation or arbitration, should be considered. These approaches have shown promise in both Ukraine and the United Kingdom, providing a more collaborative and flexible environment for resolving tax disputes. By encouraging dialogue and compromise, these methods can lead to mutually beneficial outcomes for both taxpayers and tax authorities.

In addition, the study highlights the importance of providing taxpayers with clear guidance and communication on tax laws and regulations. Improving taxpayer education programs and simplifying tax compliance procedures can help prevent tax disputes and improve overall tax compliance rates.

It is important to acknowledge that this study has certain limitations. The analysis focuses primarily on the tax systems of Ukraine and the UK, and the results may not be directly applicable to other countries. In addition, the study relies on publicly available information and may not capture the full range of tax dispute resolution practices in each country.

## CONCLUSION

A comparative analysis of the strategy for resolving tax disputes in Great Britain allows us to draw a number of conclusions and suggestions. An unconditional asset of the British approach is the combination of economic and legal approaches to the organization of tax dispute resolution processes. The presence of sufficient autonomy of HMRC allows to successfully balance on the limits of its discretionary powers in the resolution of tax disputes in order to achieve the maximum fiscal effect in each disputed situation, combined with their optimal use of temporal and human resources.

The transparency of the work, that are done by the bodies, who are dealing with issues of tax administration, detection of violations of tax legislation, consideration and resolution of tax disputes, has an extremely important role for the effective filling of budgets. HMRC is accountable to the Parliament, expenses for its operation are controlled by the British Chancellor of the Exchequer, and its activity is similar in its direction to the activity of the State Tax Service of Ukraine. It was established that, in contrast to the appointment of the State Fiscal Service of Ukraine, the HRMC is entrusted with significantly more functions, which in its activity is guided by a number of priority tasks that involve facilitating correct taxation and making it more difficult to violate tax legislation.

Particular attention is given to the analysis of the UK's approved tax dispute resolution management strategy, which was first published in 2014 and updated in 2017. The strategy provides internal mechanisms for managing the activities of supervisory authorities. As a result, the approximate order of decision-making regarding the resolution of tax disputes is summarized. In particular, it is emphasized that one of the main priorities when the participants of a tax dispute choose a method of its resolution is to ensure an honest and impartial consideration of it. This guideline is used by both taxpayers and HMRC. In the event of a disagreement between the taxpayer and HMRC, the former may apply an administrative review of HMRC's decision. Alternatively, they can appeal through a tribunal or court.

The characteristics of developed and implemented in 2007 Litigation and Settlement Strategy (LSS), which was improved and updated in 2017, is given. It was concluded, that the LLS strategy is used in resolving tax disputes regarding the payment of any taxes in Great Britain, regardless of their legal nature and type (direct/indirect taxation, property/income taxes etc.). Within the framework of this

strategy, an expanded interpretation of the "dispute" category is applied, which allows the supervisory body to call a "dispute" not only the consideration of formalized tax disputes, when there is no unified vision with the taxpayer regarding the time of payment or the amount of tax, but also cases, concerning obtaining an additional information by the supervisor body for forming an idea about the legality of the payer's actions. Emphasis is placed on the economic aspect of resolving tax disputes, because any dispute that has gone beyond the agreement of the positions of the controlling body and the payer to the level of court proceedings requires significant financial costs from both the taxpayer and the controlling body.

It has been revealed that the British strategy for resolving tax disputes takes into account both the essence and the form of transactions performed by taxpayers. When resolving disputes, the supervisory body must make sure that both the substance of any decision leading to the resolution of the dispute and the manner in which this decision is implemented are fully in accordance with the law. The LSS strategy requires the mandatory consideration of several points when choosing a way to resolve tax disputes: a) consideration of both future and immediate income streams; b) taking into account the distribution of own load and resources, the potential impact of settling a dispute in a certain way on freeing up the resources of regulatory authorities to work on other disputes.

The introduction of a tax dispute resolution model similar to the British one in Ukraine can significantly reduce the burden on judicial authorities. Formation of a clear strategy for resolving tax disputes, which must be followed by all divisions of tax authorities without exception, is one of the primary tasks on the way to the harmonization of Ukrainian tax legislation and the legislation of European countries.

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# INTERNATIONAL BUSINESS IN THE FOURTH INDUSTRIAL REVOLUTION: AFRICAN BUSINESS RESPONSE

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## ABSTRACT

*An impressive economic growth between 2000 and 2015 and increased business activities in Africa attracted global investors and research attention. Multinational companies, a product of industrial revolutions, are emerging from several African countries. However, just as African multinationals are emerging, a fourth industrial revolution (4IR) seems to be evolving, despite ongoing debates about the exact revolutionary nature of new digital technologies. Similar to previous industrial revolutions, Africa seems to be trailing the world in this new era of digitalization. This conceptual paper presents a discursive analysis of how African businesses, wishing to internationalize, and home-grown African Multinational Enterprises (MNEs), should respond to 4IR and its related technologies. Some of the inherent opportunities and emerging challenges for African business presented by the 4IR era and its associated technologies are presented. The article begins by clarifying the concept of 4IR and its misconception with industry 4.0 and similar terms. The paper then proceeds to a discussion of the summary characteristics of industrial revolutions, its relationships with the emergence of MNEs, and how theories of international businesses have generally evolved with different industrial revolutions. The authors conclude with a research agenda for African businesses and MNEs in an age of fast paced digitalization.*

**Keywords:** 4IR, Fourth Industrial Revolution, Industrial Revolution, African Business, International Business, Digitalization, Industry 4.0, emerging markets

## INTRODUCTION

The rise of business activity in Africa (Kgomoewana, 2014; Verhoef, 2017) coupled with some recent impressive economic growth (World Bank, 2022), attracted international investor and research attention. Emerging multinational companies from several African countries (Boso et al., 2019; Esho &

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Verhoef, 2020; Goncalves & Smith, 2018; Ibeh, Adeleye, & Ajai, 2018; Ibeh, Wilson, & Chizema, 2012; Verhoef, 2018) underline a positive response to market opportunities. Research on African business has garnered momentum with a call for more scholarship on business and management in Africa (George, 2015; George et al., 2016; Ingenbleek, 2019; Mol, Stadler, & Ariño, 2017; Signé, 2019; Zoogah, Zoogah, & Dalaba-Roohi, 2015). While these development point towards growing interest in Africa, the world has entered the threshold of the fourth Industrial Revolution (Liao et al., 2018).

Opportunities abound for Africa, and other emerging markets to leapfrog over industrial revolutions (Chandy & Narasimhan, 2015; Coulibaly, 2019). However, just as during previous industrial revolutions, Africa seems to be trailing the world in this new industrial revolution. The question now is how African business and Multinational Enterprises (MNEs) should respond to the fourth industrial revolution? How should home grown African MNEs and African enterprises seeking to internationalise, respond to these developments? In this paper, as our primary objective, we seek to provide the context against which African business has to respond. We present a discursive analysis of how African business and MNEs should respond. Extant research on the fourth industrial revolution in Africa is limited. The few that exist focus almost exclusively on how African countries should respond (Monga, Shimeles, & Woldemichael, 2019). However, business and the private sector remain the main drivers of innovation and technology globally.

The concept of a ‘fourth industrial revolution’ (henceforth 4IR), was coined by Klaus Schwab, the founder and executive chairman of the World Economic Forum (WEF). *The fourth industrial revolution* was the title of Schwab’s book published in January 2016. It was also the theme of WEF’s annual Davos forum held subsequently in the same year. According to Schwab (2016), the world has seen three industrial revolutions, each with primary distinctive characteristics. 4IR is the unfolding next industrial revolution. This new industrial revolution can potentially change the way the world lives, acts, and interacts, because of the fusion of technologies creating “cyber-physical systems” (Davis, 2016; Ross & Maynard, 2021; Orji, 2019; Schwab, 2016; Uleanya, 2023). However, some are of the opinion that the world is actually in a third, and not a fourth, industrial revolution (Alcácer et al., 2016; Prisecaru, 2016; Rifkin, 2012). Some are not convinced that the world is moving into a fourth industrial revolution (e.g. Alcácer et al., 2016; Moll, 2021, 2022). Moll (2021, 2022) argue extensively that the idea of a fourth industrial evolution is only a myth. Irrespective of this discourse, the reality is that some sets of technologies are rapidly changing the world as we currently know it.

The advent of a new industrial revolution has implications for the scholarship and practice of international business and management, not only in Africa, but globally. We know from Business History that the rapid increase in the number of the modern-day multinational firm is “a post-industrial revolution phenomenon” (Wilkins, 2009). The speed of internationalization of firms, and the corresponding rise in multinationals, has been affected by each industrial revolution. Developments in communications, transport, production, and organisation enabled business and management across international borders beyond what was seemingly possible before each subsequent industrial revolution. Currently, new technologies are reshaping industry boundaries, enabling new business models, changing the competitive landscapes of businesses, and creating new industries (Adner, Puranam, & Zhu, 2019; Frank et al., 2019; Kohtamäki et al., 2019; Muller, Kiel, & Voigt, 2018; Matyushenko et al., 2022; Sjödin, Parida, & Kohtamäki, 2019; Wahab et al., 2023; Weking et al., 2020). Technologies redefine the process of value creation and value capture for businesses (Kiel et al., 2017; Lerch & Gotsch, 2015; Matyushenko et al., 2022; Orji, 2019; Parida, Sjödin, & Reim, 2019; Porter & Heppelmann, 2014). Thus, 4IR has profound implications for international business and management. Research on the nature of these implications is only just beginning. As Fagerberg & Verspagen (2020) rightly acknowledge, academic research on 4IR has generally focused on its effects on jobs, the labour market, and inequality, with the use of empirical analysis and models (e.g. Davis, 2016; Acemoglu & Restrepo, 2018, 2020; Zervoudi, 2020). This is understandable as 4IR technologies are at their infancy and uncertainties still surround many aspects of

the concept. Industry 4.0, for example, is sometimes confused with 4IR. So, what exactly is 4IR? In this paper, as our second objective, we seek to clarify aspects of the conceptual confusion.

The following section provides a review of some literature on the concept of 4IR, and a brief overview of industrial revolutions generally. Then we present a brief review of how the theories and practice of international business and management have evolved through the industrial revolutions. The subsequent section of the paper explores opportunities for response by business in Africa. The paper concludes with some research directions on possible internationalisation strategies for African businesses in relation to 4IR.

## **LITERATURE REVIEW**

The literature on 4IR is limited despite the multi-disciplinary nature of the concept. This might be ascribed to Klaus Schwab's identification of the technological innovations related to 4IR which was only recently in 2016. Studies engaging directly with 4IR in international business, and management, are equally difficult to find. Despite a multitude of studies on the effects of digitalization on business models, processes, products and services, studies on 4IR are still scarce. The primary purpose of this literature review is to provide an overview of the understanding of industrial revolutions and 4IR. In clarifying some misconceptions surrounding 4IR and industry 4.0, this paper offers no hypothesis or propositions. We seek to clarify the 4IR implications for business and MNEs in Africa. Our search was conducted using the SCOPUS database with two key search words, "fourth industrial revolution" and "4IR".

### ***How are Industrial Revolutions understood historically?***

Before the first industrial revolution, the world economy was primarily agrarian. Lives and means of livelihood were based on crops and livestock farming in various forms. Agriculture was the mainstay of all economies. The beginning of the industrial era was marked by a remarkable change from an agrarian economy to a machine-based manufacturing economy (Lucas, 2004; Jideani et al., 2020; Prisecaru, 2016; Xu, David, & Kim, 2018). Indeed, the first industrial revolution sparked industrial production and accelerated unprecedented economic growth (Lucas, 2004). However, there is no universal agreement on a definition of what an industrial revolution is (Clark, 2010; Maynard, 2015). A layman's definition by the Cambridge dictionary (2020) is that it is "the period of time during which work began to be done more by machines in factories than by hand at home". Nevertheless, there seems to be some consensus on what generally constitutes an industrial revolution. Philbeck & Davis (2019) describe an industrial revolution as a significant shift "in the way that economic, political, and social value" is "created, exchanged, and distributed (pg. 17). Consequently, industrial revolutions are not merely periods of technological change. Industrial revolutions usher in a paradigm shift in the way goods and services are produced and consumed, and consequently alter the way humans live and interact with one another (Kapoor et al., 2019; Lucas, 2004; Philbeck & Davis, 2019; Prisecaru, 2016; Schwab, 2016).

Generally, industrial revolutions are characterized by paradigm shifts in four main domains: energy and power, transport, communications, production and organization (Kapoor et al., 2019; Prisecaru, 2016). A remarkable change in the source of energy, and power, is seen by some as pivotal to an industrial revolution (e.g. Rifkin, 2012). Based on this line of argument, the world is only moving towards a third industrial revolution as sources of energy and power are shifting from fossil fuels to renewable energy (Rifkin, 2012). However, as acknowledged by Rifkin (2012), there are also revolutionary changes in communications through the internet. Such changes in communication technologies when they converge with new energy systems create a new industrial revolution (Rifkin, 2012). Revolutionary changes in sources of energy and power have always had the potential to cause

ripple effects that also revolutionize transport, and production systems, and not just communications. Consequently, it is really the convergence of technologies and innovations in energy, transport, communications, and production that constitute an industrial revolution (Kapoor et al., 2019). Inevitably, changes in these four domains lead to changes in organization in all spheres of life. Hallmark traits of industrial revolution eras that distinguishes it generally from the pre-industrial era is efficiency and rapid “modern” economic growth (Clark, 2010; Harley & Crafts, 2000).

In the first industrial revolution, reliance on the manual efforts of humans and animals that were the sources of energy, shifted to steam and coal (Davis, 2016; Kapoor et al., 2019; Philbeck & Davis, 2019; Prisecaru, 2016). What is now generally referred to as the world’s first industrial revolution is known to have begun in Britain in the 18<sup>th</sup> century. Due to its origins in Britain, it is sometimes referred to as the British industrial revolution. The exact time and year it commenced, is however put at different estimated dates by different studies, starting at mid to late 18<sup>th</sup> century (Davis, 2016; Harley & Crafts, 2000; Kapoor et al., 2019; Prisecaru, 2016). Despite past debates on the exact nature of the first industrial revolution (Harley & Crafts, 2000; Temin, 1997), that period saw many economic and societal changes. Breakthrough in using coal and steam engines led to the use of trains and the building of railways to facilitate transportation (See table 1). The period also saw the advent of manufacturing and the birth of the factory (Kapoor et al., 2019; Liao et al., 2018; Temin, 1997) and a rise in standards of living (Harley & Crafts, 2000; Philbeck & Davis, 2019).

While there is a remarkably clear distinction between the pre-industrial revolution era and the first industrial revolution, there is no such clarity in the distinctive periods of the subsequent industrial revolutions. The second industrial revolution began sometime in the late 19<sup>th</sup> century. The use of fossil oils and electricity are major hallmarks of this second industrial revolution. Several innovations such as the telephone, light bulb, steamship, radio, motor car, and television provided remarkable improvements in transportation and communication (Kapoor et al., 2019; Philbeck & Davis, 2019). Similar to the second industrial revolution, the third also brought about massive improvements in transport and communication. The era saw the development of aircraft and computing information systems, and various electronics as electricity became more widely distributed and fossil fuels cheaper (Kapoor et al., 2019).

The time periods and times of each industrial revolution are debatable. For example, for Prisecaru (2016), 4IR started in 2000 while for Kapoor et al (2019), it started in the 1980s (see table 1). Consequently, the resulting sectors and products originating from each industrial revolution are also debatable. Even the exact number of industrial revolutions in history may be debatable. However, what is not debatable is that each subsequent industrial revolution built on the innovations and developments of the preceding ones. Consequently, the differences in dates and time periods are understandable because of transition periods between eras and differences in the rate of diffusion of the revolutions to different locations. Most countries on the African continent and many other developing countries, for examples, have progressed at different phases of the various industrial revolutions. Some are still moving through phases of the third or the second industrial revolutions.

As the world advances towards a new industrial revolution, the pace at which different geographical regions enter the new era, remains uneven. The subtle argument between the few who insist that the world is embarking on a third industrial revolution, and others, which seem to be in the majority, that a fourth industrial revolution is upon the globe, is likely to continue. Clearly, a new industrial revolution is progressing, regardless of what name it may be called. Even the proponents of the world moving into a third industrial revolution agree that a new era is unfolding. However, for consistency, and alignment with the majority of the literature, we refer to the new industrial revolution as the fourth one (4IR).

***The Fourth Industrial Revolution (4IR)***

Some call the 4IR era, a digital revolution (e.g. Banga & te Velde, 2018; Schafer, 2018). Others, such as Alcácer et al. (2016), refer to the new era as the information age. However, 4IR is much more than a digital revolution (Ghobakhloo, 2020; Schwab, 2016; Schulze, 2019). In fact, the third industrial revolution is sometimes referred to as a digital revolution because the latter parts, and what can be regarded as the transition period was, and still is, characterized by a rise in digitization and automation of production (Schwab, 2016; Schulze, 2019). The main characterization of 4IR, as a new industrial era, is that technologies fused to blur physical, digital, and biological worlds (Liao et al., 2018; Philbeck & Davis, 2019; Schulze, 2019; Schwab, 2016; Soh & Connolly, 2020). Cyber-physical systems and smart machines that can perform tasks previously only performed by humans, populate the world. (Liao et al., 2018; Schafer, 2018; Soh & Connolly).

**Table 1.** Summary Characteristics of Industrial Revolutions

Study/Article	Main Characteristics	1st Industrial Revolution	2 <sup>nd</sup> Industrial Revolution	3 <sup>rd</sup> Industrial Revolution	4 <sup>th</sup> Industrial Revolution
<b>Prisecaru (2016)</b>	<b>Period/Date</b>	1760-1900	1900-1960	1960-2000	2000 - ....
	<b>Energy Source</b>	Coal, Steam	Oil, Electricity	Nuclear energy, Natural gas	Green energies
	<b>Transportation</b>	Train/Rail	Train, Car	Car, Plane	Electric car, Ultra-fast train
	<b>Communication</b>	na	na	na	na
	<b>Industry/Products</b>	Textile, Steel/Steam engine	Metallurgy, Auto, machine building/Internal combustion engine	Auto, Chemistry/Computers, Robots	High-tech Industries/Internet, 3D printer, Genetic engineering
<b>Davis (2016)</b>	<b>Period/Start Date</b>	1784	1870	1969	?
	<b>Energy Source</b>	Steam, Water	Electricity	na	na
	<b>Transportation</b>	na	na	na	na
	<b>Communication</b>	na	na	na	na
	<b>Industry/Products</b>	Mechanical Production Equipment	Mass Production	Electronics, IT, Automated Production	Cyber-Physical systems
	<b>Start Period/Date</b>	1750s - 1890s	1890s - 1940s	1940s - 1990s	1980s - Present
	<b>Energy Source</b>	Coal, Steam	Internal combustion engine, Electricity	Jet Engine, Cheap oil	Distributed Power, Renewable energy, Hydrogen fuel cells, Smart grids

<b>Kapoor et al. (2019)</b>	<b>Transportation</b>	Railway	Motorcar	Aircraft, Express motorways	Electric cars, Autonomous vehicles, Drones, Driverless cars
	<b>Communication</b>	Newspapers, Telegraph	Telephone, Radio, Television	Computing, Information systems	Internet Technologies
	<b>Industry/Products</b>	Factory	Mass Production	Automation, Petrochemical industry	AI, Machine learning, Additive manufacturing (3D printing), Digitization

4IR does not merely build on the technologies of the past industrial revolutions. It converges different digital and other technologies, enabling the convergence of the physical, biological, and digital worlds. Indeed, several realities and traditional boundaries are blurred in 4IR. Boundaries between hardware and software, cyber and physical systems, between industries, and even geographical boundaries are blurred. Consequently, it may be more apt to say that the digital revolution is a transition between the third industrial revolution and 4IR.

Artificial intelligence is the most definitive technology of 4IR (Kapoor et al., 2019). It is the technology most discussed in the literature on 4IR and is the technology contributing most to the realisation of the dawn of a new industrial revolution. However, 4IR encompasses several technologies. Over 1,200 new technologies have been identified with 4IR (Soh & Connolly, 2020). Other than artificial intelligence, other exponential 4IR technologies include quantum computing, 3-D printing, machine learning, nanotechnology, robotics, biotechnology, renewal energies, and blockchain technologies. The internet of things (IOT), electric and autonomous vehicles, are all products of 4IR. Some authors even equate 4IR to an umbrella term for these new technologies (Weking et al., 2020).

As with preceding industrial revolutions, there is no agreement on the commencement date of the 4IR. While Kapoor et al. (2019) write that 4IR began in the 1980s, Schwab (2016) and Davis (2016), on the other hand, while not being explicit about time, assert that it is only a recent phenomenon, possibly within the past decade. Others believe that 4IR began about two decades ago in the year 2000 (Prisecaru, 2016). However, knowledge of the accurate start time of 4IR is irrelevant. What is relevant is that the fundamental shift in technology and production is acknowledged, and appropriate actions taken.

#### ***4IR and Industry 4.0: Same or Different?***

One misconception prevalent in the literature on 4IR is the equating of 4IR to industry 4.0. The concepts are related, but they have different meanings. Industry 4.0 refers specifically to the application of new technologies to production and manufacturing and can be regarded as a subset of 4IR (Liao et al., 2018; Soh & Connolly, 2020). Industry 4.0 was coined in Germany in 2011 to refer to new emerging technologies in the manufacturing sector (Drath & Horch, 2014; Liao et al., 2018; Soh & Connolly, 2020). Originally termed “*industrie 4.0*” in German, the word became the name of Germany’s strategy and vision to develop smart cutting-edge technologies for advancing the German manufacturing industry (Liao et al., 2018). Consequently, the concept of industry 4.0 is a narrower concept relating specifically to manufacturing and predates 4IR. Other countries have since developed their own strategies and visions,

giving rise to similar terms such as “Piano Nazionale industria 4.0”, in Italy; “*Industrie 2030*, in Canada; and “*Productivity 4.0 initiative*,’ in Taiwan (Liao et al., 2018). Industry 4.0 thus refers to the digitisation and automation of the manufacturing industry (Brettel et al., 2014; Oesterreich & Teu-teberg, 2016; Weking et al., 2020). Manufacturing still constitutes a major sector of the modern economy and was the main driver of past industrial revolutions. Indeed, industrial revolution connotes remarkable advancements in the manufacturing industry. This, perhaps, accounts for why some of the literature, especially in academic fields relating to manufacturing and production such as engineering, consider industry 4.0 and 4IR as synonymous. However, as Soh & Connolly (2020) claim:

*“Like many new concepts, the Fourth Industrial Revolution suffers from a degree of nebulousness and some commentators treat Industry 4.0 and the 4IR as synonymous terms..... Regardless of the exact terminology being used by companies or analysts, these writings share certain recurring themes. The first is the ontological argument that we are witnessing the interpenetration of digital ecosystems with our environment and even our bodies. Henning Kagermann (2015, p. 24), one of the creators of the Industry 4.0 concept, defines digitalisation as the ‘convergence of the real and virtual worlds’. Whereas this was first narrowly envisioned as occurring on the factory floor, the 4IR has broadened its application to all social, political and economic activity. Our bodies are now data, physical goods are digitally enhanced, and our virtual worlds are becoming indistinguishable from the real thing”.*

The distinction between industry 4.0 and 4IR nevertheless appears very slight. Clearly, the concepts are related, and may sometimes refer to the same things, depending on the context of discourse.

It is envisaged that 4IR, when it is fully diffused into the world, will be different from the second and third revolutions. The envisaged difference will emulate the stark distinction between the agrarian era and the first industrial revolution. The nature of 4IR has created some concerns regarding job losses; increased income, class, and gender inequality; and even the threat of a nuclear disaster (Acemoglu & Restrepo, 2018; Bikse et al., 2022; Davis, 2016; Milushev & Pagés, 2018; Schwab, 2016; Stiglitz, 2018; Zervoudi, 2020). Economist and co-author of “*Why nations fail*”, Acemoglu, et al through some empirical analysis, recently indicated the potential effects of 4IR technologies such as robotics on labour markets. Their hypothesized results show net job decreases, reduced wages, and increased inequalities (Acemoglu & Restrepo, 2018, 2020). Schwab (2016), however, anticipates even a net increase rather than a net loss in 4IR, although there might be a huge gulf between low- and highly-skilled jobs. The 4IR changes raise ethical, human rights, social, and regulatory concerns (Davis, 2016; Schulze, 2019; Schwab, 2016; Soh & Connolly, 2020). However, it is difficult to know and accurately predict what the true effects of 4IR will be. Historically, industrial revolutions and technological advances have not eroded employment opportunities, but have led to the emergence of new jobs and occupations (Milushev & Pagés, 2018). The present fears and concerns may never materialize, but stakeholders need to investigate the possible implications of 4IR.

## **Industrial Revolutions and the Evolution of International Business (IB) and IB Theories**

Businesses are already observing the effects of 4IR. Business models are fast changing (Kohtamäki et al., 2019; Muller et al., 2018; Philbeck & Davis, 2019; Rachinger et al., 2019; Wahab et al., 2023; Weking et al., 2020). The concept of servitization, for example, recognises the blurring of the traditional dichotomy of businesses offering either products or services (Frank et al., 2019; Kohtamäki et al., 2019; Weking et al., 2020). Big data and individualized data now enable personalised product-service offerings and digitalizing individuals (Matt et al., 2019). There is greater connectivity between companies, between products and between customers through the internet of things (Kohtamäki et al.,



2019). Digitization, is fast giving way to digitalization, and it is changing business and society (Ivaldi, Scaratti, & Fregnan, 2022; Orji, 2019; Parviainen et al., 2017; Rachinger et al., 2019)<sup>3</sup>. Through digitalization, Uber and Airbnb, for examples, have altered taxi transportation and hotel and accommodation service offerings, resulting in new business models. Traditional firm boundaries, as the business and management world know it, are also blurred (Kohtamäki et al., 2019).

IB is also fast changing. Different versions of firm and organization within and across countries are a result of technological advancements and industrial revolutions (Kapas, 2008). Indeed, multinational companies are a product of the advancements brought about by past industrial revolutions (Wilkins, 2009). MNEs are by their very definition multi-unit and multi-locational entities that transcend national geographical boundaries (Alcácer et al., 2016; Buckley, 2014). Consequently, the competitive advantage of MNEs relies significantly on how they are able to distribute, coordinate, and control geographically dispersed activities (Alcácer et al., 2016; Howells & Bessant, 2012). Technological advancements in each successive industrial revolution, especially in transport and communications, have eased organization and management across national and geographical boundaries. It is therefore not surprising that MNEs have increased with each successive industrial revolution.

IB theories of internationalization have also evolved with industrial revolutions. Scholars advanced theories explaining the speed, scope, and intensity of growth of internationalization, the three aspects of internationalization most used for analysis (Hagen & Zucchella, 2014), as an implicit response to changing dynamics in IB. The speed of internationalization, for example, conventionally refers to the time it takes firms to expand beyond their national boundaries into foreign markets, especially after inception of the firm. The speed of internationalization was very slow during the first industrial revolution, picked up pace in the second industrial revolution, and increased rapidly in the third industrial revolution. This pace is reflected in extant theories of internationalization. In a nut shell, historically, new internationalization theories emerged in response to the changes in MNEs and internationalization. Theories such as Uppsala model (Johanson & Vahlne, 1977), the Ownership-Location-Internalization (OLI) (Dunning, 1988), and internalization theory (Buckley & Casson, 1976) emerged in the context of the second and third industrial revolutions. These theories explain why and how firms internationalized incrementally (Uppsala model), to maximize certain advantages (OLI), and internalized production in foreign markets (internalization). Electricity enabled mass production in the second industrial revolution beyond the mechanical production capacity of the first industrial revolution (refer to table 1). The search for new markets and the organisation and international management efficiencies created by technologies, enhanced internationalisation.

Automated production, in conjunction with new information and digital technologies sped up internationalisation in the third industrial revolution. International New Ventures (Oviatt & McDougall, 1994) and the 'born global' theories (Knight & Cavusgil, 1996; Rennie1993) are attempts to explain the speed of internationalisation of some firms during the third industrial revolution. This industrial era also witnessed the emergence of MNEs from emerging markets in Asia. Theoretical perspectives such as the springboard theory (Luo & Tung, 2007) and the Linkage-Leverage-Learning (LLL) model (Mathews, 2006) were developed to explain the expansion of multinational companies from emerging markets. Asian firms integrated new technologies optimally, specifically the digital technologies of the third industrial revolution, and enhanced their speed of internationalization. This development supported market-seeking strategic competitiveness of Asian enterprises, and ultimately Asian economies.

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<sup>3</sup> Digitization and digitalization are sometimes used interchangeably but they are quite different. Digitization refers to the conversion of analogue data into digital forms while digitalization is the application of digital technologies to transform products, services, processes, work, and activities, by organizations, countries, and industries (Parviainen et al., 2017; Ritter & Pedersen, 2020).

## African Business in 4IR

Home-grown African firms (except MNEs from South Africa – see Verhoef, 2011) are only just beginning to explore internationalisation options. In the quest for international expansion during 4IR, African firms may seem to be at a disadvantage for some reasons. First, many businesses in Africa do not yet have access to many 4IR technologies. Second, the power and energy, and other enabling infrastructure for 4IR technologies are either lacking or still very expensive in many African countries (Ekekwe, 2019; Kapoor et al., 2019). Many African businesses therefore do not yet have access to 4IR technologies. Moreover, the competitive advantages required for internationalization in this new industrial era are changing rapidly (Alcácer et al., 2016). Despite the rapid changes, differences of opinion exist about how these changes could impact IB and internationalisation. The decision to expand operations into foreign markets are primarily firm boundary decisions (Chen & Kamal, 2016). While some ICT technologies may lead to more geographical dispersion (Chen & Kamal, 2016), some recent 4IR technologies such as 3-D printing may lead to additive manufacturing and a consequently reduced participation in Global Value Chains (Laplume, Petersen, & Pearce, 2016). Although 4IR technologies are making factories “smarter”, manufacturing is getting more modular and fragmented (Grabowska, 2020). This may diminish the drive for internationalisation. However, manufacturing currently constitutes only a tiny portion of economic activity in Africa, which does not completely erode internationalisation of African business opportunities in other sectors of the economy.

To explore these opportunities, we consider a series of questions that are particularly pertinent to MNEs. Howells & Bessant (2012) argue that MNEs need to respond to a series of questions if interested in expanding operations internationally. These questions pertain to organisation, structure, and control of geographically dispersed activities, such as those conducted by MNEs. The relevant questions are where does the MNE wish to expand to, to how many places does it wish to expand to, what size of operations is contemplated, and what functions do the MNE wish to expand outside its home market? A fifth question may be added, namely, how (mode of operation) does the MNE intend to expand operations internationally? We use these five questions as a framework to explore how home-grown African businesses and MNEs may respond to 4IR successfully.

African businesses and MNEs may need to explore the application of 4IR technologies to effect successful internationalisation strategies. The expansion of African domestic markets (Ingenbleek, 2019) makes expansion into other African markets a logical first option. 4IR technologies could be used to provide solutions to market information or penetration into new markets, which could facilitate expansion beyond the domestic market. The success of Kenya’s M-PESA mobile money has global reach (Adaba, Ayoung, & Abbott, 2019; Ahmad, Green, & Jiang, 2020; Aron, 2018; Jack & Suri, 2014). The phenomenal success in Kenya expanded into other countries. M-PESA mobile money platform is now operational in six (6) other African countries<sup>4</sup> (Vodafone, 2020). In response to the questions about where the company wanted to expand to and into how many markets and with how many products, did not limit M-Pesa to a choice of geographies. M-Pesa could also diversify its mobile money operations into financial services, or office services (printing, document scanning etc) by simply utilising 4IR digital technology. Choices of product and service offerings, and industry choices need to be considered together with the choice of geographical location.

Fortunately, many 4IR technologies are making it easier for businesses to expand into industries that were hitherto considered unrelated industries. Companies such as Amazon, Google, and Tesla, have expanded into very unrelated industries (Adner et al., 2019; Kapoor et al., 2019). Home grown African businesses and MNEs can therefore consider a choice of geographical location jointly with another

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<sup>4</sup> Tanzania, Lesotho, Democratic Republic of Congo, Ghana, Mozambique, and Egypt

industry, product and service offerings when contemplating internationalisation through the exploration of 4IR technologies.

The questions of what size of operations, and what functions should be extended whereto, is an integrated decision. Although these questions can be distinguished, in the context of 4IR, they are inseparable. Home grown African MNEs are small compared to their counterparts in other developing markets, such as South East Asia, with the exception of South Africa. (Esho & Adegbesan, 2016; McKinsey, 2018). However, although small firms generally face more restrictions during internationalisation than large firms, they will benefit from close cooperation in a large network, and an open mindset to internationalise successfully (Pinho & Prange, 2016; Pinho, Martins, & Soares, 2018).

In the context of 4IR, firm size is not as consequential for internationalisation as it had been during the previous industrial revolutions. The general notion that a firm has to start business operations, grow, and then pursue international expansion only incrementally has long been dispelled by born global firms and international new venture firms (Knight & Cavusgil, 1996; Oviatt & McDougall, 1994; Rennie1993). It has become easier to be a 'born global' firm in the era of 4IR through the use of advanced technologies facilitating coordination, and control of geographically dispersed activities are easier and more efficient (Chen & Kamal, 2016). This is despite the threat of fragmented and modular factories that may lead to the preference for contractual governing modes rather than hierarchical governance (Laplume et al. (2016). Benefitting from 4IR, any business activity can operate from any geographical location, and enter into foreign markets regardless of firm size. African businesses need an open mind-set towards expansion into foreign markets. African firms can leverage 4IR technologies to develop core competences and capabilities in their specific domain of comparative advantage. The adoption of 4IR technologies should not only be motivated by the mere fact that it is used elsewhere but because it can advance business operations through leveraging international networks to gain access to advanced technology, such as 4IR technology. That will be an illustration of Mathews' LLL model.

However, the basic backbone infrastructure required for 4IR technologies to effectively function need to be put in place. African governments need to address the huge gaps in digital skills, provision of electricity, internet and general infrastructure that businesses require to thrive. The political will to do this needs to be reflected in appropriate actions that go beyond rhetoric on the pages of newspapers and organized 'strategic' documents. This promises to not only aid international business within the continent but to also attract the much-needed foreign investments.

Finally, what mode of entry do African businesses use to enter foreign markets? The most prevalent strategy of African MNEs is still predominantly commodity exports (Ibeh et al., 2012). Commodity exports do not yet constitute 'internationalisation' of business operations, but only distribution of products or services. More efficient 4IR information and communication technologies will not only enhance export operations, but also facilitate the transfer of actual business operations into foreign markets. To achieve that, African business must advance beyond mere exports as an international distribution strategy. They need to advance towards firm-level internationalisation through the utilisation of 4IR. This will require either one of greenfield operations, acquisition or joint venture (Meyer et al., 2009). Extant literature does not link internationalisation to any specific mode of entry. The important consideration has been the institutional environment of the home and host countries, especially when expanding to other African countries (Esho & Verhoef, 2020; Luiz, Stringfellow, & Jefthas, 2017; Verhoef, 2018).

## **POSSIBLE RESEARCH DIRECTIONS**

Despite uncertainty as to when 4IR really began, or will begin, the new industrial revolution is a recent phenomenon. Most extant studies on the possible effects of 4IR and its technologies in various

academic fields are only hypotheses and propositions. In June 2016, the Journal of International Business Studies, the premier journal of the Academy of international business published a special issue on “internationalization in the information age”. The editors of the special issue referred to this era as an information age, and not an entirely new industrial revolution. However, some of the papers were in relation to the emerging 4IR technologies (e.g. Laplume et al., 2016; Rezk, Srai, & Williamson, 2016). From 2016, the concept and reality of 4IR has become more prevalent, and research has cumulated. However, conceptual and empirical studies relating to 4IR in international business is still scarce. So are studies relating to African business and multinationals relating on 4IR. We therefore call for both conceptual and empirical studies on how internationalization of African businesses may be impacted by 4IR and 4IR technologies.

The benefits of embracing 4IR remain an assumption without substantiating empirical evidence. Do African businessmen and entrepreneurs observe 4IR technologies positively? What is the African business fraternity’s perception of 4IR? We call for studies to investigate the perception, knowledge and response of African firms to 4IR technologies. This will require quantitative and qualitative research into African business, entrepreneurship, firms and society towards 4IR. Mazonde & Carmichael (2020) recently called for the use of qualitative research in advancing African scholarship and contribution to knowledge generation in business and management in Africa, since it will enable an emic (insider) perspective. In support of this agenda, we call for case studies of African firms already embracing 4IR technologies. Such in-depth case studies may serve as blue print for other African firms to embrace the advantages 4IR technologies may offer. Improved digital information and communication technologies offer several opportunities to conduct qualitative research into African firms. Extensive content can be mined online and from social media and there are various online databases with data for qualitative research (Corti & Fielding, 2016; Goncalves & Smith, 2018). Although online databases for qualitative data are not yet common in Africa, the opportunity exists in Africa. With some creativity, these sources can be used to access data on African business, firms and entrepreneurs, and the application of 4IR in qualitative research. The recent global pandemic, COVID-19, for example, shifted the world onto virtual platforms for a variety of purposes. These virtual platforms can be utilised to conduct interviews and focus group discussions. We also call for general surveys and quantitative studies to accumulate data on business and entrepreneurship in Africa, whereby researchers can measure the attitudes and utility of African firms towards 4IR technologies.

4IR offers an opportunity in Africa for the study of new firms and new consumers, utilising new methodologies. The advantage of integrating 4IR in business in Africa, has the potential of Geschenkronian latecomer advantages, as well as, what Chandy & Narasimhan (2015) call a “compressed change”. While developed countries also adapt to changes under 4IR, the actual changes and the potential for changes, in Africa in particular, are massive and potentially unprecedented in scale, scope and speed (Chandy & Narasimhan, 2015). Some Africans advanced rapidly from not having a phone to owning a smart phone. Consumers in Africa are also leapfrogging grid electricity to green electricity such as solar energy. Some African countries could literally leapfrog from the second industrial revolution into 4IR. Consequently, the opportunity to study international business and management as 4IR unfolds in Africa presents a significant opportunity to scholars in IB, management and the history of technology. Research can explore whether 4IR changes the concept of the multinational company. While this question may appear irrelevant, 4IR makes answering this question, and related questions in IB, pertinent. If companies can reach out to global customers from one location, will the need to expand and have subsidiaries, green field operations, and other modes of internationalisation, be necessary?

## CONCLUSION

African business has the opportunity to embrace 4IR to expand operations outside the continent. The disruption brought on by Covid-19 pandemic has accelerated the rate at which businesses have

embraced 4IR solutions to challenges (Teagarden 2020). African business and MNEs need to take up the responsibility to not allow 4IR happen to them, especially in these times, but to seize the opportunities inherent in 4IR to expand into global markets and advance business through 4IR. 4IR is not merely about technology -it opens a myriad of opportunities. The opportunities lie in using the technologies to advance business and quality life in Africa. There is already a digital divide in Africa (Banga & te Velde, 2018). The opportunity for business in Africa is to embrace 4IR and implement a strategy to take advantage of 4IR. This strategy should of a necessity consist of providing the infrastructure that will serve as the backbone to facilitate the adoption of 4IR technologies. Given the limitations of a conceptual paper such as this, we conclude by calling for empirical research on business and 4IR in Africa, and how the continuing internationalization of African businesses can be enhanced in the era of 4IR.

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# STUDENT-LED HEALTH SERVICES IN AUSTRALIA AND NEW ZEALAND: COMPARING THE COSTS

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## ABSTRACT

*This paper highlights financial considerations in establishing and running student-led clinics, in two differing national contexts of Australia and New Zealand. Student-led services, where students in healthcare programmes are engaged in delivery of care under the supervision of health service staff and/or teaching faculty, are increasing in number globally and can offer both valuable clinical learning opportunities and cost-effective and complementary primary healthcare. However, achieving financial viability and sustainability remains a common challenge. Clinics often find themselves caught in a gap between government funding streams of health funding intended to fund provision of health services versus education funding allocated for teaching, learning or research purposes. We consider the costs associated with establishing student-led clinics and explore possible options for longer-term financial sustainability.*

**Keywords:** Student-led clinics; interprofessional education; clinical education; healthcare financing

## INTRODUCTION

Student-led clinics (SLCs), sometimes also described as student-assisted or student-run clinics, are healthcare settings or services where students are engaged in the direct delivery of health care under supervision. Their history is most extensive in the United States, where the first such clinic opened in 1967 (Chen, 2015), and a Society of Student Run Free Clinics (2023) now includes 150 US clinics (see also Smith, 2014). SLCs have also been established in other countries, including in Ireland (Kavannagh, 2014), the UK (Moseley, 2022), mainland Europe (Schutte et al. 2013), Australia (Buckley et al., 2014;

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Frakes et al., 2014; Peninsula Health, 2012), and New Zealand (Tokolahi et al., 2021). SLCs are typically designed to complement mainstream health services and often fill gaps in current service provision, particularly for marginalized or underserved communities. Most such clinics target underserved populations and provide care for chronic conditions.

The benefits they provide to health outcomes for clients (Broman et al., 2022) and student learning (Wilson et al., 2023) are increasingly recognised. Empirical evidence links student-led services to improved outcomes in areas as diverse as diabetes (Ryskina et al., 2009; Wilcox et al., 2013), hypertension (Atkinson et al., 2018; Smith et al., 2017), functional health/quality of life (Doherty, 2020; O'Brien et al., 2017), depression (Soltani et al., 2015), hospital utilization (Trumbo et al., 2018), substance use (Lough et al., 2011), weight (Cusumano et al., 2017), and health screening/vaccination rates (Butala et al., 2012; Price et al., 2020), amongst others. In addition, positive SLC student learning outcomes have been demonstrated in clinical skills (Lie et al., 2016; Stephens et al., 2015) interprofessional skills (Ambrose et al., 2015; Sick et al., 2014), empathy/compassion for underserved patients (Enich et al., 2021; Mercadante et al., 2021) and leadership (Scott, 2015). In the context of global health workforce shortages, and limited clinical placement opportunities, student-led clinics provide valuable clinical learning and interprofessional educational opportunities. Moreover, they provide opportunities to establish sustainable cost-effective links between students, higher education providers, community organizations and the community at large (Stuhlmiller & Tolchard, 2015).

A scoping review with stakeholder consultation undertaken of SLC's in New Zealand (Tokolahi et al., 2021), identified the following benefits and opportunities associated with such clinics:

For students:

- Generate real-world opportunities to implement practice (clinical and operational) and contextualise teaching and learning.
- Exposure to a diversity of clinical presentations.
- Students gained a holistic appreciation of the person.
- Create understanding of authentic and effective interprofessional teamwork
- Learning can be scaffolded in a safe/controlled learning environment.
- Chance to give back to the community.

For the community:

- Fill a healthcare gap and meet community need: there is a demand for services.
- Provision of affordable, good quality healthcare.
- Interprofessional teamwork between students was enjoyed by clients.
- Interprofessional practice provided clients with a one-stop shop for accessing services.

For educators:

- Collaborations with health provider partners: potential satellite services.
- Provides some of the necessary placements and practicum experiences students require.
- Consistent with government strategy and policies on health and well-being.
- Health practitioners all held accountable to the same overarching legislation (Health Practitioners Competence Assurance Act, 2003).

To be successful, SLC initiatives require innovative thinking, detailed planning, focused action and continuous support from participating partners, including affiliated educational institutions, academic

departments, professional staff, faculty, health authorities and regulators (Canadian Federation of Medical Students and Ontario Medical Students' Association, 2018; Frakes et al., 2014). Clinics are typically driven by key individuals, with clinic management not necessarily recognised in academic workloads (Tokolahi et al., 2021). The importance of effective integration with partnering community organisations should not be underestimated as this is critical to ensure the relevance of services and provides referral networks and pathways for engagement with clients (Pennington, 2020).

While the benefits of SLCs for students, educators and the community are well-documented, achieving financial viability and sustainability remains a common challenge as the overall case for public funding provision is currently unclear. A range of SLC models and approaches are identifiable within the literature, being located and structured within a health service (see, for example Frakes et al., 2014; Tang & Stanwell, 2013) or led by educationalists, 'the academy', or students themselves (see, for example, Buckley et al., 2014; Schutte et al., 2017; Stuhlmiller & Tolchard, 2015; Thakkar et al., 2019). SLCs operating within 'the academy' can find themselves caught in a gap between health funding streams intended to directly fund healthcare provision and education budgets which are allocated primarily for teaching and learning rather than health service provision. This funding gap impacts longer-term sustainability – even where they are successful and are demonstrating good outcomes, clinics may struggle to achieve longer-term viability, with longevity remaining elusive (Haines et al., 2015). There is a fundamental tension experienced in student-led services, between the somewhat divergent goals of effective and high-quality health service provision and growing the capability and knowledge of future health professionals.

In this paper, we consider the challenge of achieving economic and financial sustainability of student-assisted clinics, with a focus on considerations of two case examples within a New Zealand and Australian context: the Waikato Institute of Technology, New Zealand, and Swinburne Institute of Technology, Victoria, Australia.

### **Waikato Institute of Technology**

Waikato Institute of Technology, based in the central North Island of New Zealand, is part of Te Pūkenga, the national Institute of Skills and Technology (Wintec, n.d.). Wintec's Centre for Health and Social Practice (CHASP) offers programs in nursing, midwifery, social work, counselling, physiotherapy, and occupational therapy underpinned by a strong commitment to interprofessional education and practice (Wintec, n.d.). CHASP students increasingly undertake placements within Wintec's recently established SLC, the development of which is supported by a multi-year, \$1.5 million Community Impact grant from Trust Waikato (Wintec, 2021). Named Te Kotahi Oranga Health and Wellness Centre, the clinic is progressing well in early pilot phases of establishment and operation – strongly supported by community health providers including the Rauawaawa Kaumatua Charitable Trust (n.d.) who have partnered with the Wintec team in the pilot phase of the project. The rationale, along with the associated education and health outcomes, are well supported in the literature (Broman et al., 2023; Wilson et al., 2022) and the team has progressed collaboration across participating health, social service, and sport science professions (Andersen et al., 2023). The team are now focussed on the options to ensure ongoing sustainability of the endeavour after three-year establishment grant period.

### **Swinburne University of Technology**

Swinburne University of Technology was first established as a technical college in 1908, becoming a university in 1992 and establishing a School of Health Studies in 2014 (Swinburne, 2022). Swinburne's School of Health Sciences offers programs in nursing, psychology occupational therapy, physiotherapy, nutrition, dietetics, health sciences, and exercise science (Swinburne University of Technology, n.d.). The school has a long-standing history in the delivery of a single--profession

psychology clinic (Swinburne University of Technology, 2023) and in the context of health service expansion is now exploring the establishment of an interprofessional SLC. The operational requirements for an interprofessional versus single-profession clinic are significantly different and so Swinburne and Wintec have partnered in the joint exploration of financially sustainable options in their respective jurisdictions.

Operating SLCs in New Zealand and Australian contexts poses financial challenges not necessarily experienced in the United States, where most SLCs are currently located. There, the structure of the healthcare system means a wider range of funding sources are available, including grants, philanthropic foundations, and government ‘safety-net’ funding for underserved populations. Operating SLCs in countries with publicly funded health and education systems means SLCs must offer a value proposition extending beyond those provided within the public system to justify their existence and secure necessary funding. In this paper, we detail the costs associated with establishing student-led services in these contexts and explore options for longer-term financial sustainability. Before doing so, it is necessary to consider the literature around costs and benefits of SLCs more broadly, and it is to this we now turn.

## LITERATURE REVIEW

A limited number of published studies have detailed specific costs associated with SLCs, with a 2022 literature review (Simmons et al, 2022) finding the costs of healthcare to have been assessed in only 2 of 14 assessed studies of student-led healthcare services. One recent exception is Min et al. (2023), which provides a budget and breakdown of all expenditures at an SLC, along with average costs of services provided to patients. A cost and cost analysis for this clinic, associated with The Ohio State University College of Medicine in Columbus, Ohio, revealed that the average cost (all in USD) per clinic was \$53.55 (per patient: \$2.14) for general clinic supplies, \$43.74 (per patient: \$7.29) for telehealth, \$278.47 (per patient: \$12.66) for laboratory services, \$247.25 (per patient: \$10.75) for pharmacy services, and \$8.30 (per patient: \$1.19) for social work. These direct costs of patient care did however account for less than a third of total costs, with the highest cost categories for the clinic being volunteer appreciation and administrative overheads. Some of these costs reflect the typical ‘service learning’ model of many US clinics, whereby student involvement is on a voluntary basis, with the assistance of volunteer licensed professionals (Adel et al., 2021). This pro-bono model means that some examples of narrowly-focused student-run health services are very low cost, especially where care provided is narrow in focus. For example, a student-run physical therapy clinic in Kansas incurred a total outgoing cost of \$1,993.23 for 253 patient visits, an average cost per visit of \$7.64 (2016 USD values, \$2,549.81 and \$9.77 today) (Sticker et al., 2013). This does however ignore wage opportunity costs.

Ultimately, patient care from students requires supervision from healthcare professionals, either on a voluntary or paid basis. We can find very few instances of supervisory staff operating on an unpaid or voluntary basis in either Australia or New Zealand (Frakes et al., 2011; Stuhlmiller & Tolchard, 2015; Tang & Stanwell, 2013; Tokolahi et al., 2021). The only exception identified is reported by Konduru (2019), being a student-run clinic model addressing medical needs of homeless populations in Adelaide. This clinic, though involving Flinders University College of Medicine and Public Health students, operated on a ‘no objection’ basis from the medical school at a homeless support centre, staffed by medical students supported by supervising doctors. However, despite positive results, the clinic was forced to close after 2 years of operation due to difficulties in finding doctors to supervise the clinic. The report concludes that for future student-run clinics to be successful in Australia they would need to be affiliated to a medical school, to access formally appointed clinical supervisors.

Evidence suggests that in Australia or New Zealand clinical placements in SLCs have a higher cost basis than placements in traditional hospital or primary care service settings. Economic modelling using cost data collected from a pilot study in Melbourne, Australia, suggested that each student day of clinical education cost AUD \$175 (at 2011 values, approximately AUD \$240 today) more than conventional hospital-based placements (Haines et al., 2014). The Sutherland Chronic Care Student Led Clinic (Tang & Stanwell, 2013), based at a hospital inpatient and community outpatient clinics and involving health screening, health promotion and referrals, involved actual costs (above BAU) of \$195,139 AUD (\$256,768 in 2023 values). Given these additional associated costs, training institutions may see little benefit in assuming responsibility for the operation of SLCs. Simmons et al. (2022) note how student-led healthcare services continue to face difficulties demonstrating their contribution from an economic perspective.

Of note, a narrowly focused analysis of costs does not take into account possible health benefits or savings associated with SLCs. Empirical evidence has also shown significant ( $P < 0.001$ ) decreases in average ED utilization of 0.39 visits per patient per year amongst patients cared for at a SLC in Boston, Massachusetts. This translated to 62.01 avoided ED visits annually, and estimated payer savings of \$84,148 (approximately \$109,132 in today's values), representing 68 percent of the clinic's direct operating costs (Thakkar et al., 2014). Similarly, Arenas et al. (2017) utilised a Monte Carlo simulations methodology to estimate health impacts (in quality-adjusted life-years) of common preventative health measures, providing evidence that a student-run clinic in Philadelphia with an annual operating budget of \$50,000 saves 6.5 QALYs, corresponding to over \$850,000 saved in healthcare costs. These values are equivalent to approximately \$62,627.69 and \$1,064,670.77 (USD) today.

Local evidence regarding costs and benefits of clinics in New Zealand or Australia are very limited. No New Zealand studies of existing clinics have examined costs or cost benefits of existing clinics in detail, though some have identified concerns with time, resources, and sustainability in a broad sense (Allan et al., 2011; O'Brien et al., 2016). A single Australian has reported the potential savings associated with care in a SLC. Stuhlmiller and Tolchard (2015) recorded how a SLC established in a rural disadvantaged community recorded the clinic as having offered over 1000 occasions of care and involved around 1500 community members in health promotion activities over the first year of clinic operation, with cost savings to the health service estimated to be \$430,000 (the equivalent of \$543,740 today). Without having presented the costs associated with running the SLC, however the true cost effectiveness of running such services cannot be determined. Detailing these costs is a key aim of this paper.

## **METHOD**

The authors are integrally engaged with the early development and operational modelling of clinics in Melbourne, Australia (via Swinburne University of Technology) and Hamilton, New Zealand (via Wintec Te Pūkenga). This study highlights an initial high-level exploration of financial costs and possible funding sources and operating approaches for such clinics by a comparative case study approach. Comparative case studies, as outlined by Goodrick (2014), “cover two or more cases in a way that produces more generalizable knowledge about causal questions – how and why particular programmes or policies work or fail to work.” This approach is particularly appropriate in situations where the aim is to identify and explain how features unique to specific contexts influence the success of programmes or initiatives (such as SLCs). Comparative case studies analyse the similarities, differences and patterns between cases sharing a common focus or goal. More specifically, case studies relate to Te Kotahi Oranga | Health and Wellness Centre at Wintec Te Pūkenga and Swinburne University's planning considerations in establishing an interprofessional SLC. This manuscript reports stage one of a detailed examination of cost structure and sustainability options.

The initial inquiry reported in this manuscript involved authors from the respective entities exploring three key areas of foci, specifically:

1. The 'costs' involved with an education owned and operated clinic
2. Identifying alternate options for clinic ownership and operation
3. Identifying possible funding sources to support student-led health services

During this initial process of inquiry, authors from both entities shared information about their respective clinic planning, establishment, and operating status along with comparison of core costs in running a clinic. Comparison was then made between the cost of sending a student on a traditional clinical placement in hospital or community setting versus placement within an on-site, educational entity operated SLC.

## RESULTS

Results highlight the case-reported direct costs of running an education owned and operated clinic in the Australian and New Zealand context, respectively. Results also report the range of ownership and operating options available for consideration along with potential sources of funding to be explored in stage two of this study.

### Costs

Table 1 shows indicative costs to education providers of traditional 'external' placements vs SLC placement costs, in Australia (Swinburne) and New Zealand (Wintec). Costs are forecasted into future years, given the challenge for clinics in achieving longer term sustainability. These costings may be useful indications for planning in other contexts, given the difficulty in estimating fiscal costs associated with an SLC (which include labour and non-labour costs). Costs in both cases include staffing for clinical supervisors (preceptors) and administrative officers organising placements, but SLCs also require managers and a level of in-house clinical staff to oversee the service. SLCs also require significant set-up costs, including clinical and IT equipment, consumables and other operational expenditure that are not accrued (at least as directly) in traditional placements. The money saved by providers in permanent placement fees do not cover the costs associated with such a clinic: an annual funding gap in Year 5 of operation of AUD\$474,297 in the Australian case and NZD\$740,096 in the New Zealand case. If no other income stream can be sourced, this financial shortfall would need to be made up by the institution.



**Table 1:** Indicative costs associated with traditional placements vs student-led clinic placements, in Australia (Swinburne University of Technology, Melbourne)

## a) student-led clinic placement

Student led clinic with infrastructure	30 students per week	48 weeks per year	Year 1	Year 2	Year 3	Year 4	Year 5
Item							
<b>Revenue</b>							
Patients per day	Fees free						
Saved per diem rate			\$72,000	\$74,160	\$76,384	\$78,676	\$81,036
<b>Cost</b>							
Placement/admin officer (HEW 6)	As per physio model		\$109,134	\$112,408	\$115,780	\$119,254	\$122,831
Clinical supervisor (Level B)	" "		\$152,622	\$157,201	\$161,917	\$166,774	\$171,778
Practice manager (HEW 10)			\$179,365	\$184,746	\$190,288	\$195,997	\$201,876
Registered Nurses 1			\$97,069	\$99,980	\$102,980	\$106,069	\$109,251
Consumables		Ongoing	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Equipment		Set up					
CLE	\$539,000						
Equipment	\$300,000						
AV	\$200,000						
Software - patient records	\$50,000						
	\$1,089,000		\$1,089,000				
Rent and outgoings**			\$260,000	\$267,800	\$275,834	\$284,109	\$292,632
<b>Total</b>			<b>\$1,895,189</b>	<b>\$827,975</b>	<b>\$850,414</b>	<b>\$873,527</b>	<b>\$897,332</b>
Note: the above includes only direct costs for the operation of the service. Excludes any other central University costs e.g., IT services, P&C, Finance, SUT management, other facilities costs (security, etc)							
**Nominal rent and outgoings for a 650smq property would be approx. \$260k p.a.							

## b) Traditional (external) placement

Traditional (students placed externally)	30 students per week (6 per day)	48 weeks per year	Year 1	Year 2	Year 3	Year 4	Year 5
Item	Cost						
\$ per day placement fee	\$40 + 3%	\$1500 \$72,000	\$72,000	\$74,160	\$76,385	\$78,676	\$81,037
\$ per day visiting supervisor (Level B)	From Physio model		\$76,311	\$78,600	\$80,958	\$83,387	\$85,889
Placement officer (HEW 6) full-time			\$109,134	\$112,408	\$115,780	\$119,254	\$122,831
Academic placement allocation (supervision hours)	Hours per student as per AWM per semester		480	480	480	480	480
	Mid C rating	246.7	\$118,416	\$121,968	\$125,628	\$129,396	\$133,278
<b>Total</b>			<b>\$375,861</b>	<b>\$387,137</b>	<b>\$398,751</b>	<b>\$410,714</b>	<b>\$423,035</b>

**Table 2:** Indicative costs associated with traditional placements vs student-led clinic placements, New Zealand (Wintec Te Pūkenga)

## a) student-led clinic placement

Student led clinic with infrastructure	30 students per week	30 weeks per year	Year 1	Year 2	Year 3	Year 4	Year 5
Item							
Revenue							
Patients per day	Fees free						
Saved placement fee			\$23,400	\$24,102	\$24,825	\$25,570	\$26,337
Cost							
Staffing							
Placement/admin officer	Clinical experience team	1 FTE	\$66,719	\$68,721	\$70,782	\$72,906	\$75,093
Manager		0.8 FTE	\$88,000	\$90,640	\$93,359	\$96,160	\$99,045
Research/Ops Co-ordinator		1 FTE	\$90,000	\$92,700	\$95,481	\$98,345	\$101,296
Occupational Therapist		0.8 FTE	\$68,000	\$70,040	\$72,141	\$74,305	\$76,535
Registered Nurse		0.8 FTE	\$68,000	\$70,040	\$72,141	\$74,305	\$76,535
Admin/ Reception		0.8 FTE	\$42,500	\$43,775	\$45,088	\$46,441	\$47,834
Research		0.5 FTE	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Clinical supervision		0.2 FTE	\$17,550	\$18,077	\$18,619	\$19,177	\$19,753
Community partners/extra staffing			\$14,150	\$14,575	\$15,012	\$15,462	\$15,926
Annual expenses							
Marketing/PR			\$2,000	\$2,060	\$2,122	\$2,185	\$2,251
IT software			\$12,900	\$13,287	\$13,686	\$14,096	\$14,519
Minor assets			\$9,000	\$9,270	\$9,548	\$9,835	\$10,130
Travel/ Accom/ Meals			\$15,000	\$15,450	\$15,914	\$16,391	\$16,883
Consumables			\$15,000	\$15,450	\$15,914	\$16,391	\$16,883
CAPEX							
Furniture, fittings, equipment	\$79,250						
IT hardware	\$75,000						
IT software	\$6,800						
Extended clinic build – on campus	\$1,500,000						
	\$1,661,050		\$1,661,050				
Facilities overheads			\$200,000	\$206,000	\$212,180	\$218,545	\$225,102
Indemnity insurance			\$80,000	\$82,400	\$84,872	\$87,418	\$90,041
<b>Total</b>			<b>\$2,518,269</b>	<b>\$882,937</b>	<b>\$909,425</b>	<b>\$936,705</b>	<b>\$964,811</b>
Note: the above includes only direct costs for the operation of the service. Excludes any other central University costs e.g., IT services, P&C, Finance, marketing, other facilities costs (security, etc)							

## b.) Traditional (external) placement

Traditional (students placed externally)	30 students per week (6 per day)	30 weeks per year	Year 1	Year 2	Year 3	Year 4	Year 5
Item	Cost						
\$ per day placement fee	\$26 + 3%	\$780 \$23,400	\$23,400	\$24,102	\$24,825	\$25,570	\$26,337
\$ per day visiting supervisor	Hourly Paid Academic		\$98,807	\$101,771	\$104,824	\$107,969	\$101,208
Placement officer full-time	Clinical experience team		\$66,719	\$68,721	\$70,782	\$72,906	\$75,093
Academic placement allocation (supervision hours)	0.5 hours per student per week		450	450	450	450	450
	Average rate per hour	\$43.59	\$19,615	\$20,201	\$20,810	\$21,434	\$22,077
<b>Total</b>			<b>\$208,541</b>	<b>\$714,795</b>	<b>\$200,431</b>	<b>\$227,879</b>	<b>\$224,715</b>

## DISCUSSION

The rationale and demand for health workforce training is unequivocally clear with current, major health workforce and worsening trends forecast. Equally clear is the increasing demand for better support for clients with complex, chronic health conditions – particularly those requiring regular engagement with the health system over long periods of time. This signals a growing imperative for health service redesign (Murtagh et al. 2021) and changes in the way in which health professionals are educated (Frenk et al., 2010). New models of client centred care characterised by increased interprofessional collaboration and practice is now a core expectation of 21<sup>st</sup> century health professional education and health service delivery – emphasised within New Zealand legislation (Health Practitioners Competence Assurance Act 2002, s. 118) and strongly promoted within Australia's current 'Strengthening Medicare' discussions (Australian Government, 2023) which include the notation that '*Well executed team-based, multidisciplinary care offers a higher quality of care, resulting in better health outcomes for Australians*'. A key question remains around how these expectations can be sustainably embedded within health professional education.

### Potential funding sources

#### 1. Educational funding

In Australia and New Zealand, government provided teaching and research grants are the primary sources of funding for higher education along with student fee contributions supported by government student loan systems (Ferguson, 2021; Tertiary Education Commission, 2021). The largest source of higher education grant funding in Australia is the Commonwealth Grant Scheme (CGS) through which course fees are subsidized for eligible students. The largest source of higher education funding in New Zealand is via the Tertiary Education Unified Funding Scheme (UFS) for vocational education providers and Student Achievement Component (SAC) funding to universities (Tertiary Education Commission, 2023). These

core funding provisions are designed to support the direct costs of teaching delivery including work integrated learning and clinical placement costs. The funding does not cover full costs; therefore, shortfalls are funded by students' fees including the higher fees gained from unsubsidized international student enrolments. Therefore, it is not unexpected that higher education leaders will seek the lowest-cost viable option which in the current context includes placement in traditional placements rather than new innovations such as SLCs (refer comparative costs in Tables 1 & 2).

The most obvious source of 'income' for SLCs in Australia and New Zealand is a redirection of the per-day payment learning institutions provide to health providers. Such payments are widely accepted in Australia and New Zealand and recognise the costs associated with accommodating and supervising students. In Victoria, a Standardised Schedule of Fees for Clinical Placement of Students in Victorian Public Health Services (Victoria Department of Health, 2022) increases the transparency of clinical placement fees, maximum per-day fees in 2023 are AUD\$67.68 for Nursing and Midwifery students and AUD\$38.27 for Allied Health students. However, as shown in Tables 1 and 2, redirection of these funds still leaves a funding gap between traditional versus SLC placements. Unless educational institutions are willing to directly subsidise clinic budgets from other income, additional funding for SLCs need to be sought from the health sector or philanthropic sources.

## 2. Health funding

In New Zealand, the majority of government health funding is via Te Whatu Ora, the national health agency. Most primary health funding through the agency is distributed via primary health organisations (PHOs), geographically based care providers funded on a capitation basis (Te Whatu Ora, 2023). However, most funding is provided via enrolment with specific practices, with enrolment (and primary responsibility) for patients difficult for SLCs – as primarily complementary services – to facilitate. A further potential funding source in New Zealand is Accident Compensation Corporation (ACC), which provides no-fault personal injury cover to all in New Zealand (ACC, n.d.). ACC funds rehabilitation for those who have experienced injury, and lesser (though still significant) amounts on accident prevention. Exploring the potential for student-led services in these areas may be worthwhile.

The most obvious potential funding source in Australia is billing Medicare (Australia's universal health care insurance scheme) for services. Various health professionals including allied health professionals can register for a personal billing number, however, there are restrictions on billing provisions by teaching academics in educational institutions. It is worth noting that historic reports on an Australian-based clinic (Frakes et al., 2011; Kent, 2011) report not having been successful in accessing such funding. An allied health student-assisted chronic disease clinic in Rockhampton, Queensland was financially supported in establishment by health services resources: both district (from CQHSD) and State (from the Queensland Health Allied Health clinical education unit). Queensland Health is the overall public health service in Queensland, made up of 16 hospital and health services including CQHSD (Frakes, 2011). Frakes et al. (2011) noted that this funding covered establishment, but that other sources of income were required to ensure sustainability for the clinic.

## 3. Philanthropic/private sector soft funding

A further potential funding source is philanthropic funding. SLCs may be established and subsequently apply for grant funding or be awarded grants for establishment. Te Kotahi Oranga, for example, was awarded from Trust Waikato a NZD\$1.5 million grant which has funded establishment and staffing costs (Wintec, 2021), while Wintec as the educational organisation provides additional financial and in-kind support. Grant funding involves administrative accountabilities through grant writing and reporting and is more likely to be successful where clinics can demonstrate impact. Philanthropic funding is generally time limited and thus not likely to provide for sustainability in the longer term.

## Ownership and operating options

In detailed consideration of options including investigating clinical models in both contexts and a detailed search of the literature, teams in both institutions have identified a range of possible clinic operating models possible in Australian and New Zealand contexts.

### 1. Education-provider owned and operated entity.

Under this model, education providers offering health programmes lead, staff and operate a clinic hosted typically on their own campus. The Swinburne Psychology Clinic is such an example. Such models offer some benefits for educational providers in terms of ensuring the prioritisation of educational requirements for students (such clinics need prioritise only education provider/learning requirements). Lines of responsibility are likely simplest in such a model (Brownie et al., 2021). As tertiary organisations are education and not health providers, this model can mean extensive implementation requirements and investment, including in patient management software and policy, accreditation, and insurance. Dedicated staff are usually required to supervise and manage the clinic. In practical terms, clinics can be aligned and managed primarily within the academy, or alternatively via the education providers' student health service.

These models can be difficult for education providers to sustain financially. As shown above, costs are significantly greater than the traditional model where students are allocated placements with external health providers. The extensive set-up costs of equipment required are exacerbated by ongoing operational expenditure that is typically greater (at least in Australian and New Zealand contexts) than the cost of external placements. As a result, such models are typically only supported by educational organisations when absolutely necessary to meet teaching and learning imperatives (for example, where external providers/placements are limited or unavailable). While clinics operating under this model can offer significant health benefits to the community via low- (or no-) cost services, funding to recognise this has proven elusive. It is important to note that SLCs often find it difficult to monetise services by directly charging clients, both because services delivered by learners are considered 'lower quality', and clinics typically target underserved communities.

### 2. Partnership-based entity.

These models involve education providers partnering with established health provider partners to establish student-led services. These services can be located within the education provider or partner organisation facilities, and led and staffed by either or both of the organisation/s. The benefits of such an arrangement include that the partner will have established client base and service reputation to draw upon; established funding sources; and the necessary accreditations. However, there may be tensions between the primary focus of the educational entity on teaching and learning and the healthcare imperatives of the partner. Note that literature showing how successful alliance ventures involve processes of learning, reevaluation, and readjustment. As Elmuti et al. (2012) have noted in this journal, those searching for strategic alliance partners should look at compatibility, not only in terms of objectives of each prospective partner via the venture – but also organisational culture, resources, and willingness to learn.

Such partnerships can be between an education provider and a public health service, such as in a SLC project at the Frankston Community Rehabilitation Centre (Victoria, Australia) which was a partnership between Monash University and Peninsula Health, the public healthcare provider for Victoria's Mornington Peninsula (Kent, 2011). However, in this case neither Medicare (Australia's universal health care insurance scheme) or Social and Community Services funding was received for the services, leaving the initiative entirely reliant on an establishment grant. Other examples involve partnerships with non-government or third sector organisations: the Wintec Te Kotahi Oranga Health and

Wellness Centre has partnered with Rauawaawa Kaumatua Charitable Trust, for example, with significant success.

### 3. Health service owned and operated entity.

Under this model health services (whether public or private) establish and fund services for clients which are staffed and run by students to some extent. These are closest to traditional placement models with students on placement with the provider and the provider having responsibility for meeting both health and learning outcomes. An example in Australia is Capricornia Allied Health Partnership (CAHP) (Frakes et al., 2011). CAHP is a partnership between Central Queensland Health Service District (CQHSD) and the Capricornia Division of General Practice. CQHSD is based on the Tropic of Capricorn in Northern Australia and serves a population of approximately 200,000 people across 101,100 square km, centred on the city of Rockhampton. Recognising the acute difficulty in attracting healthcare workers, the CAHP clinic was established on the initiative of local clinicians in late 2006, to meet patient need and to engage students in rural practice with the expectation it would lead to improvements in student recruitment. Frakes et al. (2011) report the clinic involving students from multiple universities across Australia, from Occupational Therapy, Podiatry, Dietetics, Exercise Physiology, Pharmacy, and Social Work. Placements in rural areas offer unique learning experiences, and experience with a wide variety of clients and models of delivery, as well as a realistic understanding of rural health service provision and the skills required to work in such locations (ClinEd Aus, n.d.).

## Leadership

Despite the compelling support for IPE and SLCs, many researchers over the past 15-20 years highlight the difficulties associated in progressing models of interprofessional education in practice, given complex processes and significant implementation issues (Abdelaziz et al., 2021; Bridges et al., 2011; Homeyer et al., 2018; Lash et al., 2014). All conclude that IPE is a challenging process requiring significant administrative, professional, and academic leadership to ensure effective implementation. Leadership barriers include the challenges of aligning single-disciplined curricula, timetables, competency requirements, and accreditation processes; tensions between disciplines; challenges in designing shared learning spaces; time lost to IPE placements that is needed to demonstrate discipline specific competencies; outcome and assessment measures outside of standard profession-specific scopes of practice; non recognition of IPE as clinical placement hours and more (Abdelaziz et al., 2021; Braithwaite et al., 2013; Bridges et al., 2011; Homeyer et al., 2018; Lash et al., 2014).

Complexities intensify when IPE is expanded to include clinical experience within student-led clinic services (Tang & Stanwell, 2013). Evaluation of the Sutherland Chronic Care Student Led Clinic developed in New South Wales by the Southeastern Sydney Local Health District (2013) highlight additional complexities involved in coordination across programs in up to four university providers, the limited resources for supervision within the clinics; and the funding complexities in working across major portfolios, i.e., health, education and disability support services (Tang & Stanwell, 2013). Report authors note that while the showcase was very positive, issues of funding sustainability remain unresolved with the extra costs of a clinic coordinator, clinical supervisors and administrative staff not contained within existing health or education funding provisions. These issues have persisted with the passage of time demonstrating the need for solution-focused cross sector economic modelling and leadership at the highest level of the participating organizations (Arenas et al., 2017). SLC endeavors require authentic commitment and leadership from both higher education and health service administrators, community partners, deans, faculty, and service leaders of multiple professions (Arenas et al., 2017; Bridges et al., 2011).

## **LIMITATIONS AND FURTHER STUDIES**

This study is limited in that the financial analysis relates only to two higher educational contexts and possible operating models: there may be differences in potential or real costings for different university clinics or national contexts. The models also contain some assumptions, such as the specific health professionals being trained. A clinic providing 1:1 psychology assessment and interventions clients may operate very differently to one providing community primary healthcare, for example. Each of the funding options and organizational models within this paper requires more detailed economic and fiscal analysis and testing.

An obvious direction for future research lies in in-depth economic and actuarial studies providing a broader impact analysis of SLCs. Outcomes and benefits of such clinics need to be considered via a wider fiscal lens than the current 'bottom-line' approach of individual institutions and whole-of-system cost-benefit ratios conducted. Such modelling, measuring the value of accredited exercise physiologists in Australia has previously been undertaken by Deloitte, finding that for every \$1 an Australian spends engaging the services of an accredited exercise physiologist, benefits of \$10.50 could be received in terms of improved wellbeing, improved productivity and reduced out of pocket health system expenditure (Deloitte Access Economics, 2015). Similar investigation for SLC expenditure holds the potential to confirm the benefits for such models, and drive policy and practice change.

## **CONCLUSION**

Analysis of the costs involved in operating a SLC as a university/education provider owned and operated entity poses significant financial challenges in both New Zealand and Australia (see Tables 1 and 2). The key reason is that educational entities are not funded as health service providers and health service providers are not funded to establish, trial and deliver educational innovations. Initiatives such as SLCs thus require cross-sector collaboration and subsidization, but this is difficult to achieve in an environment where health agencies are buying health services, and education buying education services. Ultimately, this points towards a need for broader reform in health and education funding in both Australia and New Zealand. In health but also many other fields, the complex problems we increasingly face require the creation of multidisciplinary teams with complementary expertise – and cross-institutional collaboration. The example of student-led clinics, which are educationally and clinically proven, shows that systems of funding and provisioning to support necessary innovation and improvement are lacking.

It is difficult not to conclude that major cross sector reform is needed between health and education policy makers and funders to better support the collaborations and innovations in health professional education needed to strengthen interprofessional education and care and better meet current health service need. This aligns with a growing recognition that existing systems, such as primary healthcare delivery via 15-minute, fee-for-service GP consults are not fit for purpose. In Australia, for example, Health Minister Mark Butler has argued that “too many Australians simply can’t get the care that they need when and where they need it out in the community” and promoted a Medicare model “that’s more blended, that has more wraparound funding, particularly for older patients and patients with complex chronic disease” (Ransley, 2023). SLCs provide one such model.

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# DEVELOPING A PRODUCT NETWORK THROUGH USER-GENERATED RECOMMENDATIONS VS SYSTEM-GENERATED RECOMMENDATIONS ON COMMERCIAL ONLINE PLATFORM

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## ABSTRACT

*Recommender systems are an integral part of many commercial platforms. A subset of recommended products is the result of the aggregated behavior of users who also purchased those products, known as the user-generated network. User-generated product reviews, images, and hashtags are increasingly valuable sources of information for customers to make product decisions online. A recent work stream addressed the economic impact of the review. Typically, the influence of product reviews is explained by numerical variables representing the value and number of reviews. On the other hand, the platform itself provides some products related to these products in a more generic way, for example: B. Product categories. Product recommendations are basically a filtering system that tries to predict and display items that a user might want to buy. It might not be completely accurate, but if it's showing you something you like, then it's working. This set of recommended products is called a system-generated network. Our goal is to capture the evolution of product networks in terms of link formation and removal as a consequence of any of the above suggestions by taking into account the strength of nodes in the network. Our results show that while user-generated recommendations have a strong impact on link formation and rank distribution in product networks, system-generated networks have no significant effect.*

**Keywords:** Recommender System, Recommended Product, User-Generated Product Review, Product Network, System-Generated networks

## INTRODUCTION

An interesting development in the retail industry in recent years is the emergence of online marketplaces. These platforms vary in what they offer, from specialized platforms that sell specific types of products (such as Netflix) to general platforms with different product categories (such as Amazon). Online platforms simplify the search and purchase process by providing the ability to compare similar products, access user-generated feedback, obtain additional product information that is difficult to obtain during the traditional purchasing process, and most importantly, keep informed about product availability. This has led to the emergence of online product networks where a large number of related products displayed on a website are linked by hyperlinks. Links between any two products are usually created using recommender systems using collaborative filtering algorithms. That is, the Recommender creates

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and displays a list of products deemed relevant based on historical data of "purchased" products. The most famous examples of this type of recommendation system are "frequently bought together" or "customers who viewed this item also viewed this item". There is also a type of recommendation system, which is not only based on user-generated data, but also recommends products on the Internet that are more system-generated. That is, the platform itself creates a network of products that are assumed to be related to the focused product. But recommended products are the result of system evaluation criteria, not user behavior. For example, we might refer to "Sponsored products related to this item" on Amazon.

In the above-mentioned product network, the webpage of the product plays the role of node, and the hyperlink is the result of the recommendation system, which is the edge. To illustrate further, let's look at the classic example of a brick-and-mortar store versus an online business platform, and their analogy in terms of nodes and links. Imagine that browsing a platform is the equivalent of walking up and down the aisles of a store. The product's position within the network of connected sites acts as a "shelf placement".

One of the fundamental decisions to make when offering a product to potential customers in a brick-and-mortar store or online commerce platform is the value of the product. Knowing the full value of products, brands, and even product categories can help managers make decisions about offering the best product basket and deciding which products to promote and how to price them. But the existence of inbound and outbound connections of the focal product causes the true value of the focal product to be confused with the true value of other products in the product network. The network value of the product must also be considered. Network value refers to the excess revenue generated by traffic redirected to key products and the revenue generated by traffic redirected to other products in the network (Oestreicher et al., 2013).

The existence of recommendation networks and product networks manipulates the demand for products by directing users' attention to products related to the products users search for. Researchers are interested in understanding the mechanisms by which product demand is affected by product network attributes. There are some studies on the impact of product web recommendation on search (Kim et al., 2010) and product sales (De et al., 2010). Product network formation is not limited to physical products or product-product networks. Each product can be integrated into different types of networks and take advantage of the characteristics of the network. One of the non-product networks is the user's social network. That is, the demand for a product may be influenced by the product's engagement in a network of users connected by a common interest. A good example of the influence of social networks on the development of product networks is the Friends social network on YouTube (Goldenberg et al., 2012). It is shown that not only users' dual networks affect the demand for products (video as a product), but also the link structure and linking methods between users or products.

Most studies on the impact of product networks or product recommendations focus on the impact of these networks on demand for focal products. They use an econometric model to capture the impact of individual attributes of the focal product as well as the cumulative impact of other nodes in the network. In fact, the way network effects are integrated is more the aggregation effect of individual nodes than network properties such as degree distribution, preferential binding, or network evolution. Oestreicher and Sundararajan (2012) study excess demand due to the presence of recommender networks. They show the impact of a product's visibility in the product network on its demand. In fact, they claim, the visibility of co-purchased products powered by recommender systems increases demand for products on the web. Furthermore, exposure to more views lengthens the long tail of demand and expands the product network (Oestreicher & Sundararajan, 2012).

Despite every effort to elucidate the network-driven contributions of recommenders and product networks to product demand, almost all studies have addressed network effects in terms of their presence

or absence. However, few studies have integrated network features to predict fluctuations in demand. But these studies are limited to general properties of the web, including the diversity and stability of the web or the page rank of each product (website) as a measure of its relative importance in the web. These research groups rely heavily on general properties of networks, such as PageRank or degree distribution, which are not easily measurable in practice without the original network.

Considering all these, we propose a deeper investigation into the impact of product recommender systems on the relationship between products. This study aims to test how product networks evolve over time with the help of recommenders. For this reason, we've divided the different types of referrers into two broad categories: user-generated and system-generated. We then argue that the contribution of each class of recommender systems to the development of the overall product network differs due to fundamental differences in their settings.

Another salient feature of this study is that it advances the existing body of knowledge for a more realistic understanding of product networks, is to use a weighted network instead of equal weight links. In fact, we define a weighted adjacency matrix to capture the relationship between each pair of nodes, instead of assuming that each link makes the same contribution. We believe that not all products contribute equally to the development of the network, but that important products (better-ranked products) have a greater impact on building and forming or removing existing links between products. We also divide the network based on incoming and outgoing networks. Although almost all studies treat the product network as an undirected network, it is clear that the incoming network of a product (links to the focal product) may have different topological characteristics from the outgoing network (links to nodes around the product) of the focal product). This difference can greatly affect the contribution of each type of referrer to the development of the network and its demand fluctuation.

To answer the above questions, we use the cross-sectional data of 51 books selected by Amazon and the links between them. In order to be able to draw rigorous conclusions, we also recorded their rankings and prices. The normalized ranking of products is a good indication of their relative importance in the network. We selected books based on the homogeneity of the recommended products. In other words, since all products point to or are pointed to by some products in the same category (books), the control constraints on product categories can be relaxed slightly. We then split the adjacency matrix of nodes and links into user-generated links and system-generated links. Furthermore, all networks are then split into input and output matrices. Considering the price of the product, these classifications allow us to study the contribution of each network to the development of the network. We can then combine the network structure and its network-related attributes with node-related attributes (such as previous demand, price, etc.) to make more accurate product demand forecasts. Gaining knowledge about the importance of different recommendation types for product network development and the sensitivity of key products to network-driven attributes can help managers decide which product to recommend and which product to link to in which recommendation procedure.

## LITERATURE REVIEW

Word of mouth (WOM) affects satisfaction, loyalty, and profitability, while product engagement affects how much consumers engage with word of mouth via Internet (De Meyer & Petzer, 2014). The availability, ease of use, and many other differentiating factors of online marketplaces make online shopping more popular than traditional brick-and-mortar stores. Online platforms not only simplify the buying process but also influence their purchasing taste. According to a 2012 online survey of more than 2,005 US shoppers, participants reported that in more than 65 percent of their shopping efforts, they chose a brand or product they had not initially considered (Floyd et al., 2014). Potential links between related products (supplements or substitutes) have attracted a lot of attention and effort from researchers

to find links between products using data mining techniques. Detecting associations between products based on customers' concurrent transactions, helps marketers optimize their shopping carts. Although market basket analysis is a popular data mining technique that helps retailers design and organize their setups, it cannot resolve the relationship between products purchased over time and those purchased in non-same transactions. Therefore, some efforts have been made to incorporate information available on product networks relevant to shopping cart analysis. In this way, associations between products are preserved through connections between products established over time and projected into the product network, rather than through transaction data (Kim et al., 2012).

Other product networking research focuses on the influence of recommenders on the purchasing behavior of potential customers. That is, they examine the conversion behavior of potential customers by tracking the user's clickstream. The path that users follow through the product network from the start node to the end node and the final purchase decision (whether to buy) constitute the main body of the domain. As mentioned by Moe and Fader (2004), the low transaction costs of commercial online platforms compared to brick-and-mortar purchases can affect customers' purchasing behavior. Accessing customers' clickstream data makes this field a research area rich in empirical studies (Moe et al., 2004). Recommenders not only influence the creation and formation of product networks, but also influence consumers' instant cross-purchase intentions. Zhu et al (2018) shows that the cross-recommendation after choosing the focus product will significantly affect the next purchase behavior. They pointed out that recommending products during the purchase process not only affects the purchase behavior but also the focal product (Zhu et al., 2018).

The impact of network location on information dissemination in networks is a notable trend in research in this field. Researchers try to relate network structural properties to the information propagation in the network (Hill et al., 2006). For example, Goldenberg et al. 2012) examines the impact of product network structure (videos posted on YouTube as nodes) on the ability to search for content in poorly defined platform exploration. They also show that the user's dual network (social media of youtubers) influences this process (Goldenberg et al., 2012). One of the motivations mentioned in the literature for the emergence of social networks or dual networks related to e-commerce platforms is to increase traffic and user engagement.

The study by Oestreicher-Singer and Sundararajan (2012) on the demand effect of recommender networks in electronic markets is an outstanding and well-designed empirical study investigating the impact of recommenders on focal products and product networks. In this study, it is shown that the overall influence of recommenders is due to the visibility of related products. That is, user exposure to hidden related products leads to increased purchases of those products on the product network. This also adds to the long tail of demand, causing more products to be seen and purchased alongside the focus product. They also argue that this effect is not the same for all products, with products with higher concentration of demand contributing more to the network. It is believed that the presence of hyperlinks in turn increases the variety of recommended products, enabling consumers to find and purchase specific products that they would not otherwise purchase, thereby increasing the happiness of consumers because of high transaction costs or their interest in products. low awareness did not purchase the recommended product (Brynjolfsson et al., 2003). Almost all research directions rely on the ranking of products to represent their needs, which is also a controversial issue (Chevalier & Goolsbee, 2003).

Although most of the IS literature on the impact of recommender systems on product networks has focused on the aggregate contribution of these recommender systems on platforms, few studies have attempted to elucidate recommender networks and their link economy (Dellarocas et al., 2013). Oestreicher-Singer et al. (2013) proposed a method based on the PageRank algorithm for the network creation value or network value evaluation of products in a large product network (Brin & Page, 1998). In their research, they strive to consider the real value generated by the products that are part of the network.

It measures the revenue generated by redirecting traffic from a focal product to other recommended products in the product network, and the value share of the focal product from inbound links from other products (Oestreicher, Libia et al., 2013). At the heart of their research is the separation and measurement of the intrinsic value of a product from the value generated by its network. This study is one of the few that weights the relative importance of networks and links based on each product's page rank.

Limited studies have attempted to extract underlying common knowledge about a set of related products in a product network linked by hidden but common attributes (Dahr et al., 2014). The formation of links between nodes (products) in large networks is considered to be the result of common properties of products, which may not be reflected in the evaluation of individual nodes. According to their research, these common shared features contain aggregated information about the preferences of a large number of customers who also purchased these products. In view of this, the researchers believe that exploiting the network-based shared demand attributes of product networks can help improve the forecast accuracy of individual products. The motivation for researchers to consider network attributes in demand forecasting is that not all information about the demand for previous products in the network is reflected in the demand for the current focus product. Their results showed that the combination of information obtained from the network (including data about each node's neighbors) and network properties such as centrality and local clustering significantly improved income prediction compared to naive predictions (Dhar et al., 2014).

A recent empirical analysis by Lin, Goh, and Heng (2015) is another study on the network-driven properties of product networks for focused product demand estimation. Her focus in this research is to examine how network attributes affect product demand. Contrary to other studies by Dhar (2014), the selected network attributes are mainly generated by the network and are not directly subject to user co-purchases or potential sharing relationships between products. The selected properties are the diversity and stability of the recommendation network. A notable feature of their model is the separation of inbound and outbound links. That is, all network properties are computed separately for inbound and outbound networks, which is ignored in other studies, treating recommender networks as undirected networks. They also categorize their networks into two broad categories of recommender systems: recommender systems for joint purchases and networks for joint viewing. The results of the analysis show that a 1% increase in co-purchasing network diversity is associated with a 0.011% increase in product demand, which is consistent with a previous study (Oestreicher & Sundararajan, 2012) examining the effect of product network visibility on long-run tails of demand. On the other hand, they show that the stability of the network has a negative impact on product demand.

## METHOD

The adjacency matrix of a simple labeled graph is the matrix  $A$  with  $A[[i,j]]$  or 0 depending on whether vertex  $v_i$  is adjacent to vertex  $v_j$ . For a simple graph with no self-loops, the adjacency matrix has zeros on the diagonal. For undirected graphs, the adjacency matrix is symmetric (Szabo, F, 2015).

To conduct this research, we used cross-sectional data on 51 books surveyed on Amazon and the connections between them. able to draw valid conclusions. We also tracked their rankings and prices. The normalized ranking of products is a good indication of their relative importance in the network. We chose books because of their homogeneity with the recommended products. In other words, since all products refer to or are referenced by some products in the same category (books), the control constraints on product categories can be relaxed easily. Then, we split the adjacency matrix of nodes and links into user-generated links and system-generated links. Furthermore, all networks are divided into input and output matrices. Taking product prices into account, these classifications allow us to study the contribution of each network to the development of the network. We then combine the



structure of the network and its network-related properties with node-related properties (such as previous demand, price, etc.) to predict product demand more accurately. Understanding the importance of different recommendation types for product network development and the sensitivity of focal products to network-driven attributes can help managers decide which products to recommend in which recommender systems and which products to associate. In order to be able to draw educated conclusions, we also recorded their rankings and prices. The normalized ranking of products is a good indication of their relative importance in the network. We select books based on the homogeneity of recommended products. Since all products are referenced by some products in the same category (books), the control restrictions on product categories can be relaxed.

Our sample (selected books) was selected from the search results for "Netzwerk Wissenschaft". The sampled data is then searched node by node to build an adjacency matrix for user-generated networks as well as system-generated networks. For books, the user-generated recommendations are recommendations titled "Frequently Bought Together", "Customers Who Bought This Item Also Bought", "Customers Who Viewed This Item Also Viewed". The system generated is "Sponsored Products Related to This Article". It's worth noting that this list is often broader for the wider range of products on an online business platform. For example, we can consider system-generated networks "compared to similar items", "customers also bought", etc. One of the main reasons for choosing books for initial research is the homogeneity of products, which helps us relax the assumption of product heterogeneity and the need to control for product categories. Another benefit of using this data is the "complement and substitute" relationship of products compared to generic products on the platform. That said, we can relax this assumption slightly while taking it into account in the main analysis. By collecting a sample of 51 nodes, we captured the connections between each pair of nodes, totaling more than 700 connections, divided into two groups of "user-generated" and "system-generated" networks. Figure 1 shows the sampling node list.



**FIGURE 1 COVER OF SAMPLED BOOKS**

## EMPIRICAL METHODS AND ANALYSIS

Compared with existing research on product networks, one of the prominent contributions of our study is to consider link weight and rank distribution as measures of node strength. Almost all previous studies in the field of IS consider PageRank or product rank or view count (in the case of YouTube videos) as metrics to measure the relative importance of nodes. However, the relative importance of nodes is considered as a control variable rather than direct link weights. Few studies using weighted networks are based on the characteristics of undirected networks. Although the methodological contribution of this study is twofold. First, we treat networks as directed because they have different degree distributions for incoming and outgoing networks. Furthermore, we include the importance of nodes and their degree distribution to measure the strength of the network.

In contrast to existing models (Bianconi & Barabási, 2001), (Barabási et al., 2002) and (Albert & Barabási, 2000) that attribute network evolution to their growth and preferential attachment, our model defines a simple weighted network based on node strength, which explains the network evolution (Barrat et al., 2004). The main difference of this model is that it allows the modeler to capture more accurate characteristics of the real world, and it also allows the weights to be developed. The inclusion of weights in the network accounts for various scale-free behaviors empirically observed in real-world examples. Our proposed model is also different from the original model proposed by Barrat et al. (2004). In this sense, they assume that the weight is defined by the weight of the link, whereas we assume that the weight is determined by the weight of the node. In this case, the strength of a node is a combination of its importance (product rank) plus a fraction of all adjacent nodes directly connected to the focal node. Since weighted networks are usually described by an adjacency matrix, each pair of nodes is connected if they are connected, otherwise the weight is zero. Complex networks usually have a power-law degree distribution ( $P(k) \sim k^{-\gamma}$ ) with  $2 \leq \gamma \leq 3$ . In complex networks, distributions are highly truncated and span orders of magnitude. Taking all this into account, the measured strength of each node is calculated as follows:

$$S_i = R_i + \alpha \sum_{j \in v_i} R_j$$

Where  $R_i$  is the relative importance of the node in the network and  $v_i$  is the set of all nodes connected to focal node  $i$ . The model shows that each link between two nodes not only contributes to the meaning of each node, but also indirectly carries the traffic connecting the nodes to the other side.

In this respect, we can say that the evolution of the network with regard to the formation of connections at each node can be predicted by the average of the node strengths. Each node has two sources of power, one is power driven by user-generated recommenders, and the other is the result of system-generated recommenders. The degree distribution and intensity distribution of the scale-free network obviously follow the power law distribution. However, due to the limited sample size, we were unable to estimate the power-law parameters of the distribution. Therefore, to estimate the relative importance of each product network in facilitating product development (connection formation), we rely on an adjacency matrix. Therefore, the empirical model will look like this:

$$\text{Log}(D_i) = \alpha U_i + \beta S_i + \gamma P_i + \varepsilon_i$$

Where  $D_i$  is the degree distribution of node  $i$ ,  $U_i$  is the influence of user-generated recommenders on node strength, and  $S_i$  is the influence of system-generated recommenders on node strength.  $P_i$  is a set of control variables, in this particular case prices.  $\varepsilon_i$  is the error term. Below is a descriptive summary of the example network.

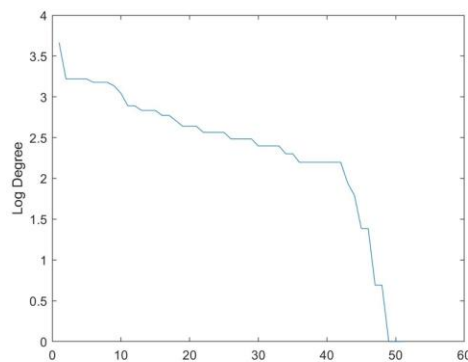
**Table 1.** Descriptive Statistics Of The Sampled Network

	<i>Products' Rank</i>	<i>Relative Importance</i>	<i>User Generated Strength</i>	<i>System Generated Strength</i>
Mean	441369.18	0.069	1.269	0.069
Standard Error	93819.98	0.0277	0.157	0.028
Median	241326	0.0054	0.8157	0.005
Mode	241326	0.0054	0.456	0.005
SD	670008.64	0.198	1.1206	0.198
Range	3318527	1.00	3.600	1.00
Minimum	1297	0.0004	0.0005	0.0004
Maximum	3319824	1.0004	3.601	1.0004
Sum	22509828	3.523	64.742	3.528
Count	51	51	51	51

**Table 2.** Descriptive Statistics Of The User Generated And System Generated Networks Divided Into Incoming And Outgoing Links.

	<i>User Generated Outgoing</i>	<i>User Generated Incoming</i>	<i>System Generated Outgoing</i>	<i>System Generated Incoming</i>
Mean	10.941	10.941	2.451	2.431
Standard Error	0.990	1.050	0.256	0.909
Median	9	10	3	0
Mode	21	5	4	0
SD	7.072	7.500	1.825	6.494
Sample Variance	50.016	56.256	3.332	42.170
Minimum	0	0	0	0
Maximum	35	33	6	31
Sum	558	558	125	124
Count	51	51	51	51

Although, the sample size is not large enough to capture the power-law distribution of node degrees, as shown in Figure 2, it follows a power-law distribution to an acceptable degree.

**FIGURE 2.** LOG PLOT OF NODE'S DEGREE

The model analysis results are shown in Table 3. As this suggests, user-generated recommender systems and the power derived from the network of products interconnected through this network contribute significantly to the formation of the network structure. The network effects generated by the system are detrimental to the overall structure of the network. One of the reasons why the system-generated recommendation network negatively impacts the product network structure is the generality of the system-generated recommendation network to recommend products versus the specificity of scanned products.

That is, while the sample network included a network of specific books, all of which were found by searching for the keyword "network science," the recommended books in the system-generated network were related to broader topics such as machine learning. In this regard, their relevance to focal networks is not so trivial compared to user-generated networks.

**TABLE 3.** Analysis Result of The Model

	Estimate	Standard Error	t Stat	P value
Intercept	2.23003205	0.228719529	9.750073	7.20E-13
User Generated	0.317583836	0.124838022	2.543967	0.014307
System Generated	-1.39764099	0.663699807	-2.10583	0.040588
Control Variables	-0.004948966	0.005869081	-0.84323	0.403373

## CONCLUSION

As mentioned earlier, networks of interconnected products are highly dynamic and change over time. Creating and removing links has a significant impact on product popularity, which in turn increases the likelihood of purchasing a product. Although the influence of recommenders on product demand has been studied, the impact of these recommenders' network-driven attributes on product demand predictability remains an open question. In this preliminary study, we show that while user-generated recommendations have a significant impact on the evolution of the network, we could not find any meaningful relationship between system-generated recommendations and the rank distribution or network structure of product networks. This requires a deeper analysis of the network using a larger sample size and wider range of products to cover all the different products recommended by the system-generated recommender system.

## LIMITATIONS AND FUTURE WORKS

Clearly, the dynamics of an evolving network must be captured over time, and cross-sectional analysis will not provide sufficient insight. In this case, panel data were collected with a larger sample size, including a greater variety of products. Furthermore, we will collect samples from another platform (such as Barnes and Noble) to examine possible endogeneity, mainly for user-generated recommender systems.

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# INVESTIGATING THE FACTORS OF CUSTOMER FEEDBACK AFFECTING PRODUCT SALES ON E-COMMERCE PLATFORMS

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## ABSTRACT

*Customer feedback is that the recorded data is translated into positive and not positive information on the e-commerce platform. Currently, the e-commerce sector has grown very rapidly from scale to the platform of digital technologies. The types of business established on the trading floor also follow standard business principles. Customer feedback is the comments that contribute to improving the quality of products and improving the provision of services. Especially on the e-commerce platform, it expresses more clearly the interactions between the seller and the direct buyer, which has decided the purchase of the customer's product. The study analysed factors related to customer feedback, follow-ups, sales times, ratings, number of product reviews, ratings, ratings, ratings, levels of reviews, and seller engagement. Methods are used for descriptive statistical analysis, frequency statistical analysis, and chi square test to compare differences. The study aims to find connections in the operation of sales shops, from which there are implications for selling on e-commerce platforms. Initially analysed, the results also showed that in the shops selling electromagnetic goods, selling food, the interaction rate affects the quantity of sales, the response rate and the level of star rating. These results provide evidence for business departments to consider the reference in selling on e-commerce platforms.*

**Keywords:** Interaction, Customer Feedback, E-commerce, Customer Services, Vietnam

## INTRODUCTION

E-commerce significantly contributes to the national economic structure. E-commerce increases the access of businesses and individuals to global markets and also helps to increase labour productivity, reduce costs and improve business efficiency (United Nations, 2021). E-commerce has also dramatically changed consumers' buying behaviour, giving them access to a wide selection of products and services while reducing the time and cost of commuting to stores (International Labor Office, 2021). The benefits of e-commerce help increase consumption and improve quality of life (Luo Xubei, 2019). Additionally, e-

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commerce also helps to strengthen competition among enterprises, especially small and medium-sized enterprises, by reducing geographic barriers to market entry and decreasing investment costs (Elbeltagi et al., 2016).

For developing countries, e-commerce contributes to the economic structure. Vietnam is one of the countries with the fastest growth rate of e-commerce (Beschoner, 2019). Nguyen and Do (2019) showed that Vietnamese e-commerce platforms have enormous potentials for development. This is a rapidly developing area in Vietnam with great potential in the future. Specifically, e-commerce helps sales, management, marketing and online sales processes, increasing efficiency and reducing production and business costs (Fauska et al., 2013). In addition, e-commerce makes it easier for businesses and individuals in Vietnam to access international markets than in previous decades (Phan, 2021). Nowadays, Vietnamese consumers can order products from European countries, the United States and Asian countries. In countries such as Vietnam and China, online shopping will be more convenient, reducing shipping time and costs. This also enables consumers to obtain more products and services, especially among rural consumers (Shanthi & Desti, 2015).

In an e-commerce business model, customer feedback is vital, especially in online sales. These responses can positively or negatively affect purchase intention, brand reputation, and e-WOM influence (Bhandari & Rodgers, 2018). If sellers receive positive customer feedback, businesses can use it to promote and introduce their products to more people. At the same time, positive feedback also helps to build customer trust and confidence, which helps to increase customer loyalty and retention (Shanthi & Desti, 2015). However, if it is negative customer feedback, businesses must pay attention to this issue and address it related to their products and services (Le & Ha, 2021). Solving these issues can lead to customer mistrust, decreased sales, and damaged business reputation (Shankar et al., 2002).

Therefore, analysing factors of customer feedback plays a crucial role in the sales management of the e-commerce platform. This analysis helps companies better understand customers' opinions to formulate appropriate business and management strategies to improve sales efficiency (Tang & Zeng, 2021). Factors of customer feedback can include product reviews, service reviews, product quality, delivery time, return policy, price, payment method, experience, purchasing, and customer support (Rita et al., 2019). Analyzing these factors helps companies understand the factors that need improvement to formulate appropriate solutions to improve product and service quality, customer satisfaction, and increase sales.

## **LITERATURE REVIEW**

Customer feedback plays a pivotal role in shaping the success of e-commerce platforms. Understanding the factors that influence customer feedback and product sales is essential for e-commerce businesses seeking to thrive in today's competitive digital marketplace. This literature review explores vital aspects of consumer behaviour theory and its application in the context of e-commerce platforms. Consumer behaviour theory provides a solid foundation for understanding how individuals make purchasing decisions and how their experiences influence feedback (Silva et al., 2023). One of the central concepts in this theory is the decision-making process, which typically involves several stages: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase evaluation. Customer feedback often emerges post-purchase evaluation and can significantly impact future purchasing behaviour. These reviews have important implications for other customers to refer to buy. Factors influencing customer feedback on E-commerce platforms include product quality and satisfaction, service quality, trust and reputation, and demographics. Besides, Nguyen (2023) Face consciousness and customer knowledge were found to be related to purchase intention.

Numerous research studies have consistently emphasized the strong connection between the quality of products and customer satisfaction. Satisfied customers tend to express their contentment through positive feedback, while dissatisfied ones are inclined to voice their grievances through negative reviews (Anderson, 1994; Zeithaml, Berry, & Parasuraman, 1996). Additionally, the quality of customer service stands out as another critical determinant. When customer service is responsive and helpful, it can transform a negative customer experience into a positive one, ultimately leading to improved feedback and the possibility of increased sales (Parasuraman, Zeithaml, & Berry, 1985). Furthermore, trust assumes a fundamental role in the realm of consumer behaviour, particularly in the context of e-commerce, where online transactions are prevalent. Research findings indicate that customers are more inclined to offer positive feedback and engage in repeat purchases on platforms with a strong reputation for reliability and trustworthiness (Doney & Cannon, 1997; Kim & Yun, 2015). Additionally, demographic factors such as age, gender, and cultural background can influence how customers perceive and contribute feedback within e-commerce platforms (Hofstede, 1980; Lee, 2002).

E-commerce platforms often feature various product categories, from electronics to fashion, home goods to groceries. Each category attracts a distinct customer base with unique preferences and behaviours. The choice of product category can significantly influence the type and level of interaction on the platform (Chen et al., 2020).

While customer interactions within specific product categories can shape their overall shopping experience. For instance, a seamless and informative interaction in the electronics category can lead to a positive experience, whereas a frustrating or unhelpful interaction may deter customers from returning to the platform (Shukla & Babin, 2013). Additionally, customer interaction often extends to leaving feedback and reviews. Positive interactions within a particular product category can result in more positive feedback, influencing other potential buyers (Zhang & Gu, 2015). Conversely, negative interactions may lead to negative reviews that can impact sales within that category. Furthermore, Effective interaction within one category can lead to cross-selling and upselling opportunities. Customers may discover complementary products in different categories based on their interactions and preferences. This cross-category interaction can result in increased sales and a more diverse shopping experience (Johnson & Friend, 2015).

In general, the relationship between sale categories and interaction in e-commerce is dynamic and multifaceted. Customer interactions within product categories can impact customer experiences, feedback, and sales outcomes. Recognizing the unique characteristics of each category and tailoring interaction strategies accordingly is crucial for optimizing sales and enhancing the overall e-commerce platform experience.

## METHODOLOGY

### Participants

Research participants in e-commerce customer opinions can include potential customers, existing customers and past customers of e-commerce enterprises. The research participants can also include different customer groups, such as customers from different geographical regions, customers with different customers who need different goods, and the transactions are mainly B2C and C2C (Sukrat & Papasratorn, 2018).

### Data collection methods

To collect data on the Shopee e-commerce platform, researchers can use the following methods:



(1) **Use the Shopee Spy tool:** This tool helps collect product and seller information on Shopee. The tool allows researchers to search for products, filter by price, reviews, and sales volume, and generate analysis reports (Menglar Technology, 2023).

(2) **Using Shopee's API:** Shopee provides an API for application developers to connect to Shopee's system and obtain data from it. Researchers can use this API to get information about products, sellers, reviews, and orders (Shopee, 2023).

The sample size in this study was determined based on sample size requirements such as the required level of significance (95% confidence level) percentage of samples belonging to the study groups. The following formulas can be used to calculate sample size estimates in customer opinion studies and chi-square tests (Cochran, 1977):

$$N = (z^2 * P * (1-P)) / E^2$$

Whereas:

N: the minimum sample size required

z: the z value corresponding to the level of confidence required (typically 1.96 for 95% significance level)

P: is the proportion belonging to the specified category (50%)

E: margin of error required (typically 5%)

This study tested that the percentage of customers who gave positive feedback on the online store's products was significantly higher than the average rate (50%) of the e-commerce platform, with a 95% significance level and a false positive. If the acceptable number is 5%, the minimum sample size required is as follows:

$$N = (1.96^2 * 0.5 * (1 - 0.5)) / 0.05^2 = 384.16 \sim 385$$

Therefore, the minimum size required is 385 for the results to be 95% confident with a maximum error of 5%.

## Data analysis methods

Crosstab analysis (also known as correlation analysis) is a statistical method used to evaluate the correlation between two or more categorical variables. A crosstab is a two-way data table in which values are categorised according to two or more qualitative variables (Patefield, 1981). The crosstab analysis method includes the following steps:

(1) **Create a crosstab:** Create a two-dimensional data table, classify variables, and divide them into data cells.

(2) **Calculate frequency:** Calculate the frequency of each cell in the crosstab and calculate the total frequency of each variable.

(3) **Correlation analysis:** use chi-square and other statistics to test the degree of correlation between variables. The results help determine whether the variables are correlated and to what extent.

The chi-square test is a statistical method used to determine whether two data sets are related. The formula for calculating the chi-square test depends on the type of test and the crosstabulation of data

being used. Independent correlation test (McHugh, 2013): This test is used when there are two qualitative variables, the theoretical formula.

$$\text{Chi-square} = \sum (O - E)^2 / E$$

whereas:

O: observed frequency in each data cell

E: expected frequency calculated for each data cell if the two variables were independent of each other

This study used the statistical applications part of R, a popular statistical analysis subroutine. The following are some of the main statistical algorithms provided by the stats package. Correlation analysis: `cor()`; Calculates the correlation matrix between variables `cor.`; Tests the correlation between variables: `test()`; Analysis of variance: `var()`; Calculate the standard deviation of the variable: `sd()`; Chi-square hypothesis test: `chisq.test()`; Chi-square test for qualitative observation variables.

## RESULTS

### Descriptive statistics

**Table 1.** Frequency analysis of the observed sample

Observation variable	Measurement	Frequency	Percentage (%)
Location			
	Ho Chi Minh	179	36.8
	Ha Noi	233	48.0
	Others	74	15.2
The best selling			
	Uncategorised	107	22.0
	Mother and baby	74	15.2
	House and lifestyle	128	26.3
	Beauty	93	19.1
	Women's fashion	84	17.3
Interaction			
	Without Interaction	209	43.0
	With Interaction	277	57.0

According to Table 1, the observed sample results show that Vietnamese e-commerce is mainly concentrated in Ho Chi Minh City and Ha Noi City. It is worth noting that Hanoi accounted for 48% of the stores selling products in Ho Chi Minh City, Ho Chi Minh City accounted for 36.8%, and other widely distributed provinces accounted for 15.2%.

In the study, using the report results of the Shopee e-commerce platform, the best-selling categories are ranked as follows; Home and Living categories have the highest sales volume (26.3%), Beauty categories account for 19.1%, Women's fashion accounts for 17.3%, and other categories are uncategorised accounted for 22.0%.

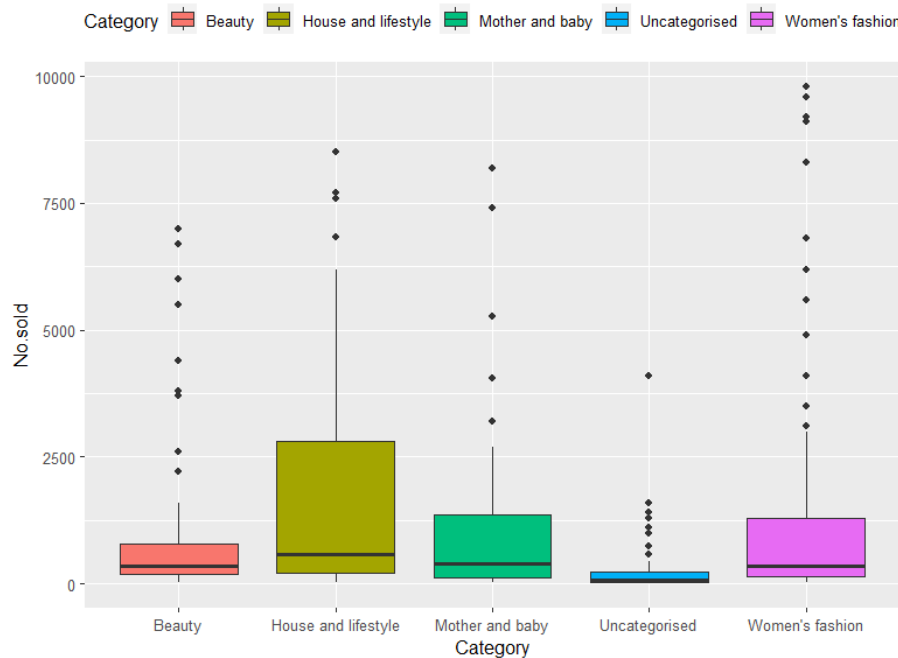
Regarding shop interaction and customer feedback, the observation findings show that the proportion of stores with "interaction, reply, and thank you" in the customer feedback part is 57%. In

contrast, the proportion of stores without interaction means that these stores do not have a two-way interaction with customers, and most only have customers: response, no feedback from the owner. In general, Shopee e-commerce products are mainly concentrated in Hanoi and Ho Chi Minh City, and the best-selling categories are home and living, beauty makeup, women's fashion, and mother and baby. Two-way sales interactions are relatively rare.

Based on Figure 1, the findings of the best seller category and sales on the Shopee platform, the results are presented in box diagrams, and the obtained numerical values can be visualized for data distribution and provide dispersion information, first percentile (25%), median (50%), and third percentile (75%) ("Kick the Bar Chart Habit," 2014). In Figure 1, the House and lifestyle category has the highest 75% percentile compared to the other categories, which means most of the data is concentrated in a part of the upper distribution, suggesting that most of the data are of great value and concentrated in regions that sold many products during the same period (Kristin, 2008). This indicates that it is necessary to refer to the sales method, considering the shop's interaction rate and price history, to construct the sales strategy on the e-commerce platform (Bilgihan et al., 2016).

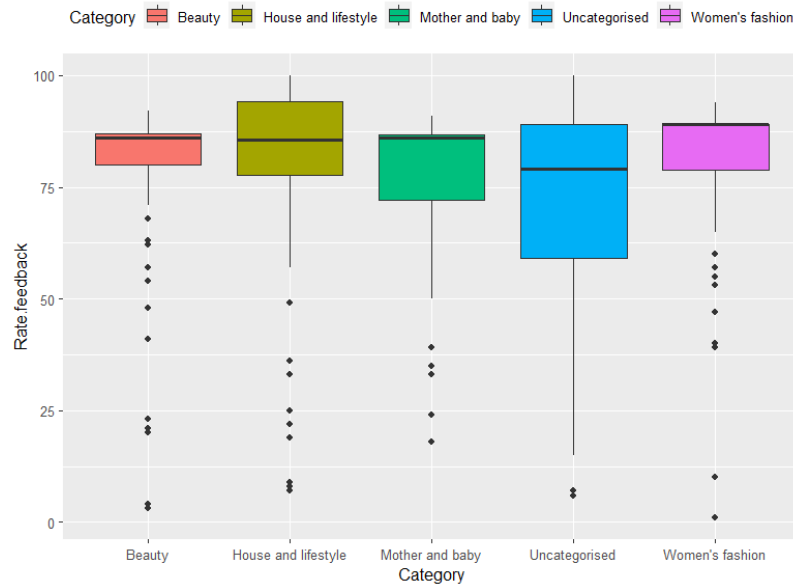
The beauty and fashion sales category descriptions results have a large margin of error, with outliers 3 times higher than the median. The broad distribution of beauty and fashion categories requires a rethink of sustainable merchandising strategies. Despite many bestsellers, the data has significant errors (Singh et al., 2022).

### Sales category and amount sold.



**Fig. 1:** Analysis results of sales category

### Sales category and response rate



**Fig. 2:** Rate feedback

### Cross-cell analysis and chi-square test

**Table 2.** Cross-tabulation analysis and Chi-square

Category	Without Interaction	With Interaction	Total
Count	45	62	107
% within Uncategorised	42.1%	57.9%	100.0%
% within Response	21.5%	22.4%	22.0%
% of Total	9.3%	12.8%	22.0%
Count	40	34	74
% within Mother and baby	54.1%	45.9%	100.0%
% within Response	19.1%	12.3%	15.2%
% of Total	8.2%	7.0%	15.2%
Count	18	110	128
% within House and lifestyle	14.1%	85.9%	100.0%
% within Response	8.6%	39.7%	26.3%
% of Total	3.7%	22.6%	26.3%
Count	49	44	93
% within Beauty	52.7%	47.3%	100.0%
% within Response	23.4%	15.9%	19.1%
% of Total	10.1%	9.1%	19.1%
Count	57	27	84
% within Women's fashion	67.9%	32.1%	100.0%
% within Response	27.3%	9.7%	17.3%
% of Total	11.7%	5.6%	17.3%

Pearson's Chi-squared test

Chi<sup>2</sup> = 72.19447 d.f. = 4 p = 7.807496e-15

According to Table 2, the cross-tabulation analysis results between sales and feedback categories, customer interaction is higher than without interaction group such as for uncategorised, home and living, 57.9% and 85.9% respectively. This indicates that when selling on e-commerce platforms, interaction with customers is required to improve sales efficiency, and similar analysis results have been recorded in some reports (Saleem et al., 2019).

At the same time, mother and baby, beauty makeup, and women's fashion categories have low or no interaction. There are differences, but these categories need to be analyzed based on price history or other aspects such as competitive strategies, product grouping features, or an attractive marketing plan. In this case, it has also been reported that the most influential factors for gaining a competitive advantage are price, product quality, distribution channels and promotional policies (Al Badi, 2018).

## DISCUSSION

Analyzing customer feedback on e-commerce platforms plays a significant role in researching and evaluating the effectiveness of online business operations. This purpose helps businesses gain a broader and deeper understanding of how customers interact with their products and services (Reason et al., 2015). Furthermore, analyzing feedback also holds substantial importance in capturing customer needs, expectations, and opinions, creating favourable conditions for improving product quality, enhancing customer experience, and fostering better customer relationships (Liu et al., 2021).

The results of our study, based on the analysis of data from the Shopee e-commerce platform, provide valuable insights into the relationship between product categories, shop interaction, and customer feedback. The home and living categories emerged as the top performers, contributing to 26.3% of the total sales volume. Beauty products accounted for a significant portion of sales, with a share of 19.1%. Women's fashion products also had substantial sales, representing 17.3% of the total sales volume. Uncategorized or miscellaneous categories contributed to 22.0% of the sales volume.

In addition to sales categories, the research investigated shop interaction and its impact on customer feedback. Approximately 57% of the stores actively engaged in "interaction, reply, and thank you" with their customers. These shops maintained a two-way communication channel with customers, responding to queries, acknowledging feedback, and expressing gratitude for customer interactions (Tsai et al., 2021). Conversely, most stores, encompassing the remaining 43%, lacked this two-way interaction. These shops primarily consisted of customers providing feedback but did not receive responses or interactions from the store owners (Jarvenpaa & Todd, 1996).

These results underscore owners' significance in customer interactions in the e-commerce environment. Interactive shops have the opportunity to foster a stronger sense of trust and engagement with their customers, potentially leading to enhanced customer satisfaction and loyalty. On the other hand, non-interactive shops may miss out on valuable opportunities for building customer relationships and addressing concerns effectively.

The following results are compared with those published in the same business environment. The results of the analysis yielded several key findings. Firstly, customer interaction emerged as a crucial factor, as product categories with higher customer interaction exhibited better sales effectiveness (Kumar & Ayodeji, 2021). For instance, the Home and Living category achieved an interaction rate of 85.9%. This highlights the role of active interaction and communication with customers in selling on e-commerce platforms. Proactive customer interaction can help establish better relationships, enhance trust, and increase the likelihood of successful sales (Itani et al., 2019).

Secondly, other factors need to be considered. In cases such as the Mother and Baby, Beauty, and Women's Fashion categories, despite having low or no customer interaction, they still achieved sales. This suggests that other factors can significantly impact sales effectiveness in these categories. Factors like pricing history, competitive strategies, unique product features, or attractive marketing programs may have played a crucial role in attracting customers and generating sales (Denga et al., 2022).

Thirdly, in addition to the analyzed factors, the analysis also emphasized that pricing, product quality, distribution channels, and promotional policies are the most critical factors for achieving a competitive advantage on e-commerce platforms (Akter & Wamba, 2016).

Overall, the analysis highlights the significance of customer interaction, the influence of other factors in specific categories, and the importance of pricing, product quality, distribution channels, and promotional policies for success in e-commerce. These results also agree with previous studies. The analysis results also support companies participating in sales on e-commerce platforms to refer to the principle of customer feedback.

## CONCLUSIONS AND IMPLICATIONS

Studying customer feedback that affects product sales on e-commerce platforms to evaluate customer responses to the online shopping experience and, simultaneously, find out best-selling category factors, response rates and sales. The results affect online sales strategies and suggest improving online sales activities. The achievements of Vietnamese e-commerce are concentrated in Hanoi and Ho Chi Minh City, accounting for a significant proportion. Hanoi City accounted for 48% of the stores selling products, Ho Chi Minh City accounted for 36.8%, and other provinces accounted for 15.2%.

Based on the sales analysis, the results present a sales trend higher than the average market share of the e-commerce platform, which shows that the development and sales potential of the e-commerce platform is significant. At the same time, the analysis results of customer response rate also show the effectiveness of the interaction during sales. Interactive sales categories will increase sales efficiencies, such as 57.9% for uncategorised and 85.9% for home and living. In addition, although the interaction rate of mother and baby, beauty and women's clothing categories is low, they still sell well. This requires further product quality analysis, such as product demand and product characteristics.

This research helps businesses related to them improve business strategies, attract customers, and increase sales. Provide advice on governance implications for interested businesses (Nguyen et al., 2022). The process of managing customer feedback helps businesses understand customers' needs and desires, improve their interactions with customers, and increase customer loyalty and satisfaction (Alzoubi et al., 2022), creating an enabling environment for businesses to offer their feedback on products, and services or quality and improve marketing strategies by using feedback. Customer feedback aligns advertising and marketing campaigns (Walker Jr & Ruekert, 1987). Customer feedback management is essential in establishing and developing a sustainable business, enhancing the interaction between enterprises and customers, creating value for customers, and improving customer competitiveness and the firm's position in the market (Nosratabadi et al., 2019).

For product reference customers, customer feedback is essential to retain and attract new customers (Khadka & Maharjan, 2017). Customers trust reviews and feedback from other customers when deciding to purchase or use services (Tueanrat et al., 2021). Customer feedback helps businesses collect customer feedback, meet customer needs, and improve product and service quality. If customers see that businesses care about and pay attention to their feedback, they tend to be satisfied and more willing to share their experience with others (Liu et al., 2021). This will help businesses create a positive image in the eyes of potential customers and improve their ability to attract new customers. Furthermore,

positive customer feedback also helps businesses improve their credibility and reputation in the market, thereby increasing competitiveness and creating long-term business benefits (Van Tien et al., 2021). Regarding to limitations, this study was specifically focused on Vietnam and results cannot be generalized. Vietnamese e-commerce platforms have specific features which may not exist in other platforms worldwide. Vietnamese consumer behavior also differs from other emerging e-commerce markets so business strategy for trading practices may only be effective in Vietnam.

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# SALESFORCE AND BRAND PERFORMANCE IN THE MULTILEVEL MARKETING FRAMEWORK: AN ACTION RESEARCH STUDY

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## ABSTRACT

*This study employs an action research methodology to explore the contribution of the salesforce to brand performance through the development of a solid brand-salesforce relationship. The research is conducted on a leading direct-selling company in Morocco. Our results show that a well-trained and motivated salesforce can play an essential role in contributing to brand performance by building strong relationships with customers, communicating about the brand effectively, promoting the brand's values and benefits, and building a positive brand reputation and image. This strong relationship pushes the salesforce to consider the brand a relational partner providing emotional and financial security. It creates a dynamic identification between the brand and the salesforce, leading to a more substantial commitment to the brand. We propose a set of recommendations for managers related to training and digital use to understand the nature of this contribution and avoid brand underperformance. Additionally, a new framework is developed to understand the brand's salesforce actions, motivations, and perceptions. The study uses semi-directive interviews, participatory observations, and internal documentation for a comprehensive aim. This work contributes to the fields of brand management, direct selling, and the multi-level marketing industry, where the sales force plays a crucial role.*

**Keywords:** brand performance, direct selling, sales force, independent direct sellers, network relationship marketing, multi-level marketing

## INTRODUCTION

The COVID-19 pandemic has prompted companies to revisit their strategies and impacted consumers, whose consumption habits have been disrupted. One notable consequence has been the widespread loss of employment, leaving numerous individuals searching for alternative means to secure supplementary income. Consequently, the pandemic seems to have exacerbated inequalities already present in the labour and employment market (Alberio & Tremblay, 2021), particularly for women or people with lower incomes who were more affected in the restaurant, hotel, and non-food retail sectors (Couturier & Posca, 2021). These conditions have also promoted the change in work-life balance by impacting workers' affective organizational commitment (Guilbert et al., 2022); on the other hand, these kinds of crisis circumstances are pushing an increasing number of workers to opt for more control over their earning potential and work environment (Harrison & Hair, 2017).

Given this circumstance, many people are inclined to engage in direct selling. Direct selling has become appealing due to its potential benefits and flexibility. With traditional job opportunities becoming

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scarce, individuals are drawn to the prospect of entrepreneurship and the potential to earn income through direct selling. This approach allows individuals to leverage their networks and personal relationships, offering products or services directly to consumers without intermediary channels. Moreover, direct selling gives individuals a sense of control over their financial situation, as they can determine their work schedules, set targets, and engagement level. This flexibility can be particularly advantageous for those seeking supplementary income, as it allows them to balance their direct selling activities with other commitments or part-time jobs.

Furthermore, direct selling is based on a business model that adopts a network relationship marketing approach called MLM: "multi-level marketing". Thus, the economic viability of this model is based on the absence of intermediaries, the minimization of advertising costs, the virtual lack of labor costs, and the articulation of robust social ties, notably through family and acquaintances (Biggart, 1990). The money saved can be allocated to compensation for those involved in distribution by applying innovative incentive systems and compensation schemes (Roman, 2021).

Similarly, the MLM system offers businesses another way to promote their products to potential consumers through human relationships and social connections (Palmatier et al., 2007; Jain, Singla & Shashi, 2015) and based on customer referrals (Sobaih, Ghannam & Aliedan, 2021; Chaubey & Subramanian, 2013). Therefore, the salesforce earns from personal sales and recruiting other sellers (Coughlan, 2016). As a result, MLM is emerging as a well-established and successful business model over the past decades (Keong & Dastane, 2019).

In direct selling, trust is crucial because it strengthens the legitimacy of the direct seller and their offerings. Customers are likelier to believe in the goods or services' worth and quality when they trust the seller. This trustworthiness contributes to the seller's excellent reputation, fostering retention and client loyalty.

Building a personal connection with consumers is frequently the foundation of direct selling. Customers are more open, receptive, and willing to participate in meaningful interactions when they trust the direct seller on a cognitive level (is established when customers perceive the expertise and competence of customer service personnel, placing their trust in their knowledge and preparation). Emotional trust emerges when customers form a deep emotional connection and feel a sense of satisfaction, leading to solid confidence in the service seller (Wang, 2009).

Additionally, Andaleeb (1996) pointed out that trust in a relationship denotes values that will increase both sides' advantages. It encourages suppliers to improve performance and engage in different behaviors (Johnson & Grayson, 2005).

In addition, in the direct selling-purchasing process, consumers are likely to perceive a higher level of risk (Peterson et al., 1989). A salesperson's job is to lower ambiguity and risk by fostering trust (McAllister, 1995). Customers could be unsure about the legitimacy or dependability of the goods or services sold through direct selling. Trust lessens perceived risks, which helps to decrease these worries. Customers feel more confident in their purchase decisions when they trust the seller because they know they are dealing with a respectable and reliable person.

Consequently, reliable direct sellers frequently gain from good word-of-mouth recommendations. Happy customers who believe in the seller are more inclined to tell their friends, relatives, and acquaintances about the company's goods and services. These recommendations can significantly increase the seller's consumer base and commercial potential especially in the direct selling industry.

In conclusion, the scope of direct selling and the multi-level marketing approach calls into question the issue of brand performance. Indeed, since this business model does not rely mainly on communication and advertising actions and in the absence of a showcase that could reinforce the credibility of the channel and the brand, this reality places the salesforce in an unparalleled position for customers in direct selling. This situation leads to the tendency for the image of the salesperson to be more critical in terms of the customer's attitudes and behaviors than the image of the channel or the company, without forgetting the fear that the image of specific salespeople could damage the image of the direct selling companies. Thus, all these reflections are at the origin of our question research, which we present in these terms: How does the sales force's relationship with the brand contribute to its performance?

## THEORETICAL ANCHORING

### **The brand is a relational object beyond its commercial purpose**

Besides the product, brands allow consumers to aspire to their personality, social belonging, and lifestyle. They play the functions of affective relationship (Fournier, 1998) and social identification (Heilbrunn, 2020). Therefore, the brand has an intangible value created by identifying consumers with it and its customers. Indeed, when consumers identify with the brand, they think the brand image is in harmony with their image and personality (Hwang & Han, 2014). The brand tells us about the customer's psychological and social profile. Product and brand ownership enriches, develops, expands individual identity, and promotes self-concept expression (Belk, 1988). Moreover, brand ownership is paramount in establishing a long-term relationship with the customer; it depends on a memorable experience with the brand and its identity, significantly impacting their sense of brand ownership (Büyükdag & Kitapci, 2021).

In this perspective, the brand is perceived as endowed with virtues, desires, and skills. It possesses psychological characteristics that Aaker (1997) studied and grouped into five themes characterizing the brand personality: sincerity, emotionality, competence, sophistication, and harshness. In this sense, customers no longer buy to have but to be and to belong. Therefore, it is in the interest of brands to act with understanding to build strong relationships with them. The two main levers of a strong relationship are the ability to create trust and attachment.

Trust is a prerequisite for any relationship. It is reflected through presumptions that integrate the credibility, integrity, and benevolence that the consumer attributes to the brand (Michaël Korchia, 2002).

- ✓ Credibility is related to the expertise of the brand and its ability to meet specific functional expectations to fulfill the performances desired by the consumer.
- ✓ Integrity implies a relational dimension. It refers to the honesty and loyalty of the brand, its ability to keep its promises and to ensure consistency between its speech and its actions.
- ✓ Benevolence is about caring for a long-term relationship. It means the consumer can rely on the brand because it can consider his interests before the brand's short-term interest.

Beyond trust, attachment is a cornerstone of the customer-brand relationship. It conditions purchasing behaviors that drive brand profitability and increase consumer lifetime value, impacting positive word of mouth and purchase intention. (Alvarez & Fournier, 2016) Explains that brand attachment enhances customers' identity, pro-brand behaviors, and repeat purchases.

Allison et al. (2016) find that strong brand attachment among salespeople increases salesperson effort on behalf of the brand; in the same direction. Gillespie & Noble (2017) show that attachment

among salespeople in many industries positively influences their performance. Moreover, (Beeler et al., 2021) findings suggest that brand attachment can influence self-concept and how to interact with other customers.

### **Nature of brand-customer relationships, are brands partners?**

The brand can be considered a relational partner by customers. In truth, some customers build relationships with brands similar to those with people and invest in emotions and engagement as they do in human relationships.

For the relationship to develop, the brand must be considered an active partner despite its transactional and passive object. To support this reflection, we would like to mention the different facets of relationships mapped by Fournier (1998), which are: (1) arranged marriages, (2) casual friends/buddies, (3) marriages of convenience, (4) committed partnerships, (5) best friend-ships, (6) compartmentalized friendships, (7) kindships, (8) rebounds/avoidance-driven relationships, (9) childhood friendships, (10) courtships, (11) dependencies, (12) flings, (13) enmities, (14) secrecy affairs, and (15) enslavements.

It is worth noting that brands have become more personified and humanized, and this finding has gained momentum through communication and the brand's conversation with customers on social networks. The humanization of brands through different media, such as video (Giro, 2018), generates more favorable consumer attitudes and contributes to the performance of brands (Puzakova et al., 2013).

Building a solid relationship with the consumer is a way of performing the brand by creating an indestructible link that touches the individual's identity. The brand proposes a model that encourages adherence, and thus leads to consumer attachment and loyalty. The consumers make the brand sparkle and become its ambassador. Consequently, they contribute to its performance and the brand gains influence not only in the material sphere but also immaterial by becoming a reference, a cultural icon for united communities.

### *Brand performance*

Brand performance is primarily based on the strength of its relationship with consumers. Brands that can create an emotional and lasting relationship with their customers tend to perform better in the long run (Aaker, 1996). Researchers have also indicated that brand performance depends on a good brand reputation, strong brand awareness, powerful customer brand fidelity, and reaching the expected image in the market (Odoom & Mensah, 2019).

Kapferer (2012) considers that brand performance refers to how well a brand meets or exceeds the expectations of consumers based on its functional, emotional, and symbolic attributes. He highlights that companies with a clear and consistent strategy for their Brand can effectively communicate that strategy to all levels of the organization can better maximize their brand performance. (Kapferer, 2012). According to Keller (2016), brand performance is the effectiveness with which a brand creates the desired advantages and value for its target market, and the degree to which it meets or exceeds customer expectations. Monga & John (2010) join the same idea; they consider brand performance as the degree to which a brand satisfies customers' needs and expectations and contributes to their overall well-being while meeting the company's financial and strategic goals. Goi (2009) tackles brand performance differently; it is how a brand can generate awareness, preference, and loyalty among its target customers and achieve a competitive advantage in the market.

The literature has proven the impact of brand relationships on brand performance. The study of Casidy et al., (2018) examines how consumers' perceived relationship orientation of hotel brands affects their identification and emotions towards the brand, which drives desirable performance outcomes.

Nadeem et al., (2021) investigate the relationship between experiential value and consumer engagement and their impact on brand relationship performance outcomes, value co-creation intentions, brand loyalty, and satisfaction. Halim (2011) also examine the relationship between brand trust, affection, and performance, mediated by purchase and attitudinal loyalty.

It is clear that brand relationships can significantly impact brand performance. A strong brand relationship can lead to higher brand loyalty, increased customer retention, and positive word-of-mouth marketing which can translate into higher sales and revenue for the brand. When customers have positive experiences with a brand and feel a connection to it, they are more likely to continue purchasing from that brand and recommend it to others.

### *The links between the sales force and the brand*

Beyond the value created for the customer and the company, the brand also creates value for the employees and the sales force. Indeed, it is essential to motivate the sales force, which is one of the primary criteria for improving their performance and strengthening their commitment to the brand. In other words, when salespeople are strongly connected to their brands, it impacts their motivation to sell and represent the brand and promote its products (Allison et al., 2016). Furthermore, fostering this motivation is a primary criterion for improving sales force performance and enhancing their commitment to the company (Merk, 2021). The results show that training, customer orientation, and managerial behavior are statistically significant and positively related to salesperson performance (Khan, 2020).

Hundreds of interviews and qualitative studies conducted among sales teams in the luxury and cosmetics industries have affirmed that sales force motivation can be intensely stimulated through a closer relationship with the brand being sold (Gil-Saura et al., 2013). In addition, three salient features characterize the relationship between the sales force and the brand. They are defined by the emotions felt by the sales force for the brand sold, which may start with appreciation and develop into love and passion; this love strengthens customer engagement, brand advocacy, and loyalty (Palusuk et al., 2019). It is clear that sellers play a primary role as brand evangelists or ambassadors (Hughes, 2013) and influence the perceptions of external stakeholders. The (Brexendorf et al., 2010) thesis highlights the critical position of the interpersonal relations between the sellers and the consumers in impacting customers' satisfaction and, eventually, their attitudes and commitment to the brand.

In addition, Lynch & de Chernatony (2007) demonstrate that human-intensive direct personal selling often involves a tailored message to the customer's needs. Nevertheless, this leads to heterogeneity and possible inconsistencies among salesforce that is often uncontrollable. Furthermore, what further compromises message consistency is that a sales force team can often be assigned to cover the same buyer or approach the same prospect, contributing to communication heterogeneity. Many researchers examine the impact of salesforce on brand attachment, identification, trust, satisfaction, image and loyalty; they notice the importance of brand identification as a motivating influence for sales personnel in supporting specific brands. Brand identification can increase salesperson effort behind a particular brand and improve brand performance.

The findings of Guenzi et al. (2016) suggest that sales capabilities enhance performance both directly through a well-structured sales force and indirectly through nurturing sales talent and targeting customers.

Amoako & Okpattah (2018) note that effective sales force management is essential for enhancing competitiveness and sales growth, particularly in emerging markets. Their study examines how sales force management leverages personal branding and technology-enabled sales tools to improve sales force productivity and performance. Nevertheless, the literature review about the impact of salesforce on brand performance in the direct selling and multi-level context is scarce.

## METHOD

The question raised at the origin of our research work emanates from an observed gap. We have already held a position at Oriflame Maroc. The difference between the realities of the brand as we live it and as it is perceived is remarkable. This astonishment produced a bewildering feeling when our dermatologist solemnly warned us not to use Oriflame products. We felt at odds with these findings. Only when we went to the parent company in Stockholm as part of our work were our questions answered, our doubts dissipated, and our uncertainties were unraveled.

Thus, we were led to establish a cross-check between how the brand is represented, perceived, communicated, and valued in Sweden (it is the country of origin) and in other countries, including Morocco, where employees perceive it differently from customers and non-customers. We had the impression that the brand has a dual perception. This mixed and bewildering view is a story of context and culture.

Indeed, the salesforce is the cornerstone of the creation of earning opportunities in the multi-level marketing. However, this openness sometimes needs to be improved in communication, especially when this approach requires direct sellers to possess practical interpersonal communication skills (Omar, 2014).

### Action research: interpretative and transformative research

Action research is an approach related to the pragmatism paradigm where the action generates the scientific knowledge necessary to design and act on the social reality of individuals. This intention of change as a motivation for undertaking research is based on the simple description, understanding, and explanation of the phenomena usually associated with research (Erro-Garcés & Alfaro-Tanco, 2020; Robson, 2011).

This action research stems from our initiative as a researcher who identifies a problem and suggests that the company intervene according to an approach that we have decided. Consequently, the company welcomes the researcher if his intervention corresponds to its field problem and benefits from the research contributions without contributing to its implementation. This action research is qualified as fundamental (Liu, 1997). Since we had to inform and involve the actors in this social reality, we were motivated to conduct this research with their consent. Thus, our status is that of the internal research actor.

### Choice of the investigation field: Oriflame Maroc

Sweden is famous for its advanced path to beauty and wellness, mirrored in its prosperous beauty industry. The country is home to many of the world's leading beauty brands, which deliver extensive coverage of products and services created to fulfill the diverse demands of consumers. Oriflame Sweden Cosmetics is among the top 5 brands in Sweden<sup>9</sup>, known for its high-quality ingredients, innovative formulas, and eco-friendly approaches.

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<sup>9</sup> <https://gobeauty.space/en/blog/article/Top-5-beauty-brands-in-Sweden/>

In the cosmetics industry, Oriflame was founded by Robert and Jonas Af Jochnick, in 1967 in Stockholm. Oriflame has become the largest direct-selling beauty company, with over 3 million independent direct sellers worldwide and approximately 1.5 billion Euros in turnover. It is present in over 65 countries worldwide.

Oriflame Maroc was created in 1997 and pioneered direct selling in Morocco. In this logic, we have chosen it as our field of investigation: first, of its historical leadership in the market, by its first position in terms of competitiveness and sales force (the most significant sales force in Africa). In addition, we were able to immerse ourselves in this environment.

Oriflame follows the global marketing strategy, but it considers all of Morocco's cultural and behavioral specificities in all its actions. Similarly, it relies on a universal value system in all its subsidiaries: Spirit, Solidarity, and Passion, as well as values that govern all its actions, relationships, and objectives.

Oriflame's promise presented as a slogan: "Your Dreams - Our Inspiration," is deeply rooted in its history and heritage. Its 50-year history has allowed people to realize their dreams through a unique professional concept. It is the manifestation of its commitment to its clients and its sales force. Conversely, their dreams play an essential role in developing their beauty products. Also, motivating programs allow them to develop their own business.

We know that Morocco and Sweden are different countries regarding multiple parameters that influence the perception of the Oriflame brand.

Sweden is known for its high level of economic development, while Morocco is considered an emerging market with a lower-middle income. Sweden's strong economy and higher GDP per Capita were last recorded at 54262.44 US dollars in 2021<sup>10</sup>. The GDP per Capita in Sweden is equivalent to 430 percent of the world's average. In Morocco, the Gross Domestic Product (GDP) per Capita reached 3,934.243 USD in Dec 2021, compared with 3,375.282 USD in Dec 2020. Morocco's Nominal GDP reached 33.164 USD in June 2022.<sup>11</sup>

It is evident that economic factors such as lower average income levels influence consumers' preferences and spending patterns and push them to look for the affordability and accessibility that provide Oriflame. In addition, Morocco's literacy rate for 2021 was 75.93%, a 2.18% increase from 2018; nevertheless, the impressive statistic that Sweden's adult literacy rate is 99% is a testament to the country's commitment to education; for 2021, Sweden ranks 16th globally in education according to the World Population Review. This parameter gives us an idea of salespeople's profiles and education levels in both countries.

Swedish and Moroccan consumers have distinct lifestyles shaped by cultural differences and social norms. These lifestyle variations can influence consumers' beauty and skincare routines, preferences for specific product categories, and usage patterns. Moroccan consumers may have different cultural influences and beauty standards than Swedish consumers. Oriflame understands and incorporates these cultural nuances into its brand messaging, product formulations, and marketing campaigns to resonate with consumers in each country.

Those attitudinal differences between Moroccans and Swedes can influence how they perceive and react to the Oriflame brand. For example, Moroccan culture is influenced by religion, collectivism,

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<sup>10</sup> <https://tradingeconomics.com/sweden/gdp-per-capita>

<sup>11</sup> <https://www.ceicdata.com/en/indicator/morocco/gdp-per-capita>



and tradition that facilitate the development of networks in Oriflame. At the same time, Swedish culture is often characterized by individualism, gender equality, and entrepreneurship. In addition, beauty ideals may be influenced by country-specific cultural and aesthetic norms. Moroccans may emphasize skincare and makeup, while Swedes may favor a more minimalist, sustainability-oriented approach.

Moreover, Swedish consumers are often known for their heightened sensitivity to ethical and sustainable values. They may value sustainable practices, corporate transparency, and the environmental impact of products. Some Moroccans may also value these aspects, but they care more about the product's country of origin and the price.

As an international brand, Oriflame generally considers cultural differences and consumer attitudes in the countries where it operates, including Morocco. It is common practice to adapt product catalogs and offers to meet Moroccan consumers' needs and preferences. In addition, Oriflame adapts its communication campaigns to the Moroccan cultural context. It can include celebrating local events and festivals, using Moroccan celebrities and influencers in their campaigns, and creating promotional content that reflects Moroccan culture and values. Regarding events and incentives for sellers, Oriflame can organize Morocco-specific activities, such as training, awards, and recognition tailored to the local market. These initiatives aim to motivate salespeople, reinforce their commitment, and foster their success in the Moroccan context.

Oriflame's global market strategy typically focuses on building a strong and motivated sales force by providing comprehensive training and support to its sellers. The company aims to equip its sellers with the knowledge, skills, and tools to promote and sell Oriflame products effectively. Oriflame established training programs designed explicitly for sellers in the region, including Morocco. These programs cover various aspects, including product knowledge, sales techniques, personal development, and business management skills.

Oriflame provides ongoing support and resources to assist sellers in their training journey. It includes training materials, online platforms, mentorship programs, and regular communication channels to address sellers' questions and concerns.

Oriflame's training approach emphasizes the success and motivation of sellers. The training programs would inspire and empower sellers to achieve their goals, develop their businesses, and increase their income potential. Moreover, it considers the Moroccan market's needs, preferences, and cultural context. The training materials and programs incorporate local market insights, cultural sensitivity, and language considerations.

## Stages of the action research

Any methodology follows a particular protocol. The fundamental take-off point for action research is identifying a problem or issue needing improvement and wanting to do something about it.

### 1. Problem Identification

This reflection is initiated by field observation. In our case, our questions were triggered by observing the direct selling environment of the Oriflame company. Understanding begins with the problem that lies in the dual perception of the brand and its need to ensure consistency in its brand, to which the sales force makes a significant contribution, as well as the context in which it takes place. It is a human or social context in which direct sellers interact with each other, customers, and non-customers. This understanding may expand as the research progresses.

### 2. Establishment of an action plan

The action plan should be appropriate to the research methods and involve rigorous tools for preliminary data collection. At each stage of the cycle, data can be collected and analyzed. Thus, in the first stage. What we observe in a participatory and non-participatory way continuously informs the research path, the questions to be mobilized in the interviews, and the nature of the information sought in the internal documents. The cycle should be understood as providing "dynamic moments" that fuel an "action research spiral" (Moghaddam, 2007). In other words, progression occurs in the form of a cycle. More concretely, our observation of the sales force in their action environment reveals to us the elements of their contribution to the brand performance of the represented brand, such as their appearance, gestures, interpersonal communication, identity, and educational level... Quantitative and qualitative data collection and analysis methods can be used, but qualitative methods are often chosen. In the example, participant observation, in-depth interviews, and event reports were used.

Finally, the detailed description of actors and contexts must be recorded in the form of minutes of meetings, videos, and logs. In order to achieve the validity of the action research, the use of different data sources is recommended, and this method is called "triangulation."

### 3. Action implementation

The action plan should be implemented, and changes can be made along the way based on the data collected during the process.

### 4. Evaluation of the action effects

After the action phase, the evaluation must be done. The following questions can be used to conduct the evaluation:

What changes have I observed? → the results of our research and recommendations will be voluntarily shared with the company to implement a set of actions.

What effect has this change had on research? → inform brand management research and rethink the brand-seller relationship.

### 5. Communication of the findings and valorization of the research

It is essential to share and compare one's observations and to cross-reference one's data. Action research cannot be conceived in isolation, although research can sometimes be a solitary activity, and reflection is essential.

## **Data collection instruments**

### ***Participatory observation***

In our research framework, we are an integral part of the organization we studied, benefiting from a double posture of researcher and internal actor; no reason could justify our absence of a declaration of intent. On the contrary, from an ethical point of view, this declaration is essential to the observation; we have actively participated in meetings such as those of the marketing and communication department, general management and direct selling salesforce, and information meetings between management and sales force. We had the privilege of observing many behaviors, testimonies, actions, and decisions in the face of events, actions, and problems encountered and writing them down in a logbook; It allowed us to build an evidence base to inform our understanding of the nature and manner of the sales force's relationship with the brand.

### ***Internal company documents***

We completed our data collection with internal company documents. Within Oriflame, there are many documents of various natures and forms: activity reports, PowerPoint presentations, meeting minutes, videos of sales force events, and press articles. Some information's open access on the website, YouTube channels, and social media, and others are confidential for internal use.

In light of these results, we understand that the salesforce has a share of the responsibility for disseminating information. It is the actor of top-down communication towards its network line, and any distortion or misunderstanding will impact on the whole process, especially since the sales force is mature. Moreover, it requires Arabic for any communication medium, which gives us the first indication of most direct sellers' education level. In addition, Moroccan consumers are concerned about product awareness and accessibility. They are willing to make a cosmetic purchase if it is recommended by friends or family, which demonstrates the weight of the recommendation for Moroccans if it is provided by people around them who are trustworthy. On the other hand, physical contact with the seller is no longer a priority, as the virtual world also allows for the development of solid relationships. In the end, contact with the product and the search for a piece of customized advice stimulate motivations for the purchase decision.

### ***Semi-structured interviews***

To gain comprehension, we interviewed twenty-one direct selling people from the network of the company Oriflame; we questioned salespeople from various areas of Morocco: the central region (Fez-Meknes, Errachidia, and regions), the region of Rabat, Casablanca, the Eastern region, the North region and the south one (Marrakech, Agadir, Laâyoune...).

We diversified the selection criteria according to age (22 to 65 years old), socio-professional status (employed, unemployed, entrepreneur, resigned from the position), academic status (illiterate, elementary, middle school, high school, bachelor's degree, master's degree, Ph.D. candidate). Moreover, our choice considered the number of experience years, which is a revealing parameter in our study, as well as the level or status of the direct seller in the system of the direct selling company, studied. The statuses are scaled according to whether the salespeople have a beginner (C), intermediate (M, SM), and advanced (D, GD, SGD, S...) level. (Appendix A includes all the information about our respondents).

Access to an authentic conversation requires trust and proximity between the two interlocutors, the primary factor that conditions the richness and quality of the collected data. The fact that we are conducting our research from an internal position (Area manager in Oriflame, Morocco) had a very positive effect on all the interviews conducted. In the eyes of the respondents, we benefit from the status of a familiar actor. We agree that with the posture of "outside researcher," we would have experienced difficulties in getting the actors to talk about their perception and experience in the context of direct selling.

The interviews with direct sellers were conducted in Arabic and French, face-to-face and by telephone, due to the unavailability of some sellers and the difficulty of accessing some cities.

### ***Results***

These semi-structured interviews were administered based on an interview guide that served as a general framework by listing the questions to be discussed with the respondent. The theme was the brand universe with an emphasis on the brand's values, its mission, and brand relationship through the variables of identification, attachment, and commitment.

In our study, we tried to understand how the direct sellers perceive the brand, their level of knowledge of its mission, values, feelings, and relationship with IT. We used Nvivo software to analyze and categorize the data. This analysis yields several results, which we present as follows:

➤ **Brand Mission and perceived positioning**

A textual analysis allowed us to identify a set of concepts frequently evoked by the interviewees that we present in the following table 1:

**Table 1.** Frequency of words in the subcategory "brand mission."

Word	Word Frequency	Weighted percentage (%)
<b>Products</b>	28	5,12
<b>Opportunity</b>	12	2,19
<b>Quality</b>	12	2,19
<b>People</b>	7	1,28
<b>Sale</b>	6	1,10
<b>Change</b>	5	0,91
<b>Gain</b>	5	0,91
<b>Realize</b>	5	0,91
<b>Dreams</b>	5	0,91
<b>Sell</b>	5	0,91

According to the results, some direct sellers do not deeply understand the brand's mission. Selling cosmetics was repeated in most speeches: only a few interviewees announced the realization of dreams as a mission, while others meant it through other expressions that are also recurrent, such as changing lives, making money, and working on the opportunity. We understand that there is confusion between the mission and the brand's business or the philosophy of the brand's opportunity that revolves around the sentence "make money today and fulfill your dreams tomorrow". In most responses, we note a dissociation of the brand between "products" and "opportunity," which are perceived differently. This observation is frequently confirmed in the Brand's perceived positioning discourse.

➤ **Brand positioning**

Indeed, the desired positioning of the brand on a global scale is "Swedish beauty". A concept that was not explicitly expressed in the interviewees' speeches. The brand positioning was discussed under the following elements:

□ **Product quality:**

Respondents commented on the quality of the products as follows: "Taking advantage of the brand coming from Sweden, under the responsibility of the great scientists and very famous perfumers to explain the opportunity through a product that has value." (Interviewee 13). In some speeches, quality was not only attributed to the product. The analysis of these speeches revealed the environmental dynamics and the brand's respect for international standards.

*"Quality encompasses everything: the packaging, the catalog, the product; there is no way to compare Oriflame to other brands. For example, there is an MLM company that*

*sells wellness products, costing 140 euros, but the packaging is not worth 1 euro and is not attractive"* (Interviewee 14).

In some speeches, quality was not only attributed to the product. The analysis of these speeches revealed the environmental dynamics and the brand's respect for international standards.

*"Quality encompasses everything: the packaging, the catalog, the product; there is no way to compare Oriflame to other brands. For example, an MLM company sells wellness products, and the product costs 140 euros, but the packaging is not worth 1 euro and is not attractive"* (Interviewee 5).

#### □ **Lack of awareness of the Oriflame opportunity**

Some direct sellers interviewed perceive Oriflame's brand positioning as needing to take its value or to be better communicated due to a lack of opportunity awareness.

According to the speeches, the opportunity is judged as unique and extraordinary. However, it is not well known and assimilated by the prospects who cannot trust the brand's promise or are unaware of the gains and advantages granted by the opportunity. According to (Interviewee 9), *"the image of the opportunity is not well worked out in advertising; 95% of prospects think it is necessary to sell. Customers must understand that they can buy the product for personal consumption with a 30% gain"*.

#### □ **Brand perception**

Some of the direct sellers interviewed define the brand's positioning through the different levels of the range that we have classified in Table (2) below:

**Table 2.** Verbatim on the brand's positioning perception

Range level	Respondent	Verbatim
<b>High Range</b>	(Interviewee 8)	For me, it is number 1 since I am 100% convinced
	(Interviewee 5)	It is the brand awareness and image, history of more than 20 years, among the big brands.
	(Interviewee 17)	It took much time to gain the consumers' trust; the brand is very famous in morocco
<b>Medium Range</b>	(Interviewee 3)	A brand intended for the general public, especially older women with a medium and modest social level
	(Interviewee 10)	Great popularity in all categories, especially the middle and upper class

Thus, the positioning has also been studied regarding brand valorization and devaluation: the devaluation is observed through the practices of independent sellers who harm the brand's image. In this sense, (Interviewee 9), a 34-year-old, argues that:

*"In Morocco, there is no matching between the perception of the society and the Moroccan mentality. There is a dissociation between how the brand sees its development and the attitude of the leaders. Some sellers manage to follow it; others destroy it because of their intellectual level. I do not mean to be educated or not, but the level of awareness is not as adapted to the brand's conception"*.

(Interviewee 8), Thirty-two years old, a graduate in architecture believes that **"there are people who devalue it because a particular category of people represents it, so they despise it. Despite this, I**

**manage to attract prospects because they see that I come from such a social and intellectual level; at the same time, I am very convinced of the Oriflame brand ".**

These devaluation practices also concern sales at knock-down prices: **"It is a brand that has a lot of value and acceptance in the world, but in Morocco, there are practices that devalue the products, there are few people who are interested in quality, it is the price that decides"** (Interviewee 15), **"currently we have problems selling in low-price stores"** (Interviewee 1).

Consequently, the interviewees are well aware of the significant issue of the brand and its positioning, which are suffering degradation effects due to the practices of specific salespeople, the attitude and mentality of the salespeople responsible for the network, and the misuse of certain products.

Except for all the respondents, other direct sellers consider that Oriflame aims to develop its brand: **"From my point of view, the brand wants to be close to and reconcile with young people, especially with the launch of product ranges for young people"** (Interviewee 3, 27 years old, Business Trainer). **"To work on a new category of consumers, especially young people"** (Interviewee 8, 32 years old, architect). This perception intends to reposition the brand felt by a category of young graduates working in other functions.

#### ➤ Brand values

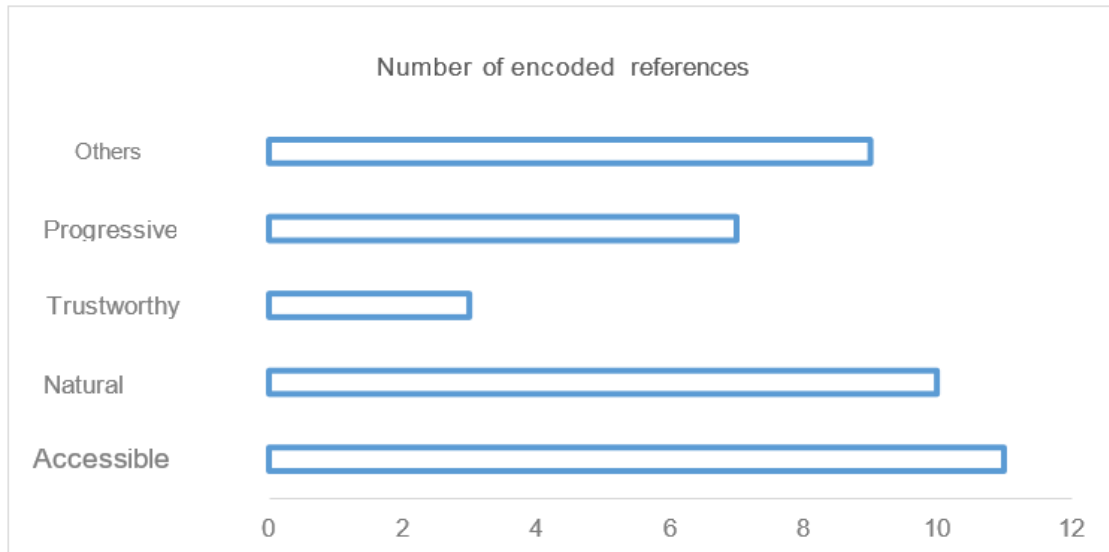
As such, all respondents easily and quickly recognized the values of the Oriflame brand, namely: "Spirit, Solidarity, and Passion."

(Interviewee 4) needs clarification on the brand's values and attributes. For her, the brand values are **"natural, Swedish, respect for the environment, an extraordinary opportunity for earnings."** **"Without mentioning the gain, it is the social side that attracts me the most. It helps women to be independent, especially when I know that purchasing some products is a donation to associations"** (Interviewee 11).

(Interviewee 9) understands solidarity as follows: **"For solidarity, I invite my group to be a center of positive energy and hope in the lives of others. For example, we can invite a widow to have a source of income, someone who needs extra income, or a student to finance his studies. I will always remember when I reached the 21% level and earned the \$1000 check. I was able to pay 1000 \$of my training [...] There is also solidarity among the team. It accompanies a new salesman, showing him how to place an order; the joy is to hear that "God be merciful to your parents," and you will always have excellent feedback. "**

#### ➤ Brand Attributes

Regarding brand attributes, our effort is to determine if direct sellers are aware of the physical and symbolic characteristics attributed to the brand illustrated in Figure (1). Note that these attributes are arguments to convince prospects to test the brand.



**Fig. 1** Brand attributes by number of references encoded on NVIVO

The results show that the most recurrent attribute is accessibility through its portfolio, as stated by (Interviewee 2): **"Given the price and the product portfolio, the brand is intended for the general public"**. Furthermore, according to (Interviewee 16): **"there is a perfume at 10 euro and another at 45 euro, our products are accessible to all levels, we collaborate with different people"**.

The two most cited attributes in the speeches are "Natural" and "Progressive". Most interviewees attest to the naturalness of the products and the natural ingredients. Two direct sellers testify to the Swedish origin of the brand: **"The brand is Natural; I always explain that Oriflame tests its products on volunteers and not on animals through clinical and consumer tests. It respects the environment, and it uses recyclable packaging. It also plants trees"** (Interviewee 20).

Other direct sellers described it differently. As an illustration, (Interviewee 12) considers that *"more important than money, the brand changes the lives of others. It makes people exceptional, and it gives them value and rewards. Some salaried employees are rarely recognized and rewarded for their effort, which has a powerful impact on personality and achievement"*.

#### ➤ Brand personality traits

We asked interviewees to describe the personality traits of the Oriflame brand. These traits represent distinct, identifiable characteristics that create strong, lasting, predictable perceptions. Personality traits also tell us about the brand's behavior through communication, actions, and packaging.

According to the responses, the brand is highly regarded as sincere because it delivers on its promises. In addition, sincerity also exists in the credibility of the brand to give the promised gains and gifts: **"Everything is clear in the products, components, use and desired result,"**(Interviewee 6), but much more than the system of opportunity told us (Interviewee 7) **"The system is frank, the brand gives value to the human being. The owners and managers of the brand consider us as business partners, especially at conferences abroad. We see a lot of sincerity; Oriflame always keeps its promises and gives us much more"**. Finally, the second personality trait cited is the sophistication related to product development and the launch of new products.

## ➤ Relationship to the brand

This aspect concerns the nature of the direct seller-brand relationship. The latter is also a customer who considers the brand, a relational partner with which direct sellers can develop relationships similar to their relationships with people and invest in emotions and commitment, as in the case of human relationships.

The responses show that the direct sellers interviewed build deep relationships with the brand. They are, furthermore, experiencing intense feelings. We conducted a response frequency query (Table 3), which revealed that the committed relationship is the most general relational nature.

**Table 3.** Frequency of words "Nature of relationship with the brand."

Word	Word Frequency	Weighted percentage (%)
Relationship	23	14,56
Oriflame	11	6,96
Committed	6	3,80
Related	5	3,16
In love	5	2,53
Convenience	2	1,27
Family	2	1,27
Wedding	2	1,27
Best	2	1,27
Blood	3	1,27
Friendly	2	1,26
Business	1	0,63

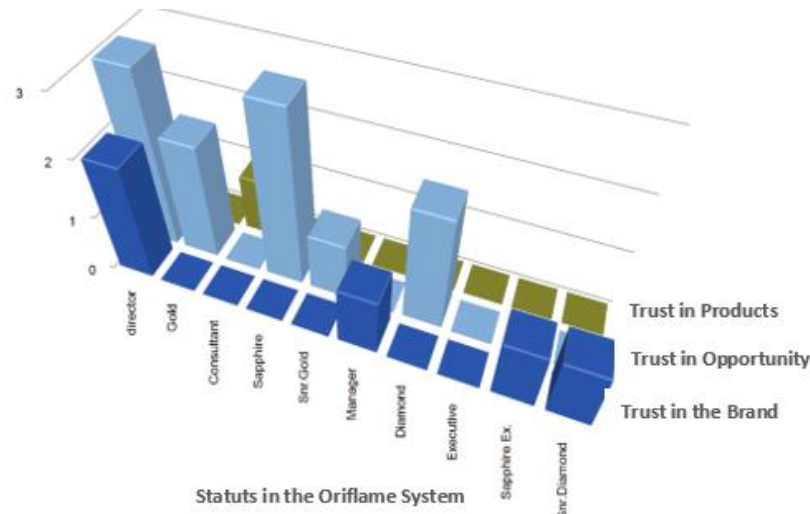
From the speeches, we can see that the sales force confirms to be related to the brand. It is indeed a kinship relationship; that is, Oriflame represents a family member or, more precisely, the father or mother. According to (Interviewee 13): **"Oriflame is my oxygen. It is the compassionate heart. I am not only talking about the material side, but she also offers us immaterial benefits"**.

In the same sense of family relationship, (Interviewee 21) explains it in these terms: **"the brand takes care of me. It reassures me. It supports me in difficult times"**. These direct sellers see the brand as a source of affection and attention (Interviewee 19). They consider it as if it fulfilled the unquestionable role of the mother in the family: **"it is like a tender mother who satisfies your needs. It becomes an eternal relationship because it flows in my blood; there is a great attachment. We feel that our network is like our children"**, adds (Interviewee 18).

The relationship is also described as committed. It is characterized by reciprocity, where **"everyone makes efforts to maintain the relationship"** (Interviewee 1), as well as a shared responsibility, **"a duty, a deep commitment"** (Interviewee 20) that implies credibility and dialogue (Interviewee 6). Even more, brand commitment is perceived as a lifestyle.



➤ Trust in the brand



**Fig. 2** Graphical representation of brand trust concerning IDV status.

Figure (2) represents the nature of brand trust by the level of direct sellers interviewed in the opportunity system. We see that the trust in the opportunity is the most pronounced and dominant. We can detect some answers to our questions by closely examining what the salesforce said.

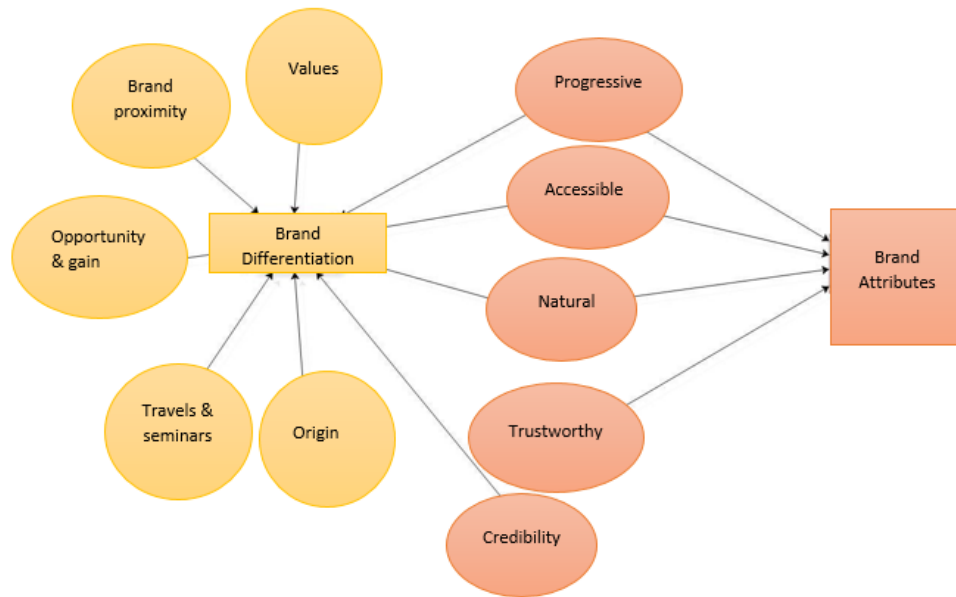
(Interviewee 12) says: **"I have more confidence in the opportunity. There are better products with higher quality for products separate from the opportunity. However, the goal is to test the product and use it instead of selling it and working on it. Salespeople only succeed for a short time.** Indeed, 61% of respondents admit to having much more confidence in the opportunity because it is reliable, fair, and without any margin for error. (Interviewee 15) **"when there is a good opportunity, you can sell any product** on a solid foundation. "However, this does not exclude the confidence of the sales force in the products. However, it remains lower than their confidence in the opportunity. (Interviewee 1) clarifies: **"I trust the opportunity much more because some products do not perform well or give opposite results if they are not well explained and applied like the sensitive skin care products."**

While most respondents have confidence in the business opportunity, it needs to be more logical and comprehensible for others to separate the brand from the product and the business system while claiming complete confidence in the whole brand. (Interviewee 16) also concludes: **I trust both; they are linked. I need to trust the products to succeed in the opportunity. For 22 years, I have been very confident in the product; if someone has had a bad experience with the product, it is because the choice was not good or the way of use.**

The interviewees, with a level of education from 3 to 5 years of higher education, develop a transversal and global vision of trust in the brand. The status in the system is a vague criterion for this position.

➤ Brand differentiation

The sales force views the brand as different through the aspects visualized in Figure (3) below:



**Fig. 3.** Convergence model between the brand attributes and brand differentiation node by Nvivo

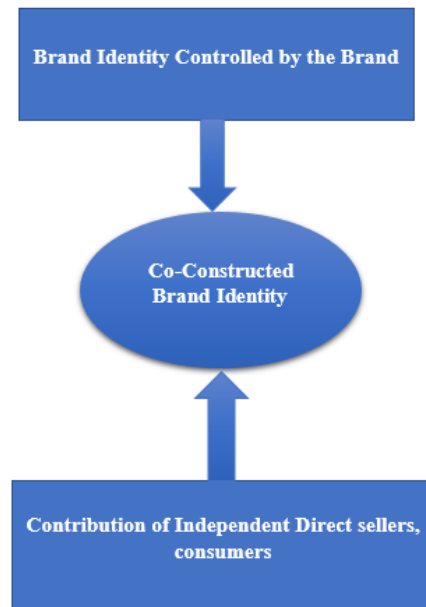
According to the sales force, the brand's differentiating factors lie in its attributes: its accessibility and its natural and progressive aspect. In the same way, other factors are to be considered, such as the opportunity and the earnings, without forgetting the trips and the seminars (Interviewees 2, 4, 14, 19).

## DISCUSSION

Since creating a solid brand is a reason for its performance, its strength lies in constructing an entity that gives meaning, a valid and coherent identity. This way, we defined the brand identity around an ideology and strong values. In a sense, identity is the foundation of the brand.

Our empirical study allowed us to highlight the identity of the brand studied, "Oriflame Maroc," to show that it is dynamic, not static, evolving through the appropriations made by the salesforce. Indeed, the literature highlights the strategic asset of creating a solid brand by respecting its identity and knowing its roots and history (Berger-Remy & Laporte, 2013).

In the direct selling industry, the brand identity is co-constructed (Figure 4) by the sales force; it seems not to be an identity controlled by the company but whose meaning is co-created by a set of actors (Batey, 2015). The responses reveal that the brand's identity is fragmented into products and business opportunities, which dominant stakeholders (direct sellers who are also customers and consumers who are not part of the brand's network) appropriate and adopt Oriflame. Ultimately, through this ownership and adoption, they construct their identity and thus create meaning. It means that the company is no longer the temple's guardian but becomes a composer who must integrate the different meanings brought by its stakeholders to the brand.



**Fig. 4.** From controlled brand identity to co-created brand identity

The results reveal that the interviewees are unaware of many principles of the brand's heritage, ideology, and Swedish attributes. They only remember elements repeated or produced by their experience with the brand, which is also due to their intellectual level. Furthermore, since they are a primary channel in this distribution mode, they do not base their messages deeply and masterfully on their identity foundations, historical heritage, and expertise. However, we found that what makes the brand strong is mainly the recognition of its values (**Spirit, Solidarity, Passion**), which are universal values analogous to their religious references, allowing them to express their identity and culture (Appiah & Ozuem, 2019). They communicate incessantly during their interaction with customers and with the company. Nevertheless, we have noted in some of the discourse that some direct sellers do not represent these values appropriately and negatively impact the brand's perception.

Indeed, the negative image of the direct selling salespeople is the main shortcoming associated with the direct selling channel (Raymond & Tanner, 1994).

We observed that the image of the direct selling channel and the salesperson's image influences the brand studied image. Indeed, the image issue is the main challenge of selling. According to this channel, this image issue is not about the represented brand but much more about the image of the independent direct seller (Sahin, 2018). It was revealed in the words of the interviewees. It is undeniable that all strong brands are based on an ideology, a value system, and a personality. They all seek to establish a homology with the personality traits of human beings to embody them better and thus create solid relationships. Indeed, the more detailed and vivid the personality description, the more accessible for the sales force to appropriate it. For example, seeing the Oriflame brand as a sincere, sophisticated, and competent person (Aaker, 1997) creates a more robust identification with the brand for independent direct sellers.

Thus, if we consider a brand a social object carrying meaning and values, our results attest to this assumption and indicate that the Oriflame brand is considered a relational partner for the sales force, which invests in emotions and commitment in the case of human relationships. According to the speeches of the salesforce, they use an emotional register to talk about the Corporate Oriflame brand. It proves that

the relationship goes far beyond simple brand preference. Therefore, respondents evoke a lack when they last used or interacted with the brand a while ago. As a result, the sales force expresses facets of the relationship that range from love and passion to a deep intention to keep the relationship going (Gumparathi & Patra, 2020). They demonstrate the high affective commitments that direct sellers evaluate as a must-have partnership role.

In addition, it is worth noting that the brands have become personified and humanized. Oriflame is represented as a member of the family, including "the mother" and "the husband": two roles that reflect security, assurance, family bonding, as well as the source of affection and funding. Humanizing brands generates favorable consumer attitudes and enhances brand performance (Puzakova et al., 2013).

From the consumer's point of view, the brand is now evaluated on four dimensions: trust, identification, attachment, and brand experience.

Regarding trust in selling, (Newell et al., 2011) support the proposition that the consulting task and the personal relationship play a critical role in influencing buyers' perceptions of expertise, trust, and relationship loyalty. In direct selling, buyer-seller relationships are very close, and the seller promotes the company's image and its own. Purchase intentions are likely to be influenced by all of these images, as a salesperson's image can build trust and reduce risk (Comstock & Higgins, 1997).

Our results show that trust between the products and the business opportunity is also fragmented. Few respondents explained that the two elements are inseparable and can only trust the business system with the products they represent. They find the brand more credible and honest through its opportunity and more benevolent through the products and their development.

From another perspective, the trust issue is not only related to the brand-direct seller relationship but also to the customer or non-customer and the direct seller. To improve long-term sales, the seller must develop consumer trust during interpersonal and interactional relationships. (Poon & Albaum, 2019; Poon et al., 2012).

On the other hand, the relationship between trust and loyalty to the direct selling channel is stronger when the prototypicality of salespeople regarding the company they work for is high. In addition, the effect of salesperson trust on loyalty to the company is more substantial when salespeople are considered prototypical for the company (Sahin, 2018). Thus, customers have a more positive trust image toward salespeople than non-customers. Ultimately, affective trust is more important than cognitive trust in the direct selling industry.

The exploration of the relationship combining the independent direct seller and the brand universe leads us to deduce that the brand is seen as a relational partner that provides affection and financial security. This strong relationship implies an attachment and commitment to the brand, which contributes to the brand performance represented by the sales force.

Based on the lessons learned from our study, we have developed several ideas that should make managers aware of a certain number of elements.

Indeed, aligning salespeople's views of the brand and behaviors with what is communicated to external stakeholders (e.g., consumers) is urgent and critical to delivering a consistent, coherent, and strong brand message in the marketplace. Direct seller input takes on a negative meaning regarding messaging.

Maintaining the image of the direct seller is crucial for direct selling companies to influence variables such as contact probability and preference for direct selling channels, which are strongly linked to the image of the independent seller.

Direct-selling brands should revisit their marketing and lead generation strategies, even if their business model does not rely heavily on advertising. Therefore, it is necessary to consider communications about the brand's image, identity, heritage, and Swedish attributes that should be addressed by non-customers, typically potential consumers.

We know that performativity is exercised on all the dimensions of the brand: by buying a brand, the consumer adheres to the manufacturing process, the place of production, the philosophy of the company that manufactures it, its environmental policy, the ethics of its managers, to the attitude of its salespeople, to the history of the company and the image of other consumers of the product. This last variable poses a significant obstacle for the study company because the brand is perceived as non-qualitative, aimed mainly at poor women who need a source of income and do not have a solid knowledge of the products. In addition, Oriflame's independent direct sellers are mainly in the middle age group. As a result, it is challenging to attract young people to buy the products or to participate in the Oriflame opportunity, hence the need to rejuvenate its sales force to maintain its sustainability. It can only be achieved by repositioning the brand and communicating all the assets and attributes that are becoming concerns of young people, such as entrepreneurship, travel, financial independence, respect for the environment, responsible consumption, and buying a "brand with purpose."

Another area for improvement we identified was the fragmentation of the brand into products and opportunities. The latter takes over because it has focused on promoting its business opportunity and still needs to value its product culture. This fragmentation is generally transmitted by direct sellers who build the whole discourse on the importance of the opportunity to earn money, change their life and ensure financial freedom. In this sense, we propose a strong focus on product culture, training qualified independent direct sellers and redirecting gifts and rewards to branded products.

We also understand that consumers are sensitive to price increases since the brand's price positioning differs from the salespeople who recommend the product and are likely to buy it. The brand has a biased and unclear perception; direct sellers have a completely different perception of it. Even consumers judge it differently than prospects. Consequently, it should rethink it by acting on its marketing mix, especially its communication policy.

In addition, in their image-building efforts, companies must work on the appearance and behavior of direct sellers. They must be prototypes of the brand, represent its cultural base and convey its universe. In this sense, reviewing the prospecting tools (vest, cap, stand...) considered devaluing the brand is necessary.

In order to anchor the prototyping in the minds of the consumers, a brief company and product presentation, as well as a personal presentation of the salespeople (success story, history, testimonials), could create an associative link in the participants' memory, which would be impactful.

- At the training level:

Concerning salesperson behavior, direct selling companies should ensure that they have the formal and informal management tools necessary to ensure that salespeople convey to the customer the image that the company wants to portray as well as the behavior that is consistent with what customers see as a company prototype (Henkel et al., 2012). Thus, it is helpful to provide training that addresses image management and personal branding.

Indeed, salespeople must be aware of how they are perceived and how to change that image as perceived by customers deliberately. If independent direct sellers are not well trained and transfer biased

learning, training becomes the primary device contributing to brand underperformance. It implies inconsistent messaging, misinformation dissemination, and poor brand expression.

We know that direct selling training is limited to self-learning, catalogs, and training company representatives provide, which should be reviewed and updated. Although there is no legal way to force them to attend training, our study shows the need for more personal investment in training. Direct selling companies should adjust their promotion plans so that salespeople who attend specific seminars get sales credit for their involvement or offer more attractive commissions and bonuses for salespeople who attend training.

Furthermore, since training increases the opportunities for interpersonal communication between the sales force and prospects, we believe it is necessary to determine the specific training needs related to the themes specific to sales training, in this case, knowledge of the products, the company, the competition, and sales techniques. As stated by Mahadevan & Yap (2019), the necessity of training remains consistent whether an individual is a recent addition to the organization or an experienced employee. Training serves as a means to ensure that employees remain well-informed about contemporary technology and industry developments, equipping them to navigate any challenges that might emerge competently. To this aim, they could use a survey to assess the knowledge of direct sellers and gather their opinions on the topics to be covered during the training.

It is also possible to follow modules of the "Train the Trainers" training to (direct sellers) in a pedagogical, correct, and professional way that will ensure the production of an accurate, coherent, and compelling message. According to Mahadevan & Yap, 2019, training readies employees to tackle challenges confidently and minimizes their resistance to change. Beyond fostering new knowledge, skills, and abilities, training also nurtures a culture of continuous learning, ensuring employees are well-prepared to navigate uncertain situations like the digitalization challenge.

- At the level of technology and digital use:

Moreover, using digital technology is a real challenge for companies and an excellent opportunity to seize. Indeed, companies must establish a digital culture, equip themselves with technical and managerial skills and ensure the convergence between traditional communication tools and digital technologies. Oriflame must therefore invest in the POEM ( paid, owned, earned, media) system, especially paid and earned media, develop engaging brand content and storytelling, and control its Owned media and its presence on social networks.

With this in mind and the growth of the direct selling industry through the use of online websites or digital applications, it seems appropriate for direct selling companies, including Oriflame, to encourage the use of technology among its independent sellers, oversee its use and schedule intense training for all levels to advocate for the adoption of technology by their independent sellers. It would enable them to connect to broader networks and thus link them to successful access-based businesses to improve their performance. As highlighted by Harrison & Hair (2017), Utilizing technology can bolster the seller's investments by facilitating the smooth and productive exchange of information, enriching established connections, and fostering the growth of potential relationships.

Poon & Albaum (2019) highlight the significance of social media in accentuating the notable impact of word-of-mouth, online reviews, and prior shopping experiences on consumer purchasing behavior.

In addition, prominent social media platforms encompass social networking sites, micro-blogging platforms, and services for sharing photos and videos. Each of these platforms serves specific purposes,

and their judicious utilization holds the potential to revolutionize business growth within the market (Soledad, 2023), consequently, it is necessary to provide a digital code of conduct is essential to avoid practices that damage the brand image and create confusion in prospects' minds. For example: using the brand name, logo, and visual identity on personal profiles, selling and promoting products at discounted prices, and sharing misinformation.

## CONCLUSION

By comprehending the frequently utilized keywords and their interconnections, researchers and professionals can pinpoint potential areas for growth and innovation. This, in turn, facilitates the development of more efficient strategies, frameworks, and approaches for business management and marketing communication. Ultimately, these efforts contribute to fostering a more sustainable future for organizations (Ogutu et al., 2023)

We have explored a critical field of research that is beginning to receive particular attention in the literature, especially since the 1960s; marketing research has mainly been developed in consumer behavior. Few studies have focused on the interaction between the brand, the seller, and the seller's behavior.

### Conceptual contribution

Our research's originality lies in exploring the direct selling sector and multilevel network marketing; without omission, we are the first to approach this industry in the Moroccan context. Moreover, we have mobilized the methodology of action research rarely used; we participate in demonstrating the interest in conducting internal studies of the organization, which is still a methodology little used in marketing research.

Moreover, the mobilization in the brand field of the performance concept, which is considered a quantitative and measurable character, seems a conceptual contribution.

### Methodological contribution

Through our interpretive positioning, we have shown that the question of the brand is part of a social conception as a process of interaction constitutive of meaning.

Moreover, using the NVivo software, based on abductive reasoning logic, seems infrequent. Indeed, the academic literature consulted regularly refers to analytical processes of a deductive or inductive nature (Bazeley, 2007; Lebègue, 2011) and specifies in detail the modalities of their implementation. Although mixed approaches are encouraged, the explicitness of this usage seems to be little exposed until now.

We had to respect the cycle, which provides "dynamic moments" which feed a "spiral of research-action" (Moghaddam, 2007). In other words, our observation of the sales force in their action environment reveals the elements of their contribution to the brand's performance, such as their appearance, gestures, interpersonal communication, identity, and educational level. These aspects, fruits of observation, are searched in the literature to refine the analysis of a cycle. Subsequently, we set up the action plan and the question formulation that leads to the action effects evaluation, the communication of the findings, and the valorization of the research.

### Implications for managers

The study contributes significantly to industries that rely on direct sellers by shedding light on the importance of brand identity and the role of direct sellers in co-creating that identity. It highlights the need for alignment between the brand's intended identity and the perceptions and behaviors of direct

sellers. By recognizing the influence of direct sellers on brand image, companies can develop strategies to ensure consistency, build trust, and enhance their brand's overall performance through practical training, communication, and support for their sales force.

The research and its findings on direct selling and brand performance can apply to other industries or those that utilize direct sellers. While the specific context and brand may vary, the fundamental concepts of brand identity, trust, and the role of direct sellers in shaping brand performance can be relevant across industries. Companies in sectors such as cosmetics, wellness products, household goods, and fashion, among others, can draw insights from this study to understand the dynamics of their brand relationship formation and the impact of direct sellers on brand perception and performance. In addition, they could use representatives or sellers for their brand who need to be well-trained, informed, and committed to the brand for high effectiveness. Moreover, the brand identity and image could be impacted by some stakeholders like sellers, consumers primarily in the digital age when they can share wrong and harmful information about the brand that could damage its image or give a wrong impression to potential consumers who decide not to buy or join the brand because of this lousy representation that constrains their identification.

From a managerial point of view, our work has allowed us to build a framework for understanding the salesforce and its contribution to the brand's performance through its relationship. Thus, we extracted and wrote several recommendations that we have grouped by theme to shed light on their actions in terms of communication, training, and digital use.

In this sense, our work allows practitioners to understand how the salesforce acts during brand performance-building and how it conceives its relationship with the brand daily in its life cycle. Finally, our recommendations aim to raise awareness and support managers on the issue of repositioning the brand and arbitrating the role of the salesforce.

Our study highlights the significance of brand identity in a crowded marketplace. Managers should focus on differentiating their brand by clearly articulating its unique values, positioning, and attributes. This differentiation will help direct sellers stand out and attract customers who align with the brand's identity.

Managers should prioritize relationship building with their direct sellers, they can create a motivated and engaged sales force by fostering a supportive and inclusive culture, providing continuous training and development opportunities, and recognizing and rewarding achievements, positively impacting the brand's performance.

Furthermore, managers should create channels for direct sellers to provide feedback and share insights from customer interactions. This feedback can be invaluable in identifying areas for improvement, adapting marketing strategies, and enhancing the brand experience. Regular communication and dialogue will inform managers about their target audience's evolving needs and preferences.

### **Implications for entrepreneurs and policy makers**

Our study also has implications for entrepreneurs because joining the direct selling industry, particularly in the context of multi-level marketing (MLM) systems, is a form of self-entrepreneurship or micro-entrepreneurship. Direct selling often fosters community among entrepreneurs within the same company. Entrepreneurs can network with like-minded individuals, share experiences, and learn from others. This supportive network can provide motivation, mentorship, and collaboration opportunities. It also offers the potential for income generation based on sales performance and team-building efforts. Entrepreneurs earn commissions and bonuses based on the sales they generate personally and through their recruited team members. Successful entrepreneurs who build an extensive and productive network



can achieve significant financial rewards, allowing them to increase their income and improve their financial situation.

Consequently, people who want to experience entrepreneurship could join direct selling. However, to succeed in the industry, they must improve their personal branding, communication skills, risk, and investment taste to maintain their business. The managers of direct selling should focus the training more on the entrepreneurship mindset, business development, and soft skills tools.

On the other hand, entrepreneurs should focus on innovation to differentiate their brands and offerings. It can include developing new product lines, incorporating technology-driven solutions, or adopting sustainable and socially responsible practices. Entrepreneurs can attract and retain direct sellers and customers by staying ahead of market trends and customer demands. They should create a supportive ecosystem that nurtures the growth and success of their direct sellers. Entrepreneurs can empower direct sellers to effectively represent and promote the brand by investing in developing their sales force. In addition, they could explore collaboration opportunities with influencers, celebrities, or industry experts who align with the brand's values and target audience. Strategic partnerships can increase brand visibility, credibility, and reach. Additionally, entrepreneurs can collaborate with complementary businesses to offer bundled products or joint promotions, expanding their customer base.

Similarly, our study implies that policymakers should invest in consumer education initiatives to raise awareness about direct selling as a legitimate and trustworthy sales channel. By providing accurate information about the industry, benefits, and potential risks, policymakers can empower consumers to make informed choices.

They should establish and enforce ethical standards and codes of conduct for direct-selling companies. It is about guidelines on fair business practices, truthful product claims, and income disclosure. By promoting ethical behavior, policymakers can enhance consumer trust and protect vulnerable individuals from fraudulent or deceptive practices. They also foster international collaboration and knowledge sharing on best practices in the direct selling industry. By learning from successful models implemented in other countries, policymakers can adopt adequate regulations that promote the sector's growth, sustainability, and brand performance.

We notice that we have respected the action research protocol and the steps. We started with the problem definition, which resides in the double positioning of the brand and its need to ensure coherence of its communication, to which the sales force contributes amply. This step is followed by establishing an action plan, which consists of defining the research methods and using rigorous tools for the preliminary collection of data.

## **Research limits**

Even if the independence of the research subject-object is chimerical in our study, we have tried to explain reality through objective knowledge obtained by crossing the subjective representations of the actors (Miles & Huberman, 2003). Furthermore, our data collection is based on the principle of triangulation, which allows us to combine different techniques to apprehend the reality of a phenomenon through different and complementary lenses (Denzin, 1978).

In response to the lack of neutrality in action research, the researcher's distancing from the field seems essential, even though they are paradoxically involved (David, 2002). In our situation, the principle of impartiality about our study subject, which implies that we access a field with the status of a neutral observer, poses a problem. With our internal status in the organization, we must respect the interests of the organization. The criterion of neutrality, required by scientists, has gradually given way to proximity relationships and embellished trust with the actors of the organization under study (Pastorelli, 2000).

Nevertheless, this contact with the actors does not mean that we have the obligation of obedience, submission, and loyalty to the field.

We must recognize the subjective and evolving aspects of the collected data, and they do not accurately reflect the situation of all direct sellers in the organization studied. In this sense, it could be interesting to extend our analyses by studying other organizations operating in the direct selling industry or other contexts or providing other types of products or services in the direct selling industry and proceed with the multi-case comparison method or conduct longitudinal studies with a panel of independent direct sellers.

We also wish to continue reflecting on the sales force's contribution to the brand's performance with the constructivist and positivist epistemological posture.

The purpose is to build a conceptual model of the brand performance in direct selling, with the possibility of modeling the variables of brand identification, trust, and commitment, in order to be able to measure and quantify the impact of the direct selling salesforce on the brand performance which will be combined in terms of sales and customer's retention.

## **Declarations**

### **Competing interests**

No, I declare that the authors have no competing interests that might be perceived to influence the results and/or discussion reported in this paper.

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## APPENDICES

### Appendix A. Sample Characteristics

Interviewee	Status (level in the Oriflame system)	Region	Level of study	Age	Function before the integration of Oriflame	Number of experience years	Gender	Duration	Means of registration
1	D	MARRAKECH	Bac+1	22	Student	5	Man	49 min	Dictaphone
2	G	AGADIR	Bac+3	23	Student	4	Woman	45min	Call recording
3	C	TANGER	Bac +5	27	Business trainer	2	Woman	43 min	Dictaphone
4	S	FES	Bac +1	29	Housewife	8	Woman	55 min	Note-taking + Post- editing
5	D	BENIMELLAL	Bac+6	30	Visiting professor, Ph.D. candidate	7	Woman	36 min	Dictaphone
6	D	NADOR- OUJDA	Bac+3	30	Midwife	8	Woman	1h10 min	Dictaphone
7	SG	CASABLANCA	Bac+6	31	Ph.D. student	10	Woman	35 min	Dictaphone
8	M	CASABLANCA	Bac+5	32	Graduate in architecture	2	Woman	37 min	Dictaphone
9	D	TANGER	Bac+3	34	Banker	14	Man	1h20 min	Dictaphone
10	DD	MARRAKECH	Elementary	35	Housewife	10	Woman	44 min	Dictaphone
11	D	TAFILALT	Bac+3	35	Accountant	8	Woman	50 min	Dictaphone
12	DD	TADLA	Bac +1	38	Housewife	3	Woman	1h 10 min	Dictaphone
13	D.D	Rabat-Salé- Kénitra	High school	39	Saleswoman in a store	9	Woman	50 min	Dictaphone
14	SG	NORTH	Bac+3	47	Coordinator in an NGO	17	Woman	42 min	Dictaphone
15	Ex	Rabat-Kénitra	Bac+3	59	Employee	21	Woman	40 min	Dictaphone
16	S. Ex.	CASABLANCA	Bac+4	61	Professor	21	Woman	1H50 min	Dictaphone
17	S.D	CASABLANCA	Bac+4	65	Professor	22	Woman	40 min	Dictaphone
18	D	MEKNES	Bac+2	32	Hairstyling dresser	9	Man	36 min	Note-taking + Post- editing
19	GD	FES	Illiterate	37	unemployed	8	Woman	1H00	Dictaphone
20	SG	FES	High school	32	teacher in a nursery	9	Woman	1H30	Note-taking + Post- editing
21	D	Azrou	illiterate	45	unemployed	11	woman	45min	Dictaphone

# EVALUATING THE IMPACT OF INFLUENCER FOLLOWING ON THE LEVEL OF SOCIAL MEDIA ENGAGEMENT

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## ABSTRACT

*In influencer marketing, the follower count of influencers is a pivotal factor for advertisers. This research, combining observational analysis, eye-tracking studies, and experiments, reveals a curvilinear link between influencer follower count and engagement with sponsored content. While higher follower counts indicate broader reach, they can paradoxically weaken engagement, following an inverted U-shaped curve. Engagement rises, reaches a peak, then declines as follower count increases. Moreover, content customization and brand familiarity influence this dynamic. Heightened customization and lower brand familiarity flatten the curve, signifying influencers prioritize relationships with followers. The study further challenges that fixation of a particular relationship structure between influencer following (indegree) and user engagement does not hold true given the complex social media dynamics. The study suggests possible existence of multiple relationship structures as well such as inverted W-shaped, U-shaped, and linear relationships. This understanding offers actionable insights for managers, guiding them to tailor content, establish genuine connections, and optimize influencer marketing strategies for heightened engagement and effectiveness.*

**Keywords:** Influencer marketing, social media engagement, eye-tracking study, inverted U-shaped curve, inverted W-shaped relationship, V-shaped relationship, linear relationship

## INTRODUCTION

As consumer skepticism toward conventional advertising rises, influencer marketing on social media platforms like Instagram is gaining momentum. This shift sees it evolve from an auxiliary approach into a market valued at over \$16 billion in 2022 (Leung et al., 2022). Within influencer marketing, advertisers compensate influencers to seamlessly integrate specific products into their content, often with creative leeway. Engagement as measured by metrics like, comments, shares and mentions is a pivotal metric for marketers. Despite the increasing popularity of influencer marketing among advertisers, there appears to be a lack of a comprehensive understanding of how to effectively nurture engagement (Watts & Dodd, 2007). This includes the challenge of identifying the most suitable influencers to maximize advertising budgets and achieve higher levels of engagement (Keller et al., 2016). Within the vast

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landscape of influencers, advertisers often prioritize an influencer's follower count, also known as indegree, as a primary criterion for evaluation (Argyris et al., 2020). Indegree quantifies the size of the audience that an influencer directly addresses through their content, and it is prominently displayed on the platform. It has emerged as a predominant metric in the influencer and retail sectors. This range of indegree spans from relatively modest figures, encompassing several thousand followers, to substantial indegrees, extending into the millions of followers (Haenlein et al. 2020).

However, the question of whether influencers with lower or higher indegree are more adept at fostering engagement remains unanswered. Advertisers are torn between capitalizing on an influencer's reach, defined by the number of followers exposed to their content—an aspect that escalates with indegree (Brown & Hayes, 2007). Consequently, some brands have fervently invested in prominent social media figures with vast followings. Conversely, denizens of social networks often crave interactive, communal bonds where they feel connected—a sentiment not necessarily fulfilled by influencers with substantial indegrees. These influencers might lack the resources or inclination to partake in meaningful, frequent interactions with their extensive follower base (Smith et al., 2012). This perception of weak connections could dampen followers' engagement, potentially negating the effectiveness of high indegree in driving greater engagement. Consequently, one influencer could boast a substantial reach—many followers exposed to their content—yet exhibit a lower likelihood of engagement.

## **REVIEW OF LITERATURE**

### **Concept of influencer marketing**

The digital age has brought forth transformative shifts in the landscape of marketing and advertisement. Within this evolving paradigm, social media platforms have emerged as dynamic arenas for brands to connect with their audiences (Wielki, 2020). A prominent feature of this social media ecosystem is the emergence of influencers, individuals who yield substantial online followings and have the ability to shape consumer behavior (Aral & Dhillon, 2018). The concept of influencer marketing has redefined the way brands communicate with their target audiences. Traditional marketing approaches have increasingly given way to influencer collaborations, where individuals with substantial social media followings endorse products or services (Watson et al., 2018). This shift stems from the recognition that consumers, particularly younger generations, place a premium on authenticity and peer recommendations (Kuksov & Liao, 2019). Influencers, with their perceived authenticity and relatability, bridge the gap between brands and consumers, engendering trust and fostering engagement (Homburg et al., 2017).

Authenticity, a cornerstone of influencer marketing, hinges on the alignment between an influencer's persona and the products or services they endorse (Ramya & Ali, 2016). In niche markets, micro-influencers with modest followings can wield remarkable influence, as their audience often consists of highly engaged and loyal individuals (Iyengar et al., 2011). Thus, the authenticity and resonance of an influencer's message often prove more pivotal than sheer follower count in niche contexts. The concept of trust further plays an indispensable role in shaping engagement levels. Trust in influencers is intrinsically linked to the credibility they maintain with their followers (Karagür et al., 2022). Trustworthiness is a complex interplay of factors, including transparency, honesty, expertise, and consistency in content delivery (Barta et al., 2023). Audiences are more likely to engage with influencers whom they perceive as genuine and reliable sources of information. Thus, the trust-crafting prowess of influencers augments their capacity to drive meaningful engagement (Bruyn & Lilien, 2008).

### **Indegree, influencer marketing and seeded marketing**

Seeded marketing, as a strategy, revolves around the deliberate dissemination of content, products, or information to a carefully selected group of initial recipients, often with the anticipation that they will subsequently share or promote this content to a broader audience (Lanz et al., 2019). This strategy fundamentally hinges on the principle of leveraging influential individuals or groups to organically propagate a message or campaign. Notably, seeding campaigns primarily encourage these initial recipients, or seeds, to promote content generated by the firm, typically devoid of any formal incentive structure (Campbell & Keller, 2003).

Influencer marketing entails influencers who are contractually bound to create and endorse offerings from advertisers. The inherent objectives of these two strategies diverge significantly: seeding marketing is primarily oriented towards initiating information cascades throughout a social network (Watts and Dodds, 2007), while influencer marketing concentrates on the amplification of key engagement metrics such as likes, shares, comments, or clicks. These metrics signify direct interactions between individual followers and the sponsored content disseminated by influencers.

Empirical investigations into seeded marketing have traditionally focused on relatively compact social networks, wherein even the most influential seeds typically possess fewer than 1,000 connections (Yoganarasimhan, 2012). In contrast, influencers often boast indegree values reaching into the millions. It is essential to recognize that insights drawn from seeded marketing studies predominantly span the lower spectrum of potential engagement effects that may be observed in influencer marketing campaigns (Palalic et al., 2020). While some seeding studies may juxtapose discrete seeding strategies, such as large indegree versus random seeding (Hinz et al., 2011), or introduce seeding criteria unrelated to indegree, they rarely delve into direct comparisons between large and small indegree seeding strategies, thus limiting their applicability to the specific research inquiry at hand. Seeded marketing campaigns frequently unfold within undirected social networks, with seeds themselves determining which of their connections receive the shared information. In contrast, influencers disseminate content to their entire followership, rendering the comparison of conversion rates between influencer marketing and seeded marketing outcomes a complex endeavor.

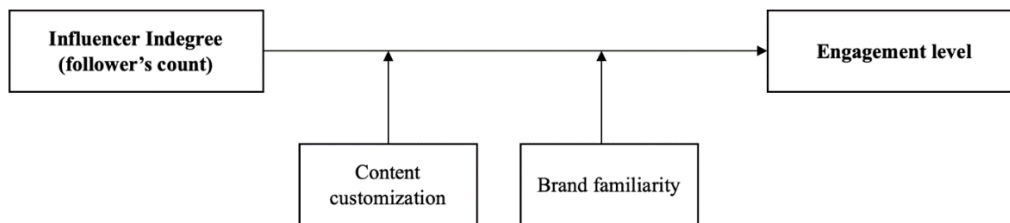
### **Relationship between influencer following and user engagement.**

A central aspect of influencer following is the magnitude of their audience. Larger followings correlate with greater reach and engagement. De Veirman et al. (2017) demonstrates a positive relationship between an influencer's follower count and the extent of engagement generated by their content. However, this linear relationship is not without nuances, as the nature of followers and the authenticity of engagement also come into play. The relationship between influencer following and social media engagement is not uniform across industries, demographics, or cultural contexts (Grewal & Stephen, 2019). The degree of an influencer's influence varies according to the domain in which they operate (Jin et al., 2019). Cultural nuances and societal values influence the appeal and effectiveness of influencers. The impact of influencer following on engagement is thus contingent upon the specific context within which influencer marketing is deployed. Further, the very notion of engagement can differ from study to study as defined by the respective researchers and as understood by the users of the research.

Metrics such as likes, comments, shares, and click-through rates are quantitative indicators of engagement. However, qualitative aspects, such as sentiment analysis and brand sentiment, provide deeper insights into the effectiveness of influencer collaborations. The combination of quantitative and qualitative metrics offers a comprehensive view of engagement dynamics. Engagement encompasses the creation of an emotional connection between influencers, brands, and consumers. Emotional engagement fosters brand loyalty and long-term relationships, contributing to the sustainability of influencer marketing efforts (Phua et al., 2017). Consequently, the impact of influencer following on engagement



extends beyond immediate metrics, influencing brand perceptions and consumer behavior over time. We present a comprehensive conceptual framework depicting this relationship in Figure 1. Our conceptualization commences by outlining the rationale behind our anticipation of an inverted U-shaped relationship (H1). Subsequently, we delve into the potential moderating influences exerted by two critical campaign attributes, content customization (H2) and brand familiarity (H3). This multifaceted framework endeavors to unravel the intricate dynamics governing influencer indegree and its impact on the engagement dynamics of sponsored content.



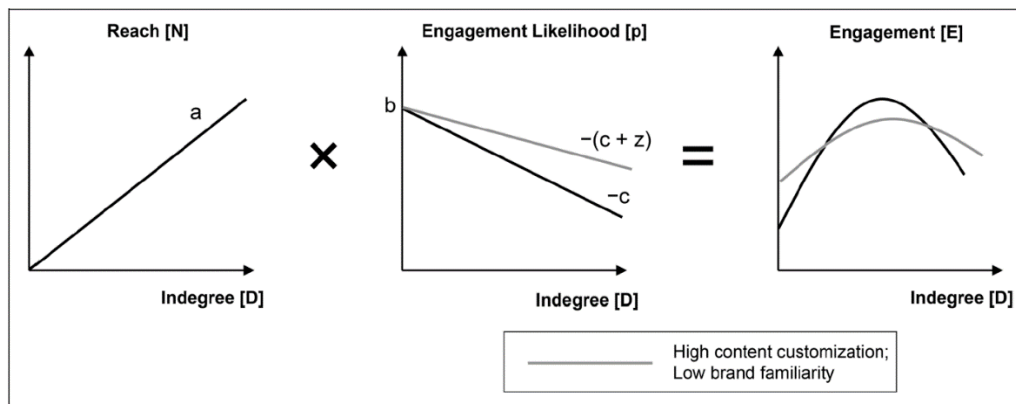
**Figure 1.** Model framework

Engagement signifies quantifiable user interactions on a social platform, prompted by motivational incentives. Engagement is measured through user activities like content liking, commenting, sharing or tagging others to heighten awareness. A connection between engagement and indegree can be developed on a straightforward dual-determinant model (Winterich et al., 2018). Influencer "i" possesses an indegree denoted as " $D_i$ " ( $D_i > 0$ ), signifying the count of followers during a specified timeframe. Influencer "i" shares sponsored content (in the form of posts or stories) with followers, wherein " $N_i$ " represents the number of followers that came across the content ( $N_i \leq D_i$ ). This parameter offers insight into the influencer's effective outreach. The engaged follower's " $n$ " (where " $n$ " belongs to  $N_i$ ) decide whether to interact with the content, guided by a probability " $\pi_i$ ." This concept of engagement likelihood mirrors the conversion probability encountered in seeding literature (Hinz et al. 2011) or the click probability investigated in online advertising research (Bleier and Eisenbeiss 2015). Boosting engagement necessitates elevating either " $N_i$ " (expanding the user base) or " $\pi_i$ ". Importantly, both determinants are inherently tied to the influencer's indegree " $D_i$ ." The impact of indegree on reach (" $N_i$ ") is substantial. Reach denotes the count of users who come into contact with the content produced by influencer "i." We assume linearity and exclude the intercept, given that when indegree " $D_i$ " equals zero, no followers are exposed to the content.

As influencer indegree increases, the reach and exposure of the content expand (De Veirman et al., 2017). Consequently, a larger follower count initially leads to higher engagement as more users are exposed to the content. This observation aligns with the upward slope of the inverted U-shaped curve. However, beyond a certain point, the relationship between influencer indegree and engagement levels exhibits diminishing returns. Some studies have identified this threshold effect where extremely high follower counts may lead to content oversaturation, reducing the relative engagement levels (Jin et al., 2019). Users may perceive highly popular influencers as less relatable or authentic, which can discourage active engagement. This phenomenon corresponds to the downward slope of the inverted U-shaped curve. Thus, engagement likelihood pertains to the average inclination of an influencer's followers to interact with sponsored content. Direct correlation between indegree and engagement likelihood may be expected (Katona, Zubcsek, and Sarvary 2011), which is driven, in part, by the fact that followers employ indegree as a decision-making cue regarding whether to engage with an individual's content (Valesia, Proserpio, and Nunes 2020). Followers, extrapolating closer ties with influencers boasting lower indegree, are more disposed to engaging with sponsored content from these influencers, as perceived tie strength plays a pivotal role in driving such engagement. In this context, the influence of indegree on engagement

likelihood can be described by the coefficient "c," which we anticipate to be negative ( $-c$ ), and the parameter "b," which characterizes engagement likelihood when indegree approaches zero, and we expect this value to be positive. We express engagement likelihood using a linear link function that operates within the unit interval.

Consequently, owing to the positive values of  $a$  and  $c$ , the connection between influencer indegree and engagement manifests as nonlinear due to the quadratic nature of indegree, and the curve that signifies this relationship is oriented downward due to the negative coefficient of the quadratic indegree term. Establishing the first derivative as 0 gives rise to an inflection point at  $D^* = b/2c$ . Therefore, when the value of  $D^*$  is situated within the span of data, an inverted U-shaped pattern materializes, indicating that engagement attains its peak at intermediary levels of indegree. We depict this interaction in Figure 2 (represented by the black curves) and forecast.



**Figure 2.** Development of U-Shaped impact model of association between indegree and engagement (Wies et al. 2023)

In hypothesis H1, we posit that there exists a specific and discernible relationship between influencer indegree and engagement with sponsored content, characterized by an inverted U-shaped pattern. This hypothesis emerges from the understanding that influencer marketing is a dynamic landscape where the sheer magnitude of an influencer's follower count can significantly impact engagement dynamics.

H1: The relationship between influencer indegree and engagement with sponsored content follows a distinctive and identifiable pattern, notably marked by an inverted U-shaped trajectory

### Moderation of the Effect of Influencer Indegree on Engagement by Campaign Properties

Content customization is a crucial campaign property in influencer marketing. It involves tailoring content to match the preferences, interests, and demographics of the target audience. Customized content is designed to resonate more deeply with followers, enhancing engagement (Phua et al., 2017). When content is personalized, followers are more likely to perceive it as relevant and valuable. The influence of an influencer's indegree on engagement likelihood can be moderated by key campaign properties that shape the context in which influencer marketing takes place (Katona et al., 2011). Content customization acts as a moderating factor in the influencer indegree-engagement relationship. As customization levels increase, the impact of influencer indegree is recalibrated. This adjustment occurs because personalized content addresses the diminishing returns associated with extremely high influencer indegrees. Customization mitigates the potential drawbacks of oversaturation by ensuring that the content remains aligned with the specific interests and needs of the audience. We focus on content customization

and brand familiarity for analyzing campaign properties. These properties play a crucial role in altering how followers perceive an influencer's indegree when making decisions about engagement. These cues affect how followers interpret the influencer's relationships and commitment, thereby influencing their engagement likelihood.

To capture the influence of campaign properties on the relationship between influencer indegree and engagement likelihood, we propose a revised model of engagement that incorporates these moderating effects. We anticipate that the coefficient of the quadratic term ( $c$ ) in the engagement likelihood equation will become less negative when the campaign property of content customization ( $C_i$ ) is increased ( $z < 0$ ). Consequently, the curvature of the parabolic relationship between influencer indegree ( $D_i$ ) and engagement likelihood ( $\pi_i$ ) will expand, leading to a moderated effect. This modulation occurs because the extent of content customization alters the way followers interpret the influencer's indegree, mitigating its negative impact on engagement likelihood. As a result, we posit that higher levels of content customization will lead to a less pronounced inverted U-shaped relationship.

H2: Increased levels of content customization serve as a moderating factor diminishing the pronounced inverted U-shaped impact of influencer indegree on engagement with sponsored content.

H2 posits that the extent to which content is customized plays a crucial role in moderating the relationship between influencer indegree and engagement with sponsored content, as described by the inverted U-shaped pattern. This hypothesis stems from the recognition that influencer marketing strategies encompass a spectrum of content customization levels, ranging from highly personalized content tailored to specific audiences to more generic, widely applicable content.

Along with content customization, brand familiarity has been recognized as a critical factor influencing consumer behavior and engagement. Consumers are more likely to engage with content and products from brands they are familiar with and have positive associations with (Keller, 1993). Familiarity fosters trust, reduces perceived risk, and enhances the likelihood of consumer engagement with sponsored content (Chaudhuri & Holbrook, 2001). Brand familiarity acts as a moderating factor in the influencer indegree-engagement relationship. According to Aaker (1991), brand familiarity significantly influences consumer behavior and decision-making processes. In situations where brand awareness is limited, consumers often resort to surrogate indicators of quality, such as the influencer's perceived credibility and reliability (Masuda et al., 2022). When audiences are less familiar with a brand, they may rely more on the influencer's credibility and trustworthiness to evaluate sponsored content. In such cases, the diminishing returns associated with extremely high influencer indegree may be less pronounced (Aaker, 1991). Reduced brand familiarity can recalibrate the influencer indegree-engagement curve by placing greater emphasis on influencer credibility and message alignment with the audience's interests. Research by Phua et al. (2017) emphasized the significance of brand-consumer relationships in driving engagement. Similarly, Jin et al. (2019) highlighted the role of brand-related factors in moderating the impact of influencer characteristics on engagement. These findings align with the hypothesis that reduced brand familiarity can diminish the inverted U-shaped impact of influencer indegree on engagement.

H3: Reduced brand familiarity moderates the inverted U-shaped effect of influencer indegree on engagement with sponsored content, leading to a decline in engagement as influencer indegree increases when consumers are less familiar with the brand.

H3 posits that the degree of brand familiarity plays a moderating role in the relationship between influencer indegree and engagement with sponsored content, characterized by the inverted U-shaped pattern. This hypothesis is rooted in the understanding that consumers' familiarity with a brand can significantly influence their engagement behavior with sponsored content promoted by influencers.

## ANALYSIS

Our empirical investigation is centered around influencers active on Instagram, a prominent social media platform boasting over 1 billion active users (Leung et al., 2022). This study employs a mixed-methods research design that allows for a comprehensive investigation of the research questions, offering both statistical insights and qualitative contextual understanding. We tested H1 to H3 through a field study utilizing observational data (StudyA). The primary quantitative data included influencer following size, engagement metrics (comments, likes, mentions, shares, views, reactions, direct messages) and campaign properties (content customization and brand familiarity). Informed consent was obtained from all participants, ensuring their willingness to participate in the study. Privacy and anonymity of influencers and followers had been maintained, with all data anonymized and confidential. The study adheres to ethical guidelines and legal regulations related to data collection and analysis. We employed eye-tracking data to substantiate that user indeed consider indegree as a pertinent cue when deciding to engage with an influencer's sponsored content (StudyB). A controlled laboratory experiment established a negative relationship between engagement likelihood and indegree, elucidating the role of tie strength in this connection. StudyC1 and StudyC2 systematically investigated the moderating impact of campaign properties on the decline of engagement likelihood caused by higher indegree. Additionally, we tried to identify the scenarios in which this U-shaped pattern might not hold.

**Table 1.** Brief features of StudyA, StudyB, StudyC1 and StudyC2 conducted for the research.

Study	Objectives of the study	Hypothesis	Methodology	Analysis
A	To analyze the presence of a U-shaped relationship between influencer indegree and user engagement levels	H1	Observed field data	The engagement with sponsored content shows an inverted U-shaped relationship in response to influencer indegree. The effect of this relationship is mitigated by increased content customization and by reduced brand familiarity. However, this relationship builds upon complex situational factors and continuously evolving.
B	To test whether the indegree of influencers acts as a cue for followers to predict their likelihood of engagement.	H1	Experimental eye-tracking	Users allocate greater attention to an influencer's indegree when assessing their likelihood of engagement compared to situations where this goal is not a factor.
C1	To test whether the impact of indegree on engagement likelihood is contingent upon the level of content customization.	H2	Experimental laboratory data	Greater content customization mitigates the adverse influence of indegree on engagement likelihood. Higher levels of content customization tend to improve the level of user engagement with the influencer post and influencer story.
C2	To test whether the impact of indegree on engagement likelihood is contingent upon brand familiarity.	H3	Experimental laboratory data	Reduced levels of brand familiarity affect users interest in spending average time per influencer post and story. However, these findings which have been drawn from a macro perspective do not seem to adapt individual user behavior which is dynamic, volatile and uncertain when viewed at the micro level.

In our study, we have undertaken the task of categorizing engagement within the framework of social media interactions, distinguishing between engagement related to posts (post engagement) and engagement pertaining to stories (story engagement). By distinguishing between post engagement, which

encompasses interactions with standard social media posts, and story engagement, which typically consist of ephemeral and time-sensitive content, our study recognizes the evolving nature of user engagement on modern social media platforms. It acknowledges the distinctive characteristics and user behaviors associated with these two categories, shedding light on how users navigate and engage with content in a dynamic online landscape (Eisend & Tarrahi, 2016). Post engagement was evaluated through common user engagement metrics: comments, post type, likes, time posted, mentions and shares. Story engagement was evaluated through story views, reactions, and direct messages. Users who had engaged with the influencer up to 24 hours of story publication or until three days of post publication were considered eligible participants. This time frame was made to capture the immediate and proximate responses elicited by the content, providing a snapshot of initial user sentiments and interactions.

### Reliability and validity check

The resulting alpha coefficient, calculated at .87, surpassed the widely endorsed threshold of .70. For construct validity, we scrutinized the average variance extracted from our indicators, which yielded value of .68 (acceptance level = .50). Additionally, composite reliability yielded .84 (acceptance level = .70). Factor loadings met the significance level ( $p < .01$ ) and exceeded .60 (likes = .83, comments = .89, mentions = .84). To enhance the robustness of our analysis, we applied winsorization to all variables at the .01 level, which involves replacing extreme values with their corresponding .01 quantiles.

### Study A: To analyze the presence of a U-shaped relationship between influencer indegree and user engagement levels

We developed PostEngagement Model and StoryEngagement Model as the two empirical models with the following modelling. PostEngagement Model is designed to analyze and predict user engagement with influencer posts on social media platforms, focusing on key metrics as comments, post type, likes, time posted, mentions and shares. This model aims to uncover the factors that influence the extent and nature of user interactions with influencer content.

$$Y_{\text{Post}} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where:

$Y_{\text{Post}}$  represents the Post Engagement (composite measure of comments, post type, likes, time posted, mentions and shares).

$X_1$  represents Influencer Indegree.

$X_2$  represents Content Customization.

$X_3$  represents Brand Familiarity.

$X_4$  represents Post Type (categorical).

$X_5$  represents Time Since Post.

$B_0$  is the intercept.

$B_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the coefficients for the respective independent variables.

$\epsilon$  represents the error term.

The StoryEngagement Model is designed to analyze and predict user engagement with influencer stories on social media platforms, considering metrics such as views, replies, and interactions within story features. This model seeks to uncover the factors shaping user interactions within the ephemeral content format of stories.

$$Y_{\text{Story}} = \beta_0 + \beta_1 S_1 + \beta_2 S_2 + \beta_3 S_3 + \beta_4 S_4 + \beta_5 S_5 + \epsilon$$

Where:

$Y_{\text{Story}}$  represents the Story Engagement (including views, replies, and interactions within stories).

*S1 represents Influencer Indegree.*

*S2 represents Content Customization.*

*S3 represents Brand Familiarity.*

*S4 represents Story Type (categorical).*

*S5 represents Time Since Post.*

*B0 is the intercept.*

*B1,  $\beta_2, \beta_3, \beta_4, \beta_5$  are the coefficients for the respective independent variables.*

*$\epsilon$  represents the error term.*

In the context of Hypothesis 1 (H1), it is imperative to highlight that both the primary coefficient denoted as  $\beta_1$ , which exhibits a positive orientation, and the squared coefficient denoted as  $\beta_2$ , characterized by an inverse orientation, pertaining to influencer indegree, have yielded statistically significant outcomes for both post engagement and story engagement. Testing the presence of a U-shaped curve between the variables can be reliably made through examination of the slope of the engagement curve at the extremities of the indegree data range (Lind and Mehlum, 2010). The comparative examination of curve's slope extremities with the given indegree data range revealed a steep and positively oriented trajectory at the lower end which subsequently evolves into a negative trajectory at the higher end of the data spectrum. The inflection points, 1,378,202 for story engagement and 1,521,826 for post engagement reside well within the data range indicating a possible consequential inverted U-shaped effect, on engagement. Consistent manifestation of inverted U-shaped relationships across the engagement indicators. Practical testing of the theorized hypothesis provided that for an influencer commanding an average indegree of 186,214 followers and accruing 5,996 likes per post, 10% augmentation in indegree begets a 5.8% increase in likes, constituting a substantial uptick of 413 likes per post. However, this ostensibly favorable effect is counterbalanced as influencer indegree continues its ascent. Conversely, in the scenario of an influencer boasting an indegree of 2.73 million followers, a similar 10% increase in indegree yields a lamentable reduction of 386 likes per post.

This hypothesis is grounded in the rationale that when influencers have a moderate follower count, they are often better positioned to foster meaningful and authentic connections with their audience. Their engagement efforts can be more personalized, and their followers may perceive them as more approachable and relatable. Consequently, influencers with moderate indegree levels may experience higher levels of engagement. Conversely, influencers with extremely high indegree levels might face challenges in maintaining the same level of personal engagement due to the sheer volume of their followers. As their follower count escalates, individual interactions may become less frequent, leading to a potential decline in the perceived authenticity and depth of engagement. Regression outcomes in Table2 for story engagement and Table3 for post engagement provide the impact of campaign properties, yielding statistical significance for story ( $\beta_3=0.041$ ,  $p<0.01$ ) engagement and for post ( $\beta_3=0.022$ ,  $p<0.01$ ) engagement reflecting upon H2 and user engagement volatilities (Obi et al., 2018).

**Table 2.** H1 – H3 results for content customization, brand familiarity (StoryEngagement)

	StoryEngagement (H1)		StoryEngagement (H2)		StoryEngagement (H3)	
H1: Indegree level of the Influencer	.378 <sup>3</sup>	(.072)	.385 <sup>3</sup>	(0.023)	.391 <sup>3</sup>	(0.183)
H1: Influencer Indegree <sup>2</sup>	-.061 <sup>3</sup>	(.021)	-.087 <sup>3</sup>	(.021)	-.071 <sup>3</sup>	(.029)
H2: Indegree <sup>2</sup> X Content customization			.051 <sup>3</sup>	(.011)		
H3: Indegree <sup>2</sup> X Brand familiarity					-.019 <sup>3</sup>	(.026)
Indegree X Content customization			-.132 <sup>3</sup>	(.029)		
Indegree X Brand familiarity					.082 <sup>1</sup>	(.031)
Content customization			-.137 <sup>3</sup>	(.022)		
Brand familiarity					.081	(.049)
Views	.179 <sup>3</sup>	(.047)	.161 <sup>3</sup>	(.039)	.138 <sup>3</sup>	(.049)

Prior sponsored posts	-.019	(.041)	.009	(.042)	-.018	(.031)
Female	.018	(.092)	.031	(.093)	.016	(.081)
Number of campaign influencers	-.141	(.082)	-.125	(.079)	.140 <sup>2</sup>	(.134)
IMR	-.007	(.062)	-.006	(.061)	-.007	(.018)
Constant	-.002	(.091)	.012	(.093)	-.012	(.062)
Estimated SD (Campaign)	.692		.717		.652	
Estimated SD (Influencer)	.567		.681		.561	
Observations	1,522		1,128		1,376	
Wald $\chi^2$	157.62 <sup>3</sup>		378.87 <sup>3</sup>		176.53 <sup>3</sup>	

<sup>1</sup>p<.10; <sup>2</sup>p<.05; <sup>3</sup>p<.01

Reduced brand familiarity exhibited a significant attenuation effect on the inverted U-shaped relationship for post engagement ( $\beta_3 = -0.016$ ,  $p < 0.01$ ), thus aligning with the stipulations put forth in Hypothesis 3 (H3). However, it is imperative to underscore that such an effect does not manifest in the case of story engagement ( $\beta_3 = 0.026$ , lacking statistical significance).

Our analysis extends to the examination of whether the moderators exert any influence on the shifting of the turning points, thereby indicating a distinct form of moderation governing the dynamics of the inverted U-shaped relationships. The results of this scrutiny reveal a compelling pattern: higher levels of content customization yield a significant rightward shift in the case of both post engagement ( $p < 0.01$ ) and, to a marginally significant extent, story engagement ( $p < 0.10$ ). Nonetheless, it is crucial to discern that while the turning point for post engagement significantly shifts to the right in response to lower levels of brand familiarity ( $p < 0.01$ ), such an effect is conspicuously absent in the context of story engagement. These nuanced findings further underscore the intricate interplay between brand familiarity, content customization, and the turning points within the framework of the inverted U-shaped relationships governing engagement dynamics.

Lesser brand familiarity weakens the inverted U-shaped relationship for post engagement ( $\beta_3 = -0.016$ ,  $p < 0.01$ ), in line with H3. However, this effect is not observed for story engagement ( $\beta_3 = 0.026$ , not significant). Additionally, we examine whether the turning points are shifted by the moderators, indicating a distinct type of moderation for the inverted U-shaped relationships. The analysis reveals those higher levels of content customization result in a significant rightward shift for both post ( $p < 0.01$ ) and marginally for story ( $p < 0.10$ ) engagement.

**Table 3.** H1 – H3 results for content customization, brand familiarity (PostEngagement)

	PostEngagement (H1)		PostEngagement (H2)		PostEngagement (H3)	
H1: Indegree level of the Influencer	.727 <sup>3</sup>	(.029)	.682 <sup>3</sup>	(0.037)	.712 <sup>3</sup>	(0.041)
H1: Influencer Indegree2	-.084 <sup>3</sup>	(.006)	-.114 <sup>3</sup>	(.006)	-.089 <sup>3</sup>	(.006)
H2: Indegree2 X Content customization			.025 <sup>3</sup>	(.006)		
H3: Indegree2 X Brand familiarity					-.013 <sup>3</sup>	(.003)
Indegree X Content customization			-.058 <sup>3</sup>	(.015)		
Indegree X Brand familiarity					.031 <sup>1</sup>	(.025)
Content customization			-.137 <sup>3</sup>	(.022)		
Brand familiarity					.032	(.021)
Impressions	.317 <sup>3</sup>	(.025)	.312 <sup>3</sup>	(.018)	.410 <sup>3</sup>	(.021)
Video posts	-.163 <sup>3</sup>	(.021)	-.198 <sup>3</sup>	(.029)	-.202 <sup>3</sup>	(.034)
Number of influencers	-.072 <sup>2</sup>	(.043)	-.041 <sup>1</sup>	(.042)	-.069 <sup>3</sup>	(.028)
IMR	-.014	(.018)	-.015	(.015)	-.019	(.011)
Questions	.032	(.018)	.017	(.021)	.022	(.018)
Constant	.051	(.023)	.046	(.027)	.038	(.037)
Estimated SD (Campaign)	.316		.328		.319	

Estimated SD (Influencer)	.177	.182	.176
Observations	4,215	3,752	4,112
Wald $\chi^2$	3,771.12 <sup>3</sup>	3,829.12 <sup>3</sup>	3,992.83 <sup>3</sup>
Category fixed effects	Yes	Yes	Yes

<sup>1</sup>p<.10; <sup>2</sup>p<.05; <sup>3</sup>p<.01

To ensure the credibility of our outcomes, we conducted a series of rigorous robustness assessments, which validate and reinforce our conclusions. We affirm the suitability of our hierarchical model framework and demonstrate that our results remain stable across alternative manifestations of campaign-specific effects. Furthermore, we establish the durability of our findings by examining diverse measurements for various control variables and both moderators tied to campaigns. We also provide outcomes that encompass both campaign moderators and their corresponding lower-order interaction terms. Additionally, we substantiate the resilience of our conclusions when employing relative indegree within a campaign, a departure from the absolute indegree we utilize in the primary analysis. Expanding on the scope of our robustness assessments, we elucidate why concerns regarding our findings potentially stemming from the platform's algorithm are unwarranted.

## Study B: Relationship between Influencer Indegree and Likelihood of Engagement

To test the established connection between influencer indegree and the propensity for engagement with sponsored content, we performed a systematic validation process. The purpose was confirming whether users indeed rely on indegree information when making decisions regarding their inclination to engage with an influencer's sponsored content. This validation was conducted using innovative eye-tracking technology, which facilitated remote data collection through participants' webcams. We referred to an experimental design involving a sample of 113 Instagram users (with an average age of 24.4 years and 42.3% women). It was to investigate whether prompting participants to assess their probability of engaging with an influencer's sponsored content would lead them to allocate more of their visual attention to information concerning the influencer's indegree (specifically, the focal area of interest), compared to a scenario where they were simply asked to browse the influencer's profile. To gauge visual attention, we employed first-pass dwell time and eye-fixation frequency. Eye-fixation frequency was determined by calculating the proportion of gazes directed at the area of interest in relation to all gazes. The remote data collection through eye-tracking technology adhered to the General Data Protection Regulation (GDPR) and did not violate privacy rights of participants. Table 4 presents the results highlighting U-shaped relationship along with the possible existence of inverted-W shaped, V-shaped and linear relationship between influencer indegree and engagement levels.

To ensure a shared comprehension of the influencer marketing context, participants were initially provided with a concise introduction to the concept. Following this, they were presented with profile pictures of two fictitious influencers, denominated as “john” and “jenny”, and were directed to choose one of these influencers to follow. Each participant was subsequently exposed to a simulated Instagram profile excerpt from their chosen influencer. Importantly, the influencer's indegree was strategically manipulated to be presented as either low (2,021 followers), medium (300K followers), or high (3.5M followers). After this exposure, participants were informed that a sponsored post from their selected influencer had appeared in their feed on that particular day. Utilizing a seven-point Likert scale, ranging from 1 denoting “very unlikely” to 7 representing “very likely” participants were asked to assess the likelihood of engaging with the anticipated post. The specific rating item employed for this assessment was phrased as follows: “How likely would you be to engage with the post you imagine seeing from influencer (by liking it, or commenting on it)?” In order to delve into the potential mediating mechanisms underlying the observed behaviors, participants were prompted to evaluate the perceived strength of their connection with the influencer. This assessment was conducted through: “I would feel close to (influencer)”, “My tie to (influencer) would be strong,” and “I would feel very familiar with (influencer).”



These items were subjected to a seven-point scale for participant responses, ranging from 1 indicating “strongly disagree” to 7 signifying “strongly agree”. The internal consistency of these items was rigorously examined using Cronbach's alpha, yielding a robust value of .91.

**Table 4.** Results for Study2 denoting the presence of multiple relationship structures between influencer indegree and user engagement

Particulars	Low-indegree condition (2,021 followers)	Medium-indegree condition (300K followers)	High-indegree condition (3.5M followers)
<b>Eye-fixation frequency</b>	Mean=18 SD=.623	Mean=14 SD=.511	Mean=12 SD=.582
<b>First-Pass Dwell Time</b>	Mean first-pass dwell time (milliseconds): 1213	Mean first-pass dwell time (milliseconds): 1027	Mean first-pass dwell time (milliseconds): 837
<b>Regression coefficient (<math>\beta_0</math>)</b>	-2 units per million followers ( $p < 0.01$ ) The negative coefficient indicates that as influencer indegree increases, eye-fixation frequency decreases, indicating possible presence of a linear relationship with decreased engagement as indegree rises		
<b>Eye-Fixation Frequency</b>	Regression coefficient ( $\beta_1$ =indegree) = -1.5 units per million followers ( $p < 0.01$ )		
Regression coefficient ( $\beta_1$ and $\beta_2$ )	Regression coefficient ( $\beta_2$ =indegree <sup>2</sup> ) = 0.0000005 units per million followers ( $p < 0.01$ ) The quadratic regression model reveals a negative coefficient for indegree and a positive coefficient for indegree squared, indicating that engagement (eye-fixation frequency) initially decreases with higher indegree, then starts to rise again, supporting a possible V-shaped relationship		
<b>First-Pass Dwell Time</b>	Regression coefficient ( $\beta_1$ =indegree) = -0.002 units per million followers ( $p < 0.01$ )		
Regression coefficient ( $\beta_1$ and $\beta_2$ )	Regression coefficient ( $\beta_2$ =indegree <sup>2</sup> ) = 0.000001 units per million followers ( $p < 0.01$ ) The quadratic regression model shows a negative coefficient for indegree and a positive coefficient for indegree squared. This indicates that connection strength (first-pass dwell time) initially decreases as indegree rises, then increases again, supporting a possible inverted W-shaped relationship.		

These statistical results provide empirical evidence for the presence of inverted W-shaped, V-shaped relationship and linear relationships between influencer indegree and user engagement, depending on the eye-tracking data used as proxies for engagement and connection strength. Additionally, the linear relationship confirms that increased indegree is associated with decreased engagement.

### Study C1: Moderation of Content Customization on Likelihood of Engagement

The outcomes of a analysis of variance (ANOVA), based on a dataset comprising 550 Instagram users (with an average age of 32.5 years, encompassing 55.3% women), all of whom maintained connections with at least one influencer and satisfactorily fulfilled the attention check criteria, unveiled an interaction effect of statistical significance ( $F(1, 487) = 3.86, p = .046$ ). In the context of low customization, participants exposed to the low-indegree condition displayed a notably elevated engagement likelihood (mean = 4.35, standard deviation = 1.71) when juxtaposed with their counterparts exposed to the high-indegree condition (mean = 3.37, standard deviation = 1.78;  $F(1, 487) = 16.81, p < .001$ ). However, in the high-customization scenario, participants across both the low-indegree (mean = 4.33, standard deviation = 1.68) and high-indegree (mean = 3.17, standard deviation = 1.69;  $F(1, 487) = 1.77, p = .181$ ) conditions reported convergent levels of engagement likelihood.

This discerning revelation intimates that, when confronted with customized content, the adverse impact typically associated with exorbitantly high influencer indegree on engagement likelihood can be effectively ameliorated. It is this observation that lends credence to the findings unearthed in StudyA. The

overarching premise of an inverted U-shaped relationship between influencer indegree and engagement with sponsored content, signifying an initial ascent followed by a subsequent descent in engagement levels as influencer indegree intensifies, forms a foundational backdrop. H2 assesses role of content customization as a prospective moderator in the intricate dynamics linking influencer indegree and engagement. This hypothesis underscores that the extent to which sponsored content is meticulously tailored to resonate with the unique proclivities, preferences, and expectations of the influencer's audience can exert a profound influence on the efficacy of influencer marketing endeavors. It engenders a nuanced perspective that sheds light on the intricate interplay between indegree, customization, and engagement, thereby enriching our comprehension of this multifaceted phenomenon.

### **Study C2: Moderation effect of brand familiarity on Likelihood of Engagement**

We adopted an in between-subject experiment featuring a 2 (indegree: low vs. high)  $\times$  2 (brand familiarity: low vs. high) design to introduce brand familiarity in the model. Within the low-brand-familiarity condition, the influencer was strategically aligned with a brand perceived to possess lower recognition within the public sphere. High-brand-familiarity condition centered on an influencer endorsing a brand that had already garnered substantial awareness among the populace. ANOVA analysis drew upon a dataset, comprising responses from 527 Instagram users (average age: 36.4 years; gender distribution: 58.2% women) who, in actuality, maintained connections with at least one influencer and satisfied the attention check criteria. Six outliers were judiciously excluded from the dataset following the application of Cook's  $d$  (Keller et al., 2016).

Within this framework, a marginally significant interaction effect materialized ( $F(1, 492) = 3.78$ ,  $p = .072$ ). Participants exposed to the low-indegree conditions (mean engagement likelihood: 3.87, standard deviation: 1.79) reported elevated engagement likelihood in comparison to their counterparts immersed in the high-indegree condition (mean: 3.43, SD: 1.89;  $F(1, 492) = 9.77$ ,  $p = .003$ ). However, when brand familiarity assumed a diminished role, participants inhabiting both the low-indegree condition (mean: 4.23, SD: 1.73) and the high-indegree condition (mean: 3.81, SD: 1.79;  $F(1, 492) = 0.38$ ,  $p = .513$ ) converged toward analogous levels of engagement likelihood. H3 postulates that the influence of influencer indegree on engagement with sponsored content undergoes a shift contingent upon the variable of reduced brand familiarity. It asserts that, in circumstances where users harbor lower familiarity with a brand, the evaluation of sponsored content leans more heavily on the influencer's credibility and trustworthiness. In such contexts, the conventional diminishing returns often associated with exceedingly high influencer indegree may exhibit a less pronounced impact. This recalibration of the influencer indegree-engagement curve underscores a pivotal role of reduced brand familiarity in shaping consumer responses, with a heightened emphasis on influencer credibility and the alignment of messaging with the audience's interests. Accordingly, in scenarios where consumers boast high familiarity with a brand, they may have already cultivated pre-existing notions and preferences. In such instances, the deleterious effects of high influencer indegree on engagement are likely to be accentuated. Familiarity with the brand's established messaging and products may usher in a saturation point, rendering further exposure via influencers a less potent driver of heightened engagement. These multifaceted findings underscore the intricate interplay between brand familiarity, influencer indegree, and engagement dynamics within the realm of influencer marketing.

## **IMPLICATIONS**

This study presents a framework that establishes a connection between influencer indegree and overall engagement levels. This framework emerges as a valuable instrument for addressing the common question regarding whether increased follower count leads to increased engagement levels and, if so, to what extent. Martínez et al., (2018) focused their efforts on investigating the impact of influencer

credibility on social media engagement. Their findings underscored the significance of influencer credibility in fostering higher engagement rates. They suggested that perceived trustworthiness and credibility positively influence audience interactions with influencer content. This emphasis on credibility aligns with the broader concept of influencer authenticity discussed in the current research. However, it's noteworthy that their study did not delve into the role of influencer following size in conjunction with credibility. Similarly, Lou and Yuan (2019) conducted research that examined the influence of influencer content authenticity on social media engagement. Their findings indicated that authentic and genuine content resonated more with audiences, leading to increased engagement levels. This emphasis on authenticity and its positive correlation with engagement aligns with the broader idea of influencer authenticity discussed in the current research. However, the study did not specifically investigate the relationship between influencer following and engagement, nor did it consider the role of campaign properties in this dynamic.

Ware (2016) analyzed around 5 million Instagram posts to suggest a linear downward correlation between the rise in the number of influencer's following and the engagement levels (as measured through likes and comments). Similarly, Smith et al. (2012) suggested that the relationship between influencer following and engagement is not purely linear. This study has analyzed that instead of a linear correlation between the size of an influencer's following and the engagement levels, there exists a more complex relationship in the form of inverted U-shaped curve indicating that engagement may initially increase with follower count but eventually plateau or even decline. This nuanced understanding provides a more complex view of how influencer size influences engagement, challenging the earlier linear perspective. While Belanche et al., (2021) emphasized the importance of authenticity, the current research goes beyond authenticity to consider the impact of influencer following in conjunction with campaign properties. It introduces the idea that campaign properties like content customization and brand familiarity can moderate the relationship between influencer following and engagement. This expands the scope of understanding by suggesting that follower count alone may not be the sole determinant of engagement, and contextual factors matter.

The study built upon Wies et al. (2023) methodology overcoming its limitations in terms of its limited engagement metrics (comments, likes and mentions), limited participants reach and focus on theorized model over practice. They examined influencer indegree as a cue that followers use to assess their connection with the influencer. However, some followers may have direct personal interactions with influencers, such as responding to messages or being tagged in posts. This study has tried to reflect that corroboration of Weis et al. (2023) about the presence of U-shaped relationship between influencer indegree and user engagement is not an absolute constant but rather contingent upon multifaceted situational factors and the assumptions inherent in the study's experimental design. Provided, the user preferences and the dynamic nature of social media interactions, the U-shaped relationship observed may exhibit significant variations when scrutinized at the micro-level, focusing on individual user behaviors over an extended timeframe. It becomes apparent that this relationship, often conceptualized as U-shaped, can morph into alternative shapes such as inverted W-shaped, V-shaped, or even adopt a linear trajectory. These variations come to the forefront when we zoom in on the nuanced behaviors of individual consumers, considering their unique preferences, interactions, and evolving engagement patterns over an extended observation period. Thus, our exploration underscores the need for a more nuanced and dynamic understanding of the influencer-indegree-engagement relationship, one that acknowledges the inherent complexities and variability introduced by individual user behaviors and extended time scales. This perspective challenges the nature of the U-shaped model proposed by Weis et al. (2023) and calls for a more comprehensive examination that considers the intricacies of user engagement within the ever-evolving realm of influencer marketing.

## **LIMITATIONS AND SCOPE FOR FURTHER STUDIES**

While the research primarily focuses on influencer following size and campaign properties, alternate explanations could consider the quality and relevance of the content itself. It is possible that engagement levels are primarily driven by the content's appeal, irrespective of the influencer's following. Engaging and relevant content may capture users' attention and encourage interactions. The willingness of an influencer's audience to actively participate in discussions and conversations around the content can be another alternate explanation. High levels of engagement may result from active and engaged followers who initiate discussions and debates. The influencer's own engagement practices could influence the level of interaction with their content. For example, influencers who actively respond to comments and engage with their followers may foster a more interactive community around their content. Different content formats, such as videos, images, and interactive polls, may have varying engagement rates. The demographic characteristics of an influencer's audience could play a crucial role in engagement levels. Alternate explanations might explore how the composition of an influencer's following, such as age, gender, interests, and geographic location, influences the type and frequency of engagement. Further, the timing and frequency of an influencer's posts could also be an alternate explanation. Posting at strategic times or maintaining a consistent posting schedule might impact engagement rates. Users may be more likely to engage with content that appears when they are most active on the platform. Social media platforms frequently update their algorithms, which can affect how content is displayed to users. It could explore how changes in platform algorithms impact engagement levels with influencer content. An algorithm update that prioritizes content from certain types of influencers might influence engagement.

The presence of other competing content in users' feeds could be an alternate explanation. Users may have limited attention spans and may choose to engage with only a subset of the content they encounter. The competitive landscape within a user's feed might influence which content gets engagement. Incorporating these alternate explanations into the research analysis can provide a more comprehensive understanding of the factors that contribute to social media engagement with influencer content. It highlights the complexity of the influencer marketing landscape and underscores the need to consider multiple variables when studying engagement dynamics.

## **CONCLUSION**

This research represents a significant advancement in the field of influencer marketing by focusing upon the possible relationship structures between influencer following (measured through indegree) and user engagement (measured through user activities including likes, comments, shares). We acknowledge the constraints inherent in these data collection methods. These metrics can be subject to biases when influencers curate their profiles, emphasizing their most successful content, potentially leading to inflated perceptions of effectiveness. Earlier studies have tried to assess the existence of a linear and non-linear relationship between influencer indegree and user engagement. This empirical study identified higher possibilities of having a non-linear relationship than linear relationship. Further, it challenged the existing theories about fixing particular pattern of indegree-engagement relationship with possible existence of multiple influencer-indegree relationships like inverted U-shaped, inverted W-shaped, V-shaped, and linear relationship as well.

Our findings offer valuable insights into the strategic management of campaign properties. We highlight the nuanced interplay between influencer indegree, content customization and brand familiarity. For lesser-known brands, the inverted U-shaped relationship tends to flatten, allowing them greater flexibility in collaborating with larger-indegree influencers without compromising tie strength concerns. In contrast, well-established mainstream brands are advised to engage with influencers boasting moderate indegree levels to optimize engagement. Our study contributes substantially to the existing literature by

offering a more comprehensive understanding of influencer marketing dynamics, providing practical guidance to both brands and influencers in navigating the complex landscape of engagement, and shedding light on the evolving nature of user behavior in response to influencer content.

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# A MEASUREMENT EXPLORING THE RELATIONSHIP BETWEEN CUSTOMER ENGAGEMENT AND DIGITAL TRANSFORMATION IN RESTAURANTS

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## ABSTRACT

*This research aims to explore and analyze how adopting digital transformation initiatives and leveraging e-marketing techniques can influence various aspects of restaurant operations to improved sales outcomes. This research aims to develop models that explore the connections between based on the principles of the Technology Acceptance Model (TAM) and Customer Relationship Management (CRM). Data was collected through a cross-sectional customer survey, and structural equation modeling was used to analyze the relationships between the variables. The results of hypothesis testing indicate that factors like usefulness and ease of use indirectly influence sales efficiency, which may entail enhancing the overall user experience and increasing the practicality of digital tools. Furthermore, digital transformation and digital marketing directly contribute to sales efficiency, highlighting the importance of developing a robust digital marketing strategy and fostering customer interaction through online channels. These findings highlight the significance of relationship digital transformation and e-marketing's sales impact. Findings promote tech adoption, enhancing operations and customer experience. Research avenues involve exploring transformation's roles, security, and sustainability, cross-industry analysis, long-term effects assessment, and cultural impact on e-marketing. The research results provide valuable insights by demonstrating that the direct contributions of digital transformation and digital marketing to sales efficiency emphasize the significance of crafting strong digital marketing strategies and nurturing customer engagement through online channels. This original contribution highlights the pivotal role of these factors in optimizing restaurant sales effectiveness within the context of digital transformation and e-marketing.*

**Keywords:** Digital transformation, e-marketing, usefulness, ease of use, sales effectiveness

## INTRODUCTION

Digital transformation in Vietnam is happening at a rapid pace and brings a lot of potential for economic and technological development in the country. Digital transformation has played an active role

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in economic development. Experts forecast that the digital sector expands by about 10% per year, the accumulated monetary profit for the economy will exceed \$ 200 billion in 2021-2045 (Jacques Morisset, 2021). Vietnam has experienced rapid growth in the field of digital transformation (Madani, Dorsati H.; Morisset, 2021). The number of internet users and mobile users is increasing dramatically (Vu Minh Khuong, 2019). Social networks and mobile apps are becoming popular means of accessing information and connecting with customers. Along with the growth of mobile phones has become the main tool for internet access for Vietnamese people. With the popularity of smartphones and affordable prices, people can access the internet and use mobile applications easily (Nguyen Hoang Tien, 2020). A densely populated feature that has become a potential digital market, Vietnam is becoming an attraction for technology businesses and digital transformation service providers. The significant increase of internet users and mobile users has created huge opportunities for the development of digital services and applications (Manh Vu Van Manh, 2018). Despite its rapid growth, Vietnam still faces challenges in terms of network infrastructure. There are still some areas that do not have adequate internet coverage and the internet speed is not satisfactory (Madani, Dorsati H.; Morisset, 2021).

In the field of tourism and restaurant service business, digital transformation opens up opportunities to reach and market to customers more effectively. Restaurants can use online platform such as websites, webapps, webmobile, social networks, email marketing, online advertising and mobile applications to advertise related services, notably the number of customers searching through online application platforms (Nguyen Thi Thanh Nhan, 2019). This helps attract a larger potential customer and increases the likelihood of finding and recognizing the restaurant's brand. Online ordering and ordering apps help restaurants manage the reservation and ordering process more efficiently. Customers can easily view available tables and book online according to their needs (Liyanage et al., 2018). This helps avoid long waits and creates a smooth experience for customers. In addition, the restaurant can also offer online delivery and ordering services to expand its business scope and reach more customers. Digital transformation and online advertising have a significant positive impact on the restaurant business (Singh; Gurtej, 2022). By applying digital technology and using online advertising channels, restaurants can increase the reach and visibility of advertising information on digital platforms, target specific customer segments, personalize marketing messages, and engage with customers effectively (Dabas et al., 2021). Online advertising offers cost-effective marketing options, real-time tracking and measurement capabilities, and the ability to enhance customer engagement and gather feedback. By leveraging digital transformation and online advertising, restaurants can optimize marketing strategies, allocate resources efficiently, and drive growth in the digital age (Konietzko et al., 2019).

## **BACKGROUND THEORY IN RESEARCH**

This study incorporates pertinent theories related to digital transformation, online advertising, and sales efficiency. Specifically, the Technology Acceptance Model (TAM) theory is employed. TAM is instrumental in providing insights into user technology acceptance and adaptation processes (Davis, 1987). In the context of digital transformation and online advertising, TAM helps this research look at how businesses and consumers value and adopt digital technology and online advertising platforms. The study centers around key factors, namely usefulness, ease of use, attitude, and behavioral intent, which impact the adoption and effectiveness of online advertising as well as sales effectiveness for restaurants. To enhance sales effectiveness, particular attention is given to Customer Relationship Management. This theory emphasizes the management and cultivation of customer relationships to elevate customer satisfaction, foster loyalty, and improve sales efficiency (Hong-kit Yim et al., 2004). The gap of the restaurant business of digital transformation linking online advertising, theory Customer Relationship Management helps research explore how integrating digital technologies and online advertising platforms can facilitate relationship management between companies and customers (Azila & NoorNeeraj, 2011).

Applying these theories helps researchers better understand how to integrate digital transformation and online advertising, while optimizing sales efficiency for the restaurant business.

## DEVELOP HYPOTHESES

### Perceived ease of use (PE)

The theory TAM (Fred Davis, 1986) has been extended and applied by researchers in different contexts. Several notable researchers contributed to the development of TAM and its relationship to ease of use of technology in business. Perceived ease of use (PE) refers to an individual's perception of the level of effort required when using a specific system. This perception is crucial as it directly or indirectly influences users' attitudes and intentions towards adopting new technologies, services, and systems. The belief in the system's usefulness and ease of use significantly shapes users' overall perceptions and behaviors (Davis, 1989). Perceived ease of use is defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989).

Research based on the Technology Acceptance Model (TAM) indicates that perceived usefulness directly influences the intention to adopt technology, while the perception of ease of use indirectly impacts technology adoption through attitudes towards its use (Kim et al., 2010). These studies have consistently shown that perceived usefulness and perceived ease of use are key factors in determining the acceptance of new technology. In the context of this particular study, useful awareness refers to the extent to which a company recognizes that implementing digital technology will enhance its business performance. Similarly, the perception of ease of use pertains to a company's awareness that adopting digital technology will be both effortless and beneficial for their business (Cho et al., 2022).

**H1.** The level of perceived ease of use directly influences digital transformation.

**H2.** The level of perceived ease of use directly influences digital marketing.

### Perception Usefulness (PU)

Since the initial model of technology adoption was proposed (Fred Davis, 1986), researchers have expanded the model and applied it in a variety of contexts. Perceived usefulness refers to “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989). Some notable researchers who contributed to the development of TAM and its relationship to the intended use of technology include Viswanath Venkatesh (1996), James L. Davis (1989), and Shirley Taylor (1995). Recent studies related to intention to use technology are used to measure, examining the relationship between perceived usefulness and behavioral intentions using technology. The results of the study findings demonstrate that perceived usefulness plays a crucial role in positively shaping behavioral intentions towards technology usage. Additionally, previous research has indicated that factors such as cognition, ease of use, and mobile devices have a notable positive impact on the perception of usefulness (Dhingra & Mudgal, 2019).

Perceived usefulness (PU) is a variable that encompasses various aspects of technology and influences the intention to use technology in the workplace. The study's results reveal that both perceived usefulness and perceived ease of use have a significant positive influence on individuals' intentions to utilize technology to enhance their work performance (Usman et al., 2020).

The Technology Acceptance Model (TAM) which provides a theoretical framework for measuring digital transformation and digital marketing intent has also been found in other studies, showing that individuals' intentions to use technology are influenced by their perception of usefulness and ease of use (Usmani, 2021). The study's findings suggest that efforts to enhance perceived usefulness and ease of use may help drive adoption at work (Gefen & Straub, 2000). Previous reports provide evidence

supporting the significant positive impact of perceived usefulness (PU) on both digital transformation and digital marketing. Furthermore, it has been found that cognitive ease of use plays a significant role in shaping the perception of usefulness (Shang et al., 2005). Perceived usefulness has helped employees and managers solve difficult problems, brought efficiency in sales and especially helped employees identify and understand customers in interactions (Yoon & Suh, 2003).

**H3.** Perceived usefulness exerts a strong influence on digital transformation.

**H4.** Perceived usefulness has an impact on digital marketing.

## Facilitating conditions

Theory TAM highlights significant factors, including performance expectations, effort expectations, social influences, and facilitating conditions, which influence the adoption of technology. Moreover, it predicts that age, gender, experience, and voluntariness play crucial roles in regulating technology adoption behavior (Venkatesh et al., 2003). According to Venkatesh is definition of Facilitating conditions as “the degree to which an individual believes that an organisations and technical infrastructure exist to support use of the system”.

Digital transformation has gained widespread popularity in the realm of sales; however, the extent and nature of this transformation vary based on the size and type of business. It encompasses investments, deployment, and utilization of new and advanced technologies throughout the sales process. As a result, companies across various industries and of varying sizes are making substantial investments to enhance their business infrastructure by leveraging digital platforms (Trenerry et al., 2021).

The emergence of new digital technologies has brought about a significant disruption to traditional sales processes, leading to a profound transformation in the way salespeople conduct their operations (Guenzi & Habel, 2020). The advent of novel digital technologies has resulted in a substantial upheaval of conventional sales processes, triggering a profound metamorphosis in the approach and execution of salespeople's tasks (Klein et al., 2021), (2) Customer Relationship Management Support, (3) Selling through digital sales channels (Habel et al., 2021a) and (4) facilitates communication with customers and colleagues (Habel et al., 2021b). The research results have provided evidence of the benefits of new technology to increase sales effectiveness. It also shows that salespeople's use of technology can increase sales, profits, and improve customer relationships (Singh et al., 2021).

**H5.** Facilitating conditions have an impact on digital transformation.

**H6.** Facilitating conditions have an impact on digital marketing.

## Digital transformation

Digital transformation can be defined as the strategic utilization of digitalization and technology in a company's operations, aimed at enhancing its capabilities and competitive advantage to deliver greater value to customers (Singh et al., 2021). In addition to enhancing workflow efficiency, digital transformation empowers salespeople to deliver core value in innovative ways. By leveraging various technologies, such as digitizing internal processes or optimizing customer interactions, salespeople can explore new avenues to improve efficiency and provide enhanced value to their clients (Guenzi & Habel, 2020). On the other hand, Digital marketing in the restaurant industry refers to the use of online and digital strategies, tools, and platforms to promote restaurants, attract customers, and enhance the overall dining experience. It involves leveraging the digital landscape to reach a wider audience, engage with potential and existing patrons, and drive reservations or orders online (Dabas et al., 2021).

When adopting digital platforms, it is easier for employees to interact and understand customers more accurately (Thaichon et al., 2019). Various platforms exist within the digital landscape, encompassing diverse categories such as search engines, social media platforms, and payment gateways. These platforms serve distinct functions, enabling businesses to enhance their online visibility, engage with customers through social channels, and facilitate secure transactions. Leveraging these different types of platforms can significantly contribute to a company's digital presence and overall success in the digital marketplace (Rangaswamy et al., 2020). When necessary, companies use the information provided by customers to advertise and introduce products to consumers as quickly as possible. One of the defining features of digital platforms is their capacity to facilitate and mediate transactions and interactions among various parties, including buyers, merchants, and service facilitators (Leung & Loo, 2022). These platforms act as intermediaries, connecting and enabling seamless exchanges between different stakeholders in the digital ecosystem. They play a pivotal role in streamlining processes, fostering trust, and enhancing efficiency in digital transactions. By bringing together these parties, digital platforms create an environment conducive to effective commerce and collaboration (De Reuver et al., 2018). On the other hand, digital transformation can help customers self-service, self-payment and many utilities when designing and developing digital platforms (Hartmann et al., 2020). Digital transformation is very diverse, it applies to many fields and is related to digital marketing efficiency but it has certain barriers such as: to have a digital transformation strategy, time, finance, operating personnel, expectations for customers to experience the end (Pascucci et al., 2023).

**H7.** Digital transformation influences digital marketing.

**H8.** Digital transformation has an impact on sales effectiveness.

### **Sales effectiveness**

Measuring sales effectiveness, customer relationship management (CRM) principles have been widely used (Choudhury & Harrigan, 2014), the sales process has undergone significant transformations influenced by digital technologies. These changes include the ability to view and select products before placing an order, access comprehensive information about stock availability and various products and services, communicate effectively with sales stakeholders (Hung et al., 2010). These advancements have revolutionized how customers engage with the sales process, enabling them to make more informed decisions, explore a wider range of options, and engage in seamless communication with sales representatives (Ribeiro-Navarrete et al., 2021). This study considers various viewpoints, but its approach to determining sales effectiveness revolves around evaluating the activities, behaviors, or attributes of salespeople that contribute to a successful sales interaction (Knowles et al., 1994). The relationship of sales efficiency with digital marketing has implications. In many areas, the hospitality sector has had case studies on digital marketing and innovation performance contributing to revenue growth (Kanaan et al., 2023).

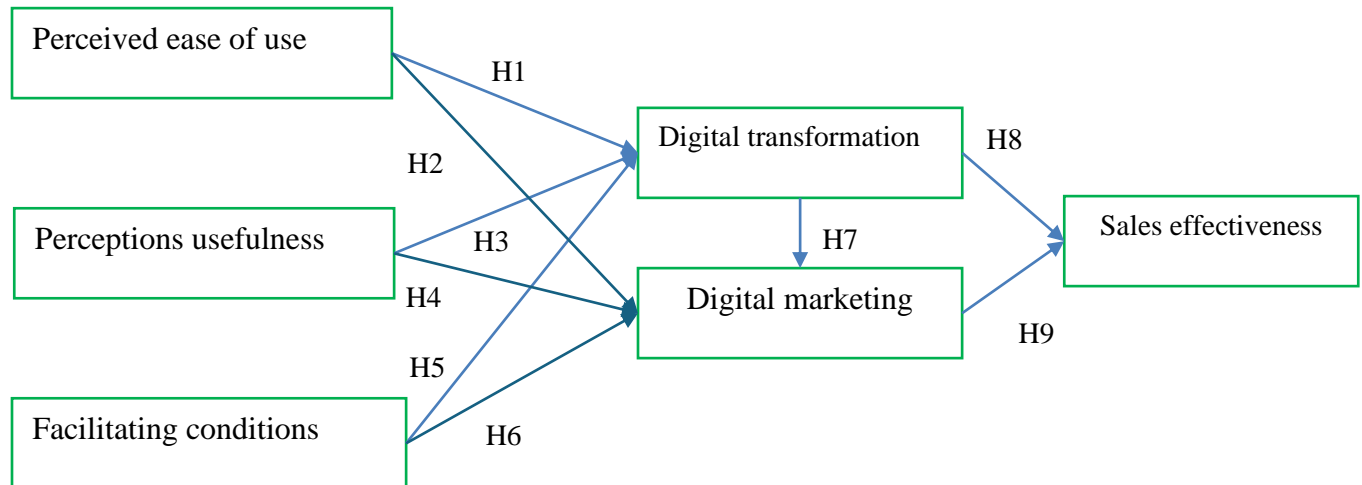
The implementation of digital marketing strategies in business operations has led to an expansion in the scale of data collection technology utilized in sales activities and technical applications. This proliferation has propelled companies to adopt various tools aimed at enhancing sales effectiveness and fostering stronger customer relationships (Lockett, 2018). By leveraging digital marketing approaches, businesses can gather valuable data, which can be utilized to gain insights into customer behavior, improve sales strategies, and optimize overall performance (Saura, 2021). Furthermore, the utilization of tools and technologies enables companies to streamline sales processes, enhance customer interactions, and ultimately drive sales growth and customer satisfaction (Ribeiro-Navarrete et al., 2021). Sales activities in applying digital transformation and digital marketing are defined as: Information integration and automation, interaction with customers through the system, support business processes, sales automation, customer information collection, Manage incidents, complaints, product status, plan

marketing campaigns, sales or customer service, and measure return on investment (ROI) (Moctezuma & Rajagopal, 2016).

**H9.** Digital marketing has an impact on sales effectiveness.

From the analysis and hypothesis development to determine the research model as follows

### The concept model of use in research (authors, 2023)



## METHODOLOGY

### Collection data

In this study, a non-probability convenience sampling method was employed. The participants in the data collection process consisted of employees and management personnel employed at various restaurants. During visits to these restaurants, individuals fitting the criteria of employees or managers were approached. We sought their consent to partake in the survey, subsequently providing them with an introduction to the research and a clear explanation of the underlying concepts to ensure their understanding of the measurement framework. Following the clarification of any queries they might have had, we proceeded to gather data through a provided hyperlink. <https://forms.gle/vN99VXyYmS4CbAag6>

The designed questionnaire is used as a data collection tool. The description of the questionnaire is divided into 2 parts, the general demographic information section, and the main content section according to the research model. In order to ensure the validity of each model validation method, it is necessary to establish a minimum sample size that guarantees the reliability of the obtained results. In this study, confirmatory factor analysis (CFA) or structural equation modeling (SEM) was employed, and the model under examination consisted of fewer than 7 factors, with each factor being represented by at least 3 observed variables. Additionally, the observed variables were required to have a communality score of 0.5 or higher. Following the guidelines provided by Hair, a minimum of 300 respondents was estimated as the required sample size to ensure adequacy (Hair et al., 2010). To account for potential attrition or incomplete responses, the study aimed to collect data from 400 respondents. Ultimately, the study obtained data from a total of 393 respondents.

A well-structured questionnaire has been developed, drawing upon the foundational theory and empirical research already established in the field. At the start of the questionnaire, relevant definitions of

minimalist research for a better understanding of the concept. Demographic questions (age, gender, education, and job position) were included at the top of the questionnaire. Participants were asked to give feedback by agreeing to the contents of the questionnaire. Measurement variables derived from other related studies on extending TAM theories, and CRM principles are also included for a deeper understanding of this research context. The Likert scale (1 = strongly disagree, 5 = strongly agree) is used to encode the responses. Vietnamese is the language of the questionnaire. All structures were measured through pre-trial interviews and edits of a small sample size of 30 people before the formal survey.

### Cronbach Alpha Reliability Analysis

The reliability of the scale was assessed using the Cronbach Alpha index, which measures the degree of correlation between observed variables within the same factor. The obtained Cronbach Alpha values indicate the variables that significantly contribute to measuring the concept of the factor. A high Cronbach Alpha score suggests that the observed variables effectively measure the overall factor. However, in this study, some of the measured variables had low corrected item coefficients (total correlation) of less than 0.3, indicating their limited contribution to the factor (Nunnally, 1978).

### Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis applied to the appropriateness analysis of the research model and the data obtained. Reliability includes Cronbach's alpha, while validity includes distinguishing value. Meanwhile, structural modeling is used to examine the relationship between structures. The results on differentiated values are presented in Table 2. Extra diagonal values represent correlation squares while cross values represent AVE To meet the criteria for differentiating values, the square root of AVE for each structure must be greater than the correlation distinguishing value between structures (Hair Jr et al., 2014). In Table 2, indicators suitable for both the measurement model and the structure are given. Hypothesis testing is carried out using a structural equation modeling.

## RESEARCH FINDINGS AND DISCUSSIONS

### Data acquisition pattern characteristics

**Table 1.** General information about samples

Character	Contents	Frequency	Percent (%)
Gender	Female	251	63.9
	Male	142	36.1
Age	18 - 29	71	18.1
	30 - 39	124	31.6
	40 - 49	77	19.6
	50 - 59	82	20.9
	Up 60	39	9.9
	Level degree	151	38.4
Education	College	78	19.8
	Master	78	19.8
	Other	19	4.8
	Ph. D	67	17.0
Position	Employee	217	55.2
	Leader	116	29.5
	Unknown	60	15.3

Source: author analysis from data, 2023

From Table 1, results obtained from 393 survey respondents, the proportion of men accounted for 36.1%, females 6.3.9%. The majority of respondents were between 30 and 39 years old, accounting for 31.6%. Information on educational attainment in the survey accounted for 38.4% of university graduates. Current job characteristics, those surveyed majority have jobs, staff job positions account for 5 5.2%, while managers accounted for 29.5% and the group with indefinite employment 15.3%.

In this study, the demographic characteristics indicate a higher representation of women compared to men. The majority of participants fall within the age range of 30 to 39 years. In terms of education, tertiary education is predominantly reported. Additionally, the majority of participants hold staff-level job positions.

## The results analysis Cronbach Alpha and CFA

**Table 2. Results of reliability analysis and scale**

Code	Variable name	Cronbach Alpha	AVE
PE	Perceived ease of use	0.92	0.60
PU	Perception of usefulness	0.90	0.65
FC	Facilitating conditions	0.91	0.64
DT	Digital transformation	0.89	0.66
DM	Digital Marketing	0.91	0.63
SP	Sales effectiveness	0.91	0.66

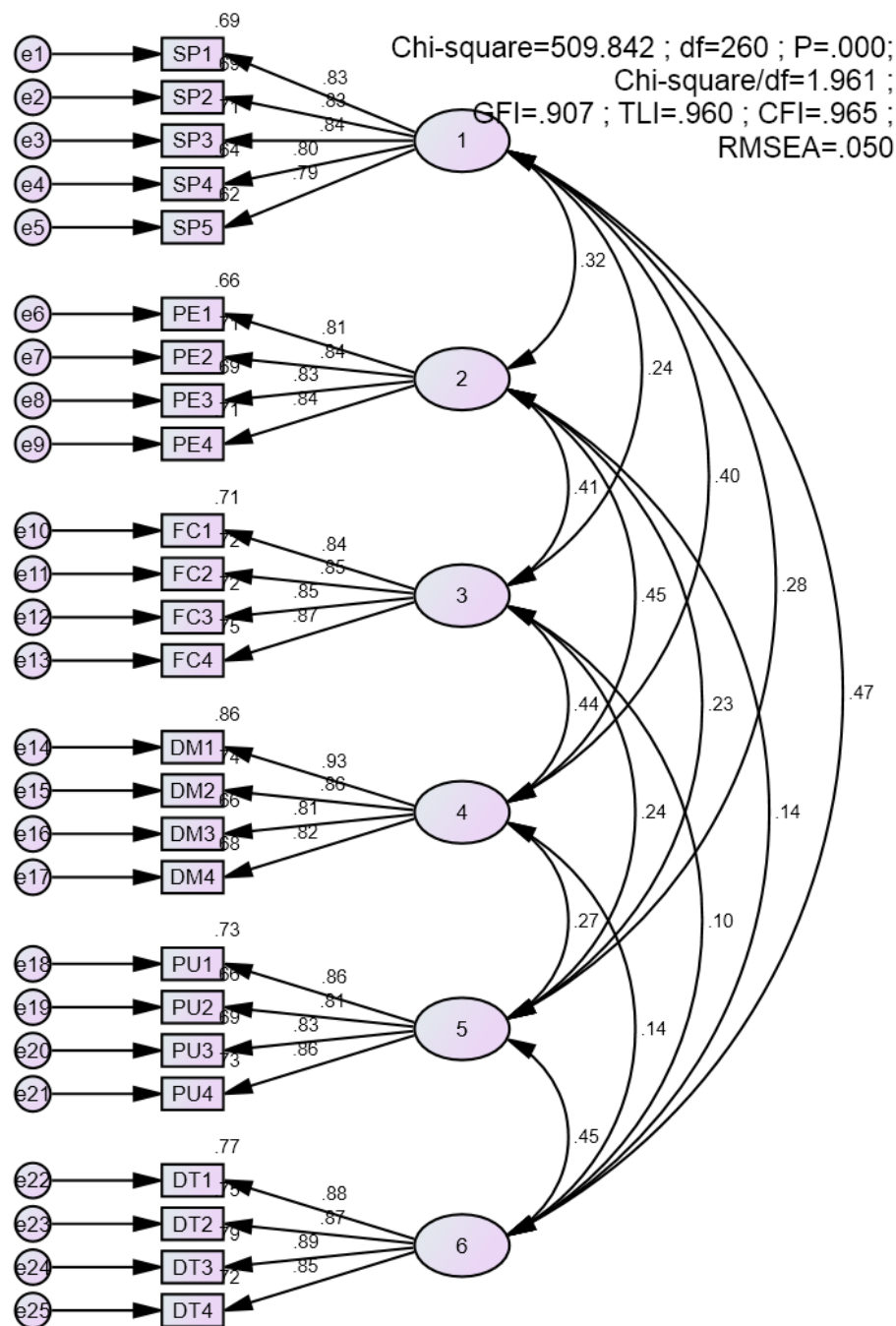
Source: author analysis from data, 2023

Notes: SP. Sales effectiveness, PE. Perceived ease of use, FC. Facilitation, DM. Digital marketing, PU. Useful Perception, DT. Digital transformation.

From Table 2, the results of the Cronbach Alpha scale reliability analysis with values from 0.89 – 0.92 ensure sufficient reliability to measure during the survey (Nunnally, 1978). In this study, CFA analysis was used and the mean extraction variance (AVE) was used, which measured the degree of convergence of the observed group of variables (Hair Jr et al., 2017).

The results of the analysis were compared with previous studies to ensure that the data obtained were consistent with the theoretical model that had been synthesized. Indicators such as: Meaningful squared limb test (P-value = 0.000), free degree adjusted squared chi 1.96 less than 2 (McIver and Carmines, 1981), The indicators are guaranteed according to previous studies proposed for application GFI = 0.90, CFI = 0.96, TLI = 0.96, RMSEA = 0.05 (Hair et al., 2010).

Therefore, the results of the scale reliability analysis, the scale convergence analyses are determined in accordance with the data obtained and the theoretical model applied in this study.



**Figure 1.** The results of the analysis confirm the normalization of the critical model.

Source: author analysis from data, 2023

Notes: 1. Sale efficiency, 2. Perceived ease of use, 3. Facilitating conditions, 4. Digital marketing, 5. Useful awareness, 6. Digital transformation.



## Hypothesis testing in a research model

**Table 3.** Presents the findings of the relationship analysis within the model

	Relationships		Estimate	Error	P-value	Notes
Digital transformation	<---	Perceived ease of use	.056	.063	.368	Not acceptable
Digital transformation	<---	Facilitating conditions	-.024	.056	.676	
Digital transformation	<---	Useful perceptions	.481	.060	***	Not acceptable
Digital Marketing	<---	Perceived ease of use	.289	.052	***	
Digital Marketing	<---	Facilitating conditions	.244	.047	***	
Digital Marketing	<---	Useful perceptions	.120	.052	.022	
Digital Marketing	<---	Digital transformation	.011	.046	.810	
Sales efficiency	<---	Digital transformation	.379	.045	***	
Sales efficiency	<---	Digital Marketing	.353	.050	***	

Source: author analysis from data, 2023

From Table 3, the impacts of Perceived ease of use, Facilitating conditions on Digital transformation. This result is also consistent with a research report on "Exploring factors influencing user behavioral intent for digital technology adoption" found in Indian (Trivedi et al., 2022). Addition, in the field of e-payments, a research report in Australia on the intention to use e-wallets also has results consistent with this study, perceived ease of use, facilitating conditions the impact on digital transformation (Senali et al., 2022). While, the relationship between Digital transformation and Digital marketing do not determine the level of impact, this association is not accepted in this study. This result is also found the Kosovo business case study, in which the authors design independent measurement variables to investigate the impact of Digital transformation and Digital marketing on brand promotion and brand positioning using Google Analytics, social media, e-commerce, search engines, mobile apps, or other digital channels (Istrefi-Jahja & Zeqiri, 2021).

This can explain (1) the perceived ease of use impacting digital transformation in the restaurant business. The complexity of digital transformation and implementation in a restaurant business environment can create additional complexities, making it difficult to perceive ease of use to directly impact the overall transformation (Van Der Schaft et al., 2022). Complexity may involve integrating different digital systems, training employees, or adapting existing processes to accommodate digital tools. (2) Perceived facilitating conditions for digital transformation are not related to digital transformation, which may depend on financial resources, organizational culture, customer needs or external market conditions that affect digital transformation results compared to the simplicity of use or simple perceived facilitation (Soto Setzke et al., 2021). (3) Digital transformation and digital marketing are separate concepts that can contribute to the overall performance of the restaurant business. However, in the restaurant business may depend on other aspects and different goals. This is why digital transformation may not be directly related to digital marketing in the restaurant industry (Bharadwaj et al., 2013). On the other hand, digital marketing may be one component of a restaurant's digital transformation efforts, but they are not inherently tied together. Digital transformation focuses on the strategic transformation of the entire business, while digital marketing focuses on addressing advertising activities and customer acquisition. Both are critical to the success of restaurants in the digital age, but are not related to different approaches and goals.

Therefore, the results obtained in the study focused on useful cognitive relationships impacting digital transformation with the highest estimation factor of 0.48 and digital transformation impacting restaurant business performance with an estimate factor of 0.39. The useful perceived relationship

between digital transformation and business performance can be explained by the interdependent nature (Chen et al., 2016). Digital transformation, which involves the integration of digital technologies and processes into restaurant operations, can leverage advanced technology, digital transformation that helps operations be processed accurately and quickly, improves efficiency, better analyzes data, and enhances customer experience (Matyushenko et al., 2022). As a result, these improvements can positively impact a restaurant's business performance by increasing productivity, reducing costs, optimizing resource allocation, enabling data-driven decision making, and ultimately leading to improved customer satisfaction and loyalty (Fernandes et al., 2021).

Meanwhile, other relationship facilitation conditions, perceptions usefulness impact digital marketing has an estimation factor of 0.24 and digital marketing impacts restaurant business performance has a coefficient of 0.35. This result was also found to be consistent with a study in the Indian about the relationship between facilitation conditions, perceptions usefulness impact adoption technology by Small and Medium Enterprises (Chatterjee & Kar, 2020). This can explain facilitating conditions, such as organizational culture, resource capabilities, and technology infrastructure, creating an enabling environment for the implementation of effective digital marketing strategies in the restaurant industry (Wibowo et al., 2020). When digital marketing tools and strategies gained by restaurant owners and managers are useful, they are more likely to be adopted and used more effectively. Digital marketing endeavors encompass various activities such as social media marketing, online advertising, and content creation, all of which can significantly contribute to enhancing a restaurant's overall business performance. In order to increase brand visibility, attract and engage customers, drive website traffic, e-commerce platforms, and reach potential customers, digital marketing can positively impact key performance indicators such as sales revenue, Customer retention and corporate profitability (Angeloni & Rossi, 2021). Therefore, the relationship between facilitating conditions, perceived usefulness, digital marketing and restaurant business performance is important to facilitate digital marketing initiatives, and enhance business results in the restaurant sector.

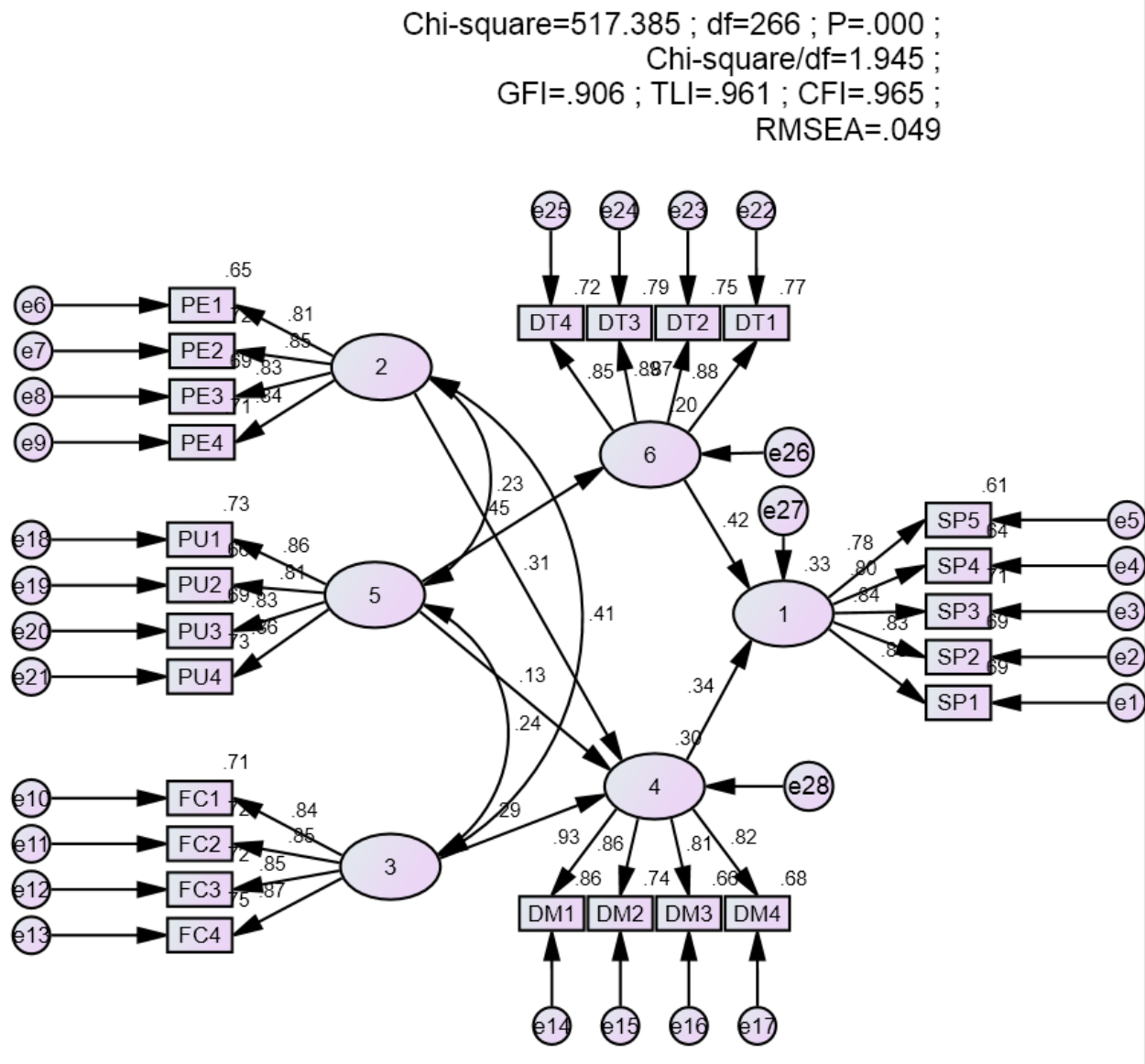
The analysis results provides a summary of the accepted research hypotheses within the study model, derived at table 4

**Table 4.** Presents a synthesis of the hypothesis tests in the study

Code	Hypothesis	Decision
H1.	Perceived ease of use has an impact on digital transformation	Not accepted
H2.	Perceived ease of use has an impact on digital marketing	Accept
H3.	Perceived usefulness has an impact on digital transformation	Accept
H4.	Recognizing how usefulness has an impact on digital marketing	Accept
H5.	Facilitating conditions have an impact on digital transformation	Not accepted
H6.	Facilitating conditions have an impact on digital marketing	Accept
H7.	Digital transformation has an impact on digital marketing	Not accepted
H8.	Digital transformation has an impact on sales efficiency	Accept
H9.	Digital marketing has an impact on sales effectiveness	Accept

Source: author analysis from data, 2023

From the results of analysis and hypothesis testing, using linear structure analysis identify the relationships in the study. To simplify the analysis process is depicted visually according to Figure 2.



**Figure 2.** Digital transformation impact analysis model on restaurant business

Source: author analysis from data, 2023

Notes: 1. Sale efficiency, 2. Perceived ease of use, 3. Facilitating conditions, 4. Digital marketing, 5. Useful awareness, 6. Digital transformation.

## CONCLUSIONS AND IMPLICATIONS

The sample characteristics in this study reveal a predominant representation of women, with a concentration of ages ranging from 30 to 39. The majority of participants have attained a university-level education, and the prevailing job positions reported are those of employees.

The research results show that the relationship between useful perception and digital transformation affects restaurant business performance. Digital transformation can leverage advanced technology, improve efficiency and enhance customer experience. These innovations can increase

productivity, reduce costs, optimize resources, and create data-driven decisions. This leads to improved customer satisfaction and loyalty (Zaki, 2019). Thus, the relationship between digital transformation and restaurant business efficiency is interdependent and successful digital transformation implementation is an important factor for the restaurant business in the digital age (Cheng et al., 2023; Orji, 2019)

The results of the study apply the relationship between facilitating conditions, useful perceptions and digital marketing, along with restaurant business performance, considering the use of digital marketing tools and strategies to benefit in business. Digital marketing decisions, including social media marketing, online advertising, and content creation, can improve restaurant business performance. Digital marketing can increase brand visibility, attract and engage customers, and increase website traffic, e-commerce platforms, and reach potential customers (Singh; Gurtej, 2022). This can make a positive impact on key performance indicators such as revenue, customer retention, and overall profitability of the restaurant (McNeill & Nienaber, 2018).

From the results obtained, the proposed administrative implications should be considered as follows.

The relationship between useful awareness and digital transformation, and the impact of digital transformation on restaurant business performance, should consider proposing some important governance implications. First, useful awareness of digital transformation in the restaurant industry needs attention and increased access to technology. This can be achieved through practicing Train and informing employees about the benefits of digital transformation, as well as creating facilitating conditions for them to use technology in their daily work. Second, restaurant management needs to ensure that digital transformation projects are implemented appropriately and effectively. This includes choosing the right technology, clearly defining goals, and shaping a digital transformation strategy. Finally, monitoring and evaluating the results of digital transformation is important to measure effectiveness and adjust strategies if necessary. Restaurant management needs to ensure that the relationship between useful awareness and digital transformation is strengthened and positively affects business performance, thereby ensuring the success and growth of restaurants in a digital environment.

For the relationship between facilitation, useful awareness, and digital marketing in the restaurant industry it is necessary to consider aspects. First, create an enabling environment by building an organizational culture of digital transformation and providing sufficient resources to implement a digital marketing strategy. At the same time, ensure that employees are trained and receive complete information about the benefits and usage of digital marketing tools and strategies. Second, define detailed goals and plans to implement digital marketing activities. This includes choosing the right channels and tools, building engaging content, and determining the scope and timing of implementation. Finally, track and evaluate digital marketing effectiveness using metrics and feedback from customers. Restaurant administrators need to use this information to adjust their marketing strategies, optimize results, and ensure accuracy to build a growth business model in the restaurant sector.

Digital transformation can help restaurants improve their efficiency, enhance customer experience, and increase sales. Restaurants can implement digital transformation strategies such as investing in new technologies, developing a digital marketing strategy, and focusing on creating a seamless customer experience. For a lasting efficiency of a digital transformation and customer engagement strategy is to implement a mobile app that allows customers to order and pay for their food ahead of time, track their order status, and receive personalized recommendations. Restaurants can also use social media to engage with customers and email marketing to send targeted offers and promotions. When deploying mobile apps, managers collect big data from here research to examine customer behavior, exploit with sustainable efficiency.

In general, this research provides a concise overview of the key considerations and governance implications associated with useful awareness, digital transformation, and digital marketing in the restaurant industry, with a strong focus on enhancing business performance and competitiveness in the digital era.

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**Appendix A.** Measurement structure of observed variables

<b>Code</b>		<b>References</b>
<b>PU</b>	<b>Perception of usefulness</b>	
PU1	Using digital technology can help companies sell highly efficiently	Usman et al., 2020
PU2	Use online metrics to solve many problems in sales management	Gefen & Straub, 2000
PU3	Using digital technology can improve advertising results and sales efficiency	Rangaswamy et al., 2020
PU4	Using digital technology helps employees and managers solve difficult problems in the process of work activities	Singh et al., 2021
<b>PE</b>	<b>Perceived ease of use</b>	
PE1	Belief in the functionality of digital technology helps salespeople smoothly in the implementation process	Davis, 1989
PE2	Features in digital transformation technology are designed to learn and implement	Kim et al., 2010
PE3	The applied digital technology will shorten sales time and effectively interact with customers	Cho et al., 2022
PE4	Digital technology is designed for agile execution and operations methods in the sales process	Fred Davis, 1986
<b>FC</b>	<b>Facilitating condition (FC)</b>	
FC1	The company always creates favorable power support to use online sales tools	Trenerry et al., 2021
FC2	The company has support and training to use online sales tools	Venkatesh et al., 2003
FC3	Digital technology has changed the way customers are approached	Klein et al., 2021
FC4	The company is oriented to build a strategy to use online tools for future sales	Habel et al., 2021
<b>DT</b>	<b>Digital transformation</b>	
DT1	The company provides sales and services that have automated processes	De Reuver et al., 2018
DT2	The company uses an order management software system and member customers	Hartmann et al., 2020
DT3	Companies set up programs in digital marketing	Rangaswamy et al., 2020
DT4	The company has invested in technology that helps with digital transformation (defined technology such as order process automation, invoice printing, day, month, quarter reports, CRM integration, and support staff)	Hartmann et al., 2020 Choudhury & Harrigan, 2014
<b>DM</b>	<b>Digital marketing</b>	
DM1	The company measures the influence of social media, which has an impact on sales effectiveness	(Guenzi & Habel, 2020
DM2	Does the company use digital marketing tools (social media, google analytics, website, etc.) that have an impact on sales efficiency	Hartmann et al., 2020 Rangaswamy et al., 2020
DM3	The Company uses a website for promotional information and sales effectiveness	Leung & Loo, 2022
DM4	The company has implemented digital marketing on technology platforms	Rangaswamy et al., 2020
<b>SP</b>	<b>Sales effectiveness</b>	

	You are working in sales in the company, you can make an overall assessment in relation to the following:	
SP1	Sales achieved in the last 12 months	Ribeiro-Navarrete et al., 2021
SP2	Have a sales strategy for the last 12 months	Saura, 2021
SP3	Digital transformation clearance has expanded customer understanding and increased sales efficiency	Lockett, 2018
Sp4	Achieving total contribution margin in the last 12 months	Moctezuma & Rajagopal, 2016
SP5	Sales that meet or exceed the sales quota assigned to each unit of sale	Moctezuma & Rajagopal, 2016

# SPORTS FOOTWEAR BRANDING: ITS INFLUENCE ON CONSUMER ATTITUDES AND PURCHASE INTENTIONS

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## ABSTRACT

*Sports footwear brands are becoming very popular, especially among Generation Y consumers. The purpose of this study was to determine the factors relevant to sports footwear branding; and to assess their influence on building consumer attitudes and purchase intentions of sports footwear brands. The study followed a descriptive research design, and a quantitative method was implemented. The participants of the study were drawn from Generation Y consumers. The results of the study indicated that brand image, brand association, brand name and brand endorsement have a statistically significant impact on the attitudes of Generation Y consumers towards sports footwear brands. The results of the study indicated that brand name is the most important factor that influences the attitude of a Generation Y consumer to sports footwear brands, followed by brand association, brand image and brand endorsement. Furthermore, the results indicated that consumer attitude, in turn, influences consumers' purchase intention of sports footwear brands. The study made recommendations for sports footwear branding and suggested ways to influence the attitudes and purchase intentions of Generation Y consumers towards sports footwear brands.*

**Keywords:** brand image, brand association, brand name, endorsement, attitude, intentions

## INTRODUCTION

Branding has become a crucial part of peoples' lives and assists consumers in making purchasing decisions each day. (Cunningham, 2018:359). Sports footwear is available in different brands such as Nike, Puma, and Adidas, to name but a few. As such, these sports footwear brands are worn by almost

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everyone around the world - children, teenagers, and adults (Jaworek & Karaszewski, 2020). These individuals purchase their favourite sports footwear brands for different reasons.

According to Jaworek and Karaszewski (2020), the market for sports footwear is growing as most people are joining gyms or fitness clubs, and are participating in all forms of outdoor sports and physical activities that are recommended for a healthy lifestyle. The South African population of over 58 million shows a growing interest in health and fitness, indicating demand for athletic footwear in the country (Market Research.com 2023). Some South Africans are members of fitness clubs such as Virgin Active, Planet fitness and SBK Gym. In addition, recreational activities have become the norm among health-conscious South Africans. Some sports footwear brands have features, like build-in sensors tracking performance and pressure sensors (Market Research.com 2023). The aim of participating in such activities is to maintain a healthy lifestyle. As such, individuals are expected to have proper outfits for these sporting activities, and sports footwear is one of the items needed.

The demand for sports footwear has changed from its original purpose and has turned into casual wear directed by fashion (Jaworek & Karaszewski, 2020). South Africans are increasingly incorporating sports footwear into their everyday fashion driven by the rise of streetwear trends (Market Research. Com, 2023). Sports footwear brand manufacturers are striving to produce fashionable footwear for casual wear (Moghaddasi and Moghaddasi, 2021:76). In response, South African companies manufacturing sports footwear are incorporating streetwear elements such as bold colours, graphic designs and retro-inspired styles into their sports footwear brands. Such market response will increase the demand for sports footwear brands among customers. Indeed, the current revenue for footwear in South Africa is \$144.60m in 2023 and is expected to increase by 4.34% by 2028 (Statista, 2023). Many studies conducted previously, investigated factors influencing consumer attitudes and purchase intentions. The findings of empirical studies in the literature confirmed brand image, brand association, brand name and endorsement as factors influencing attitude and purchase intentions. Such factors were investigated in this study for their influence on consumer attitudes and purchase intentions towards sports footwear brands among Generation Y consumers.

Authors have different definitions of the Generation Y cohort. Therefore, many definitions have been developed for this cohort available from the literature. For the purposes of this study, the definition by Market (2005) was selected, which defines Generation Y as individuals born between 1986 and 2005. This definition indicates that Generation Y consumers are currently between the age of 18 and 37. This is the biggest cohort among all consumer cohorts in South Africa. Consumers from this cohort are either educated, working citizens, or still perusing tertiary qualifications (Crampton & Hodge, 2009). These individuals are brand-conscious and are heavy spenders on fashionable brands (Lai and Teo, 2019; Lodjo and Tumwu, 2015; Ronaldo and Atik, 2015). These facts indicate that the Generation Y cohort is the most lucrative market for sports footwear manufacturers. Therefore, it is important that all sports footwear manufactures understand the factors influencing consumer attitudes and purchase intentions of sports footwear brands.

## LITERATURE REVIEW

### **Theoretical background - *Theory of planned behaviour***

This study was founded on the Theory of planned behaviour by Ajzen (1991), which was used to explain the dependent variable of this study, namely attitude and intentions. Attitude refers to an individual's favourable or opposing feelings towards a specific behaviour (Ming et al., 2022:1004). Intentions establish whether the products meet the consumers' expectations. The theory suggested that attitudes are the inspiration to intentions. In other words, attitude plays an important role in explaining behaviour (Arslandere and Er, 2020). Similarly, if consumers believe that they will receive positive outcomes from

the association with a specific sport footwear brand, they will use the specific brand (Havard et al., 2022). With the impact of attitude on intention taken into consideration, sports brand manufactures have to manufacture sports footwear that meet the expectations and needs of their customers (Ming et al., 2022). Therefore, this study integrated independent variables to understand the attitude; and attitude served as mediator between independent variables and intentions as per the model presented in figure 1.

## Brand image

Brand image is about the presentation of a brand in consumers' minds based on their beliefs in a brand. In other words, brand image is a mental construct, where customers form connections and associations with a specific brand (Danes et al., 2010). The seminal definition of brand image comes from Keller's definition of brand image "as perceptions about a brand as reflected by the brand associations held in consumer memory" (Keller 1993) This definition is widely used by many authors (Upamannu & Gulati 2014). Unique brand image has the potential of encouraging customers to buy the brand and similar brands from other competing brands. Furthermore, the notion of brand image has grabbed the attention of academics and practitioners due to its importance in influencing many marketing outcomes (Elseidi and El-Baz, 2016). The outcome could be its influence on consumer attitude towards sports footwear. Elseidi and El-Baz (2016); Ginanjar et al., (2019) and Dülek & Saydan, (2013) confirmed that brand image has a positive impact on consumer attitudes. Therefore, in line with the studies of Elseidi and El-Baz(2016); Ginanjar et al (2019) and Dülek and Saydan, (2013), the present study hypothesised about the impact of brand association on brand image:

*H1: Brand image has a statistically significant influence on consumer attitudes toward sports footwear.*

## Brand association

Cunningham (2021) explained brand association as the aspects of the brand that are linked to consumers' memory of a brand. Keller (1993) identified three categories of brand association: attributes, benefits, and attitudes. Attributes are divided into two categories: product-related and non-product-related. Product-related attributes are the physical composition of a product, while non-product-related attributes include the logo or brand name (Cunningham, 2021). A pair of Adidas sneakers is an example of physical product-related attribute as a composition of a product; and the brand name, Adidas, is an example of non-product-related attribute. Brand attitude refers to consumers' feelings or behaviours towards a specific brand (Hossien et al., 2012). Consumer attitude towards a brand can be negative or positive. For example, a person might not purchase Nike products because bad scandals might be linked with the brand. Benefits are personal values for customer attached to a brand and are categorised into three types of benefits: functional, experiential, and symbolic (Gordon et al., 2016). Functional benefits are the more intrinsic advantages of a brand and usually correspond to the product-related attribute (Keller, 1993). Functional benefits could be comfort and the grip of Nike sneakers for basketball. Experiential benefits are the feelings associated with using the product where customers are seeking pleasure and symbolic benefits refer to extrinsic benefits, such as social status coupled to the brand (Gordon et al, 2016). In many communities owning a pair of Jordan sneakers is considered a symbol of good social status. Brand managers must understand the importance of brand association as it helps customers to retrieve information about the brand, a reason to buy a brand and to create more product extensions (Cunningham, 2021). The study empirically tested the impact of brand association on consumer sports footwear brands. The study of Ratnasari et al. (2020) investigated the influence of brand association on consumer attitude and the results of the study indicated that brand association has an influence on consumer attitudes. In line with this, the present study hypothesised about brand association:

*H2: Brand association has a positive influence on consumer attitudes toward sports footwear.*

## **Brand name**

According to Cunningham (2018:359), a brand is given a name to differentiate it from other competing brands in the market. For example, Nike Air Force is a brand name for a sport manufactory under the category of trainers or sneakers. Sometimes the meaning of a brand name is not linked to the brand functions. For example, Apple brand is not selling apples, but manufacturing gadgets such as smartphones, laptops, tablets and so forth. A brand name is important for manufactures as it pays a crucial role in brand identification among consumers (Kotler & Armstrong, 2017:233). Consumers who are pleased with a brand name are willing to purchase the same brand, even if the price increases (Anitha, 2014). Clearly, brand name has an influence on consumer attitude. In line with the literature reviewed, this study investigated the influence of brand name on consumer attitude. Therefore, the study hypothesised about brand name:

*H3: Brand name has a positive influence on consumer attitudes toward sports footwear.*

## **Brand endorsement**

Brand endorsement is the approval of something in public by a very popular person. Most companies use celebrities to endorse their products in the market for marketing purposes. Such agreement is popular, known as celebrity endorsement. The reputation of the celebrity is used to raise awareness of a specific brand and build the positive image and perceptions of the brand in the minds of consumers (Cunningham, 2021). Many sport stars such as Tiger Woods, Lionel Messi and Itumeleng Khune have been employed by companies to endorse their brands (Cant, 2021; Cunningham, 2021). For example, Tiger Woods endorsed the Nike brand (Cunningham, 2021). With endorsement deals, celebrities often appear in the brand advertisement, using the brand or talking about the brand (Cunningham, 2021). In other words, celebrity endorsement is another form of marketing (Cant, 2021). Clearly celebrity endorsement can influence consumer attitude. Likewise, celebrity endorsement changes consumer attitudes (Calvo-Porrall et al., 2021). Klaus and Bailey (2008) conducted a study of celebrity endorsers influencing consumer attitudes and confirmed that endorsement influences consumer attitude. This study, line with the study of Klaus and Bailey (2008) on celebrity endorsers towards consumer attitude the study hypothesised about brand endorsement:

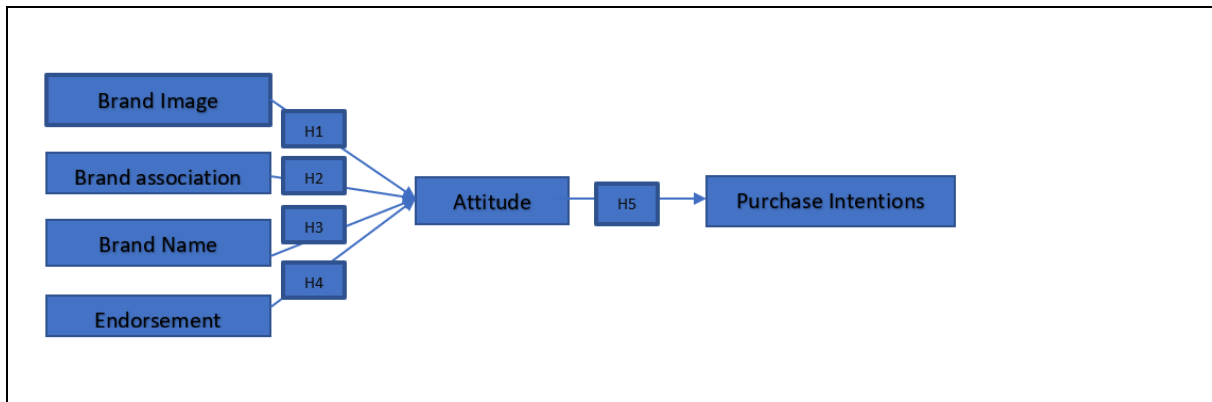
*H4: Brand endorsement has a positive influence on consumer attitudes toward sports footwear.*

## **Consumer attitude and purchase intentions**

Attitude is very important factor for a behavioural study (Mpinganjira & Mbango, 2013). Attitude is defined as a learning orientation based on which a state of constant like or dislike is generated towards a certain object (Fishbein & Ajzen, 1975). Such attitude is directed towards a specific brand. Brand attitude is all about consumers' feelings or behaviours towards a specific brand (Hossien et al., 2012: 5693); it can be pleasant or unpleasant (Mubarak, 2018). Enterprises must understand what consumers think of the brand, and further explore their attitudes towards the brand (Wu and Wang, 2014). Attitudes are either positive or negative (Koththagoda and Herath, 2018). A positive attitude reflects positive feelings or emotions, for example, products and advertisements (Sinthamrong and Rompho, 2015), while negative attitude reflects feelings of dislike, or loss of trust. In other words, consumers express their preferences for a product or service from a particular brand. (Noor et al., 2020). Marketers use all the possible ways to convince consumers to form favourable attitudes towards their product (Kaushal &

Kumar, 2016). The importance of forming favourable attitudes towards a brand has the possibility of influencing purchase intentions. 'Purchase intentions' is defined as consumer willingness to make an effort to purchase a brand (Spear and Singh, 2004). Many literature studies attempted to investigate the influence of attitude on purchase intentions (Cheah et al., 2015; Elseidi and El-Baz, 2016; Singh and Banerjee, 2018; Redda, 2019). The results of these studies revealed that attitude has an influence on purchase intentions. This study, in line with the mentioned studies to investigate the influence of attitude towards purchase intentions, therefore hypothesised as follows about consumer attitude and purchase intention:

**H5:** *Consumer attitude has a positive influence on the purchase intentions of sports footwear brands.*



**Figure 1:** Conceptual research model

## RESEARCH DESIGN AND METHOD

The study followed a descriptive research design and implemented a quantitative method. The required data to achieve the objective of this study was collected, using a self-administrated questionnaire. The questionnaire of the study was divided into two sections: Section A, which comprised the demographic information of the participants and Section B, which comprised the measurement of these items (consumer attitude, brand image, brand association, brand name, brand endorsement, consumer attitude and purchase intentions were entered as independent and dependent variables. The measurement items (brand image, brand association, brand name, endorsement, attitude, and purchase intentions) which featured in Section B were taken from the existing scales in the form of a literature review. In addition, a seven-point Likert scale was used and the participants were asked to rate each item, ranging from 1 (strongly disagree) to 7 (strongly agree).

A convenience sampling technique, an example a non-probability sampling technique, was selected for this study. The target population for this study was full time Generation Y students between the age of 18-25 years old. Generation Y cohort dominates all the population groups in South Africa. In addition, the participants were students registered from two Higher Educations Institutions namely one traditional university and one University of Technology and permission was granted from both institutions. The study utilized data collected from a sample of 378 Generation Y students. Hair et al. (2010) suggests a minimum sample of 100 for models containing five or fewer constructs with high communalities, 150 for models containing seven or fewer constructs with modest communalities, 300 for models containing seven or fewer constructs with lower communalities and 500 for models with large number of constructs with some lower communalities. Pallant (2020) recommends a sample size of

greater than 150, and a ratio of at least five case per variable. The data collected from 378 participants in this study produced a ratio of nine cases per variable and is therefore deemed sufficient.

## RESULTS AND ANALYSIS

### Descriptive statistics and reliability of scales

The study participants included more males (193) than females (190) between age 18 and 25 from one comprehensive university and one University of Technology. The mean values of all nine constructs were greater than 3.5, indicating that the variables are generally important in predicting sports footwear brands. Nike, Adidas, Puma, Kappa, and Asics are the top five sports footwear brands among Generation Y university students. Cronbach alphas were computed for each construct, measuring the antecedents of attitudes towards sports footwear brands. The Cronbach alpha values were all greater than 0.06 (Malhotra, 2010) ranging from 0.63 to 0.81, indicating that the scales used in the study had internal consistency reliability, as shown in table 1.

### Correlation analysis

A correlation analysis was conducted to assess the linear relationship between variables before testing causality through multivariate regression analysis. As shown in the correlation matrix table (table 1), a positive relationship exists between each pair of variables after determining direction tested in this study, lending support to the measurement theory's nomological validity (Hair et al., 2010; Malhotra, 2010). There is no multicollinearity because none of the coefficients were greater than 0.90. Brand association (0.633) and brand name (0.572) had a strong correlation to brand image, while brand endorsement (0.314); attitude (0.391) and intentions (0.365) had a moderate correlation to brand image. Brand name (0.515) had a stronger correlation; attitude (0.373) and intentions (0.429) had a moderate correlation and brand endorsement (0.259) had a weaker correlation. Brand endorsement (0.332), attitude (0.373) and intentions (0.417) had a moderate correlation to brand name; attitude (0.054) had a stronger correlation, while attitude had a weaker correlation to brand endorsement. Intentions (0.572) had a strong correlation to attitude.

**Table:1** Cronbach's alpha and Correlation analysis

	Cronbach's alpha	BI	BA	BN	BE	Attitude	Intention
<b>Brand Image (BI)</b>	0.79	1					
<b>Brand Association (BA)</b>	0.80	.633**	1				
<b>Brand name (BN)</b>	0.63	.572**	.515**	1			
<b>Brand endorsement (BE)</b>	0.72	.314**	.259**	.332**	1		
<b>Attitude</b>	0.78	.391**	.371**	.373**	0.054	1	
<b>Intention</b>	0.81	.365**	.429**	.417**	.205**	.572**	1
** Significance at $p \leq 0.01$ (2-tailed).							

### Multivariate regression analysis

Having tested the linear association between the variables of the study through correlation analysis, the next step was to determine the influence (effect) of the independent variables on the dependent variables. Table 3 shows the results of the multivariate regression analysis and collinearity



statistics. The collinearity statistics in table 3 show that there is no collinearity problem because the tolerance values were greater than 0.10 and the variance inflation factor of the variables was less than 10.00 (Pallant, 2020). After determining the absence of collinearity issue, a multivariate regression analysis was performed to identify the factors relevant to sports footwear branding and to assess their influence in building consumer attitudes and purchase intentions of sports footwear brands.

Four branding predictors (factors) namely brand image, brand association, brand name and brand endorsement were entered as independent variables, and consumer attitude was entered as a dependent variable. As reported in table 2, the F-ratio (25.896) was significant at  $p < 0.01$ , inferring the suitability of the model in predicting Generation Y sports footwear branding. All four independent variables were found to have a statistically significant influence explaining approximately 21% of the variance in Generation Y Sports footwear branding, as indicated by the  $R^2$  value of 0.213.

**Table 2:** Regression model summary – ANOVA results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.462 <sup>a</sup>	0.213	0.205	0.922984	25.896	.000 <sup>b</sup>
a. Predictors: (Constant), Endorsement, B.Assoc, B.Name, B.Image						

As reflected in table 3, all four factors, brand image, brand association, brand name and brand endorsement, were found to have a statistically significant influence on brand loyalty; therefore, H1, H2, H3 and H4 are supported. Also, see table 4 for the results of the hypotheses testing.

H1 *brand image has a positive influence on consumer attitude towards sports footwear* is supported,  $\beta = 0.153$ ,  $p < 0.001$ , in line with previous empirical research (Elseidi & El-Baz, 2016; Ginanjar et al., 2019; Dilek & Saydan, 2013). In this instance, brand image is a mental construct where sports footwear consumers form connections and associations with a specific brand name. It has the potential of encouraging customers to buy the brand and help them make a purchase decision. This study adds to the body knowledge that has confirmed that brand image has a positive impact on consumer attitudes towards sports footwear.

H2 *brand association has a positive influence on consumer attitude toward sports footwear* is also supported,  $\beta = 0.165$ ,  $p < 0.007$  and corroborates the findings of Ratnasari et al. (2020). In the context of this study, the brand association is the identification of elements linked to a brand by sports footwear consumers. Attributes, benefits and attitudes are three categories of brand association. Attributes are the physical composition of a product, while nonproduct-related attributes include the logo or brand name. The brand association has an influence on consumer attitudes towards sport footwear brands as it helps customers to retrieve information about the brand, a reason to buy it and create more product extensions.

Similarly, H3 *brand name has a positive influence on consumer attitude towards sports footwear* is concluded,  $\beta = 0.192$ ,  $p < 0.000$ , in support of existing literature (Anitha, 2014). The brand name is important for manufacturers of sports footwear brands, as it plays a crucial role in brand identification among consumers, and it has an influence on consumer attitude. Finally, H4 *brand endorsement has a positive influence on consumer attitude towards sports footwear* is supported,  $\beta = 0.075$ ,  $p < 0.012$ , and provides support to previous empirical studies (Cant, 2021; Calvo-Porrall et al., 2021). Brand endorsement is the approval of a sports footwear brand in public by a popular person, used to raise awareness and build a positive image of a brand. It can influence consumer attitude, as evidenced by a study conducted by Klaus and Bailey (2008:58). In terms of importance, based on the beta coefficients, the results of the

study indicate that brand name ( $\beta = 0.192$ ) is the most important factor that influences Generation Y consumer attitude towards sports footwear brands followed by brand association ( $\beta = 0.165$ ), brand image ( $\beta = 0.153$ ), and brand endorsement ( $\beta = 0.075$ ).

**Table 3:** Beta coefficients and collinearity statistics

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.566	.287		12.424	.000		
	Brand Image (BI)	.153	.048	.204	3.211	.001	.509	1.964
	Brand Association (BA)	.165	.061	.164	2.708	.007	.564	1.773
	Brand name (BN)	.192	.052	.213	3.676	.000	.613	1.631
	Brand endorsement (BE)	.075	.030	.123	2.524	.012	.866	1.155
a. Dependent Variable: Attitude								

The second part of the study's objective was to determine whether consumer attitude influences the purchase intentions of sports footwear brands among Generation Y. The regression analysis produced an  $R^2$  of 0.327, implying that approximately 33% of the variance of the purchase intentions of sports footwear brands among Generation Y is explained by their attitude towards sports footwear brands. The influence of consumer attitude on the purchase intentions of sports footwear brands is supported ( $\beta = 0.586$ ,  $p < 0.000$ ); therefore, *H5 consumer attitude has a positive influence on purchase intentions of sports footwear brands* is supported as reported consistent with well-documented studies (Cheah et al., 2015:774; Elseidi & El-Baz, 2016:274; Singh & Banerjee, 2018:1630). In this context, consumer attitude can be viewed as a learning orientation based on which a state of constant like or dislike is generated towards a certain sports footwear brand. This is a crucial finding to sports footwear brand manufacturers.

**Table 4:** Testing of hypotheses

Hypothesis	T-Statistics	P-values	Decision
H1: Brand image $\rightarrow$ attitude toward sports footwear	3.211	.001	Supported
H2: Brand association $\rightarrow$ attitude toward sports footwear	2.708	.007	Supported
H3: Brand name $\rightarrow$ attitude toward sports footwear	3.676	.000	Supported
H4: Brand endorsement $\rightarrow$ attitude toward sports footwear	2.524	.012	Supported
H5: Consumer attitude $\rightarrow$ purchase intentions of sports footwear brands.	13.684	.000	Supported

## CONCLUSION AND RECOMMENDATIONS

The sports footwear market in South Africa is growing at a fast pace. The profit from this market is expected to grow significantly in the coming few years. As a result, the market is attracting more new sports footwear brands. The purpose of this study was to investigate sports footwear branding and its influence on consumer attitudes and purchase intentions. To achieve the objectives of the present study, four variables, namely brand image, brand associations, brand name and endorsement served as independent variables towards attitude. All four variables were found to be influencing consumer attitudes towards sports footwear brands. Furthermore, attitude served as an independent variable towards purchase intentions. The result confirmed that attitude influences purchase intentions among Generation Y consumers.

Sports brands such as Nike, Adidas, Puma, Kappa, Asics and Umbro were the most identified or preferred brands among the participants. In other words, these brands dominated the study. Sports footwear brands that are not part of this study must start to develop stronger marketing strategies that will increase brand awareness for their brand. Sports footwear brands that dominated in this study have to maintain their marketing strategies to remain relevant to the market and to keep their space for a lucrative market share within the sports footwear market in South Africa. There are limitations to this study like any other research. A qualitative method or mixed method is recommended for future studies as this study used a quantitative method. In addition, future studies can sample from all provinces in South Africa as the current study only sampled in two provinces.

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# PROMINENT ANTECEDENTS OF HERDING AND THEIR ROLE IN FINANCIAL MARKET ABNORMALITIES

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## ABSTRACT

*The purpose of this research is to make available thoughtfulness concerning the prominent antecedents of herding bias in the stock market, which may lead to stock market abnormality. The core objective of this research is to investigate individual behavior toward investment and individuals' forecasting and decision-making power about the macroeconomic variables that can influence managerial decisions. Researchers also analyze the abnormal fluctuations in the market, and how to reduce the market abnormalities and increase rationalities. The primary data has been collected from experts in three different stock exchange markets through semi-structured interviews. Qualitative techniques are used to collect information from the accomplices. Semi-organized discussions intended to distinguish the broad knowledge and views of every single plaintiff comprehensively. A sample of nineteen practicing stock market analysts and advisors from Pakistan, Turkey, and the USA were selected for this study. The research-underscores six prominent antecedents of herding bias. This research discernibly discussed the methods to treat such biases over and was done with expert advice. It is concluded that the behavior of an investor to buy and sell the assets depends on future expectations predicted by prominent antecedents, which are the fundamental causes for herding that may lead to market abnormalities. Moreover, rational analysis of the past and current scenarios is also important.*

**Keywords:** Antecedents, Herding Bias, Stock Market, investment decisions, rational analysis

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## INTRODUCTION

Despite the belief among many market participants that they possess the acumen to consistently offer precise and logical strategic insights, the reality is different. While a few are seasoned experts, most lack habitual investment experience. Mainstream investors often rely on others' actions due to limited market comprehension. Lack of knowledge leads to herding behavior, yet contrary to common belief, experienced investors can also make overconfident decisions. Conversely, novice investors meticulously consider factors to mitigate risks, challenging the notion of uniform behavior. Menkhoff, Schmidt, and Brozynski (2006); and Ruhnka, Feldman, and Dean (2022) stated that fledgling stockholders acquire good revenues as compared to senior stockholders just because of their intellects.

In the situation of herding, people usually make decisions without any plan and act in the same direction as the greater part of the people around them, as almost all of the people invest in the same stock. Herding behavior is commonly based on non-informational trading in the market (Hung, Lu, & Lee, 2010; Chen, 2021). Yang (2011); and Rahayu, Putra, Oktaverina, and Ningtyas (2021) mention that herding behavior occurs when people don't think about their personal decisions carefully and just make homogeneous decisions like others in the market. It usually occurs in a situation of lack of contemplation, when people think optimistically toward the investment decisions as well as ignoring the risk factors, when the prices of specific stocks are abnormally high, and when most of the people invest in the same direction/stock (Candy & Novita, 2021). Herding behavior, rooted partly in Thorstein Veblen's theory of the leisure class, suggests people mimic the financial actions of specific social classes. Criticized by philosophers like Kierkegaard and Nietzsche, herding represents a worrisome conformity where crowds act uniformly, dismissing individuality.

Sometimes, the market earns abnormally high or low returns because of the uncharacteristic fluctuations/movements in the market. The positive nonstandard returns affect the market but negative nonstandard returns may also unenthusiastically affect the market (Yarovaya, Matkovskyy, & Jalan, 2021). Most of the time in the market, the atypical fluctuations and returns as well may depend on any uncertain occurrence of the event. The anomalous returns of the market may depend on the level of market efficiency; weak, semi-strong, & strong.

This study examines how individuals perceive market investment decisions amid varied behaviors, highlighting that herding isn't exclusive to stocks but a pervasive aspect of life. Olsen (1996) concludes that people who see their future by ignoring most of the risk corners by positively thinking about their future achievements and also cannot predict future fluctuations carefully could result in herding behavior.

The present study also aspires to discover how individual perceptions influence market anomalies in financial securities. Market behavior heavily influences decisions, driven by others' perceptions and current conditions. Fluctuations in stocks and macroeconomic factors significantly impact investor decision-making. Herding behavior, devoid of planning, emerges in uncontrollable, erratic financial market conditions, leading to atypical fluctuations. Bose, Orosel, Ottaviani, and Vesterlund (2008) investigated that monopolistic prices arise when the buyer of stocks makes decisions based on other people's purchases. For example: when the individual has little or no knowledge about the market or when the stock price does not reflect the market information, then they usually make decisions based on third-party comments or the comments of experienced people, and when the individual has a standard familiarity regarding the market fluctuations, but they make decisions based on market lobby groups/behaviors and observe the decisions/actions of the other people toward the investment.

With the help of perfectly available market information and careful analysis of up-to-date market adjustments/fluctuations, an individual can make successful decisions. Ahmad and Wu (2022); and Cote

and Goodstein (1999) state that the herding behavior of individuals and groups can change the perfectly available market information into biased information. Celen and Kariv (2005); and Mand, Janor, Rahim, and Sarmidi (2021) state that herding behavior is very effective in situations where perfect market information is not accessible. Not only is the herding behavior a cause for market abnormalities or liquidation but there are so many biases that exist in the different personalities of the individuals. The perception quality, decision-making ability, and choice behavior of each individual varies (Zerihun & Makgoo, 2019). Moreover, people with a high level of observation and capacity for forecasting can make successful decisions (Youssef & Rajhi, 2009). This research investigates individual investment decision-making, perceptions of market anomalies, and the origins of abnormal market fluctuations. Unlike single-country studies, it uniquely concentrates on the USA, Turkey, and Pakistan. Its core objectives include reducing emotional decision-making, enhancing individual rationality, improving market efficiency, reducing uncertainty, increasing returns, and minimizing bias in these diverse markets.

### Research Questions

- How do individuals make an investment decision?
- How does an individual perceive the market environment/situation and forecast the market movements based on their experience?
- How may the movements of macroeconomic variables affect the market?
- To how much extent does the group discussion of investment managers influence the market volatility?
- What are the reasons for abnormal fluctuations and can reduce irrationality in the market?

### Research Objectives

The main objectives of this paper are to determine whether individual behavior and its factors such as forecasting the market movements and decision-making ability, forecasting ability can influence investment decision-making behavior, and also to know about managerial decisions about the movement of macroeconomic variables, and reasons can reduce irrationality in the market.

## LITERATURE REVIEW

A stock market is the most powerful tool /indicator to show the economic position of any country (Uddin, Chowdhury, Anderson, & Chaudhuri, 2021), because the major operational companies of the country trade their stocks in the market, and these stock trading shows the performance of the company. Usually, the investors/brokers/agents make investment decisions based on strong, semi-strong, and weak forms of efficiency in the market. So, operational planning, investment decisions, and dividend policies can affect the actions of investors toward their stocks. Sometimes in the market, the availability of information regarding stocks depends on the type of investor; big or small. More often, big investors take in hand perfect market information and then drive the market for the sake of their own. The availability of market information to a specific individual or a group can be the cause of herding behavior and market abnormalities as well (Bose, Orosel, Ottaviani, & Vesterlund, 2006; Rahman, Amin, & Al Mamun, 2021). All these plans of the firm/business are internally based, and the organization should efficiently perform them to trade their stocks in a well-organized manner. Sometimes in the market, companies with highly diversified portfolios cannot make efficient and timely rational decisions in all domains because of environmental differences. The rationality and the biasedness of the decisions somewhat depend on the environmental differences. Kim and Pantzalis (2003); and Zhang, Yang, Li, and Khan (2021) opine that most of the time environmental differences can be the cause of herding behavior.



According to the semi-strong efficiency hypothesis, price adjustments take place according to new information, and as soon as information is made publicly, excess returns in the stock market can be observed (Anderson et al., 2001).

The market fluctuations of the developed countries are different from the developing countries (Chowdhury, Dhar, & Stasi, 2022). As Dholakia and Simonson (2005) examine perfectly available market information can influence the choice behavior of the individual. Moreover, Lin, Huang, and Chen (2007) investigated how individual company performance plays a very important role in the success of the stock market. They concluded that not just the human bias toward the securities is the main reason for abnormal fluctuations.

There are other reasons for such aberrations, such as inflation & deflation, business conditions, trade activities, new information, market psychology, uncertainty, political conditions, dividend policies, supply & demand, monopolistic competition, interest rates, etc. (Gao, Li, & Wang, 2021). The level of market efficiency; weak form, semi-strong form, and strong form may be strongly connected with the decisions in the market. In general, prices reflect the actual situation of the market in normal situations. The level of biasedness in the decisions of the investors may depend on how much information is incorporated into the prices of stocks. The higher the level of information accuracy the lower the level of biased decisions in the market and the lower the level of information accuracy; the higher the level of biased decisions in the market (Badri, Heikal, Terah, & Nurjaman, 2022). Choi and Sias (2009) mentioned there was a strong association between the level of available information and the probability of making a biased decision. In general, people who have near to perfectly available market information will quickly analyze the information to get monetary and timely advantage as well. So, investors in the market can buy the product earlier as compared to other investors just based on the availability of information (Kliestik, Zvarikova, & Lăzăroiu, 2022; Stone & Miller, 2012). When people think optimistically about the future, they generally focus on one factor and unconsciously ignore the probability of return. Chang (2010); and Sadewo and Cahyaningdyah (2022) concluded that people with optimistic behavior typically ignore that return because of herding. People think optimistically as they feel that they can make rational and logical decisions for the future and control future movements too, but such sort of philosophy most of the time results in abnormal market movements. Tedeschi, Lori, and Gallegati (2008) maintain that the majority of people don't want to listen to the suggestions given by several economists regarding the market situation as they think that they can make cognitive decisions. Because of their emotional decisions, some abnormal fluctuations may also occur in the market (Stein, & Levine, 2021), and because of these abnormalities, these irrational investors may also be known to be noise traders in the market (Gupta, Walia, Singh, & Gupta, 2022). Every investor in the market wants to decide by focusing on the opportunities and threats regarding their circumstances at the time of investment. Corazzini and Greiner (2007) declare that almost all investors want to make their investment decisions after careful analysis regarding the probability of gain and loss. There is a strong assumption of rationality that exists in the concept of standard finance that almost all investors make their investment based on the concept of "rationalism" which means that they want to analyze their costs and benefits before implementing their plans.

Rational decision-makers in the market sometimes may also be influenced by the environment of herding behavior. In herding, well-informed investors may alter their beliefs about a specific object/stock in the market, and this occurs because of homogenously made decisions in bulk (Hussain, Sadiq, Rasheed, & Amin, 2022). Mensah and Yang (2008) state that logical financier in the market may change their perceptions towards a specific object/stock because of the discernment and belief of their friends in the market.

Most of the time, variations in return are considered an awful performance (Pástor, Stambaugh, & Taylor, 2022). But after careful analysis, it can be examined that either the variation is positive or

negative because symmetrical positive variation will be considered as a good market performance and symmetrical negative variation will be considered as a poor market performance, but typically asymmetrical distinction would be considered as a deprived market recital too. In general, these symmetrical as well as asymmetrical variations can be the results of different directions of herding behavior (Wang, Liang, Xue, & Ge, 2021).

Park (2011) concludes that some relationship exists between symmetrical and asymmetrical distinctions and returns. Ferrouhi (2021); and Kremer and Nautz (2013) reiterated that herding could also be the result of precedent asymmetrical discrepancy in return and information.

Most of the investors in the market are initial-stage investors, and they usually take help from different mutual fund managers, who can also behave irrationally in the market based on different market environments. Wagner (2003) asserts that herding may affect very strongly in fundamentalist circumstances as compared to noise trader status. Different investment managers in the market make plans according to various circumstances but most of the time their decisions are correlated with each other. Dong (2008); and Stylos, Zwiegelhaar, and Buhalis (2021) declared that most of the time managers make their investment plans after group discussions with each other.

## METHODOLOGY

To identify the influence of individual decisions/perceptions/behaviors on the market success or failure, the primary data will be collected from the traders in Pakistan, USA, and Turkey Stock Exchange through semi-structured interviews. For data collection, this study used non-probability (convenience) sampling, by giving high consideration to the relevant respondents. This study is based on a subjective approach (qualitative methodology) to extensively detain the contender's thoughts. To determine the difference in herding behavior between developed, emerging, and frontier equity markets; the researchers selected the USA, Turkey, and Pakistan respectively as populations. Due to the scarcity of high-ranking officials in the stock exchange, researchers used a quality research approach as this approach provides deep insights by focusing on the depth rather than breadth for the small sample size which comprises high-ranking officials of the stock exchanges of Pakistan, USA, and Turkey.

It is unquestionable that there were neither some facts providing erstwhile to the contenders and nor was some estimation shared vis-à-vis probable retorts. In this study, a multi-case study method based on interviews (Eisenhardt, 1989; Eisenhardt & Graebner, 2007) was used, in which data collected by semi-structured interviews, to vicious circle scrupulous certainties apropos the stockholders of the monetarist part. Plentiful cases make accessible the chance to categorize configurations and basic overtones by the handy check of subjects and signs. The case study protocol (Haddock-Millar, Sanyal, & Müller-Camen, 2016) is given in Table 1.

The significant queries of the study are linked with the focus of the study –regarding herding bias and financial market abnormalities. This study determines varied crow's nest that was condition open, letting a proportional collapse of maneuvers to the use of analysis (based on a high level of awareness) just before handling the ailment in which stockholder shot to invest having herding bias with lack of market optima knowledge.

For this study, the stock experts from Pakistan, Turkey, and the USA are the population. Semi-structured discussions go with abstract all-out material. Besides, for this study, nineteen interviews were systematized – nine were face-to-face and ten were open-ended scales from experts of the stock markets (Table 2) – and mainstream contenders gave ample and lucid replies as per the constraint of the study.

**Table 1.** Case study protocol***Case study steps***

1. Credentials of research accent and scope
2. Credentials of discrete prosperities to turn out to be ‘many examples’
3. Auxiliary expansion of research queries
4. Credentials of apposite study gears and measures, together with qualitative data gathering methods such as semi-structured interviews and focus groups
5. Credentials of ‘fitting’ providers: an erect and analogous part of the case studies with engrossment of ecological and human resource management/growth inventiveness
6. Data gathering time – December 2021 – August 2022
7. Data analysis: in-state at private subsidiary level
8. Development of all-embracing
9. Literature support
10. Reaching end: literature and data ampleness consummate
11. Dissemination: report and artifact development

**Table 2.** Interview Respondents

Job Role	<i>Pakistan</i>	<i>USA</i>	<i>Turkey</i>
Stock Market Analysts	3	2	3
Advisors on the Stock’s	6	2	3
Total Participants	9	4	6

Job roles in Table 2 prove that all the contenders have a wide range of information concerning herding bias and the usual abnormalities of the stock market.

The main interview queries are taken from the existing literature in the areas of herding bias and market abnormalities. The interview queries are provided in Table 3.

The interviews are in full swing with an inclusive discussion of the stockholder’s biases at the time of investment in securities, the antecedents of herding bias, the level of investor awareness concerning market movements, and controlling perspectives for stock market abnormalities. The interviews were then enthused into the particular areas documented in the literature. The one-to-one discussions are insistent between 35 and 45 minutes and up to 60 minutes for each individual.

**Table 3.** Interview protocol and questions.***Interview protocol***

- Make known to the interrogators and applicants.
- Plan the research process.
- Plan the grit of the study, counting penalty areas and objectives.
- Contrary likely research concerns, ethical subjects and get consensus.
- Plan preparation of the interview/focus group.

***Research themes and specific questions******Investor’s biases toward the selection of securities***

## PROMINENT ANTECEDENTS OF HERDING

1. What are the main types of biases that may be present in investors at the time of investment in the securities?
2. May you please share the plentiful effects of biases on the returns?
3. To what extent, are investor approaches persuaded by the directions of controlling bodies?
4. How do individuals make an investment decision?

### ***Antecedents of herding bias***

1. What are the main antecedents behind herding bias?
2. How to control the antecedents of herding?

### ***Investor's level of awareness regarding the movements of the market***

1. May you please tell us about the few domineering inner intuitions of the investors at the time of investment in the stock market?
2. To what extent does the investor regain consciousness an indulgent that they are in a prejudiced position?
3. Do they want to outfit their matters of biasness?
4. What role do you play in these sorts of conditions?
5. What are the effects of your part in definite situations?
6. How does an individual perceive the market environment/situation and forecast the market movements based on their experience?

### ***Stock market abnormalities***

1. What are the prominent underpinnings behind market abnormalities?
2. How delicate is the market of financial securities?
3. Which level of efficiency (weak, semi-strong & strong) may exist in the market of financial securities?
4. How the level of market efficiencies are linked with market abnormalities?

### ***Controlling perspective for stock market abnormalities***

1. May you please tell us about the few domineering inner intuitions of the investors at the time of investment in the stock market?
2. To what extent, can investors regain consciousness and indulge that they are in a prejudiced position?
3. Do they want to outfit their matters of biasness?
4. What role do you play in these sorts of conditions?
5. What are the effects of your part in definite situations?
6. To how much extent, does the group discussion of investment managers influence the market volatility?

### ***Risk-taking propensity of investors***

1. Do you think that the maximum of investors makes decisions based on herding? If “Yes”, then how you may inspire them in the direction of risk-taking defiance?
2. Oblivious investors may take whichever high risk or low risk. What do you think?

### ***Reasons behind Market Abnormalities***

1. How may the movements of macroeconomic variables affect the market?
2. What are the reasons for abnormal fluctuations in the market?

### ***About you***

1. What kind of information is vital for you in the direction of analysis/advice at the time of investment decision concerning stocks?
2. What do you see as the key controls to do convincing investment with cognizance?

## RESULTS AND DISCUSSIONS

### As for the Stock Market's Analysts

*As per the experts from Pakistan*, the coherence of a stock's position in the industry-based classificatory structure that determines value is a prerequisite for the effectiveness of the price-setting process in the stock market. This framework aids investors in interpreting complex economic news. The main hypotheses are that incoherent stocks are traded more frequently because they are more likely to be affected by variations in the interpretive models used to comprehend important information and that both volume and volatility are higher for incoherent stocks because convergence on a common interpretation depends more on self-recursive market dynamics. The volume of trading, as well as the fluctuation of prices, are two important characteristics of market activity. The persistent absence of trade or price movement suggests that the market is either being manipulated by an outside party or that it has simply collapsed.

According to the efficient markets hypothesis (EMH), which has been the standard theory in academic finance since the 1960s, the price of a financial asset includes all information about future returns on that asset that is now available to the public. The main implication of this viewpoint is that there should be little to no trading and infrequent changes in stock prices. However, unconventional theorists have criticized the EMH by claiming that there is greater volatility and trading than one would anticipate from fully efficient markets. Unorthodox perspectives are used to create a sociological framework that sheds light on financial market behavior. Furthermore, characterizing the circumstances under which financial markets are more or less efficient and gaining a greater knowledge of how they operate are more fruitful goals, particularly for the sociology of markets. Coherent securities should have relatively little market activity. Prices just serve as a reflection of the knowledge that is made known and understood outside of the marketplace. The volume of trade should be higher in particular because investors are more likely to assign several meanings to the same information. The theories linking valuation challenges and market activity are in line with some recent heterodox finance research (Matoušková, 2021). There are two ways to understand the consequences of the aforementioned analysis. First, the findings help us better comprehend the dynamics of the financial markets. The circumstances predicted by the conventional, efficient market hypothesis (EMH) should be approximated by stocks that are highly coherent in that they inhabit distinct categories. However, in so far as a stock is harder to categorize, speculators in that stock confront a considerably more difficult environment when attempting to evaluate information about it. More generally, the picture of the market that is painted is one of "crude functionalism": market processes are typically efficient enough to reproduce but suboptimal in that they may consistently fail to reward/punish a sizable portion of the very behavior that they are intended to encourage or discourage. Moreover, neither the market's efficiency nor its inefficiency is exceptionally high. Instead, the circumstances that encourage efficiency may be acquired in several ways and are evident as positions in the social system.

*As per the experts from Turkey*, the trading-based phenomenon is the asymmetric influence on the daily volatility of individual stock returns. The leverage effect and time-varying anticipated returns are two prior hypotheses that might explain this. Leverage doesn't appear to have much of an impact on the daily frequency of asymmetric volatility, though, as it is possible to detect asymmetric volatility for equities without any leverage. The link between daily volatility and lagging returns is, however, successfully influenced by the trading behavior of herding and contrarian investors. It is consistent with the foreshadowing of the rational expectation models that the liquidity-driven, non-informational (herding) trades increase volatility as a result of stock price declines and that the informed (contrarian) trades decrease volatility as a result of stock price increases. In many ways and to a large extent, the results of the volatility and trading activity are successful.

To wrap up the subject, it should be noted that given the asymmetric volatility in individual stock returns at daily frequency, returns are anticipated to fluctuate according to the frequency of the economic cycle. The daily asymmetric volatility was previously not adequately explained, necessitating the development of new hypotheses based on trade activity.

There are varieties of mutual funds (equity funds, fixed income funds, & money market funds). Instant funds are more moderate and balanced rather than extensive or intensive. Regarding this aspect, international investors are more indulged in instability and crises and seem to be the culprit. Local investors are more in benefit, so outsiders face more challenges. Asset prices usually change and there is inconsistency in the prices, as fluctuation in the prices seems to be one of the major problems apart from the herding behavior of the international investors. However, for selling purposes emerging market funds are made available to devise some contingent strategies. Principle agent is one of the issues in herding strategies, in which we have to deal with that owner (top-level) employees (middle level or low level) should be on the same pedestal and their goals should be the same and there should be no self-benefit strategy. The concept of total quality management should be followed to deal with this issue. Momentum strategies have also been diligently observed as investors tend to buy those assets whose prices are increasing and on the same page try to sell those assets whose prices are decreasing. Whereas, international investors decode the data differently than domestic investors do.

*As per the experts from the USA*, month-to-month, year-to-year, and especially decade-to-decade, the direction of the U.S. stock market throughout the 20th century was unpredictable. 10-year real percentage increases in the Standard and Poor's were influenced by significant bullish and bearish movements (S&P). For evaluating the effectiveness of the stock market as a social capital allocation mechanism, the divergent interpretations of significant bullish and bearish markets have diverse consequences. Investment is encouraged by high stock markets. The main benefit of having a stock market is that it acts as a social calculator, reporting to companies what the market thinks of their prospects and directing how investments are allocated. The decline in real prices during World War I was the first of the significant bearish market movements. In the 20th century, there have been five significant bullish and bearish markets in the American stock market. Major market trends have frequently been reversed throughout the last century. After World War II, it was shown ex-post that the idea regarding the postwar era considered as a "New Era" was accurate.

The main stock market changes occurred not because of investors' propensity to follow trends and fads, which made the market very unstable, but rather because the future constantly seemed uncertain and stock values were particularly sensitive to expectations of future growth.

### **As per the Advisors on the Stock's Investment**

*As per the experts from Turkey*, money illusion is a psychological question being debated among economists. Few think that individuals inevitably ponder upon their coinage in factual terms, based on the prices of the shares they see around them. Yet, there are quite a few reasons why it is probable to be the illusion of money for several individuals, plus a general absence of economic education, and the rigidity of prices realized for various goods and services.

Money illusions can also influence the perception of the results of the investors. Experiments have shown that people generally perceive an approximately 2% cut in nominal income and unchanged monetary money as unfair value, but see an increase of 2% in nominal income, where 4% inflation is acceptable, despite them being almost equivalent rational while examining the prices of Treasuries, safe

stocks, and risk population allows us to distinguish illusion money from any change in investor attitudes towards risk.

*As per the experts from Pakistan*, the decision to purchase a stock is not merely a valuation of the risk-return trade given in a particular situation because of standing facts, but likewise, a part of the investor's belief borders on the suspicion and disbelief lurks in her/his mind if the relevant information or data s/he has obtained regarding stocks; is reliable or not. We should have confidence in the impartiality of the game/s and the individual who is to carry out such transactions in the stock market. Investors should have to trust in the fairness of the game and the reliability of the members invested in it. Some individuals get benefits when the investors don't know much about the stock market and lack data to assess it. If you want to assess the broad power of trust-based explanation, then it is good to start by modeling the impact of trust on different portfolios. These models also give us some sense of economic importance.

*As per the experts from the USA*, the prices of assets are generally very sensitive as they react to the economic news abruptly. Everyday involvement seems to upkeep the view that prices of assets are inclined by an extensive range of surprising events and that particular events have a more prevalent effect on the prices of assets than others. Not even a single theory would contend that the association between financial markets and the macroeconomy is completely unidirectional. However, the prices of stocks are commonly considered as reply to external forces.

By the end, herding befalls when an expert picks to examine a fact. The market analyst would like to be the principal investor while discovering the facts can only get turnover from speculation if other stockholders follow suit and thrust the asset's price in the direction projected by the principal predictor. Else, the principal predictor may be wedged holding an asset that s/he cannot gainfully sell.

From the above discussion, it is concluded that investors tend to follow the action of the majority rather than making independent decisions. Investors need to ensure that information related to financial markets is accurate. For this purpose, investors must start by modelling the impact of trust on different portfolios.

## CONCLUSION

Herding bias occurs when individuals have to face ambiguity and/or acquire inadequate signals to forecast the future (Gavrilakis, & Floros, 2021). Moreover, when the decision-making authority is heard, most information is lost because the people who will make decisions in the future are unable to understand parts of the information that was collected by the herding parties. When equity returns herds, the variability of return is low. However, the asset pricing model narrates that there is an increase in inconsistency because individual returns are repugnant from market yields. The research underlines that there is an upsurge in variability when there are large price changes and individual returns show deviations from market return during market stress so individual returns cannot be determined by herd bias of investors that is to follow the group in market stress. Literature in finance has untaken a robust importance on the collaboration between worldwide securities markets. Interest has augmented significantly following the removal of the control of foreign exchange in established and developing marketplaces, high-tech advances in communications and tradeoff systems, and the primer of pioneering financial products, which have shaped further chances for worldwide investment. Especially, new remunerative developing stock markets have fascinated the consideration of the managers of international funds as a chance for portfolio divergence and also strengthened the interest of scholars in discovering linkages with worldwide markets. The features that drive cross-sectional variances in the probable returns of the stock in developing equity markets are qualitatively similar to those that have been recognized for established markets. As per the responses, some people have confidence that the premiums are a

recompense for universal risk dynamics, whereas some believe in firm inadequacy in the way markets integrate facts into prices.

The financial markets are highly sensitive and prone to react mercurially to ever-changing and sudden economic and financial data and statistics regarding the shares.

In the end, it is concluded that various prominent antecedents are the fundamental cause of herding which may lead to market abnormalities; individual behavior (Gunathilaka & Fernando, 2021), individual perception (Ahmed, Rasool, Saleem, Khan, & Kanwal, 2022), individual forecasting ability (Fei & Liu, 2021), individual choice (Vedadi & Greer, 2021), individual decision-making abilities (Kartini & NAHDA, 2021), and movements of macro-economic variables (Wicaksono & Falianty, 2022). It is the general behavior of an investor to buy the assets that manifest the bullish trends and sell those that are bearish. The increase and/or decrease in the price of assets depend on future expectations predicted by prominent antecedents—which are the fundamental cause for herding that may lead to market abnormalities.

Furthermore, the law of supply and demand significantly affects the different stock markets in such a way that it determines the prices of each stock that shapes up the entire market. Interest rates affect the demand and supply of the shares. An increase in interest rates results in decreased demand for stocks. There is still room available to explore the herding behavior and investment decisions of an individual by using qualitative techniques for developing countries.

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