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Investigating the Impact of Digital Technology on Business Performance among Small and Medium Enterprises in South Africa

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A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business

Johannesburg, 2025

Research Supervisor

Dr. Eleanor Chipeta

DECLARATION

I, Atlegang Masego Mosimanekgosi, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Atlegang Masego Mosimanekgosi

Signature: A. M. Mosimanekgosi

Signed at Toekomsrus, Randfontein

On the 24th day of February 2025

DEDICATION

“Grandmother, the alchemist, you spun gold through this hard life, conjured beauty from the things left behind”

This paper is dedicated to Nkgono, my grandmother, Helena Blessing Ndu Mosimanekgosi.

Who took the first step to education and generations later, we are studying at academic institutions she could have never dreamed of.

ACKNOWLEDGEMENTS

Firstly, I would like to thank the almighty God who knew this was my path before I even applied. Through his grace, I walked this path.

To my mother, for supporting me in everything I do (even if she doesn't agree) because what are mothers for?

To my supervisor, Dr. Eleanor Chipeta for providing guidance on this journey and being a present and passionate supervisor. The destination was not clear at first but somehow, it made sense in the end.

To my pillar of strength who has witnessed me walk this journey and supported me, even though you didn't know that this Master's degree would be on our life plan (Believe me I also didn't…) Your patience is appreciated more than you will ever know.

To my syndicate group members, especially my colleagues whom I have formed bonds with along the way. May we never lose touch…

& my friends & family, who always see the light in me. Thank you for always asking "How is your Masters going?" It is done.

ABSTRACT

Small and Medium Enterprises (SMEs) are recognised as significant contributors to global economic growth. Due to their capability to establish new markets and provide employment. In a society that is becoming more digital, SMEs need to adapt to these market changes to remain operational and profitable. This study investigated the impact of digital technology on business performance, in the South African context. This study was anchored on the resource-based view theory, which stipulates that an organisation's competitive advantage can be determined by its internal capabilities and resources.

This study employed a quantitative research design and the primary data collection method involved gathering survey responses through the Qualtrics platform. The study population consisted of SME owners, managers and employees. The data collected was analysed through statistical methods, which included tests for normality and reliability, as well as correlation and regression analysis. These tests were implemented to evaluate the hypotheses that were developed from the literature review conducted.

The results obtained based on the sample of 114 participants revealed that access to finance and social capital had a positive impact on business performance. However, the remaining four factors, digital marketing, social media usage, E-commerce and entrepreneurial education did not have an impact on business performance. This was due to their statistical significance being higher than the threshold, therefore yielding inconclusive results.

This study contributes to the existing literature by providing insights on key factors that drive business performance within the SME sector. It recommends that SMEs establish strategic connections with each other based on their product offering, to solidify their value chain to attract new customers. Additionally, training provided to SMEs should be tailored to accommodate their schedules and digital marketing should be used with an intention beyond generating sales, but also to develop relationships with customers.

KEYWORDS – small and medium enterprises, social capital, digital marketing, social media, entrepreneur education, access to finance, business performance

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LIST OF ACRONYMS

SMEs – Small and medium enterprises

CHAPTER 1. INTRODUCTION

1.1 Statement of purpose

The purpose of this research is to investigate the impact of digital technology on business performance of Small and Medium Enterprises (SMEs) in South Africa. This study seeks to identify the digital factors and determine their influence on business performance within the South African business environment. The findings aim to provide actionable insights for policymakers and SME owners, enabling them to develop effective strategies that leverage digital technology. Ultimately, this research seeks to support SMEs in enhancing their competitiveness and sustainability in an increasingly digitalised environment.

1.2 Background of the study

The National Development Plan (NDP) of South Africa outlines ambitious goals, such as eradicating poverty, reducing inequality and lowering unemployment to 6 per cent by 2030. However, significant disparities exist between these goals and the current economic conditions in the country. While entrepreneurship plays a pivotal role in driving economic growth by creating jobs and contributing to poverty reduction and economic development (Adenutsi, 2023), establishing SMEs is noted as a key catalyst for achieving such goals (Bhorat et al., 2018). Globally, SMEs account for more than 90% of businesses in operation. A study conducted by the International Finance Corporation (IFC) and McKinsey estimated that there are between 420 and 510 million formal and informal SMEs worldwide, with the majority, approximately 365 to 445 million operating within developing economies (Ramalho et al., 2018). SMEs are crucial to the global economy, serving as the main drivers of employment and job creation in developing nations and they represent approximately 99% of all enterprises in the OECD member countries (OECD, 2019). SMEs are a pillar of societies globally, as they account for more than 70% of employment and around 50% of the Global GDP (United Nations, 2024). Within the South African context, SMEs are significant contributors to alleviating social problems

such as economic exclusion and high levels of unemployment (Khoza et al., 2022). South African SMEs contribute between 52% - 57% to South Africa's Gross Domestic Product, which approximates to 61% of the country's total employment (Voeten & Marais, 2016).

The economic contribution of SMEs is widely recognised both in academic and public policy, yet a universally accepted definition remains elusive (Madani, 2018). While definitions vary across different countries and regions, often depending on factors such as the number of employees, annual turnover, and the specific industry within which the organisation operates (Bertanzetti et al., 2024; Madani, 2018); this study adopts a definition that represents the South African context. Thus, a registered business entity managed by one owner or more, carried out in any sector of the economy with criteria based on annual turnover and number of employees, as guided by the 1996 National Small Business Act of South Africa[1].

The survival rate of SMEs in South Africa is notably low. The failure rate of South African SMEs stands at an alarming 75%, which is one of the highest failure rates globally (Muriithi, 2017). In a swiftly changing business landscape, comprehending the factors that influence SME performance is essential for realising their growth potential. For example, A study conducted by Herrington and Coduras (2019) revealed that inadequate levels of entrepreneurial education, insufficient access to funding, and unfavourable government policies and regulations may impede the growth of SMEs. Similarly, Lwango et al., (2017) are of the view that profitability and financial performance are closely associated with customer satisfaction. SMEs experience significant financial constraints,

[1] https://www.google.co.za/search?q=national+small+business+act+south+africa&client=safari&sca_esv=330d60e69ac8c606&channel=iphone_bm&sxsrf=AHTn8zoyj1wWdUKdE45Gjx6AWPw_-wL8gg%3A1739266796485&source=hp&ei=7BqrZ7m0G-mkhbIPhtm-gAk&iflsig=ACkRmUkAAAAAZ6so_AbHbr1Vr6a0mf9xcRlC5oX0ZkDq&oq=national+small+business+Act+of+south%C2%A0&gs_lp=Egdnd3Mtd2l6IiZuYXRpb25hbCBzbWFsbCBidXNpbmVzcyBBY3Qgb2Ygc291dGjCoCoCCAAyBRAAGO8FMggQABiABBiiBDIFEAAY7wUyCBAAGIAEGKIESNH9AVAAWPnuAXAUeACQAQCYAfoDoAHRiAGqAQsyLTQ0LjEzLjIuMbgBAcgBAPgBAZgCTqAC2YYBqAIKwgIKECMYgAQYJxiKBcICCxAAGIAEGLEDGIMBwgIIEAAYgAQYsQPCAggQLhiABBixA8ICBBAAGAPCAgsQLhiABBixAxiDAcICBRAAGIAEwgIOEAAYgAQYsQMYgwEYigXCAg4QLhiABBixAxjRAxjHAcICDRAuGIAEGLEDGIMBGArCAgoQABiABBixAxgKwgIGEAAYAxgKwgINEAAYgAQYsQMYgwEYCsICEBAAGIAEGLEDGIMBGIoFGArCAgoQLhiABBixAxgKwgIHEAAYgAQYCsICERAuGIAEGLEDGNEDGIMBGMcBwgIHECMYJxjqAsICFBAuGIAEGLEDGNEDGIMBGMcBGIoFwgILEC4YgAQY0QMYxwHCAg4QLhiABBixAxiDARiKBcICBBAjGCfCAgUQLhiABMICDhAuGIAEGMcBGI4FGK8BwgILEC4YgAQYxwEYrwHCAgsQLhiABBixAxjUAsICBhAAGBYYHsICBxAAGIAEGA3CAggQABgIGA0YHsICCxAAGIAEGIYDGIoFwgIHECEYoAEYCsICBBAhGAqYAwXxBUWAqA1ycTbakgcMMjAuMC40Mi4xMy4zoAfqsgQ&sclient=gws-wiz

which limits their marketing alternatives and capacity to obtain market awareness (Omondi, 2017). With the advent of social media SMEs have a more efficient way to directly engage with their customer base (Wardati & Er, 2019), leverage E-commerce to effectively promote their products and services to prospective clients. However, SMEs are experiencing skills and infrastructure challenges (Seseni & Mbohwa, 2021) and are not harnessing these technologies, which stifles their growth opportunities (Mputle, 2020). Investigating the intersection of these factors with emergent opportunities provides an opportunity to redefine the success of SMEs in the digital age. Consequently, this study endeavours to investigate the digital factors that impact Business Performance among SMEs in South Africa, particularly within the Gauteng region.

1.3 Problem statement

SMEs are acknowledged as essential drivers of economic expansion and job creation worldwide. In South Africa, SMEs represent over 50% of national employment (Mbatha et al., 2024). Notwithstanding the growing acceptance of digital platforms in South Africa, certain obstacles persist that impede the complete utilisation of these technologies by SMEs (Masenya, 2023).

Despite their significant contributions to the economy, the literature highlights numerous factors that influence their existence. While, Nhleko et al., (2023) highlighted the lack of economic access as one major factor limiting the effectiveness of SMEs in making an economic impact, Mbatha et al., (2024) are of the view that the COVID-19 pandemic has exacerbated marketing challenges, comprising prohibitions, constrained financial resources, and obstacles in digital marketing. Moreover, effective marketing is essential for the success of SMEs, and many rely on traditional marketing tools such as print media, although broadcast media is used selectively (Cant & Wiid, 2016). Furthermore, Kurniasari (2023) posits that access to finance is essential for the digital adoption of SMEs, without it they can't innovate or integrate new technologies within their business operations. Furthermore, SMEs have significant obstacles that hinder their capacity to attain optimal performance, sometimes resulting in early business closures (Dlamini, 2020). Despite research acknowledging the existence of these factors, there is limited

research that examines the combined effect of conventional entrepreneurship and technological factors on SME performance. Most studies separate these elements, overlooking their intricate relationships (Anggadwita & Indarti, 2024). This accentuates a significant deficiency in thorough research examining the various factors affecting SMEs. Thus highlighting a substantial research gap, emphasising the necessity of a comprehensive examination of the key factors that influence the performance of SMEs. By addressing this research gap, this study aims to provide a holistic understanding of the diverse key factors that impact SME performance. With the objective of highlighting strategies and recommendations derived from empirical evidence to enhance the resilience, competitiveness, and long-term success of SMEs. Addressing these challenges through supportive policies and frameworks can help SMEs gain a competitive advantage and achieve sustainable business performance (Serumaga-Zake & Van der Poll, 2021).

1.4 Research objectives

I. Primary objectives

The primary objective of this research study is to investigate the digital factors that impact business performance among SMEs in South Africa.

II. Empirical objectives

The empirical objectives of this study are outlined below.

- To investigate the impact of social media usage on the business performance of SMEs in South Africa
- To investigate the impact of digital marketing on the business performance of SMEs in South Africa
- To investigate the impact of E-commerce on business performance of SMEs in South Africa

1.5 Rationale

This research study seeks to investigate and develop a comprehensive understanding of the impact of key components, i.e. digital technology, on the commercial performance of SMEs within the South African context. SMEs play a pivotal role in the economic landscape of South Africa. According to Kongolo (2010) SMEs account for 91% of formal business entities, which accounts for approximately 60% of employment in the country. Consequently, in a society that is increasingly embracing digital technologies. Existent literature highlights the benefits of SMEs adopting digital technology into their business. A study by Nuseir (2018) concluded that the business success of SMEs is enhanced by the adoption of Digital media. Additionally, the competitiveness, productivity and business performance of SMEs are significantly enhanced by digital technology especially in a post Covid-19 context (Kádárová et al., 2023). Based on these insights, it is imperative to fully understand the challenges that are preventing SMEs from incorporating digital technologies into their daily operations within the South African context. Furthermore, developing strategies to enhance the resilience of SMEs and to secure their future economic growth by using these technologies.

The objective of this research study is to explore the relationships between digital factors such as digital marketing and social media usage and classic entrepreneurship factors such as social capital, and their impact on SME business performance. Including the non-digital factors provides a more holistic perspective assessing how they interplay with the digital factors with regards to business performance. From an academic perspective, this research study endeavours to enhance the current body of knowledge concerning the challenges that are faced by South African SMEs. Consequently, making a scholarly contribution to the existing research pertaining to the SME sector in South Africa and its challenges in achieving growth. The insights derived from the execution of this study will provide valuable insights into the obstacles that impede SMEs from embracing digital technologies. Emphasising critical elements that impede growth and identifying implementable best practices. These will inform stakeholders, including business leaders, academics and policymakers on possible efforts that could be implemented to empower SMEs to incorporate more digital technology in their operations. Ultimately, assisting

them in using these technologies more effectively. Consequently, enabling growth, encouraging competitiveness, and securing the long-term sustainability of SMEs in a progressively digital economy.

1.6 Delimitations of the study

Delimitations are the restrictions of this research study, stipulated below.

1. This research study will focus on SMEs that are operational within the boundaries of the Gauteng province in South Africa and will not consider businesses in other provinces and countries.
2. Macroeconomic factors, such as rising interest rates or inflation will not play a role in this research study.
3. International trade and its impact will not be a consideration in this study.
4. The impact of human resource management will not be considered for the research study undertaken.
5. Only SMEs that have been in operation for a minimum of 1 year will be considered.

1.7 Definition of terms

The stipulated key terms which will be used during this study will be defined below.

1. SMEs - According to Sandala (2015, as cited in Lekhanya, 2015), the South African categorisation of Small to Medium Enterprises (SMEs) is defined as enterprises with less than 200 employees.

2. Business Performance - According to Smith & Reece (1999, as cited in Zulkiffli & Perera, 2011), business performance can be defined as the operational function of an organisation that aims to fulfil the desires and requirements of its major shareholders.

3. Performance indicators – According to Blackburn et al. (2013), business performance can be carried out by measuring specific factors. These factors

include employee churn over a two-year period, changes in turnover over the previous three years, and the profitability of the business over the preceding two-year period.

4. Determinants - According to Krasniqi (2008, as cited in Lekhanya, 2015), the term "determinants" refers to various factors that can either be internal or external to an organisation. These factors may include financial resources, market conditions, access to finance, competition, and other similar aspects.

1.8 Assumptions

The below statements will be adopted as assumptions for the undertaking of this research study.

1. In South Africa, SMEs generally face similar constraints and challenges, regardless of what industry they are operating in & the size of the organisation.

2. With the existence of better access to financial resources and adequate use of technology, SMEs would experience an improvement in terms of business performance.

3. Government policies and regulations have a direct impact on the business performance of SMEs.

4. Due to the low barriers of entry in some industries, competition influences the business performance of small and medium enterprises. Therefore, SMEs that have a competitive advantage over their competitors will experience improved business performance.

5. The internal and external factors can influence the business performance of small and medium enterprises.

1.9 Chapter Outline

Chapter 1 – Background, Problem statement, context & objectives

The aim of this chapter was to clarify the purpose of this research study and to provide a background on the main themes addressed in the research problem. These themes served as the foundation for the research objectives and questions that guided the trajectory of this study. Additionally, this chapter highlighted the significance of the study within the broader spectrum of the existing literature. It also outlined the research study's limitations, followed by the assumptions and key terms that served as the foundation for this study.

Chapter 2 – Literature Review

The aim of this chapter was to provide a literature review of previous research studies that are related to the identified factors, based on the Resource-Based View theory. This review contributed to the development of the hypotheses that were tested in this research study. Subsequently, resulting in the development of the conceptual framework.

Chapter 3 – Research instrument design

The aim of this chapter was to elaborate on the research approach, including an outline of the research design. Additionally, the data collection process was described in detail, along with the sampling method that was employed. Additionally, the research instrument was defined. Furthermore, the chapter provided a thorough explanation of the data collection, analysis, and interpretation procedures.

Chapter 4 – Data analysis

The aim of this chapter was to present the findings obtained from the preceding data analysis step. Beginning with an overview of the demographic and descriptive statistics. Furthermore, the normality, reliability and validity test results were showcased. Consequently, the outcomes derived from the correlation, confirmatory factor analysis and regression analysis were presented.

Chapter 5 – Interpretation & discussion of results

The aim of this chapter was to present a detailed discussion of the study results based on the proposed research constructs. The discussion included the primary findings derived from the research and a comparison of these findings with existing literature. The chapter concluded with recommendations and conclusions for each of the constructs.

Chapter 6 – Conclusion & Recommendations

The objective of this chapter was to conclude on the research objectives and provide recommendations based on the results. The chapter provided an overview of the study's contribution to the body of knowledge on SME business performance. Additionally, suggestions for future research studies were offered, as well as the study limitations and recommendations.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

The proposed study aims to investigate the digital factors that impact business performance among SMEs in South Africa. This chapter reviews the literature on entrepreneurship, further discussing the various factors identified as internal resources, aligning with the principles of the Resource-Based View (RBV) theory. The RBV theory serves as the primary theoretical framework underpinning this research, with a focus on resources such as digital marketing, social media usage, E-commerce, access to finance, entrepreneurial education and social capital.

2.2 Evolution of entrepreneurship

Entrepreneurship is a key driver in developing economies worldwide, as it encourages competition and market expansion (Dhaliwal, 2016). Entrepreneurship has been the subject of extensive research for decades. However, a definition that is universally acknowledged is yet to be established. Numerous authors have contributed their own interpretations, Schumpeter articulated that the role of an entrepreneur in society is to be an innovator and disruptor, by introducing new products or services and therefore as a result, effecting a change in society (Sobel, 2018). Entrepreneurship serves critical roles within society, driving economic development globally, empowering marginalised citizens and consequently, improving social well-being (Kamara et al., 2022). Similarly, Kao (1993) proposed entrepreneurship as a process of doing something new and different with the objective of creating wealth and adding value to society. Therefore, it can be concluded that entrepreneurship is a key force of economic prosperity worldwide.

There are several forms of entrepreneurship highlighted within existing literature. Aulet and Murray (2013) proposed two types of entrepreneurship, firstly, opportunities-based entrepreneurship, where an individual identifies an opportunity in the market and decides to dedicate their efforts in pursuit of a new career in entrepreneurship. Secondly, necessity-based entrepreneurship occurs when an individual engages in entrepreneurship

as a means of income generation. Entrepreneurial education is another emerging type of entrepreneurship, that has the objective of educating students on different aspects of entrepreneurship, such as identifying opportunities in the market. Therefore, ultimately encouraging more students to become entrepreneurs (Ratten & Usmanij, 2020).

Research into the entrepreneurship field over the last decade indicates that entrepreneurship is deemed as a possible solution to inequality in Society as well as environmental degradation (Muñoz & Cohen, 2017). Therefore, entrepreneurs are valued as important contributors to society, due to their role in increasing competition within the market. By leveraging evolving technology, entrepreneurs can increase productivity, therefore creating more employment and driving the development of society, resulting in economic growth (Dhaliwal, 2016). However, the role of entrepreneurs has transcended its original role of creating employment by taking advantage of opportunities in the market. Sustainable entrepreneurship has drawn considerable attention on a global scale, encouraging entrepreneurs to transform their business strategies to include goals centred on sustainable development to create profitable businesses that support sustainable entrepreneurship (Shepherd & Patzelt, 2011). Which entails entrepreneurs prioritising efforts that involve commercial, social, and environmental objectives, catering to the ever-evolving needs and demands of the present-day economy (Schaltegger & Wagner, 2011). Subsequently, entrepreneurs who embrace the principles of sustainable development will create value for present-day consumers while preserving resources for future generations (Larsson et al., 2016). Ultimately, this trend has resulted in the development of new terms such as environmental entrepreneurship, eco-entrepreneurship & green entrepreneurship (Kraus et al., 2017).

2.3 Definition of SMEs

The relationship between SMEs and entrepreneurship is multifaceted and involves various factors that contribute to innovation, resilience and business performance. SMEs have been attributed to have a significant contribution to the economic activity of many countries by creating employment opportunities for citizens. This proves to have a positive impact on the development of society, due to social ills such as unemployment

and poverty being alleviated. The difficulties SMEs face in achieving quick development have been brought to light by several research findings. These constraints include limited market access, inadequate financial and banking services, a lack of technological know-how, problems obtaining raw materials, and restrictions on creating efficient networks. It is interesting that these restrictions, while common among some SMEs, do not necessarily hinder their ability to succeed in their endeavours. Insights acquired from engaging with successful SMEs suggest that their achievements can be mostly attributed to their unwavering commitment to growth and innate aptitude for creativity (Octavia et al., 2020).

Despite the importance of SMEs in society being recognised, considering the existing body of academic literature, there isn't a globally accepted definition of SMEs (Anggadwita & Mustafid, 2014). SMEs are defined differently across various countries; some studies highlight countries categorising SMEs by taking into consideration the number of employees. In contrast, other countries classify these enterprises based on the value of their assets. Additionally, the criterion used to categorise SMEs also differs across different industries (Abor & Quartey, 2010). Additionally, according to the Bolton Committee (1971, as cited in Abor & Quartey, 2010) small firms could be classified by using economic and statistical definitions. Pertaining to the economic definition, the firm is considered small if 1) its share in the market is considered relatively small 2) management is done by the owner and 3) the enterprise is independent and doesn't form part of a larger organisation. In contrast, the statistical definition classifies enterprises as small based on the sector of the firm and its contribution to the economy in terms of GDP.

The United States of America classifies its SMEs based on the regulations that are defined by the Small Business Administration (SBA). The classification is implemented based on the income of the enterprise, the number of employees, the economic sector the enterprise is operating in and the ownership structure of the enterprise The situation is similar in Canada, where there isn't a universally accepted definition within the country (Madani, 2018). In Japan, the SME definition also considers the number of employees and the value of the capital (Madani, 2018). The European definition for SMEs has changed over the years. Circa, 1996 the classification of SMEs was based on 4 factors which comprised the

turnover of the enterprise, the number of employees, the independence criterion & the balance sheet total (Madani, 2018). A revision was implemented in 2017 by the European Commission to ascertain whether the thresholds for the turnover amount and the balance sheet amount for SMEs were still relevant (Madani, 2018).

Exploring how SMEs are defined in the African context, Ghanaian enterprises are typically categorised as either urban or rural enterprises. A classification that is not made in developed countries. Enterprises are also classified based on the number of employees. Micro enterprises are classified as having less than 5 employees, and small enterprises employ between 5 and 29 employees. Additionally, medium-sized enterprises employ between 30 to 99 employees. Ultimately, any enterprise that employs 100 or more people is classified as a large enterprise. An interesting insight about SMEs in Ghana is that most of the enterprises are owned by women. (Abor & Quartey, 2010). In South Africa, enterprises are classified based on the framework that was developed from the National Small Business Act of 102 of 1996. This framework classifies enterprises using the number of employees as a measure. Revenue generated from those defined as survivalist enterprises is usually below the poverty line, examples of these enterprises include hawkers & subsistence farmers. Enterprises that have a turnover of less than R150 000 per year and less than 5 employees are classified as Micro enterprises. Enterprises that have access to technology, operate in the formal market and have less than 10 employees are classified as very small enterprises. Additionally, in the construction, electricity, manufacturing and mining sectors a very small enterprise, needs to have less than 20 employees. Enterprises that employ less than 50 people are classified as small enterprises. Medium enterprises have less than 100 to 200 employees, depending on their industry of operation (Abor & Quartey, 2010).

Analysing existing literature centred around the SME definition reveals that there are differences across various countries and industries. To fulfil the objectives of this research study, the SME definition that is outlined in the National Small Business Act of 102 of 1996 will be employed.

2.4 Social Network Theory

The Social network theory is a framework used to analyse how people, groups, or organisations are connected. Instead of looking at individuals in isolation, it focuses on the entire network of relationships. This framework helps us understand how these connections influence behaviour, the flow of resources, and the overall social structure. Essentially, it provides a powerful set of tools for seeing how influence spreads, how information moves, and how social capital is built within a network. Which allows for the shaping of media or personal influence and drives changes in behaviour or attitudes (Liu et al., 2017). The network theory depicts social relationships through a network of nodes and ties. In this context, nodes represent the persons (i.e., customers) who comprise the network, whereas ties represent the connections or relationships that exist between these nodes. Different types of links might exist between nodes and in its most basic form, a social network delineates all essential connections between the nodes under investigation. This theory posits that individuals form bonds to maximise personal benefit and social capital, based on collective interests. Furthermore, that behaviour is shaped by continuous social relations and trust within established networks (Light & Moody, 2020).

The network theory enables the assessment of social capital possessed by individual network participants. These concepts are commonly depicted using a social network diagram, in which nodes are represented as points and ties are represented as lines connecting these points (Omondi, 2017). Additionally, this theory provides a foundation in relation to understanding how SMEs operate, particularly how they acquire resources, gain information and grow their businesses, through their network, which includes customers, business partners, investors and community members (Friedkin & Johnsen, 2014). In the context of this study, this entails investigating how SMEs can capitalise on their networks through the digital technologies stipulated below.

2.4.1 Digital Marketing

Digital marketing is a tool that SMEs across multiple territories have experienced positive results by implementing it (Jadhav et al., 2023). It can be defined as a type of marketing

that uses electronic devices such as personal computers, smartphones, telephones, and gaming consoles to actively engage and involve stakeholders in the marketing process (Omondi, 2017). Another definition articulates digital marketing as the strategic use of digital technology in business operations to efficiently capture customer interest, enable brand maintenance and expansion, ensure client retention, and significantly improve sales performance. As such, it may be seen as an adaptable and technologically driven framework through which organisations engage with consumers and other stakeholders to create, maintain, and sustain the value of their brand's products and services (Kanan & Li, 2017, as cited in Arobo, 2022). Search engine marketing (SEM), search engine optimisation (SEO), content marketing, influencer marketing, content automation, campaign marketing, mobile applications, data-driven marketing, e-commerce marketing, social media marketing, social media optimisation, email direct marketing, display advertising, e-books, optical discs, and games are all examples of digital marketing techniques (Desai, 2019). The stipulated techniques are representative of the principles from the social network theory, particularly influencer marketing where the influencer acts as a bridge node, that extends the reach of the brand on digital platforms (Tetyana Pimonenko et al., 2023). Similarly, data analytics allows for trends to be identified and relationships to be mapped within this network (Liu et al., 2017).

To effectively leverage digital platforms, SMEs should adopt sustainable digital marketing practices. With the objective of cultivating long-term customer connections in addition to selling products and services (Mazzarol, 2015). Numerous SMEs are often in the growth stage of their life cycle, a vital point in which client attraction and retention become critical. As a result, it is paramount for these businesses to develop marketing objectives that prioritise successful client reach (Omondi, 2017). By doing so, SMEs gain the ability to reach out to and engage with potential new customers, increasing their chances of generating improved returns and sustainable growth (Mazzarol, 2015). Ultimately to enhance the effectiveness of digital marketing, organisations should prioritise the creation of novel consumer experiences, as well as developing engaging media plans (Yasmin et al., 2015).

Customers have the power to actively influence brand communication through digital platforms, allowing organisations to tailor personalised content to the interests and preferences of specific customers. To produce such personalised content, organisations must first collect the geographic and demographic data of their customers. The main advantage of personalised content is its ability to generate distinct profiles for different customers and then use this information to target specific individuals, resulting in a tailored, relatable, and meaningful experience. As a result of these efforts, customers are motivated to engage with the brand's content more deeply by sharing their experiences and thoughts with others, which can significantly increase the effectiveness of the brand's marketing strategy and, as a result, contribute to a rise in sales (Galetto, 2016, as cited in Arobo, 2022). Consequently, building and maintaining consumer trust arises as a crucial factor contributing to the long-term viability and sustainability of SMEs and repeat buying behaviour can be achieved when consumers develop a sense of trust in a brand (Enehasse & Sağlam, 2020).

The importance of trust in digital marketing strategies is further reinforced by empirical studies examining the impact of these efforts on SME performance. The significance of digital marketing efforts is further reinforced by empirical studies examining its impact on SMEs. Nuseir and Aljumah (2020) conducted a study to investigate the influence of digital marketing efforts adopted by SMEs in the United Arab Emirates to determine the business performance. The study concluded that SMEs in the UAE are coerced to embrace digital marketing due to external pressures. Additionally, reaching remote customers results in a positive impact on SME performance. Onyango (2016) concluded that digital marketing had an advantageous impact on revenue, profitability, and market share. Further benefits of digital marketing for SMEs include, expanded audience reach beyond geographical limitations, effective result measurement, improved customer engagement, and reduced costs relative to traditional marketing approaches. Digital platforms provide marketers with ample data and insights to make informed decisions. Digital marketing applications possess the capacity to efficiently track online user behaviour and visitor interactions, enabling organisations to gain insights into various aspects such as the origins of online visitors, the specific web pages they accessed, the duration of their stay on the website, the sources generating high-quality traffic, and

critically, whether these website visits translate into valuable leads or conversions. By measuring campaign performance, SMEs may optimise their efforts and understand how target audiences respond to various touch points and messages (Jain, 2015). However, digital marketing poses specific obstacles for SMEs. These encompass the use of ad-blocking software, which can diminish the efficacy of online adverts, dependence on technology that may encounter reliability challenges, and an increased degree of competition in the digital arena (Veleva & Tsvetanova, 2020).

From the research studies highlighted above. It can be deduced that extensive research exists on digital marketing and its impact on SMEs business performance. Insights attained from these research studies highlight digital marketing as a cheaper avenue for SMEs to build customer relationships and market their products and services (Ignatius et al., 2024). Additionally, SMEs have realised positive results from implementing digital marketing into their strategy (Jadhav et al., 2023). Consequently, the below hypothesis was derived from the insights developed from the above analysis.

H1: Digital marketing has a positive impact on SME business performance.

2.4.2 Social Media Usage

The emergence of social media in the modern world has grown to a point where it has a domineering presence, altering behaviour and interactions within society. Social media usage has broken down barriers to creating global connections and transformed previous methods of social interactions between users (Azzaakiyyah, 2023). This was enabled by the proliferation of internet usage, from the number of individuals using the internet surpassed 2 billion and it is projected to increase twofold each year (Smith, 2011). This has forced organisations to adapt their marketing strategies. In the pursuit of expanding their customer base, organisations must surpass the limitations of traditional marketing methods.

Over the last few decades, social media usage by the public has increased expeditiously. Consequently, the network theory forms an integral framework into understanding social

media usage through investigating the users relationships and flow of information. The users are represented as nodes in the network and the connections characterised by the interactions which form the edges that link the nodes (Liu et al., 2017). Social media platforms are developed to allow users to form connections based on similar preferences. Content generated by users is the core to social media, which fuels the interaction and engagement among users (Kavitha, 2024). Social media has evolved over the years from being a niche activity to being an integral part of society and this is due to technology being more accessible, leading to increased internet adoption. As well as changing consumer behaviour and network effects, as more people engage on these social media platforms (Verdegem, 2021). To showcase their services and products to potential new clients, organisations need to develop strategies centred around the use of social media platforms. With the impending reality of society entering the 4th industrial revolution, organisations need to transform and innovate to remain profitable. This reality is even more daunting for SMEs. A study by Odoom et al. (2017) concluded social media offers SME owners benefits that traditional media doesn't. The main benefit of using social media is the cost factor, as marketing on social media would prove to be cheaper than traditional modes of marketing. In developing countries like Ghana, there has been a notable rise in the use of social media platforms. Odoom et al. (2017) revealed a shift in media consumption patterns, specifically highlighting the adoption of social media platforms by Ghanaian organisations. These platforms are being harnessed as effective communication channels for interactive and informative purposes. Nevertheless, it should be highlighted, that the mere existence of technology does not automatically lead to its widespread adoption and acceptance within society. According to Octavia et al. (2020) in Indonesia, a large percentage of SMEs have not benefitted from the advancement of digital technology. This is due to the use of the internet by SMEs still being at a very low level. Consequently, this is why some SMEs have not incorporated E-commerce into their business operations. Additionally, knowing what type of device a customer is using to engage with the organisation, is one of the pieces of information that a firm needs to gather to develop an effective marketing strategy. Additionally, what the customer demands from the organisation as well as the interaction pattern between the customer and organisation. These insights allow for a better understanding of customer behaviour, which is essential for the optimisation of communication from the organisation to the

customer. Ultimately allowing for an enhanced customer experience (Stone & Woodcock, 2014).

Assessing existing studies to understand the role of marketing efforts on business performance in relation to reviews of products and services. Considering organisations that interact with customers through digital platforms. The number of customer reviews on products and services was found to be of positive influence on business performance and subsequently, the growth of revenue (Kim et al., 2016). To further illustrate that the effective use of social media can influence the behaviour of guests. A study conducted by Aluri et al. (2015) aimed to investigate the behavioural impact and effectiveness of social media channels embedded in hotel websites. Insights drawn from this study concluded that embedded social media channels on the hotel's website directly influenced traveller satisfaction. This conclusion could be derived from the traveller's enhanced levels of perceived social interaction, perceived enjoyment and perceived informativeness, which further influenced the purchase intention.

From the research studies highlighted above in can be concluded that there has been extensive research undertaken in the field of social media and how SMEs can use it to improve their business performance. Existing knowledge highlights that the use of social media is growing exponentially (Verdegem, 2021). SMEs need to adapt their marketing strategies to leverage this development. Additionally, social media marketing typically has a cheaper cost compared to traditional marketing methods Odoom et al. (2017). The insights derived from this analysis formed the foundation for the below hypothesis.

H2: Social media usage by SMEs has a positive impact on SME business performance.

2.4.3 E-commerce

E-commerce has been proven an essential tool for SMEs to sell their products and services globally (Nather & Burhanuddin, 2018). The process of executing business transactions over the internet is referred to as E-commerce. This includes a wide range of activities, such as transferring useful information in the form of products and services and

facilitating payments, all of which are made possible by web-based technologies (Lu et al., 2010). There are various classifications of E-commerce as highlighted in existing literature. B2C E-commerce is represented by an organisation selling its products through its website. B2B E-commerce is illustrated when transactions are executed between organisations through online platforms such as websites (Mputle, 2020). E-commerce is an innovative and profitable way of doing business that goes beyond the simple transfer of information. It covers a broader range of electronic transactions, including point-of-sale requirements, determination, and production scheduling, as well as invoicing, payment processing, and receipt management (Alley & Emery, 2017). Social network theory underlines how interpersonal interactions, such as peer recommendations, online reviews, and content sharing serve as key drivers of consumer purchasing behaviour (Ala et al., 2021). The use of e-commerce for advertising, communication, buying, selling, and payment transactions is gradually becoming the industry standard. This trend can be seen in the steady year-on-year increase in the number of businesses moving to electronic commerce platforms to conduct their day-to-day commercial activities (Ayawei, 2022). Its significance was further highlighted during the COVID-19 pandemic, as SMEs were forced to integrate E-commerce into their business operations (Bravo et al., 2022). Consequently, SMEs can improve their profitability and longevity by embracing e-commerce platforms (Ayawei, 2022).

E-commerce allows clients to make purchases at their leisure, allowing them to buy from a variety of merchants at any time. Furthermore, E-commerce platforms provide quick access to critical information such as product specifications, availability, and pricing information (Rungsrisawat et al., 2019). Aside from customer satisfaction, another important component influencing the e-commerce process is innovation. The presence of creativity and innovation is critical to the successful adoption and implementation of Business-to-Business (B2B) e-commerce (Kiumarsi et al., 2019). A website or a group of interconnected websites meant to facilitate commercial activity is referred to as an electronic marketplace, sometimes known as an e-marketplace. By performing transactions on behalf of its members via dedicated websites, these e-marketplaces play an important role in supporting Business-to-Business (B2B) e-commerce. The fundamental goal of electronic marketplaces is to improve the efficiency of purchase

orders and to assist customers in expediting complex, paper-based transactions between buyers and sellers. They also make it easier to buy and sell low-volume goods, contributing to a more efficient and successful B2B e-commerce ecosystem (Kollmann et al., 2020).

E-commerce improves the performance of SMEs by enabling better and more effective business process management. According to Mechman et al. (2022), it also has a critical role in lowering transaction costs, which contributes to SMEs' improved performance. A study conducted by Octavia et al. (2020) to analyse the impact on e-commerce adoption on entrepreneurial orientation and market orientation in business of SMEs in the Jambi province of Indonesia, to investigate the E-commerce adoption and market orientation impact on SME's business performance. This study concluded that market orientation, entrepreneurial orientation & E-commerce adoption have a positive and significant influence on the improvement of the business performance of SMEs. E-commerce adoption offers further benefits for SMEs, such as enhanced visibility of items and services to new customers, essentially fostering business expansion. E-commerce improves customer comprehension via data insights, enabling businesses to customise their offering to better satisfy consumer demands. Moreover, comprehensive product and service descriptions enable consumers to make informed purchasing choices, promoting trust and transparency. Ultimately, e-commerce enables efficient and paperless procedures, optimising operations and alleviating administrative difficulties for SMEs (Goga et al., 2019). Despite the various benefits of E-commerce, its implementation within SMEs has experienced considerable obstacles. Infrastructure management, IT security and privacy concerns connected to cybersecurity, system availability, connectivity issues, and other issues resulting from load shedding are the major hurdles highlighted. Furthermore, the high cost of installing E-commerce solutions for SMEs has been identified as a significant impediment (Mputle, 2020). Additionally, Jin et al. (2018) posited that despite the availability of financial resources for Information Technology (IT) investments, small businesses have shown a significant reluctance to make such investments. SMEs in South Africa and Nigeria have been hesitant to adopt new technology. Regardless of the link between integrating new technology and achieving a competitive advantage, it is worth noting that there is a growing interest in the research

sector on the need for SMEs to invest in IT applications to sustain profitability (Struwig et al., 2019).

Extensive research already exists on E-commerce and its impact on SMEs. Insights attained from these research studies highlight that E-commerce has had a positive impact on SMEs that have adopted it (Ayawei, 2022).. The adoption of E-commerce was further exacerbated by the Covid-19 pandemic where SMEs were forced to use it, to continue transacting through the global lockdowns (Bravo et al., 2022).. However, SMEs have faced obstacles in adopting E-commerce (Mputle, 2020). Ultimately, the below hypothesis was derived from the insights garnered from the above analysis.

H3: E-commerce has a positive impact on SME business performance.

2.5 Resource-based view theory

According to Penrose (1959, as cited in Nair et al., 2008) businesses can be thought of as collections of distinct resources and abilities that they strategically combine to take advantage of new opportunities. Barney (1986) asserts that organisations gain and maintain a competitive edge through the characteristics of resources emphasised by the Resource-Based Theory (RBT). These distinguishing characteristics of resources include their difficult imitability, inherent value, non-substitutability, rarity, and imperfect mobility.

Volatile market conditions have caused organisations to rethink their business strategies. Transforming the focus of their long-term strategies based on their organisational capabilities. Internal firm knowledge that is possessed by the employees is a preeminent resource of the organisation. Therefore, it is imperative for organisations to leverage off the organisation's resources to maintain a competitive advantage over their competitors (Grant, 1996). Furthermore, a study conducted by Barney (1991, as cited in Griffy-Brown & Chun,2014) argued that an organisation's resources can either be classified as tangible resources, such as the physical assets that the organisation possesses or its financial capital. In contrast, intangible resources could be the company culture, employee loyalty

and the brand of the organisation. Barney (1991, as cited by Griffy-Brown & Chun,2014) also stated that the Resource-Based View theory suggests that organisations possess resources necessary for the development, selection, and execution of strategies, and these resources are distributed heterogeneously among organisations. Furthermore, it suggests that these differences in resources between organisations tend to remain relatively stable over time. Eisenhardt & Martin (2000) are of the view that organisations that have resources that are valuable, rare, inimitable and cannot be substituted can achieve a competitive advantage in the marketplace. When strategies are created using such resources competing organisations will find it challenging to imitate them. An example of this is presented by a study conducted by Griffy-Brown & Chun (2014) which concluded that organisations in Japan leveraged the internet to enhance their customer base i.e. improving the relationship with existing customers and forming relationships with new customers. These efforts were achieved by engaging customers regularly through emails and ultimately, creating a customer database. Further actions included weekly updates to the organisation's homepage on the website, actively analysing enquiries and sales and creating memberships online.

A practical way in which this theory can be harnessed by SMEs is if governments support SMEs with the resources and skills that can be leveraged to overcome their challenges. Additionally, creating a network and sharing ideas, strategies and experiences is another practical way in which the RBV theory can be implemented by SMEs (Chumphong et al., 2020). SMEs are required to cultivate a climate of unique and innovative thinking to offer original and appealing products to consumers. To accomplish this, the adoption of certain approaches within their organisations becomes imperative. CEOs or owners of SMEs should establish clear guidelines aimed at fostering motivation among their employees to generate innovative ideas, ultimately resulting in heightened levels of customer satisfaction (Chumphong et al., 2020).

Based on the discussion and insights above, the Resource-based view theory will be used to underpin this research study and the factors discussed below were identified as resources that SMEs possess, that have a potential impact on the business performance.

2.5.1 Access to finance

Access to Finance, especially for SMEs is an essential factor that impacts their development, growth and future sustainability. Consequently, financial resources are essential for enabling firms to successfully implement their present goals and satisfy client expectations. Additionally, financial resources ensure that organisations have the financial muscle needed to maintain their operations, make infrastructure investments, and allocate resources to important links in their value chain. Financial resources also empower organisations with the means to pursue innovation and development projects. Enabling the diversification of their product lines and expansion of their market reach by using the extra money to develop new goods and services (Jasra et al., 2011). Governments play an important role in assisting organisations by implementing tax breaks, providing subsidies, equity funding and innovation hubs, all made possible through state funds. These assistance measures are intended to stimulate economic growth, encourage entrepreneurship, and improve the market competitiveness of enterprises (Jugend et al., 2018). SMEs having access to finance enables them to innovate and invest in technologies in their daily operations. In Zambia, Mobile money platforms had a positive impact on SMEs, as their transactional efficiency and costs were reduced (Sinkala, 2023). Additionally, SMEs that integrate digital technologies into their business can increase their access to finance (Jiang, 2024). However, Alshareef and Tunio (2022) concluded that SMEs that face cash flow issues is due to the lack of access to finance, resulting in their growth being affected.

In the South African environment, difficulties in obtaining commercial bank finance for SMEs originate from non-compliance with financial standards enforced by national credit authorities. Financial lending institutions need to comply with the FICA (Financial Intelligence Centre Act 38 (2001)) and the National Credit Act (NCA). Compliance with these legislative frameworks is critical for SMEs seeking finance from South African commercial banks. Failure to comply might hamper access to the capital required for the growth and development of the country's SMEs (Ayyagari et al., 2007). Furthermore, Microfinance Institutions (MFIs) primary objective is providing financial services, notably lending, to SMEs that are unable to obtain loans from traditional banks. This

alternate funding strategy is especially advantageous for SMEs that may not meet traditional banks' rigorous requirements or collateral criteria (Marino, 2019). Meso-finance is a financial product that was created to meet the financing needs of SMEs that lie between the microfinance and commercial banking sectors. This intermediate financing alternative seeks to bridge the gap and provide appropriate financial solutions for SMEs who have outgrown microfinance but may still encounter barriers to accessing standard commercial banking services (Lieno, 2014).

Past research studies highlight that SMEs having access to finance has positive consequences such as fostering innovation, as well as infrastructure investment and enabling growth (Jugend et al., 2018). However, there are challenges that SMEs face in the pursuit of this finance, these include regulatory compliance obstacles when engaging with traditional banks. Alternatively, there are alternative methods such as Meso finance and government interventions (Marino, 2019). By overcoming these hurdles, SMEs would be able to leverage these resources to innovate and produce new products, as well as improve their operations and expand their footprint. Therefore, the access to finance construct was included as a control factor in this research study, to provide a holistic view on how access to finance interplays with the digital factors and business performance. Additionally, including it as a control construct ensures that business performance is not being attributed as a result derived purely from SMEs ability to access funding (Fowowe, 2017). A recent study that employed access to finance concluded that innovation could be an important reliance strategy for SMEs to survive periods of economic turmoil (Saridakis et al., 2023). The study investigated SME performance in the UK during the covid-19 pandemic among 13 325 SMEs. Accordingly, including access to finance as a control variable allows for the established influence of financial constraints on SMEs to be accounted for, while isolating the effects of other variables being investigated (Bongomin et al., 2017). Furthermore, the inclusion of this construct allows for a more precise estimation of the effects of the digital factors being examined. Thus, accounting for external influences that could possibly distort the results and reduce the possibility of observed relationships to result in alternative explanations. Ultimately, the hypothesis below is informed by the insights derived from the existing literature analysed above.

H4: Access to capital has a positive impact on SME business performance.

2.5.2 Entrepreneurial Education

Entrepreneurial education is an important factor for SMEs and larger organisations alike, that has an impact on SME performance. This is due to the nature of this education, which empowers SMEs with the knowledge and skills needed to improve their service offering (Ferreira et al., 2021). With the launch of a single course at Harvard University in 1947, the discipline of entrepreneurship education was born. There has been a significant rise in demand for entrepreneurial education because of the acknowledged importance of entrepreneurship in promoting economic development. As a result, the field has grown significantly and is taught all around the world (Liguori et al., 2018). Instilling a mindset in graduates that is open to identifying and seizing opportunities is one of the key goals of entrepreneurial education. Resulting in graduates having an entrepreneurial mindset that fosters innovation, which would be instrumental whether graduates opt to start their own companies or become employees. This enables the individual to identify opportunities which may lead to the growth of a firm. This notion is supported by studies demonstrating that entrepreneurship education efficiently promotes the development of competent entrepreneurs. (Asghar et al., 2019). Additionally, individuals with entrepreneurial expertise, because of their educational achievement, are more prepared to actively engage in business operations as compared to those who don't (Barreira et al., 2015).

Entrepreneurial education efficiently educates entrepreneurs to identify and handle risks connected with their companies by fostering this understanding. Additionally, Asghar et al. (2019) proposed that the skill illustrated by findings from the study undertaken by Cho and Lee (2018) is endorsed by the core principles that define the Theory of Planned Behaviour (TPB). Consequently, Marecha (2020) notes that entrepreneurs who prioritise developing and implementing a well-structured business plan make a substantial contribution to SMEs and in turn, the overall economic growth of society. According to Marecha (2020) imitation of goods and services is rampant among SMEs within Gauteng. This has led to a market saturated with similar product offerings, resulting in a slump in

sales for some SMEs. Ultimately leading to their business closure within the early years of operation. This highlights the need for entrepreneur education, as it would instil a mindset in future business owners of establishing businesses that have the potential to scale rapidly while being sustainable and profitable.

In today's constantly evolving digital world, SMEs need to integrate digital technologies into their business operations. However to effectively harness the power of these digital tools, training and education on how to implement and use these digital technologies effectively is essential (Ekechi et al., 2024). Additionally, Vrontis et al. (2022) highlighted the importance of government support in terms of training and funding for SMEs to implement technologies. Entrepreneurial education can be introduced as a control variable to separate its influence from other entrepreneurial characteristics that drive SME success. This way, any differences in outcomes are not merely explained by varying levels of education among SME owners and managers (Prakash & Khadka, 2022). Additionally, Resende et al. (2020) concluded that entrepreneurial education is a key factor that can shape how SMEs grow and adapt to shifts in economic and social conditions. Including entrepreneurial education as a control variable enables researchers to distinguish its role in SME development from the influence of other factors, allowing for a more accurate estimation of the digital factors being investigated. Also accounting for external influences which might cause a distortion to the results. Consequently, the inclusion of entrepreneurial education reduces the likelihood of confounding or alternative explanations, providing a more holistic understanding of how digital and non-digital factors interact to influence SME performance.

Insights derived from the existing literature indicate that entrepreneurial education is a research topic that has been explored over multiple decades. It is beneficial for the SMEs as it provides them with the knowledge to introduce new product lines or improve processes. The hypothesis presented below is informed by the insights discussed above.

H5: Entrepreneurial education has a positive impact on SME business performance.

2.5.3 Social Capital

Social capital can be referred to as the quantity and quality of recurrent connections and relationships among people and organisations that include mutual trust and cooperation. The concept of social capital was first introduced in the 1980s and subsequent research by Pratono and Mahmood (2014) has provided empirical evidence that SMEs that actively establish and exploit networks tend to achieve higher levels of performance. Entrepreneurs rely on their social partners for vital knowledge and resources, which assists them in reducing the uncertainties and dangers involved with their commercial initiatives. SMEs can make educated and prudent business decisions by using social capital (Díaz et al., 2011). Due to social capital being readily available, entrepreneurs may tap into networks and relationships that inform them with critical knowledge, market insights, and industry trends. Entrepreneurs can gain knowledge about client preferences, market demands, and competition strategies through these links, allowing them to make better educated judgements. By removing ambiguities and uncertainties, social capital enables entrepreneurs to appraise possibilities and problems more confidently. Despite its importance, social capital is usually disregarded when analysing the causes of company failure (Jalali et al., 2013).

A study by Ndlovhu (2020) suggested that cognitive social capital is possessed by businesses that share common goals, vision, and understanding with their major stakeholders. Cognitive social capital is the collective knowledge, beliefs, and shared understanding that exists among individuals and organisations within a social network, according to academic literature. It symbolises the shared cognitive frameworks and intellectual resources that enable effective communication, collaboration, and decision-making.

Social capital plays an important role in the adoption of digital technologies by SMEs. A study by Kurniawan et al. (2019) which explored SMEs in the digital marketing technology era concluded that entrepreneurs are more likely to use digital marketing tools if they have strong social networks. Additionally, trust and collaboration have been identified as key enablers in the SME digital technology adoption process. Using social capital as a control variable makes it possible to separate its influence from other factors

that shape firm outcomes, leading to a more accurate analysis of SMEs performance (Servaes & Tamayo, 2017). Furthermore, examining SME performance exclusively through financial metrics provides a limiting view, especially since SMES operate on a smaller scale and are less likely to have a comprehensive archive of formal records. Intangible resources like social capital offer a competitive advantage which cannot be reflected through financial metrics only. Including social capital as a control variable it helps clarify the distinct impact of knowledge sharing on SME performance by factoring in the impact of existing social networks (Sutrisno et al., 2024). Consequently, by incorporating social capital as a control variable, a more comprehensive understanding can be derived of the factors that positively impact SME performance (Prabandari & Yulianti, 2023). Therefore, it is imperative to include the social capital construct in this research study to provide a holistic view of how social capital interplays with the digital factors and business performance. Consequently, allowing for any confounding or alternative explanations.

When organisations and their major stakeholders, such as employees, customers, suppliers, and partners, match their goals, vision, and understanding. The social network gains a sense of unity and coherence. This cognitive social capital improves the flow of information, mutual comprehension, and coordinated action. Therefore, the role of social capital on business performance can be measured, which informs the below hypothesis.

H6: Social capital has a positive impact on SME business performance.

2.5.4 Innovation

Innovation is the cornerstone of an organisation's success and the economy, as it fosters growth and drives creativity (Chakim et al., 2023). Schumpeter introduced the idea of innovation and described it as the process of bringing new goods and services to market. This effort involves developing and implementing fresh concepts, ideas, or business strategies to address changing consumer requirements and preferences (Orlando et al., 2013). Additionally, Innovation substantially enhances an organisation's performance and profitability by improving the quality of its products or services. The adoption of

innovative methods, technologies, or strategies enhances the organisation's ability to produce high quality products or services, hence directly influencing its financial success. As the quality of goods or services enhances, businesses frequently observe heightened customer satisfaction and competitive advantage, resulting in improved profitability (Gharakhani et al., 2013).

SMEs due to their agility and flexibility, can recognise and address niche market areas or specialised client demands that may be disregarded or ignored by more powerful rivals. Therefore, SMEs can acquire a competitive edge in the market by leveraging their agility to respond quickly to emerging trends. Consequently, developing novel products or services, and customising their offerings to satisfy the unique requirements of niche markets (Varis & Littunen, 2010). As a result, innovation is highlighted as one of the factors influencing SME success (Orlando et al., 2013).

From surveying existing literature, it is evident that innovation is recognised as a strong building block for the prosperity of organisations, particularly SMEs as they have the advantage of providing niche products and services. Which can be leveraged to establish a competitive advantage and enhanced profitability.

2.6 SME Performance

The performance of SMEs is influenced by various factors such as financial access, entrepreneurial ability, innovation and the level of digitalisation (Kádárová et al., 2023). The most effective way for an organisation to gauge its growth and progress is through performance. As a result, substantial scholarly research has been devoted to the study of organisational performance and its associated metrics (Gavrea et al., 2011). The growth of a company comes because of an increase in demand for goods or services, of which initial results will be seen in sales growth and consequently in investments in additional factors of production to enable it to satisfy new demands Janssen (2009, as cited in Omondi, 2017).

Business performance is frequently classified into three major factors in the strategic management literature: sales growth, net income growth, and return on investment (Tembe, 2018). A study by Anderson & Ronteau (2017), defined success for SMES by using a wide range of performance metrics. Profitability, sales growth, longevity, and employment growth are a few of these indicators. The ability of an SME to endure obstacles and maintain its presence in the cutthroat business environment is demonstrated by longevity, which is frequently assessed by the length of operations or survival rates. Additionally, employment growth illustrates an SME's ability to generate employment opportunities and support economic growth. These multidimensional performance metrics offer a thorough evaluation of the performance and influence of SMEs in the business environment.

Financial and non-financial measurement tools are used to assess business performance. However, a company's level of competitiveness is ultimately determined by its financial success (Rylková, 2015). A research study by Gama, (2021) highlighted several factors impacting SME performance. Financial resources are essential for enabling firms to successfully implement their present goals and satisfy client requests. These assets make sure that companies have the money they need to maintain their operations, make infrastructure investments, and allocate resources to important links in their value chain. Additionally, financial resources give businesses the means to pursue innovation and development projects. Businesses can diversify their product lines and expand their market reach by using extra capital to develop new goods and services (Jasra et al., 2011). Additionally, Effective marketing strategies have a big impact on a company's long-term prospects, including its overall success and sustainability, in addition to the short-term performance of the company during marketing campaigns. Beyond the short-term results of a campaign, an effectively executed marketing strategy helps build and strengthen brand equity. Brand equity is the term used to describe the unquantifiable worth and reputation attached to a brand, which includes elements like brand recognition, brand loyalty, perceived quality, and brand connotations. Strong brand equity promotes consumer loyalty, trust, and favourable brand perceptions, all of which have a long-term favourable impact on the company's bottom line (Yousaf et al., 2018). Technological resources enable businesses to create goods and services that satisfy market quality

standards, expand their operational reach beyond geographical boundaries, and create new products to meet the evolving needs of their customer base (Jasra et al., 2011).

2.6.1 Sales Growth, Revenue and Profitability

The ability of SMEs to generate sustained earnings and assure a favourable return on investment is reflected in profitability, which acts as a fundamental indicator of financial performance(Anderson & Ronteau, 2017). For SMEs, financial performance measures act as vital markers of competitiveness, offering a way to gauge overall business performance (Csapi & Balogh, 2020). Furthermore, the growth and profitability of SMEs play a critical role in driving national economic development. Because SMEs contribute significantly to both GDP and job creation, their performance directly influences broader economic stability and progress. Another important statistic for evaluating an SME's growth and market penetration is sales growth, which shows how well it can acquire and retain customers (Anderson & Ronteau, 2017),

In developing countries, SME profitability is shaped by several factors, such as the scale of business operations, the entrepreneur's education level, the nature of the business, the extent of family involvement, managerial expertise, licensing requirements, investment in advertising, and access to formal banking services (Njanike, 2019). Profitability of SMEs in South Africa is often constrained by inadequate government support structures and a lack of critical resources. Business incubators have the potential to uplift SME performance, however a majority battle to play this role as they are dependent on limited resources and government funding to maintain these operations (Rens et al., 2021).

According to a study by Ramasimu et al. (2023), which investigated the support of government to SMEs in South Africa. SMEs particularly in Lephalale, face profitability challenges due to limited access to capital, equipment, and business training, compounded by weak government support. The study recommends stronger government intervention through mentoring, capacity-building initiatives, and improved support frameworks to enhance SME profitability and long-term sustainability. Therefore, for SMEs to maintain long-term profitability, it's crucial to not only anticipate potential challenges but also to

put proactive, targeted strategies in place. By planning ahead and addressing risks before they escalate, SMEs can create a stronger foundation for growth and resilience in competitive markets (Azarenkova & Chyhryn, 2015).

2.6.2 Workforce Growth

When SMEs increase their employee headcount, the operational capacity of the organisation is enhanced. This can result in a possible increase in production, as well as an expansion of service and product offerings, with the possibility of entering new markets. Additionally, as the SME grows, it can benefit from economies of scale and enhanced bargaining power, which can positively impact business performance (Alintwe et al., 2024). For SMEs, growth in employee numbers is supported by factors such as shared responsibility between management and staff, effective leadership, and favourable economic conditions. However, challenges like unstable market environments, weak strategic planning, limited access to finance, and gaps in managerial skills can hold back business growth and hinder headcount growth (Lomatey et al., 2020). An increase in employee headcount can be a useful indicator of SME performance, as it often reflects growth and the need for greater operational capacity. However, this measure on its own does not provide a complete picture. It needs to be assessed alongside other performance metrics and within the broader context of the firm's strategic goals to capture overall business health and sustainability accurately (Jones et al., 2023).

2.6.3 Customer satisfaction and loyalty

Customer satisfaction is defined as the degree to which a customer's expectations, needs, and preferences are fulfilled during their interaction with a product or service. This satisfaction often associated with positive outcomes for businesses, including customer loyalty, repeat purchase intentions, and improved financial performance (Raza Shaikh, 2024). Customer loyalty can be defined as the tendency of customers to repeatedly select and engage with a specific brand, service, or company over its competitors, leading to behaviours such as repeat purchasing and brand advocacy. Loyalty is shaped by several factors, including service quality, customer satisfaction, trust, perceived value, and the

effectiveness of loyalty programs (Budianto, 2019). Customer loyalty is indirectly reinforced through trust and the perceived value of service, both of which are shaped by the customer's satisfaction with the retailer (Molinillo et al., 2017). The development of loyalty is an ongoing process that requires continuous effort and adaptation, rather than a one-time achievement. Building customer loyalty represents a comprehensive business strategy rather than a standalone marketing initiative and should be prioritised by firms seeking to maximise customer value (Duffy, 1998). Among SMEs in the retail sector, entrepreneurial skills, marketing skills, and selling price emerged as the key factors influencing customer loyalty. Findings indicate that around 69% of customers exhibited loyalty to their retailers, reflecting a solid foundation of repeat clientele for these businesses (Worku, 2019).

Budianto (2019) examined the relationship between service quality and customer loyalty, concluding that service quality exerts a positive influence on customer loyalty. The findings indicate that higher levels of service quality are associated with enhanced customer loyalty outcomes. Furthermore, Customer satisfaction has been found to demonstrate a strong correlation with business profitability in SMEs. Higher levels of customer loyalty and satisfaction are associated with increased market share and enhanced business performance (Drosos et al., 2019). Superior levels of customer satisfaction offer firms a strategic advantage by fostering favourable customer behaviours such as loyalty and repeat purchasing, while also contributing to improved financial performance. Organisations that balance effective customer management with cost control consistently achieve stronger outcomes compared to those that overlook satisfaction metrics (Basari & Shamsudin, 2020). Therefore, it can be concluded that customer satisfaction is essential for business success, as it drives loyalty, profitability, and long-term strategic advantage. To sustain high levels of satisfaction, organisations must continuously evaluate and enhance their offerings through operational improvements, service quality initiatives, and effective complaint management.

2.7 Conceptual Framework

The conceptual framework, depicted in Figure 1, presents the constructs investigated in this research project. This framework was created by analysing and synthesising existing academic literature. The resources that support the theory have been identified as the independent variables on the left side of the framework. These variables include social capital, access to finance, entrepreneurial education, social media usage, digital marketing and e-commerce. Based on the review, it is suggested that these factors influence the performance of SMEs, which is the dependent variable.

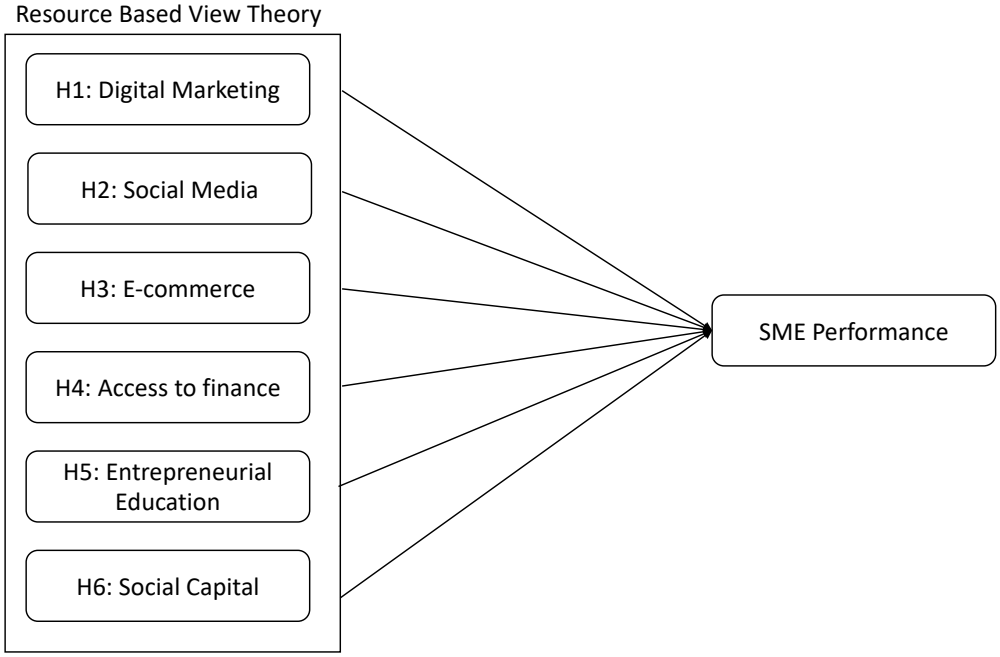

Figure 1: Conceptual Framework

2.8 Conclusion of the Literature Review

SMEs constitute a large percentage of employment in South Africa. However, the prosperity of SMEs is an issue that is not just affecting South Africa, but also developing and first-world countries. Mitigating factors that hinder the prosperity of SMEs could have a positive effect on the global economy. The below insights can be drawn from the literature review.

The advent of technology has opened corridors of opportunity for new ways of marketing for businesses. However, the existence of technology does not equate to the extensive use of that technology as stipulated by Octavia et al. (2020) concerning social media marketing. Accessing external finance for entrepreneurs is still a major obstacle to the survival of SMEs even though there have been initiatives implemented to assist SMEs (Rungani & Potgieter, 2018). Investigating the aspect of entrepreneurial education, Asghar et al.(2019) suggested that entrepreneurial education aims to equip students with the knowledge to identify opportunities to develop their own enterprises. Finally, SME performance can be assessed by considering the financial and non-financial indicators.

CHAPTER 3. RESEARCH METHODOLOGY

This study aimed to investigate the impact of digital technology on business performance among SMEs in South Africa. This chapter discusses the research methodology employed to address the research objectives. The initial section of this chapter outlines the research paradigms that influenced the research approach. Subsequently, the chapter discusses the research design and the data collection method employed in the study. Thereafter, a discussion on the quality assurance measures employed to guarantee internal and external validity and reliability. The chapter concludes with the ethical considerations and proposed timelines for this study.

3.1 Research Approach

A research approach is a comprehensive plan which stipulates the methodology used in a research study. The qualitative, quantitative and mixed methods are the most used research approaches & each of these approaches is associated with a philosophy (Saunders et al., 2019). The qualitative research approach is mainly employed when exploring or seeking an understanding of a social or human problem. This research process involves open-ended questions, data collection in natural settings and the meaning of the data derived from the researchers' interpretations (Creswell & Creswell, 2022). The main data collection methods involve focus groups, interviews as well as observations, while analysis typically involves thematic or narrative approaches (Walker, 1987). Qualitative research is largely inductive, also known as grounded theory as the researcher develops hypotheses from the data instead of testing existing theories (Chapman et al., 2015). The quantitative research approach is mainly employed when testing objective theories, this is achieved by analysing relationships between variables. These relationships are measured with structured instruments through statistical analysis of numerical data (Creswell & Creswell, 2022). Surveys and experiments are the most used methods to collect numerical data (Baker & Chenery-Morris, 2021). Quantitative approaches typically employ deductive reasoning as hypotheses are developed from broader theories and tested through data collection and analysis (Mweshi & Muhyila, 2024). Mixed-methods research is a combination of qualitative and quantitative research

approaches. By triangulating the data sources, it aims to provide a more comprehensive view of the research problem and enhance the validity of the findings derived (Terrell, 2015).

The quantitative research methodology was deemed appropriate for this research study as it follows a deductive approach and aligns with the positivist paradigm. Introduced by August Comte, Positivism is a scientific paradigm that grounds knowledge in empirical observation and measurable phenomena. Within this approach is expected to draw on data and evidence, all phenomena is assessed through objective measurement and verification (Maretha, 2023). Deductive reasoning enables researchers to evaluate hypotheses generated from established theories, guaranteeing that results are objective and applicable across contexts. The positivist paradigm relies on empirical observation and scientific measurement, to generate objective and impartial results (Creswell, 2016). This methodology reduces researcher bias and guarantees that the results are derived only from the data. The choice to embrace a positivist methodology and deductive approach is informed by the research objectives of this study. Which is to investigate the impact of digital technology on SME business performance. Furthermore, this decision was influenced by prior studies, including "Antecedents and Consequences of small and medium-sized enterprise innovation" by Dlamini (2019), which had comparable research objectives. This study employed structured data collection methods, including questionnaires and experiments, and incorporated statistical analysis to ensure objective interpretation of the results. By relying on quantifiable evidence, the findings can be tested and validated by other researchers, reinforcing the reliability of this approach. Additionally, this methodology ensures that the study remains free from bias, enhancing the credibility of the insights generated.

3.2 Research Design

The research study design is an extensive framework that outlines the methodologies for data gathering and the procedures used for analysing the data (Bryman & Bell, 2015). The research design pertains to the methodology employed in a study, including underlying philosophical assumptions to data interpretation (Creswell & Creswell, 2022).

Exploratory research serves as an effective instrument for formulating open-ended enquiries to enhance comprehension of a certain subject or phenomenon of interest to the researcher (Saunders et al., 2019). Furthermore, the objective of exploratory studies is to uncover more profound insights when the researcher lacks certainty regarding the available information or when the topic has not been thoroughly investigated (Stevens, 2006). In contrast, the objective of conclusive research is to provide clear and definitive results, establishing relations based on hypotheses (Nunan et al., 2020). Furthermore, within this research design, the researcher can choose between the descriptive approach or the causal research approach (Saunders et al., 2019). The descriptive approach aims to gain detailed insights from the population being investigated. Hypotheses can be tested by examining relationships between variables and answering who, when and where questions. The causal approach also termed explanatory research, can be used to test the cause-and-effect relationship between the variables being investigated. With this approach, research questions are likely to start with "how" and "why" (Saunders et al., 2019).

To achieve the objectives of this research study, the descripto-explanatory research design was followed to investigate the impact of digital technology on SME business performance. This approach was deemed appropriate as it allows the researcher to identify the current state and trends of digital technology usage within The SMEs being investigated. In addition to this, analyse their impact on business performance.

3.3 Data Collection Methods

Data collection refers to the methodical gathering of information for analysis. It involves several methodologies, such as surveys, interviews, and observations, aligned to study objectives. Efficient data collecting improves the reliability and validity of study outcomes (Christal, 1985).

Primary data refers to original data that is gathered directly by the researcher to address their research objectives. This comprises data collected through experimentation, direct observation, interviews or questionnaires that were curated for the research question

(Lindsey et al., 2018). Secondary data refers to data that has been previously collected, analysed and made available by other researchers or organisations. Examples include research articles and journals by scholars, government reports and legal databases (Manu et al., 2021).

Secondary data sources were used in this study to develop the extensive literature review presented in Chapter 2. Primary data sources were used to investigate the impact of digital technologies on SME business performance in South Africa. This collected primary data using a self-administered closed-ended questionnaire.

3.4 Population and Sample

3.4.1 Population

The definition for a population stipulates it, as an entire data set associated with variables that have similar features forming a complete whole (Van Zyl, 2014). Additionally, the term 'population' in research alludes to the elements, individuals or objects that the researcher aims to study and comprehend (Rahi, 2017). Furthermore, a population can be defined in four dimensions namely, time constraints, participants, geographical constraints and sampling units (Malhotra, 2020). SONA (2023) estimates the number of SMEs in South Africa to be between 2 300 000 and 3 500 000. Informal and micro sectors constitute the bulk of this amount. Additionally, Gauteng accounts for approximately 783 410 SMEs (Mkhonza & Sifolo, 2022). For this, study the target population constituted of SMEs located within the borders of South Africa, that operated within the Gauteng province.

3.4.2 Sample and Sampling methods

The term 'sample' refers to the subset of the population that is selected for the study (Creswell & Creswell, 2022) and the term "sampling" refers to the process of selecting the subset of the population for the study (Rahi, 2017). Sampling techniques can either be probability sampling or non-probability sampling. With probability sampling the

chance of a participant being selected from the target population is equal for everybody. In contrast, with non-probability sampling, the probability of a participant being chosen is unknown.

Convenience sampling was selected as a suitable strategy for participant selection as it allowed data to be collected from participants that were within reach of the researcher, additionally, it was a cost-effective and quicker approach (Kivunja, 2015). The study's target population consists of SME owners, employees, and business owners in Gauteng. To draw valid statistical conclusions about a population from sample data, the sample size must be big enough to allow for a reasonable margin of error (Saunders et al., 2019). 98 respondents were established as the minimum amount of respondents required to realise the research objectives of this study. This target was informed by the formula detailed below, proposed by Tabachnick and Fidell (2019), which prescribes the minimum threshold needed to generate an appropriate sample size for multiple regression.

$N > 50 + 8m$, where m is the number of factors being investigated, for this study this was 6 factors.

According to Goodhue et al. (2012), a larger sample size reduces the margin of error by increasing statistical power, resulting in the margin of error being reduced and more robust results. Based on this insight, this study aimed to garner responses from a minimum of 300 participants. This value was informed by the sample size of 300 used by Shezi (2019) whose study investigated the effect of business development services and human capital on the performance of SMEs in Gauteng. The questionnaire was self-administered by approaching local SMEs with a physical copy of the survey, and asking them to populate it. In addition to this measure, the link to the questionnaire was distributed to online SMEs operating on social media platforms to increase the number of respondents. The actual sample achieved is outlined in Chapter 4.

3.5 The research instrument.

The usage of survey tools also has the benefit of making data consolidation and cleaning simple, ensuring data quality, and easing subsequent analysis. Due to its capacity to permit data collection through numerous channels, enabling a larger reach and perhaps a more diverse sample, the survey method was chosen as the preferred research approach.

Albeit underestimated, how a questionnaire is designed plays a crucial role in data quality concerning self-administered surveys by the researcher. The design influences undesirable occurrences such as unanswered and skipped questions (Sanchez, 1992). Questionnaires that are well structured with a clear outline, encourage participants to engage, therefore reducing the participant dropout rates (Stone, 1993). These guidelines were taken into consideration and the questionnaire for this study was structured into sections that contained closed-ended questions that consisted of items to measure the impact of digital technology on the SME business performance in South Africa.

Likert scales were also used in the questionnaire as they facilitate data to be collected from a large population. Additionally, allowing of various statistical analyses to be executed on the data collected allowing for insights to be derived to inform research findings (Chyung et al., 2018). The questionnaire was developed and administered in English. The questionnaire included a cover letter which provided a brief background of the research study as well as a screening question which asked participants if they were willing to be a study participant. The final questionnaire used in the study is found in Annexure A. The questionnaire layout & measures used are detailed below.

The digital marketing construct comprised 5 statements that measured the extent to which SMEs use digital marketing within their business. The construct was measured on a 5-point Likert scale adapted from a study by Omondi (2017) that investigated the impact of digital marketing on sales growth of small and medium enterprises in Nairobi, Kenya. The scale used consisted of five items, rated on a 5-point Likert scale ranging from 1 (“No extent”) to 5 (“Very great extent”). An example of a statement within this construct was: “To what extent does your organization use search engine optimization (SEO)?” This

measure was deemed appropriate as it assessed the adoption of digital marketing (digital technology) among SMEs in South Africa.

The social media construct comprised 4 statements that measured the extent to which SMEs use social media within their business. This construct was measured on a 7-point Likert scale adapted from a study by Dahnil Sikumbang (2019) that investigated social media adoption among small and medium enterprises. The scale used consisted of four items, rated on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). An example of a statement within this construct is: "We consider our business a frequent user of social media". This measure was deemed appropriate as it investigated the use of Social media (digital technology) by SMEs in South Africa.

The E-commerce construct comprised 8 statements that measured the extent to which SMEs incorporate E-commerce within their business. This construct was measured on a 7-point Likert scale adapted from a study by Chin and Shahzad (2018) that investigated the impact of factors influencing use of E-commerce on performance of Malaysian small and medium enterprise. The scale used consisted of eight items, rated on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). An example of a statement within this construct was: "Using E-commerce increases my business productivity". This measure was deemed appropriate as it investigated the use of E-commerce (digital technology) by SMEs in South Africa.

The access to finance construct comprised 5 statements that measured the level of accessibility to external funds by SMEs and gauged their awareness of prospective government aid. This construct was measured on a 5-point Likert scale that was adapted from a study by Dlamini (2019) which aimed to investigate antecedents and consequences of Small and Medium-Sized Enterprise Innovation". The scale used consisted of five items, rated on a 5-point Likert scale ranging from 1 ("No extent") to 5 ("Very great extent"). An example of a statement within this construct was: " Our business benefits from support provided by government to small businesses". Although this construct is not representative of digital technology, based on the following insight. SMEs having access to finance impacts their ability to invest in new technologies, introduce new goods and

services as well as expand into new markets (Jasra et al., 2011). This measure was deemed appropriate as it assessed how access to finance correlates with digital technology usage and business performance by SMEs. Thus enabling a more holistic, robust and comprehensive research study,

The Entrepreneurial education construct comprised 5 statements that measured SMEs' knowledge and experience within entrepreneurial education. This construct was measured on a 7-point Likert scale that was adapted from a study by Marecha (2020) that aimed to investigate business planning and entrepreneurial education: Key drivers for SME performance in South Africa's Gauteng Province. The scale used consisted of five items, rated on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). An example of a statement within this construct was: "I received entrepreneurial education at post-secondary school level". Although this construct is not representative of digital technology, based on the following insight. The presence of digital technology does not necessarily mean that SMEs know how to use it. Therefore, training empowers SMEs with skills and knowledge to effectively leverage digital technology (Ekechi et al., 2024). This measure was deemed appropriate as it assessed how entrepreneurial education correlates with digital technology usage and business performance by SMEs. Thus enabling a more holistic, robust and comprehensive research study.

The social capital construct comprised 5 statements that measured the value of social capital to SMEs. This construct was measured on a 7-point Likert scale that was adapted from a study by Ndlovhu (2020) which investigated social Capital as a pathway to Small and Medium-sized Enterprises' performance in North-West Province. The scale used consisted of five items, rated on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). An example of a statement within this construct was:" I build networks during training sessions". Although this construct is not representative of digital technology, based on the following insight. Existent literature has identified social capital as an important consideration in the adoption of digital technology. According to Kurniawan et al., (2019) entrepreneurs are more likely to use digital marketing tools if they have established strong social networks.. This measure was deemed appropriate as it assessed how social capital correlates with digital technology

usage and business performance by SMEs. Thus enabling a more holistic, robust and comprehensive research study,

Section B of the survey comprised of the business performance construct being measured and the demographic detail.

The Firm Performance construct comprised 7 statements that evaluated different aspects of SME business performance. This construct was measured on a 7-point Likert scale that was adapted from a study by Chin and Shahzad (2018) that investigated the impact of factors influencing use of E-commerce on performance of Malaysian small and medium enterprise. The scale used consisted of seven items ranging from 1 (“Strongly disagree”) to 7 (“Strongly agree”). An example of a statement within this construct was: “The company has increased on profitability”.

Additionally, Section B of the survey investigated the demographic and general business information about the SMEs. This section queried information on the SME's age, the sector in which it operates, the size of the organisation, and the location of the organisation. These questions were adapted from a study by Dahnil Sikumbang (2019). Questions 49 and 50 which also asked about general business information, were adapted from Marecha (2020). In conclusion, the questionnaire consisted of 2 separate sections, Section A consisted of questions relating to the constructs being investigated. Section B was devoted to the business performance construct and SME demographic data.

3.6 Procedure for data collection

The main method of data collection involved the distribution of the questionnaire to participants who satisfied the selection criteria. The below method details the proposed procedure for data collection.

1. Questionnaire Development

   A thorough questionnaire was created based on the research objectives and the frameworks forming the foundation for this research study. The questionnaire was

divided into 2 sections: demographic information, and variables relating to the research objectives.

2. Pre-testing

   This phase was undertaken before data collection to ensure the clarity, relevance, and appropriateness of the questionnaire. Pre-testing was conducted with a small group of SME owners, managers or employees. To assess the user engagement and experience with the questionnaire in this research study, a pilot study was carried out at the early stages of data collection. For this phase, data collection was conducted using two methods. The initial technique entailed directly approaching SMEs and asking them to complete a physical questionnaire. The second approach involved the researcher asking for participation from SMEs on social media platforms.

   A total of twelve responses were used to evaluate the efficacy of the survey, with particular emphasis on the respondents' competence in answering all the questions. The comments and recommendations were considered when revising the questionnaire to improve its validity and reliability. In general, the feedback from the pilot survey was positive, as respondents were able to complete the survey. However, key feedback indicated that the survey was very long. As a result, the number of questions was decreased to address this insight. The preliminary replies obtained during the pilot study were omitted from the final analytic sample.

3. Sampling method

   This study's target group was SMEs in the Gauteng region. To identify participants, non-probability (convenience) sampling was used. From this sampling strategy, the researcher was able to collect data from SMEs that were accessible and most relevant to the research objectives.

4. Participant engagement

Participants were recruited through multiple means. Including approaching organisations on social media platforms and through community engagement.

5. Data collection

   The survey was distributed in person and electronically using Qualtrics during the data collection period. Advantages of this method include participant convenience, easier data management, and effective data gathering. A personalised link was sent via email, to participants that satisfied the selection criteria. Clear instructions were provided to ensure that participants understood how to complete the questionnaire.

6. Data privacy and quality

   Responses were continuously monitored for data quality and completeness. Additionally, participant confidentiality and data privacy were strictly enforced throughout the research procedure. All data collected was kept securely stored within the cloud environment.

3.7 Data analysis strategies

The collected participant responses were downloaded from the Qualtrics platform and integrated into the SPSS and Jamovi software packages for statistical analysis. The data was first screened and cleansed, this step involved excluding responses that did not have 100% completion. In accordance with the data cleansing dimensions which included completeness, usability and interpretability (Hair et al., 2020). Following this, the gathered data was analysed using descriptive statistics to examine its structure and composition, to establish a foundation for enhanced statistical analysis and to identify key patterns (Dong, 2023). Following this, statistical tests for normality by assessing skewness and kurtosis values were implemented to assess whether the data satisfied the criteria for parametric testing (Hair et al., 2020). Next, the KMO and Bartlett's test for sphericity were implemented to determine if the data would be appropriate for factor analysis (Field, 2012). Internal consistency of the scales was tested using the Cronbach's

Alpha test (Hair et al., 2020). Additionally, Pearson correlation analysis was used to measure the strength between two variables, through a range of -1 denoting a perfectly negative relationship, 0 denoting no relationship and +1 denoting a perfectly positive relationship (Field, 2012). This was followed by confirmatory factor analysis and ultimately, multiple linear regression analysis, to quantify the relationship between the constructs and business performance (Field, 2012).

3.8 Quality Assurance

3.8.1 *External validity (generalisability)*

According to Cooper and Schindler (2014), external validity pertains to the examination of how the experimental treatment interacts with other factors and the consequent implications for generalisation across different times, settings, or individuals. It focuses on understanding how the effects observed in a particular study can be applied and extended to other contexts, populations, or time periods. By assessing external validity, researchers can determine the extent to which the findings of a study hold true beyond the specific conditions under investigation, allowing for broader generalisations and implications. The analysis of SME business performance is not a new area of study; hence this research study has the potential to be replicated in other scenarios. However, the generalisability of the present study does require certain considerations.

The findings' generalisability may be hampered by the sampling technique used, which involves disseminating the questionnaire online. Participants' propensity for not responding opens the door to the possibility of response bias, which could affect the sample's representativeness. A thorough knowledge of the issue under study may also be hampered by the respondents' lack of diversity. It's also critical to recognise that an exclusive focus on SMEs in the Gauteng region would not accurately represent SMEs operating in rural settings. As a result, care should be used when generalising the findings to a different population or context.

3.8.2 *Internal validity*

The proposed approach to ensure that this construct is maintained and enhanced involved taking the following steps. The first phase comprised reviewing relevant academic literature to look at elements that have already been studied, albeit in various situations, adding to the body of knowledge. Following this, a pilot research study was carried out with fewer individuals to validate the instrument. The questionnaire items were also written in a clear, concise, and unambiguous manner to make it easier for responders to understand.

3.8.3 *Reliability*

According to Cooper and Schindler (2014), reliability is the assessment of how much a measurement is not impacted by random or unstable errors. Focusing primarily on the consistency and dependability of the tools used for data collecting, ensuring that erratic variables and environmental factors do not contribute interference. Internal consistency was used in the context of the current study to analyse the relationship between the independent and dependent variables. The Cronbach's alpha test, which assessed internal consistency, was employed; a threshold higher than 0.6 denoted a stronger association between the variables being studied.

3.9 Ethical considerations

This study took several ethical issues into account. Firstly, only participants who were 18 years old or older were identified as potential respondents. Additionally, all adults who participated in the poll gave their informed consent before participating. The study made sure that participants had an open choice regarding whether to participate or not, free from any pressure or intimidation. Importantly, the privacy and anonymity standards were scrupulously upheld, protecting the secrecy of the respondents' personal data. Additionally, to ensure that the confidentiality of the participants was upheld, the questionnaire did not capture any information that could be used to identify a participant

such as their name or phone number. This research study could not commence until ethical clearance was approved by the Wits Business School Research Ethics Committee.

3.10 Proposed schedule and timelines

The proposal for this research study was submitted before the 30th of June 2023, accompanied by the ethics clearance form. Following this, the research topic was presented to the research panel and once ethics had been cleared, the data collection period spanned over a period of 4 months. Once the data was collected, it was analysed and synthesised to present a final research report which was submitted before the 28th of February 2025.

CHAPTER 4. PRESENTATION OF RESULTS

4.1 Introduction

The objective of this research study was to investigate the impact of digital technology on the business performance of SMEs in South Africa. The purpose of this chapter was to present this study's findings using graphs that visually represented the results obtained during the data collection phase. Section 4.2 of this chapter provides an overview of how the gathered data was screened and cleansed to derive a final dataset that was eligible for analysis. Additionally, section 4.3 stipulates how the data variables were coded. The demographics of the respondents are presented in section 4.4 and section 4.5 detailing the descriptive statistics for the constructs studied. The final section, containing sections 4.6 – 4.11 of this chapter presents the outcomes obtained from the statistical data analysis. This encompassed the use of normality, validity and reliability tests. Subsequently, the correlation, CFA and regression tests were conducted to evaluate the hypotheses. The survey data was analysed using the SPSS and Jamovi software packages to derive valuable insights.

4.2 Data Screening

Data screening is an essential initial step that must be carried out before the data analysis stage. It is vital because it enables the detection and resolution of any possible issues in the dataset, guaranteeing that no issues impact the statistical analysis. This section provides an overview of many elements of the data screening process, such as checking for mistakes in the SPSS file, managing missing data, and evaluating normalcy.

The first stage of the data screening procedure involved cleaning the dataset by excluding respondents who did not satisfy the specified criteria and discarding incomplete responses. Only one qualifying criterion was used to choose respondents: their agreement to participate in the poll. The control was incorporated on the landing page of the Qualtrics survey website, prompting participants to indicate their level of comfort in completing the questionnaire. After receiving a confirmation of consent, the respondents

proceeded to answer the survey questions. Data was only taken from individuals who had provided their consent. As a consequence of this initiative, a total of 152 individuals willingly took part in the study. Afterwards, the dataset was examined for any errors in data input and any items with negative wording were converted into positive wording. In addition, situations in which respondents did not answer all the questions were excluded from the study.

The research survey was distributed to more than 1,000 eligible participants through face-to-face engagements, email, as well as social media platforms like Facebook, Instagram, and WhatsApp. The survey comprised participants who were employees, managers or owners of small businesses operating within the Gauteng province. Despite multiple reminders, a total of 152 participants submitted responses, resulting in a response rate of around 15%. Following the completion of preprocessing and data cleaning, 114 responses were used for the analysis. This result confirms the hypothesis stated in Chapter 1 that small business proprietors are frequently engrossed in day-to-day business activities and, as a result, are less inclined to have the time to participate in surveys (Adams et al., 2015).

4.3 Variable coding

To improve construct identification and optimise data analysis, the constructs examined in this research study were coded as illustrated in the Table below.

Variable	Code
Digital Marketing	DM
Access To Finance	AF
Social media	SM
E-Commerce	EC
Entrepreneurial Education	EE
Social Capital	SC

Business Performance	BP

Table 1: Variable Coding

4.4 Demographic profile

Analysing the biographical information of the participants who responded to this survey promised that the survey findings were put into perspective, thus preventing conclusions from being derived about improper groups (Wegner, 2016). Items that investigated the demographic profile of the respondents and basic business information were included in section B of the questionnaire. The demographic data obtained encompassed the business's age, industry, and geographical location within Gauteng. The data obtained comprised 114 responses from employees, managers and owners of SMEs.

4.4.1 Gender

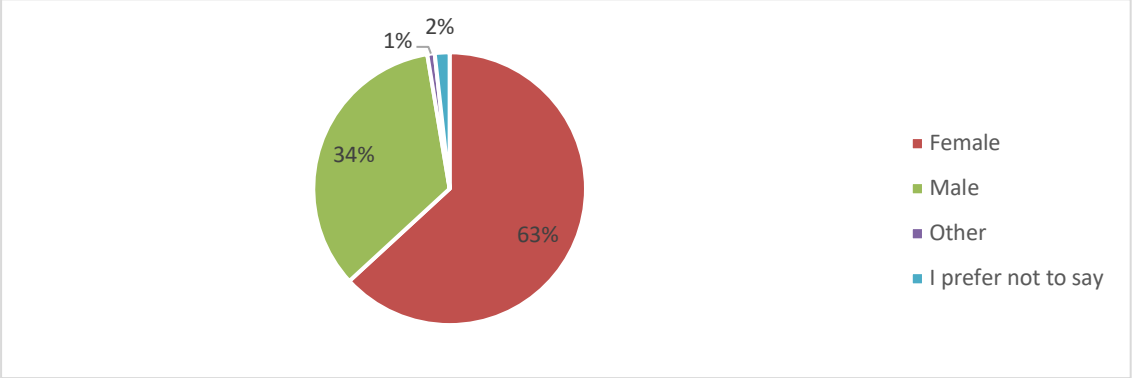

Figure 2: Gender demographics

The results stipulated in figure 2 show that of the total 114 participants, 72 (63%) were female, 39 (34%) were male, 2 (2%) selected the "I prefer not to say option" and 1 (1%) indicated "other". According to these findings, this study garnered more responses from female participants than male participants. This discovery is consistent with the research conducted by Ojong et al. (2021), which argued that Africa is a continent where most entrepreneurs are women.

4.4.2 Age

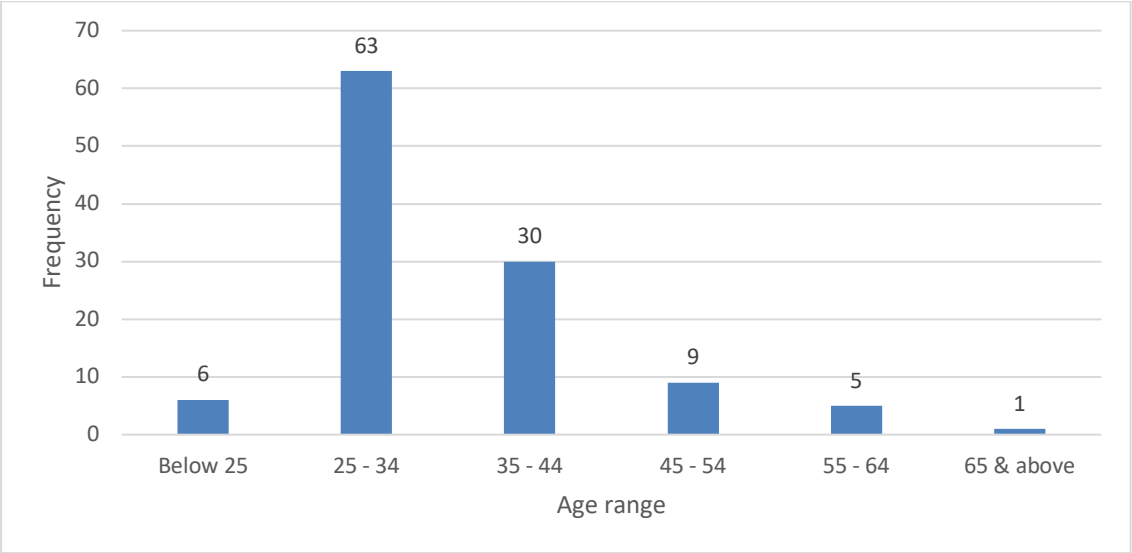

Figure 3: Age demographics

Age group		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25	6	5.3	5.3	5.3
	25 - 34	63	55.3	55.3	60.5
	35 - 44	30	26.3	26.3	86.8
	45 - 54	9	7.9	7.9	94.7
	55 - 64	5	4.4	4.4	99.1
	65 & above	1	.9	.9	100.0
	Total	114	100.0	100.0	

Table 2: Age demographic statistics

The results stipulated in figure 3 show that of the total 114 respondents, 63 (55%) were between the ages of 25-34, the most popular age group, Followed by 30 (26%) participants were between the ages of 35 – 44. 45 – 54 was the third highest age group with 9 (8%) of the total participants. Table 2 presents a concise overview of the statistical information related to the age demographic in the sample.

4.4.3 Highest level of education completed.

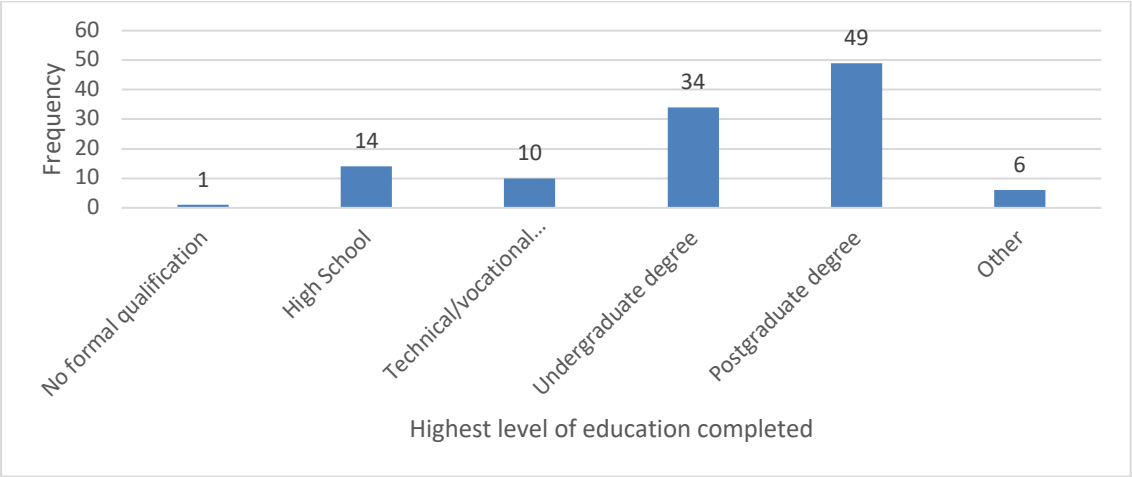

Figure 4: Education demographics

Education level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal qualification	1	.9	.9	.9
	High School	14	12.3	12.3	13.2
	Technical/vocational training	10	8.8	8.8	21.9
	Undergraduate degree	34	29.8	29.8	51.8
	Postgraduate degree	49	43.0	43.0	94.7
	Other	6	5.3	5.3	100.0
	Total	114	100.0	100.0	

Table 3: Education demographics statistics

The results stipulated in Figure 4 show that of the total 114 respondents, 49 (43%) have a postgraduate degree, Followed by 34 (30%) participants with an undergraduate degree.

14 (12%) participants indicated that their highest level of education was high school. Table 3 presents a concise overview of the statistical information related to the education demographic in the sample.

4.4.4 Industry Demographics

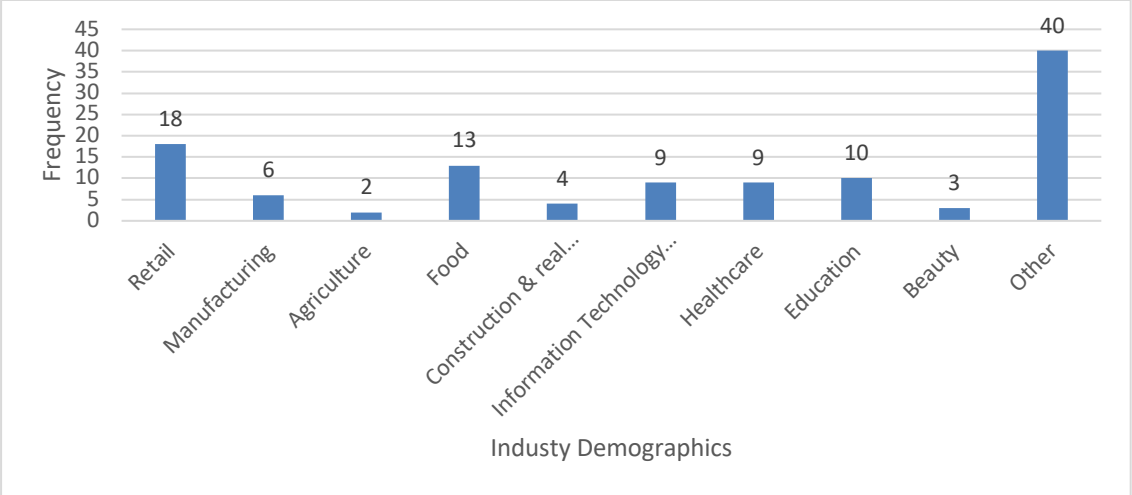

Figure 5: Industry demographics

Industry		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Retail	18	15.8	15.8	15.8
	Manufacturing	6	5.3	5.3	21.1
	Agriculture	2	1.8	1.8	22.8
	Food	13	11.4	11.4	34.2
	Construction & real estate	4	3.5	3.5	37.7
	Information Technology (IT)	9	7.9	7.9	45.6
	Healthcare	9	7.9	7.9	53.5
	Education	10	8.8	8.8	62.3
	Beauty	3	2.6	2.6	64.9
	Other	40	35.1	35.1	100.0

	Total	114	100.0	100.0	

Table 4: Industry demographics statistics

The results stipulated in Figure 5 show that of the total 114 respondents, 40 (35.1%) indicated that their business falls within the "Other" category, the highest within this demographic. Followed by 18 (16%) indicating that they operate within the retail industry. 13 (11%), the third highest indicated that they operate within the "Food" industry. Table 4 presents a concise overview of the statistical information related to the education demographic in the sample.

4.4.5 Business tenure

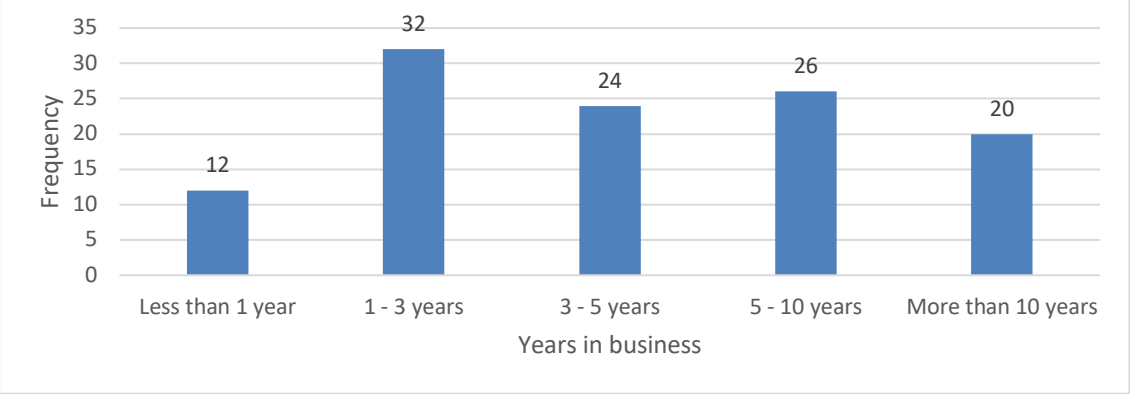

Figure 6: Business tenure demographics

Years		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	12	10.5	10.5	10.5
	1 - 3 years	32	28.1	28.1	38.6
	3 - 5 years	24	21.1	21.1	59.6
	5 - 10 years	26	22.8	22.8	82.5
	More than 10 years	20	17.5	17.5	100.0
	Total	114	100.0	100.0	

Table 5: Business tenure statistics

The results stipulated in Figure 6 showed that of the total 114 respondents, 32 (28 %) indicated that their business tenure falls between 1 – 3 years, the highest tenure period within this demographic. Followed by 26 (23%) participants who indicated that their business tenure is between 5 – 10 years. 24 (21%) the third highest business tenure of 3 – 5 years, was represented by 24 (21%) participants. Table 5 presents a concise overview of the statistical information related to the education demographic in the sample.

4.4.6 Employee headcount

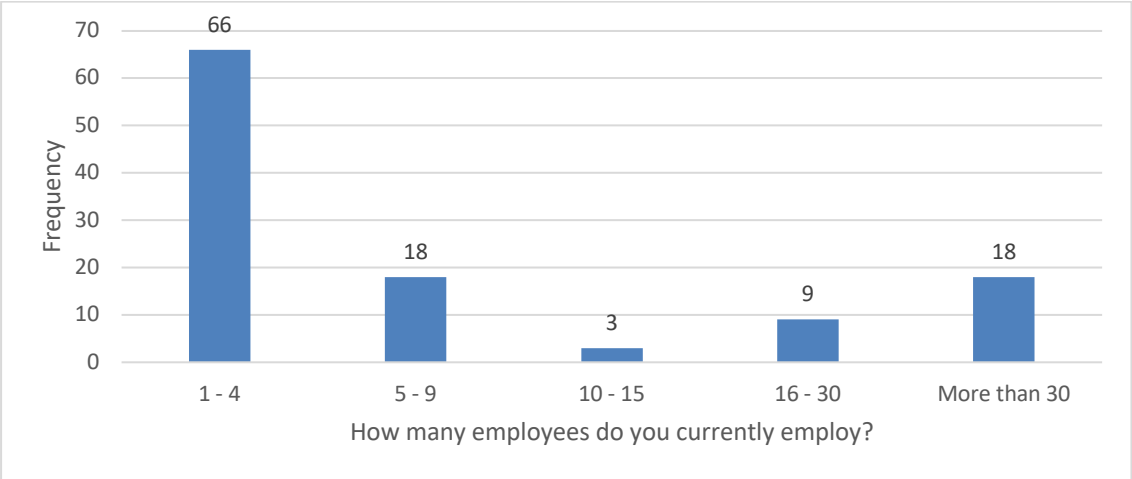

Figure 7: Employee headcount demographics

Employee Headcount		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 4	66	57.9	57.9	57.9
	5 - 9	18	15.8	15.8	73.7
	10 - 15	3	2.6	2.6	76.3
	16 - 30	9	7.9	7.9	84.2
	More than 30	18	15.8	15.8	100.0
	Total	114	100.0	100.0	

Table 6: Employee headcount statistics

The results stipulated in Figure 7 show that of the total 114 respondents, 66 (58 %) indicated that their employee headcount fell between 1 – 4, the employee headcount with the highest selection. Followed by 18 (16%) participants who indicated that their employee headcount fell between 5 – 9 and more than 30, respectively. The third highest employee headcount of 16 – 30, was represented by 9 (8%) participants. Table 6 presents a concise overview of the statistical information related to the Employee headcount demographic in the sample.

4.4.7 Municipality

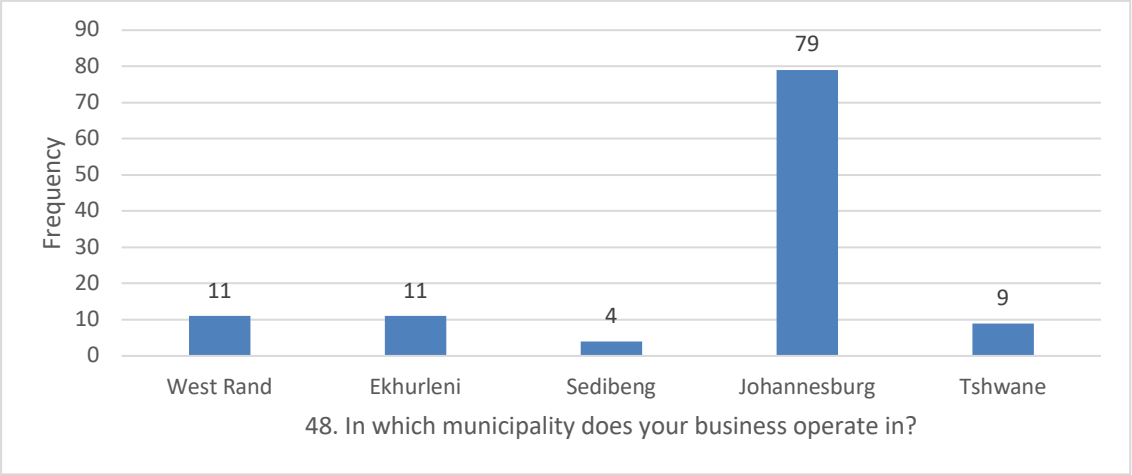

Figure 8: Municipality demographics

Municipality		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	West Rand	11	9.6	9.6	9.6
	Ekhurleni	11	9.6	9.6	19.3
	Sedibeng	4	3.5	3.5	22.8
	Johannesburg	79	69.3	69.3	92.1
	Tshwane	9	7.9	7.9	100.0
	Total	114	100.0	100.0	

Table 7: Municipality demographics statistics

The results stipulated in Figure 8 show that of the total 114 respondents, 79 (69 %) indicated Johannesburg as their municipality, the highest selection within this sample. Followed by 11 (10%) participants who indicated that their municipality was the West Rand or Ekhurleni, respectively. Tshwane was the third highest municipality selected, it represented 9 (8%) of the participants. Table 7 presents a concise overview of the statistical information related to the Municipality demographic in the sample.

4.5 Descriptive Statistics

This section presented the descriptive analysis findings. Descriptive analysis is a crucial statistical technique which allows researchers to condense raw data, offering a concise representation of its core attributes, such as the average, spread, and variability. This method enables a thorough comprehension of the overall structure and patterns of the dataset (Cant, 2006).

4.5.1 Digital Marketing

The Digital marketing section of the questionnaire consisted of 5 questions that were measured using a 5-point Likert scale. The purpose of this section was to determine the extent to which SMEs used digital marketing in their operations and how it impacted their business performance. Table 8 illustrated that the respondents were familiar with and used most of the tools mentioned in the questions to a moderate or great extent, as indicated by mean scores between 3 and 4. However, question 4, which inquired about the use of search engine optimisation, had the lowest mean score of 2.83. Furthermore, it had the highest standard deviation score, suggesting that responses were distributed more widely. These results indicate that respondents in this survey are more inclined to employ tools such as emails and social media marketing for their business operations.

	N	Minimum	Maximum	Mean	Std. Deviation
1. To what extent does your organisation use Emails?	114	1	5	3.75	1.211

2. To what extent does your organisation use mobile marketing?	114	1	5	3.31	1.298
3. To what extent does your organization use social media marketing?	114	1	5	3.89	1.135
4. To what extent does your organization use search engine optimisation (SEO)?	114	1	5	2.83	1.369
5. To what extent does your organization use online advertising (website, blogs, etc.)?	114	1	5	3.07	1.315
Valid N (listwise)	114				

Table 8: Digital marketing statistics

4.5.2 Social Media

The Social media section of the questionnaire comprised four questions that were measured using a 7-point Likert scale. The objective of this section was to determine the extent to which SMEs employed social media for business purposes and to evaluate the possible influence of social media usage on business performance. According to the data in Table 9, the respondents showed a very positive attitude towards using social media in their business operations. Most of the responses had a mean score between 4 and 6, and there was a consistent level of variation. This signified that SMEs acknowledged the significance of social media with regard to their business. Nevertheless, the variance indicated, highlighted that SMEs embraced social media in a diverse manner.

	N	Minimum	Maximum	Mean	Std. Deviation
11. We consider our business as a frequent user of social media.	114	1	7	5.56	1.699
12. Our business uses the capabilities of social media to the fullest	114	1	7	4.75	1.622

13. Our business uses our social media for most of our business activities	114	1	7	4.83	1.739
14. Our business uses many social media concurrently which work well together	114	1	7	4.45	1.730
Valid N (listwise)	114				

Table 9: Social media statistics

4.5.3 E-Commerce

The E-commerce section of the questionnaire consisted of nine items, measured with a 7-point Likert scale. This section sought to scrutinise the degree to which SMEs incorporated E-commerce into their business activities and assessed its influence on business performance. As illustrated in the data depicted in Table 10, the respondents deemed E-commerce as an essential component of their business strategies. This conclusion was derived from the consistently high ratings on all questions, indicating a generally favourable impression of E-commerce's ability to improve business performance. It was anticipated that the implementation of e-commerce would result in enhanced sales quality. In addition, the replies showed a similar variance score of around 1.700, suggesting that SMEs acknowledged the importance of E-commerce in their business operations. However, it is adopted in different ways and SMEs encountered various obstacles when implementing it.

	N	Minimum	Maximum	Mean	Std. Deviation
15. Using E-commerce would enhance my business effectiveness, my effectiveness on the job.	114	1	7	5.32	1.659
16. E-commerce is useful in my business.	114	1	7	5.04	1.658

17. Using E-commerce increases my business productivity.	114	1	7	4.95	1.650
18. Using E-commerce enables my staff to accomplish transactions more quickly.	114	1	7	4.97	1.685
19. Using E-commerce can decrease the time needed for my business transactions.	114	1	7	4.92	1.673
20. If my company uses E-commerce, it will increase the quality of sales of my business.	114	1	7	5.04	1.667
21. My company has the resources necessary to use E-commerce for example manpower, capital, etc.	114	1	7	4.28	1.772
22. Using E-commerce fits into our way of doing business.	114	1	7	4.80	1.868
23. Using E-commerce is compatible with all aspects of my business transactions.	114	1	7	4.39	1.827
Valid N (listwise)	114				

Table 10: E-commerce statistics

4.5.4 Access to Finance

The Access to finance section of the questionnaire consisted of five questions measured with a 5-point Likert scale. The purpose of this section was to ascertain whether the organisation had access to external funds and to determine the respondents' awareness of prospective government aid. According to the data shown in Table 11, respondents gave negative ratings to their ability to obtain external finance, with responses falling between mean scores of 1 and 2. Question 7, which investigated government assistance for small enterprises, resulted in the lowest average score of 1.52 and the lowest variability, suggesting that respondents received very few benefits in terms of financial support for

their businesses. On the other hand, inquiries on knowledge of company financing possibilities received the highest scores, indicating that SMEs had a moderate level of awareness of external funding choices and could present the required collateral to a reasonable degree.

	N	Minimum	Maximum	Mean	Std. Deviation
6. Our business is able to provide the necessary collateral requirement to access finance	114	1	5	2.58	1.072
7. Our business benefits from support provided by government to small businesses	114	1	5	1.52	.914
8. Our business is aware of available funding activities	114	1	5	2.63	1.214
9. Our business invests funds for innovation	114	1	5	2.46	1.256
10. Financial institutions offer our business affordable rates of interest on loans	114	1	5	2.02	1.182
Valid N (listwise)	114				

Table 11: Access to finance statistics

4.5.5 Entrepreneurial Education

This section of the questionnaire which focused on Entrepreneurial education consisted of five questions, which were measured through a 7-point Likert scale. The purpose of this section was to ascertain the respondents' knowledge and experience in entrepreneurial education and to evaluate the possible influence of such education on business performance. As illustrated in the data presented in Table 12, respondents unanimously recognised the significance of entrepreneurial education, as indicated by the highest mean score of 6.12 and the lowest standard deviation of 1.122 for this item. Nevertheless, the responses also revealed a lack of knowledge and unequal opportunities when it comes to accessing entrepreneurship education.

	N	Minimum	Maximum	Mean	Std. Deviation
24. Learning about business planning is very important to me	114	1	7	6.12	1.122
25. I received entrepreneurial education at post-secondary school level	114	1	7	4.38	2.067
26. I would prefer to employ graduates who have entrepreneurial education	114	1	7	4.81	1.493
27. I have not heard about entrepreneurial education	114	1	7	2.85	1.806
28. Will receiving entrepreneurial education improve your business performance	114	1	7	5.53	1.422
Valid N (listwise)	114				

Table 12: Entrepreneurial education statistics

4.5.6 Social Capital

The social capital section of the questionnaire consisted of six questions, which were measured through a 7-point Likert scale. This section sought to evaluate the importance of social capital for SMEs and its potential influence on business performance. As illustrated in the data presented in Table 13, the majority of respondents indicated a good perception of social capital in relation to their business activities. Nevertheless, the reactions ranged from impartial to moderately agreeable. The questions pertaining to networking through the business chamber of commerce displayed the most variability, indicating that not all SMEs are familiar with or engage with this platform.

	N	Minimum	Maximum	Mean	Std. Deviation
29. Our business has developed networks through business associations	114	1	7	5.01	1.543

30. Our business has developed networks through the business chamber of commerce	114	1	7	3.36	1.960
31. I build networks during training sessions	114	1	7	4.33	1.702
32. Our relationship with suppliers is based on mutual trust	114	2	7	5.77	1.205
33. I have spent much effort on cultivating connections with suppliers	114	2	7	5.64	1.311
34. Our business has no relationship with customers	114	1	7	1.96	1.531
Valid N (listwise)	114				

Table 13: Social capital statistics

4.5.7 Business Performance

The Business performance section of the questionnaire consisted of seven questions, which were measured using a 7-point Likert scale. The purpose of this section was to evaluate the various facets of business performance. According to the data displayed in Table 14, the respondents usually held a favourable view of their business performance, namely on the increase in sales revenue, profitability, and customer satisfaction. The question evaluating customer satisfaction showed the least amount of variation, suggesting a uniform perspective among respondents around this element.

	N	Minimum	Maximum	Mean	Std. Deviation
35. The company has increased on growth in sales revenue	114	1	7	5.29	1.504
36. The company has increased on profitability	114	1	7	5.09	1.538
37. The company has increased on labour productivity	114	1	7	4.76	1.609
38. The company has increased on level of customer satisfaction	114	1	7	5.69	1.145

39. The company has increased on overall financial performance	114	1	7	5.06	1.604
40. The company has increased on level of customer loyalty	114	1	7	5.49	1.257
41. The company has increased in growth of machine or worker	114	1	7	4.66	1.671
Valid N (listwise)	114				

Table 14: Business performance statistics

4.6 Test For Normality

The next step in the data analysis procedure involved conducting normality tests to assess the distribution characteristics of the data for each construct examined in this study. Normality is characterised by a symmetrical distribution that forms a bell-shaped curve, with the most frequent scores occurring in the centre and decreasing frequencies as you move towards the extremes (Pallant, 2020). Before conducting parametric tests, it is necessary to establish that every category of the variables defined as independent follows a normal distribution, this holds true for the variables defined as dependent (Field, 2009). Normality in this research study was assessed using skewness and kurtosis statistics, following the guideline by Hair (2010) which stipulates that a distribution is considered to approximate normality when its skewness and kurtosis values fall within the range of -2 to +2. Table 15 below provides a summary of the skewness and kurtosis for the factors being investigated.

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
DM	114	-.208	.226	-.535	.449
SM	114	-.771	.226	.037	.449
EC	114	-.647	.226	-.240	.449

AF	114	.770	.226	0.58	.449
EE	114	-.464	.226	.683	.449
SC	114	.177	.226	.209	.449
BP	114	-.942	.226	1.132	.449

Table 15: Normality test results

The skewness and kurtosis statistics for all the variables being investigated are presented in Table 15 above. The results from the normality assessment indicate that the variables approximate a normal distribution as the skewness and kurtosis fall within the acceptable range of -2 to +2 (Hair, 2010). Evaluating the skewness, SC and DM exhibited a skewness that is closer to symmetric distribution. Additionally, EE, EC, BP and SM exhibited a negative skew, with the tail being longer on the left. Consequently, AF exhibited a positive skew, with the tail being longer on the right. Evaluating the kurtosis, BP exhibited a higher value in comparison to the other variables, however fell within the acceptable range and the rest of the variables DM, SM, EC, AF, EE and SC displayed no signs of extreme tailing. Based on these results it was concluded that the data was suitable for parametric analysis.

4.7 Validity

This section of the report illustrated the results garnered from executing the reliability test for the responses garnered from the questionnaires. In addition to this, the validation of the constructs in this study. As a precursor, validation of the research instrument was achieved by a pilot study.

4.7.1 External Validity

External validity refers to the extent to which the same outcomes or findings would be obtained if the study was conducted on a broader population (Bezuidenhout et al., 2014). To achieve external validity, the survey was sent to a small group of respondents before

it was distributed on a larger scale. The pilot study garnered 12 responses and based on the user feedback, around 10 questions were removed to make the survey more concise. The objective of reducing the number of questions was to encourage participants to complete the questionnaire in its entirety.

4.7.2 Internal Validity

The Kaiser-Meyer-Olkin (KMO) index measured how well the sample analysed in this study represented the population of SMEs. On the other hand, Bartlett's test of sphericity evaluated if the data was suitable for factor analysis (Mutsekwa, 2016). Internal validity assessed the suitability of the research procedures and instruments in addressing the study issue (Bezuidenhout et al., 2014). To assess internal validity, the data was analysed using the statistical software programmes SPSS 29 and Jamovi 2.4.12. Before executing the factor analysis, the KMO index in conjunction with Bartlett's test of sphericity was used to verify that the data satisfied the necessary conditions for factor analysis.

The KMO test for sample adequacy produced an index of 0.773, surpassing the minimum barrier of 0.5, indicating satisfactory adequacy. Furthermore, Bartlett's test of sphericity produced a value of less than 0.01, which falls below the critical criterion of 0.05. Therefore, the data collected was suitable for executing factor analysis, as evidenced by the findings presented in Table 16.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.773
Bartlett's Test of Sphericity	**Approx. Chi-Square**	2964.454
	df	820
	Sig.	<.001

Table 16: KMO and Bartlett's test results

4.8 Reliability

The Cronbach’s Alpha test was used to assess the reliability of the data. Bonett and Wright (2014) defined Cronbach's Alpha as a commonly employed metric for assessing

the reliability of a sample, especially for scales that consist of several items. This analysis confirmed that the measures employed in the research instrument may be implemented in other instances and regularly generate accurate data without measurement mistakes. The reliability test results for the investigated factors in the questionnaire were presented below.

The instrument employed in this study demonstrated a high degree of dependability for replication. According to Izah et al. (2023), a Cronbach's Alpha test result over 0.6 is considered to be on the lower threshold of the acceptable range. Consequently, Field (2012) assert that a Cronbach's alpha beyond 0.6 is deemed satisfactory within the preliminary research phases, however a value surpassing 0.7 is considered moderate. Elevated Cronbach's alpha values beyond this indicate enhanced reliability (Hair et al., 2016).

4.8.1 Digital Marketing Construct

Table 17 below, illustrated that the overall Cronbach Alpha test was 0.685 for the statements relating to the Digital marketing construct. This overall result indicated that the overall level of internal consistency for this scale was acceptable because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.685	5

Table 17: Digital marketing reliability statistics

Additionally, Table 18 below illustrated the Cronbach's Alpha test for each of the statements that constituted this construct. Evaluating the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
1. To what extent does your organisation use Emails?	13.10	13.097	.367	.189	.664
2. To what extent does your organisation use mobile marketing?	13.54	12.127	.439	.219	.634
3. To what extent does your organization use social media marketing?	12.96	13.281	.388	.262	.655
4. To what extent does your organization use search engine optimisation (SEO)?	14.01	11.885	.426	.214	.642
5. To what extent does your organization use online advertising (website, blogs, etc.)?	13.77	10.992	.580	.361	.568

Table 18: Deleted items analysis – Digital marketing statements

4.8.2 Social Media Construct

Table 19 illustrated that the overall Cronbach's Alpha test was 0.865 for the statements relating to the Social media construct. This overall result indicated that the overall level of internal consistency for this scale was good because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.865	4

Table 19: Social media reliability statistics

Additionally, Table 20 below illustrated the Cronbach's Alpha test for each of the statements that constituted this construct. Taking into consideration the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
11. We consider our business as a frequent user of social media.	14.04	19.344	.710	.521	.829
12. Our business uses the capabilities of social media to the fullest	14.84	19.214	.774	.612	.805
13. Our business uses our social media for most of our business activities	14.76	18.802	.730	.550	.821
14. Our business uses many social media concurrently which work well together	15.15	19.863	.648	.420	.855

Table 20: Deleted items analysis – Social media statements

4.8.3 E-Commerce Construct

Table 21 detailed that the overall Cronbach's Alpha test was 0.934 for the statements relating to the E-Commerce construct. This overall result indicated that the overall level of internal consistency for this scale was excellent because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.934	9

Table 21: E-commerce reliability statistics

Additionally, Table 22 below illustrated the Cronbach's Alpha test for each of the statements that constituted this construct. Taking into consideration the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
15. Using E-commerce would enhance my business effectiveness, my effectiveness on the job.	38.39	125.018	.775	.660	.925
16. E-commerce is useful in my business.	38.67	122.419	.854	.822	.920
17. Using E-commerce increases my business productivity.	38.76	123.103	.838	.788	.921
18. Using E-commerce enables my staff to accomplish transactions more quickly.	38.74	124.532	.775	.634	.925
19. Using E-commerce can decrease the time needed for my business transactions.	38.79	125.407	.756	.599	.926

20. If my company uses E-commerce, it will increase the quality of sales of my business.	38.68	126.274	.734	.610	.927
21. My company has the resources necessary to use E-commerce for example manpower, capital, etc.	39.43	134.743	.453	.258	.944
22. Using E-commerce fits into our way of doing business.	38.91	119.125	.832	.741	.921
23. Using E-commerce is compatible with all aspects of my business transactions.	39.32	121.672	.782	.683	.924

Table 22: Deleted items analysis – E-commerce statements

4.8.4 Access to Finance Construct

Table 23 illustrated that the overall Cronbach's Alpha test was 0.758 for the statements relating to the Access to finance construct. This overall result indicated that the overall level of internal consistency for this scale was moderate because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.758	5

Table 23: Access to finance reliability statistics

Additionally, Table 24 below illustrated the Cronbach's Alpha test for each of the statements that constituted this construct. Taking into consideration the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
6. Our business is able to provide the necessary collateral requirement to access finance	8.63	11.598	.495	.265	.726
7. Our business benefits from support provided by government to small businesses	9.69	12.144	.531	.322	.719
8. Our business is aware of available funding activities	8.58	10.370	.578	.385	.695
9. Our business invests funds for innovation	8.75	10.528	.522	.296	.718
10. Financial institutions offer our business affordable rates of interest on loans	9.19	10.883	.523	.283	.716

Table 24: Deleted items analysis – Access to finance statements

4.8.5 Entrepreneurial Education Construct

Table 25 showed that the overall Cronbach's Alpha test was 0.570 for the statements relating to the entrepreneurial education construct. This overall result indicated that the overall level of internal consistency for this scale fell slightly below the 0.6 threshold. This construct holds theoretical significance in understanding how it impacts business performance, considering the other constructs in this research study with regards to the

research objectives. Excluding this construct from the study would hinder the empirical objectives outlined in Chapter 1. Therefore, it remained integral to this study and was not deleted.

Cronbach's Alpha	N of Items
.570	3

Table 25: Entrepreneurial education reliability statistics

Additionally, Table 26 below illustrated the initial view of Cronbach's Alpha test for each of the statements that constitute this construct. Investigating the value for the Corrected item-total Correlation. It was noted that the overall Cronbach alpha test result could be increased to 0.570 by removing statement 25 and statement 27 due to their low loadings. Table 27 illustrated the resultant view of the construct after removing the 2 statements. Therefore, this construct was retained for further analysis.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
24. Learning about business planning is very important to me	17.56	13.894	.299	.275	.203
25. I received entrepreneurial education at post-secondary school level	19.31	12.409	.067	.143	.391
26. I would prefer to employ graduates who have entrepreneurial education	18.88	10.817	.469	.280	.000
27. I have not heard about entrepreneurial education	20.83	17.078	-.180	.142	.570

28. Will receiving entrepreneurial education improve your business performance	18.16	11.798	.392	.295	.088

Table 26: Deleted items analysis – Entrepreneurial education statements

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
24. Learning about business planning is very important to me	17.56	13.894	.299	.275	.203
26. I would prefer to employ graduates who have entrepreneurial education	18.88	10.817	.469	.280	.000
28. Will receiving entrepreneurial education improve your business performance	18.16	11.798	.392	.295	.088

Table 27: Updated deleted items analysis – Entrepreneurial education statements

4.8.6 Social Capital Construct

The below Table 28 showed that the overall Cronbach alpha test was 0.666 for the statements relating to the Social capital construct. This overall result indicated that the overall level of internal consistency for this scale was acceptable because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.666	6

Table 28: Social capital reliability statistics

Additionally, Table 29 below illustrates the Cronbach's Alpha test for each of the statements that constitute this construct. Taking into consideration the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
29. Our business has developed networks through business associations	21.06	24.324	.408	.263	.620
30. Our business has developed networks through the business chamber of commerce	22.71	20.438	.487	.380	.590
31. I build networks during training sessions	21.74	21.505	.539	.354	.568
32. Our relationship with suppliers is based on mutual trust	20.30	26.087	.437	.560	.618
33. I have spent much effort on cultivating connections with suppliers	20.43	26.371	.358	.539	.638
34. Our business has no relationship with customers	24.11	27.571	.187	.144	.693

Table 29: Deleted items analysis – Social capital statements

4.8.7 Business Performance Construct

Table 31 showed that the overall Cronbach's Alpha test was 0.904 for the statements relating to the Business performance construct. This overall result indicated that the overall level of internal consistency for this scale was acceptable because it was above the 0.6 threshold.

Cronbach's Alpha	N of Items
.904	7

Table 30: Business performance reliability statistics

Additionally, Table 32 below illustrated the Cronbach's Alpha test for each of the statements that constituted this construct. Taking into consideration the Cronbach's Alpha test for all the statements, no statement was deleted for this construct.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
35. The company has increased on growth in sales revenue	30.75	49.603	.795	.752	.880
36. The company has increased on profitability	30.96	49.334	.787	.804	.881
37. The company has increased on labour productivity	31.28	49.443	.736	.631	.887
38. The company has increased on level of customer satisfaction	30.35	56.690	.620	.564	.900
39. The company has increased on overall financial performance	30.98	48.708	.778	.719	.882
40. The company has increased on level of customer loyalty	30.55	54.108	.704	.603	.892
41. The company has increased in growth of machine or worker	31.39	51.071	.621	.529	.902

Table 31: Deleted items analysis – Business performance statements

The general model consistency, multidimensionality, and construct validity were ascertained using the Cronbach's Alpha test to guarantee that the constructs were suitable for further analysis in this research study. Table 32 below shows a summary of the Cronbach's Alpha test results.

Research construct	Number of Items	Cronbach Alpha	Reliability interpretation
Digital Marketing (DM)	5	.685	Acceptable
Social Media (SM)	4	.865	Good
E-Commerce (EC)	9	.934	Excellent
Access to Finance (AF)	5	.758	Moderate
Entrepreneurial Education (EE)	3	.570	Acceptable
Social Capital (SC)	6	.666	Acceptable

Table 32: Cronbach's Alpha test summary

4.9 Correlation Analysis

The Pearson correlation was employed to assess the degree of linear association between the individual independent variables and the dependent variable (Field, 2009). It was implemented to investigate the existence of linear relationships between the research variables. Additionally, to measure the strength of the association among them through the correlation coefficient, r which contains values that range between -1 to +1 (Somekh & Lewin, 2011) When the r value is negative, this suggested a negative relationship between variables, where the increase of one variable resulted in the decrease of the other value. In the opposite scenario, where the r value is positive, this suggested that as one variable increased the other variable also increased. Additionally, a r value of 0.00 suggested that a relationship did not exist between the two variables. The Pearson correlation coefficient was classified as "very weak" when $0.00 \leq r < 0.19$, "weak" when $0.20 \leq r < 0.39$, "Moderate" when $0.40 \leq r < 0.59$, "Strong" when $0.60 \leq r < 0.79$ and "Very strong" $0.80 \leq r < 1.00$ (Evans, 1996). The data was deemed appropriate for the Pearson correlation as it satisfied the requirements for parametric tests.

The results, presented in Table 33 below, illustrated the correlation coefficient, strength, direction and significance between the variables analysed using Pearson correlation.

Variable 1	Variable 2	Correlation Coefficient (r)	Strength of Relationship	Statistical Significance (p)	Significant?
DM	SM	0.552	Moderately Strong Positive	< 0.001	Yes
DM	EC	0.377	Moderately Weak Positive	< 0.001	Yes
DM	AF	0.374	Moderately Weak Positive	< 0.001	Yes
DM	EE	-0.001	Very Weak Negative	0.99	No
DM	SC	0.109	Very Weak Positive	0.248	No
DM	BP	0.203	Weak Positive	0.030	Yes
SM	EC	0.371	Weak Positive	< 0.001	Yes
SM	AF	0.214	Weak Positive	0.022	Yes
SM	EE	0.022	Very Weak Positive	0.819	No
SM	SC	0.122	Very Weak Positive	0.195	No
SM	BP	0.223	Weak Positive	0.017	Yes
EC	AF	0.325	Weak Positive	< 0.001	Yes
EC	EE	0.387	Weak Positive	< 0.001	Yes
EC	SC	0.256	Weak Positive	0.006	Yes
EC	BP	0.201	Weak Positive	0.032	Yes
AF	EE	0.117	Very Weak Positive	0.215	No
AF	SC	0.455	Moderately Strong Positive	< 0.001	Yes
AF	BP	0.382	Weak Positive	< 0.001	Yes
EE	SC	0.269	Weak Positive	0.004	Yes
EE	BP	0.086	Very Weak Positive	0.365	No
SC	BP	0.359	Weak Positive	< 0.001	Yes

Table 33: Pearson correlation summary

According to Barton and Peat (2014) multicollinearity may arise between pairwise variables when the absolute value of the Pearson correlation coefficient is approximately 0.8. From the above summary it can be noted there is no multicollinearity evident between

the variables being examined. Furthermore, the Pearson correlation matrix in Table 34 below illustrates the visual relationship between the variables that were investigated.

	DM	SM	EC	AF	EE	SC	BP
DM	1						
Sig. (2-tailed)	<.001						
SM	.552**	1					
Sig. (2-tailed)	<.001						
EC	.377**	.371**	1				
Sig. (2-tailed)	<.001	<.001					
AF	.374**	.214*	.325**	1			
Sig. (2-tailed)	<.001	0.022	<.001				
EE	-0.001	0.022	.387**	0.117	1		
Sig. (2-tailed)	0.99	0.819	<.001	0.215			
SC	0.109	0.122	.256**	.455**	.269**	1	
Sig. (2-tailed)	0.248	0.195	0.006	<.001	0.004		
BP	.203*	.223*	.201*	.382**	0.086	.359**	1
Sig. (2-tailed)	0.03	0.017	0.032	<.001	0.365	<.001	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 34: Pearson correlation matrix

4.10 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is used when a researcher proposes relationships between underlying factors and observed measures in advance, either based on empirical research or theoretical knowledge and then statistically verifies this proposed structure (Hair et al., 2006). The study involved analysing 36 observable variables and associated six latent components using Jamovi version 2.4.12.0 to conduct Confirmatory Factor

Analysis (CFA). The sample comprised SME owners, managers and employees within Gauteng, with a total of 114 participants.

This chapter assessed four model fit criteria to assess the overall fit of the model, these measures included the chi-square/degrees of freedom (χ2/df), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMS), Tucker-Lewis Index (TLI) and the Root Mean Square Error of Approximation (RMSEA). Additionally, the construct validity and the discriminant validity were used to confirm that the model was valid and reliable.

4.10.1 Model fit analysis

The first step of the CFA process involved assessing the overall fit of the CFA model to ascertain that it satisfied the minimum acceptable thresholds for fit indices as stipulated in Tables 35 and 36 below.

X2	df	p
566	369	<.001

Table 35: Test for exact fit

Fit Index	Recommended Value	Actual value
Chi-square (χ2 /DF)	Good - Less than 3	1.53
	Acceptable - Between 3 and 5	
	Poor - Above 5	
Comparative fit index (CFI)	Good – Above 0.90	0.907
	Poor – Less than 0.90	
Root mean square error of approximation (RMSEA)	Good - Less than 0.05	0.069
	Acceptable - Between 0.06 and 1	
	Poor - Above 1	
Tucker-Lewis Index (TLI)	Good – Above 0.90	0.890
	Acceptable - Between 0.80 and 0.90	
	Poor – Less than 0.80	

Source: Adapted from Hair et al. (2010)

Table 36: CFA model fit indices

4.10.2 Chi-Square (χ2/df)

This statistic assessed if the suggested fit of the proposed model was accurate within the population (Nevitt & Hancock, 2000).) The fit for the model is deemed good when the chi-square value is less than 3 (Hair, 2010). The result of the normed chi square was 1.53 which was less than 3. Therefore, the results satisfied the thresholds for this measure.

4.10.3 Comparative Fit Index (CFI)

The objective of this measure was to evaluate the model fit between the specified model and the hypothesised null model (Gatignon, 2009). The Comparative Fit Index (CFI) efficiently resolves the sample size problems that are often encountered when using the chi-square test and the normed fit index. It demonstrates exceptional adaptability even in studies with limited sample sizes (Bentler & Bonett, 1980). As stipulated in Table 36 above, the CFI value of 0.907 was more than the minimum acceptable level. Therefore, the results satisfied the thresholds for this measure.

4.10.4 Root Mean Square Error of Approximation (RMSEA)

The objective of this measure was to ascertain the extent to which the model fits the population covariance matrix. When the sample size is big, there are fewer issues and inconsistencies (Steiger, 2016). As stipulated in Table 36 above, the RMSEA value of 0.069 fell within the acceptable range. Therefore, the results satisfied the thresholds for this measure.

4.10.5 Tucker-Lewis Index (TLI)

The objective of the Tucker-Lewis Index (TLI) was to resolve the sample size issue that is associated with the Normed Fit Index (NFI). As stipulated in Table 36 above, the TLI value of 0.890 fell within the acceptable range. Therefore, the results satisfied the thresholds for this measure.

Overall, it can be concluded that this model had a good fit based on the results from the above analysis on fit indices. However, to reach this state, some modifications needed to be made to the original model. This included firstly removing items that were not statistically significant. Furthermore removing items that had a loading of less than 0.500, pending these steps, items DM1, DM4, AF2, AF3, EC7, SC1, SC2 and SC3 were removed from the model and modification indices that were suggested were implemented to further improve the model fit. The model loadings for the remaining items are detailed in Table 37 below.

4.10.6 Model loadings

Factor	Indicator	Stand. Estimate
Digital Marketing	DM2	0.51
	DM3	0.82
	DM5	0.512
Access to Finance	AF1	0.902
	AF4	1.256
	AF5	0.471
Social Media	SM1	0.776
	SM2	0.852
	SM3	0.795
	SM4	0.732
Ecommerce	EC1	0.848
	EC2	0.886
	EC3	0.866
	EC4	0.785
	EC5	0.76
	EC6	0.773
	EC8	0.831
	EC9	0.763
Entrepreneurial Education	EE1	0.883
	EE3	0.441
	EE5	0.966

Social Capital	SC4	0.787
	SC5	0.908
Business Performance	BP1	0.827
	BP2	0.816
	BP3	0.732
	BP4	0.568
	BP5	0.89
	BP6	0.692
	BP7	0.616

Source: Authors compilation

Table 37: Factor loadings

4.10.7 Convergent Validity

Convergent validity denotes the extent to which the various items of a construct are correlated, indicating that they assess the same fundamental concept (Field, 2012). The Average Variance Extracted (AVE) was computed to evaluate convergent validity. The AVE was calculated using the standardised factor loadings of observable variables related to their respective latent constructs. It was calculated by aggregating the squared factor loadings of each observed variable and dividing this sum by the number of items for the construct (Hair et al., 2006). An AVE threshold of 0.50 or over signified that the construct explained over fifty per cent of the variance in its indicators, which indicated adequate convergent validity (Hair et al., 2006). Additionally, the value of 0.4 was acceptable due to the condition that if the AVE value is less than 0.5, but composite reliability is higher than 0.6, the convergent validity of the construct is acceptable (Fornell & Larcker, 1981). The results are stipulated in Table 38 below

Factor	Indicator	Stand. Estimate	Average Variance Extracted (AVE)	Composite Reliability (CR)
Digital Marketing	DM2	0.51	0.398	0.653
	DM3	0.82		
	DM5	0.512		

Access to Finance	AF1	0.902	0.871	0.947
	AF4	1.256		
	AF5	0.471		
Social Media	SM1	0.776	0.624	0.869
	SM2	0.852		
	SM3	0.795		
	SM4	0.732		
Ecommerce	EC1	0.848	0.817	0.941
	EC2	0.886		
	EC3	0.866		
	EC4	0.785		
	EC5	0.76		
	EC6	0.773		
	EC8	0.831		
	EC9	0.763		
Entrepreneurial Education	EE1	0.883	0.636	0.828
	EE3	0.441		
	EE5	0.966		
Social Capital	SC4	0.787	0.722	0.838
	SC5	0.908		
Business Performance	BP1	0.827	0.551	0.894
	BP2	0.816		
	BP3	0.732		
	BP4	0.568		
	BP5	0.89		
	BP6	0.692		
	BP7	0.616		

Source: Authors compilation

Table 38: Convergent validity results

From Table 38 above, it can be deduced that the convergent validity for this research study satisfied the required thresholds. The AVE ranged from 0.398 – 0.817, this illustrated that the constructs were effective in explaining a significant portion of the variance with regards to the respective items. The Composite Reliability values were all

above the minimum threshold specified. Therefore, it can be concluded that both the AVE and CR satisfied the acceptable thresholds in this study.

4.10.8 Discriminant Validity

This study assessed discriminant validity by comparing the correlations among constructs to the square root of the AVE for each construct. Discriminant validity denotes the degree to which a construct is differentiated from other constructs within a model, guaranteeing minimal overlap among them (Field, 2012). Hair et al. (2016) asserted that discriminant validity is confirmed when the square root of the Average Variance Extracted (AVE) for a construct surpasses the correlations between that construct and all other constructs within the model. Therefore, satisfying this criterion signified that the constructs embodied distinct concepts and did not overlap. The findings, encompassing the correlation matrix of the composite variables, are displayed in Table 39 below.

	DM	SM	EC	AF	EE	SC	BP
DM	0.631						
SM	.552**	0.790					
EC	.377**	.371**	0.904				
AF	.374**	.214*	.325**	0.933			
EE	-0.001	0.022	.387**	0.117	0.797		
SC	0.109	0.122	.256**	.455**	.269**	0.850	
BP	.203*	.223*	.201*	.382**	0.086	.359**	0.742

Source: Authors compilation

Table 39: Discriminant validity results

The results for discriminant validity in this study indicated that the square root of the AVE for each construct exceeds the correlations among constructs. For example, the square root of AVE for Digital Marketing (DM) is 0.631, which was higher than all the correlation coefficients within its column. This trend was evident across all the constructs

affirming the constructs are distinct. Consequently, it can be deduced that discriminant validity was confirmed in this research study.

4.11 Regression Analysis

Following the confirmation of the validity and reliability of the research constructs, a multiple linear regression analysis was performed. The hypothesised model was evaluated, as well as the impact of digital technology tools such as social media, digital marketing, and e-commerce—alongside conventional factors such as entrepreneurial education, social capital, and access to finance in relation to SME business performance in South Africa.

The model summary illustrated in Table 40 below, demonstrated a good model fit as F(6,107) = 5.830 and the P value was less than .001, the adjusted R square change = 0.204 and the r square change = 0.246. Illustrating that the stipulated predictors explained approximately 25% of the variation in business performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.496[a]	.246	.204	1.05632	.246	5.830	6	107	<.001

a. Predictors: (Constant), SC, DM, EE, AF, EC, SM

b. Dependent Variable: BP

Table 40: Model Summary

The objective of the ANOVA test, displayed in Table 41 was to test the degree of differences between the variables being investigated. Testing was done using an alpha of .05 and overall, it was concluded that at least one of the variables was significant in predicting the firm performance. This conclusion was established from the outcome of the regression model which was significant based on the results that $F(6,107) = 5.830$, $p < .001$ which was less than 0.05 and the R squared = 0.246.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.032	6	6.505	5.830	<.001[b]
	Residual	119.392	107	1.116		
	Total	158.424	113			

a. Dependent Variable: BP

b. Predictors: (Constant), DM, SM, EC, AF. EE, SC

Table 41: ANOVA test summary

The regression analysis results as shown in Table 42 below, highlighted that Access to Finance (AF) and Social Capital (SC) were significant predictors of business performance (BP). Access to Finance displayed the strongest positive result ($\beta = 0.370$, $p < .001$), followed by Social Capital with results ($\beta = 0.237$, $p = 0.010$). In contrast, Digital Marketing(DM), Social Media(SM), E-commerce(EC) and Entrepreneurial Education (EE) were found to not significantly influence Business Performance (BP).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.250	.797		2.821	.006
	DM	.032	.141	.026	.230	.819
	SM	.033	.095	.039	.342	.733
	EC	.021	.083	.026	.255	.799
	AF	.487	.118	.370	4.117	<.001
	EE	.001	.108	.010	.010	.992
	SC	.241	.092	.237	2.606	.010

a. Dependent Variable: BP

Table 42: Coefficients summary

4.12 Regression results summary in relation to the hypotheses

Hypothesis 1: Digital marketing has a positive impact on SME business performance.

The coefficient for digital marketing was positive and not statistically significant (β = 0.026, p = 0.819). This result suggested that digital marketing does not have a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 1 was not supported.

Hypothesis 2: Social media usage by SMEs has a positive impact on SME business performance.

The coefficient for social media was positive and not statistically significant (β = 0.039, p = 0.733). This result suggested that social media usage does not have a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 2 was not supported.

Hypothesis 3: E-commerce has a positive impact on SME business performance.

The coefficient for social media was positive and not statistically significant (β = 0.026, p = 0.799). This result suggested that E-commerce does not have a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 3 was not supported.

Hypothesis 4: Access to finance has a positive impact on SME business performance.

The coefficient for access to finance was positive and statistically significant (β = 0.370, p < 0.001). This result suggested that access to finance does have a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 4 was supported.

Hypothesis 5: Entrepreneurial education has a positive impact on SME business performance.

The coefficient for access to finance was positive and not statistically significant (β = 0.001, p = .992). This result suggested that entrepreneurial education does not have a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 5 was not supported.

Hypothesis 6: Social capital has a positive impact on SME business performance.

The coefficient for access to finance was positive and statistically significant (β = 0.237, p = .010). This result suggested that social capital has a significant impact on the business performance of SMEs in this research study. Therefore, hypothesis 6 was supported.

4.13 Chapter 4 summary

This chapter cemented the fact that this research study was quantitative, as envisioned by the research design. The objective of this chapter was to present the results of the statistical analysis executed with the intention of examining the impact of the independent variables on business performance in South Africa. The demographics were presented first followed by the tests of normality, then the reliability analysis. Pending this a correlation analysis, a confirmatory factor analysis and a regression analysis were undertaken to test the hypotheses. Chapter 5 compared the results derived against the existing body of literature.

CHAPTER 5. DISCUSSION OF RESULTS

The objective of this chapter was to provide comprehensive insights derived from the data analysis results reported in Chapter 4, additionally to evaluate the hypotheses proposed in Chapter 2. Section one reviewed the demographic data, the second section assessed the hypothesis testing outcomes, and the third section concluded the discussion. The objective of this research study was to investigate the impact of digital technology on the business performance of SMEs in South Africa. The study addressed the research objectives and questions by drawing on inputs from SME owners, managers and employees operating businesses within the Gauteng province.

5.1 Discussion pertaining to demographics

5.1.1 Gender split

From the sample analysed in this research study, 63% of the participants were female and 34% were male. This insight is reflective of existent literature, a 2019 report from the World Bank stated that Africa has the highest rate of entrepreneurship globally and is the only continent where women represent the majority of entrepreneurs. According to Steel (2017), women entrepreneurs can attain independence from their husbands for their personal care and consumption requirements through the income that they generate. Additionally, women entrepreneurs in Africa are challenging and reshaping the prevailing narrative, with the potential to significantly alter the economic landscape of the continent (Kelly-Linden, 2020). They are firmly rooted in and shaped by the actualities of their individual African nations and communities (Ojong et al., 2021).

5.1.2 Age

This question aimed to identify the age range of the entrepreneurs who responded. Questionnaire results illustrated that the majority of respondents in this sample, around 55%, were between the ages of 25 and 34, while 26% were between 35 and 44. For this

sample, it can deduced that a majority of the sample being investigated was within the economic working age.

5.1.3 Education demographics

This question aimed to ascertain the level of education achieved by the entrepreneurs within the sample. Subsequently, approximately 43% of the SMEs that responded indicated that they have a postgraduate degree. Furthermore, approximately 30% of the population had an undergraduate degree. Therefore, it could be deduced that the majority of this sample size had acquired some sort of formal education beyond high school education.

5.1.4 Business tenure

This question sought to establish how long the SMEs being investigated had been in existence. Insights from the analysis indicated that 32 SMEs which constituted 28% of the sample size, had been in existence for 1 – 3 years. The second longest business tenure, represented by 23% of the sample had a tenure of between 5 – 10 years. Therefore, it could be deduced that the majority of this sample size had businesses that were still in their formative years.

5.2 Discussion of key findings

5.2.1 Discussion on Digital Marketing

Hypothesis 1: Digital marketing has a positive impact on SME business performance.

Numerous SMEs are at the growth stage of their business life cycle, which is a critical time for customer acquisition and retention. As a result, these organisations must design marketing objectives that prioritise successful client outreach. Many marketing communication qualities and traditional media channels can be mimicked by digital marketing tactics, allowing for a more diverse marketing mix (Omondi, 2017). Therefore, the establishment and preservation of consumer trust emerges as a vital element that

contributes to the enduring feasibility and endurance of SMEs. Consequently, SMEs exhibit repeat buying behaviour when a level of brand affinity and trust has been established (Enehasse & Sağlam, 2020). This study explored the impact of digital marketing on SMEs performance to ascertain the extent to which the organisation takes advantage of social media marketing, search engine optimisation (SEO) and online advertising. Drawing insights from existent literature, SMEs in the UAE are coerced to embrace digital marketing due to external pressures (Nuseir & Aljumah, 2020). Consequently, digital marketing had a positive impact on revenue, profitability, and market share (Onyango, 2016).

This study revealed a positive but weak relationship between digital marketing and SME performance, meaning that digital marketing had little to no impact on business performance. This is also signified by the insignificant p-value = 0.819. Therefore, it was concluded that there is not enough evidence to support that digital marketing had a positive impact on business performance among SMEs in Gauteng. These findings are likely to be a possibility within the South African contexts due to various obstacles that inhibit the effective use of digital marketing, which include the cost of limited availability of infrastructure to support digital marketing and the cost of accessing the internet (Lekhanya, 2015). Another obstacle may include a lack of technical skills and understanding by SMEs to implement effective digital marketing strategies (Korff, 2021). These results provide insights for policymakers and business accelerator practitioners to consider empowering SMEs with adequate digital technology infrastructure.

5.2.2 Discussion on Social Media

Hypothesis 2: Social media usage by SMEs has a positive impact on SME business performance.

The number of internet consumers has surpassed 2 billion since 2010 and is expected to double annually. Consequently, businesses need to develop strategies that prioritise the use of social media platforms to effectively communicate their services and products to potential new clients (Smith, 2011). This study explored the impact of social media usage on SME's performance, exploring the SMEs' perception of the value of social media

platforms. Social media provides SME owners with advantages not afforded by traditional media. Furthermore, there is a shift in media consumption patterns, as demonstrated by Ghanaian businesses as they increasingly leverage social media platforms for interactive and informative purposes (Odoom et al., 2017). Additionally, it is imperative for the organisation to know what types of devices their customers are using to develop effective marketing strategies (Stone & Woodcock, 2014).

This study revealed a positive but weak relationship between social media and SMEs performance meaning that social media has little to no impact on business performance. This is also signified by the insignificant p-value = 0.733. Therefore it was concluded that there is not enough evidence to support that social media had a positive impact on business performance among SMEs in Gauteng. These findings are likely to be a possibility within the South African contexts due to various reasons. One of which could be that SMEs are not fully comprehending how social media usage could benefit their businesses (Rahbi & Abdullah, 2017). These results provide insights for policymakers and management teams within the social media platforms to consider empowering SMEs with knowledge on how to effectively leverage social media in their business operations.

5.2.3 Discussion on E-commerce

Hypothesis 3: E-commerce has a positive impact on SME business performance.

SMEs can improve their profitability and longevity by embracing E-commerce platforms (Ayawei, 2022). E-commerce improves the performance of SMEs by enabling better and more effective business process management. According to Mechman et al. (2022), it also has a critical role in lowering transaction costs, which contributes to SMEs' improved performance. The use of e-commerce for advertising, communication, buying, selling, and payment transactions is gradually becoming the industry standard. This trend can be seen in the steady year-on-year increase in the number of businesses moving to electronic commerce platforms to conduct their day-to-day commercial activities (Ayawei, 2022). Market orientation, entrepreneurial orientation and e-commerce adoption have positive and significant influences on the improvement of the business performance of SMEs

(Octavia et al., (2020). This study investigated the impact of E-commerce on SMEs performance, it explored the compatibility and the perceived benefit of organisations infusing E-commerce in their businesses.

This study revealed a positive but weak relationship between E-commerce and SMEs performance meaning that E-commerce had little to no impact on business performance. This was also signified by the insignificant p-value = 0.799. Therefore, it could be concluded that there wasn't enough evidence to support that E-commerce had a positive impact on business performance among SMEs in Gauteng. These findings are likely to be a possibility within the South African context due to various obstacles. These obstacles could include the availability of reliable internet, digital payment platforms and the logistics of delivering the product to the customer (Ramsern & Baxodirovna, 2023). Additionally, IT security and cybersecurity are other factors that impede the adoption of E-commerce by SMEs (Mputle, 2020). These results provide insights for policymakers and business accelerator practitioners to consider empowering SMEs with resources to enable SMEs to adopt E-commerce within their business.

5.2.4 Discussion on Access to Finance

Hypothesis 4: Access to finance has a positive impact on SME business performance.

Businesses can diversify their product lines and expand their market reach by using extra capital to develop new goods and services (Jasra et al., 2011). Meso-finance is a financial product that was created to meet the financing needs of SMEs that lie between the microfinance and commercial banking sectors. This intermediate financing alternative seeks to bridge the gap and provide appropriate financial solutions for SMEs who have outgrown microfinance but may still encounter barriers to accessing standard commercial banking services (Lieno, 2014). Access to finance has an impact on the business performance of formal and informal SMEs (Zylfijaj & Nikoloski, 2021). This study investigated the impact of Access to finance on SMEs performance, exploring how SMEs obtained and used financial resources, as well as the perceived benefits of these efforts.

This study revealed a positive and moderate relationship between access to finance and SMEs performance meaning that access to finance had an impact on business performance. This was also signified by the significant p-value <.001. Therefore it was concluded that there is enough evidence to support the hypothesis that access to finance has a positive impact on business performance among SMEs in Gauteng. Which was aligned with existing literature.

5.2.5 Discussion on Entrepreneurial Education

Hypothesis 5: Entrepreneurial education has a positive impact on SME business performance.

The main goal of entrepreneurial education is to develop in graduates a mindset in graduates that is open to seeing and seizing possibilities. Whether graduates opt to start their own companies or become employees, they are raised with an entrepreneurial mindset that fosters innovation. This enables the individual to identify opportunities which may lead to the growth of a firm. This notion is supported by studies demonstrating that entrepreneurship education efficiently promotes the development of competent entrepreneurs (Asghar et al., 2019). This study investigated the impact of entrepreneurial education on SME performance, exploring the awareness and perceived value of entrepreneurial education. Individuals with entrepreneurial expertise because of their educational achievement are more prepared to actively engage in business operations than those who do not (Barreira et al., 2015). Additionally, entrepreneurship education is essential for arming firm owners with information about the elements that lead to failure (Cho et al., 2018).

This study revealed a positive but negligible relationship between entrepreneurial education and SME performance meaning that entrepreneurship had no impact on business performance. This is also signified by the insignificant p-value = 0.992. Therefore it could be concluded that there was not enough evidence to support that entrepreneurial education had a positive impact on business performance among SMEs in Gauteng. These findings were likely to be a possibility within the South African contexts due to various obstacles. These obstacles could include entrepreneurs not having

access to formal education or training opportunities, as well as the lack of entrepreneurial education within the schooling system (Marecha, 2020). Additionally, existing programs may be not sufficient to provide the knowledge that SMEs need to overcome their challenges (Kabue, 2019). These results provide insights for policymakers and business accelerator practitioners to develop educational programs with an appropriate delivery method, that empowers SMEs with practical knowledge that can be implemented within their daily business practices.

5.2.6 Discussion on Social Capital

Hypothesis 6: Social capital has a positive impact on SME business performance.

Social capital is a critical form of entrepreneurial capital that considerably contributes to the growth and sustainability of enterprises. In South Africa, SMEs are widely recognised as key drivers of economic development, particularly due to their capacity to decrease unemployment and alleviate poverty (Mbatha et al., 2024). The establishment of social capital is necessary for the sustained development and prosperity of small and medium-sized enterprises. Consequently, it is considered a critical element in the improvement of the positive performance of SMEs (Ndhlovu, 2020).

This study investigated the impact of social capital on SME performance, exploring how entrepreneurs cultivated and used networks that they have created with suppliers, other entrepreneurs and their customers. The performance of SMEs was positively influenced by the attainability of resources accumulated through social capital, high social capital can lead to high enterprise performance (Jalali et al., 2013). Entrepreneurs with a history of social interactions developed trust among network members (Claridge, 2018). Consequently, SMEs must build strong stakeholder relationships to sustain market share, profitability, and job creation. Trust with customers is essential, and robust supplier partnerships help optimize operations and expand assets (Ndhlovu,2020).

This study revealed a positive and moderate relationship between social capital and SMEs performance meaning that access to finance had an impact on business performance. This

is also signified by the significant p-value = .010. Therefore it could be concluded that there is enough evidence to support the hypothesis that social capital had a positive impact on business performance among SMEs in Gauteng. This insight was in alignment with existing literature on social and business performance.

5.3 Chapter 5 summary

The objective of this chapter was to present and expand on the findings from the statistical analysis undertaken in Chapter 4. The goal of this analysis was to investigate the research question and acquire insights into how selected constructs—namely digital marketing, social media, e-commerce, access to finance, and social capital—affect the Business performance of SMEs.

The conclusions attained from this analysis concerning the research objectives were discussed in Chapter 6. Furthermore, the final part of this report will discuss the study's shortcomings, prescribe recommendations, and suggest areas for future research.

CHAPTER 6. CONCLUSION & RECOMMENDATIONS

This final chapter provided a concise summary of the research study, outlining the results derived from the analysis in relation to existing literature, with a particular focus on the insights that were unearthed. Additionally, this chapter also made recommendations, discussed the study's shortcomings, and proposed areas for future research on elements of the topic that were not included in this study.

6.1 Conclusion regarding Research Objective 1

To investigate the impact of digital marketing on the business performance of SMEs in South Africa

The study's findings suggested a very weak positive and insignificant relationship between digital marketing and business performance in the South African context. Therefore, the hypothesis that "Digital marketing has a positive impact on business performance." was not supported. Consequently, this suggests that the digital marketing strategies of SMEs may require a re-evaluation to ensure that they are in alignment with the requirements and preferences of their target audience and that adequate resources are allocated to optimise the potential positive effects on firm performance.

These findings did not conform to existent literature which emphasises the positive impact of digital marketing on SME success. Nuseir and Aljumah (2020) researched SMEs in the UAE and discovered that digital marketing activities improve business success, especially when targeting remote clients. Similarly, Onyango (2016) observed that digital marketing increases revenue, profitability, and market share.

6.2 Conclusion regarding Research Objective 2

To investigate the impact of social media usage on the business performance of SMEs in South Africa.

The study's findings suggested a very weak positive and insignificant relationship between social media usage and business performance in the South African context, the hypothesis that "Social media usage has a positive impact on business performance." was not supported. Consequently suggesting that media usage alone did not have a significant impact on business performance and that SMEs may need to develop ways in which they can better use social media in their daily operations.

These findings did not conform to existent literature which suggested that social media had a positive impact on business performance. Furthermore, social media also offered advantages to SME owners that traditional media does not (Odoom et al., 2017

6.3 Conclusion regarding Research Objective 3

To investigate the impact of E-commerce on business performance of SMEs in South Africa

The study's findings suggested a very weak positive and insignificant relationship between E-commerce and business performance in the South African context, the hypothesis that "E-commerce has a positive impact on business performance." was not supported. Suggesting that E-commerce, as currently used by the SMEs who participated in the research study, may not be a significant driver of business performance.

These findings did not conform to existent literature which indicated that E-commerce adoption, market orientation, and entrepreneurial orientation all had a favourable and significant impact on the success of SMEs. According to Octavia et al. (2020) these aspects correlate to improved business performance, implying that embracing E-commerce and aligning with market and entrepreneurial orientations are helpful to SMEs.

6.4 Conclusion regarding research question 4

To investigate the impact of access to finance on the business performance of SMEs in South Africa.

The study's findings suggested a moderately positive and significant relationship between firm performance and access to finance in the South African context. The hypothesis that "Access to finance has a positive impact on business performance" was supported. Suggesting that access to finance was a significant driver of business performance.

These findings were aligned with existent literature, a study conducted by Zylfijaj and Nikoloski (2021) concluded that access to finance has an impact on the prosperity of both informal and formal SMEs. Similarly, in Nigeria, it was concluded that bank credits to SMEs have a significant impact on the growth of the Nigerian economy (Oaya & Mambula I, 2017).

6.5 Conclusion regarding research question 5

To investigate the impact of entrepreneur education on the business performance of SMEs in South Africa

The study's findings suggested a weak positive and insignificant relationship between entrepreneur education and business performance in the South African context, the hypothesis that "Entrepreneur education has a positive impact on business performance" was not supported. This finding suggested that entrepreneur education, as currently experienced by the SMEs was not effective in driving business performance. Therefore, the method of presenting and delivering it to SMEs may need to be altered.

These findings were not aligned with existent literature, according to Asghar et al., (2019) entrepreneurial education had a positive influence on SMEs. Similarly, entrepreneurship content, pedagogy and development influenced the financial performance of graduate-owned SMEs in Tanzania (Ndibalema et al., 2024).

6.6 Conclusion regarding research question 6

To investigate the impact of social capital on the business performance of SMEs in South Africa.

The study's findings suggested a moderately positive and significant relationship between social capital and business performance in the South African context, the hypothesis that "social capital has a positive impact on business performance" was supported. Suggesting that social capital was a significant driver of business performance.

These findings were aligned with existent literature, according to Mahar and Ghumro (2020) social capital increases resources that are available to entrepreneurs, and SMEs leverage these resources to enhance business performance. Similarly, Claridge (2018) emphasised the importance of trust, which is cultivated through social interactions among network members. Furthermore, Ndhlovu (2020) highlighted the significance of establishing robust relationships with stakeholders to preserve market share, profitability, and job creation. To optimise operations and broaden their asset base, SMEs must cultivate trust with customers and establish strong partnerships with suppliers.

6.7 Recommendations

The purpose of this research study was to investigate the influence of a variety of factors on business performance, with a particular emphasis on digital marketing, social media usage, E-commerce, access to finance, entrepreneurial education and social capital. This research study focused on SMEs and analysed the impact of these factors on their performance in terms of prosperity, growth and sustainability. It was imperative to consider not only financial metrics but also non-financial perspectives to develop a thorough comprehension of the business performance of SMEs. It was also necessary to evaluate additional internal and external factors that impact sales growth and profitability, as business success is not exclusively determined by marketing or digital marketing initiatives.

One suggestion was for SMEs to establish networks through small business empowerment centres, which enable them to cultivate relationships with other SMEs to exchange ideas, knowledge, and skills. As opposed to viewing each other as competitors, this collaborative approach has the potential to enhance their market position. Encouraging employees to cultivate social capital and share knowledge within the organisation can foster a supportive environment that attracts investment by demonstrating a robust value chain, while building social capital through business associations, incubator hubs, and business seminars can further enhance performance.

The training support for SMEs should be provided in a manner that is convenient for their hectic schedules, with the option of remote learning through digital platforms. In learning areas such as digital marketing, social media usage and E-commerce adoption, where industry-specific trends can have a substantial impact on business growth, the content must be updated regularly to ensure that it remains current and pertinent.

In addition, the evaluation of the impact of digital marketing should extend beyond its impact on sales and profits to include its impact on customer relationship management and brand loyalty. A comprehensive approach that evaluates both internal and external factors that contribute to the growth and profitability of SMEs is indispensable, as the success of an organisation is not limited to financial outcomes.

6.8 Limitations of the study

Even though this study may have contributed to the existing literature, below are some of the challenges that were experienced. The intended sample's responses were difficult to gather, as some participants were reluctant to complete the questionnaire. As a result, the study did not achieve the number of responses that was initially anticipated. Incomplete responses were also a result of the questionnaire's length, as some participants did not complete all the questions. Ultimately, this resulted in a smaller sample size for the study. Additionally, the investigation was conducted in Gauteng, South Africa's economic epicentre; however, this province is characterised by substantial socioeconomic disparities. The survey was not concentrated in a specific area of Gauteng,

such as a specific township, The study's generalisability to other provinces in the country is restricted by its geographic focus. This study did not have a focus on a specific industry, Ultimately, The study's results may have been influenced by the diversity of the respondents, who were not similar, which could have impacted the overall findings.

6.9 Suggestions for further research

The constraints faced in this study can provide a basis for future research deliberations. Future researchers could use different techniques to collect their data, to improve response rates. By broadening the scope to encompass other provinces in South Africa, a more comprehensive and balanced viewpoint can be achieved. Gauteng, albeit being the economic centre, does not adequately reflect the varied realities encountered around the country.

Furthermore, the use of a qualitative methodology, such as interviews or focus groups, might facilitate the discovery of subtleties and meaningful observations that are frequently overlooked in quantitative research. A longitudinal research method may be useful for monitoring the trajectory of the constructs over time, providing a more profound understanding of their effects over a prolonged duration rather than at a singular moment.

Subsequent investigations could derive value by including control variables to enhance uniformity among participants. Such an approach would enable the examination of the constructions inside a particular setting, such as a singular geographical area or sector. Furthermore, including external economic variables, such as foreign exchange rates and government policies, in future studies could offer a more sophisticated comprehension of their influences on SMEs.

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APPENDIX A: Research Instrument

Dear Participant
My name is Atlegang. I am studying for a degree of Master of Management in the field of Digital Business, Faculty of Commerce, Law and Management at the University of the Witwatersrand. My supervisor is Dr. Eleanor Chipeta I am conducting a research study about the impact of digital factors on the business performance of SMEs. The study title is **Investigating the Digital Factors that Impact Business Performance among Small and Medium Enterprises in South Africa.**

I am inviting you to take part in an interview/survey. If you decide to take part, your participation in this research study will last about 10 Minutes.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decided not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely, Atlegang Mosimanekgosi

Researcher: Atlegang Mosimanekgosi, 539264@sudents.wits.ac.za, 078 451 5957

Supervisor: Dr Eleanor Chipeta, Eleanor.chipeta@wits.ac.za, 011 717 8238

Do you consent to proceed in this research study?

- ○ YES (6)
- ○ NO (7)

Skip To: Digital Marketing If Dear Participant My name is Atlegang. I am studying for a degree of Master of Management in the f... = YES

Skip To: End of Survey If Dear Participant My name is Atlegang. I am studying for a degree of Master of Management in the f... = NO

Page Break

Digital Marketing 1. To what extent does your organisation use Emails?

- ○ 1 - No extent (1)
- ○ 2 - Limited extent (2)
- ○ 3 - Moderate extent (3)
- ○ 4 - Great extent (4)
- ○ 5 - Very great extent (5)

Digital Marketing 2. To what extent does your organisation use mobile marketing?

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Digital Marketing 3. To what extent does your organization use social media marketing?

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Digital Marketing 4. To what extent does your organization use search engine optimisation (SEO)?

- ○ 1 - No extent (1)
- ○ 2 - Limited extent (2)
- ○ 3 - Moderate extent (3)
- ○ 4 - Great extent (4)
- ○ 5 - Very great extent (5)

Digital Marketing 5. To what extent does your organization use online advertising (website, blogs, etc.)?

- ○ 1 - No extent (1)
- ○ 2 - Limited extent (2)
- ○ 3 - Moderate extent (3)
- ○ 4 - Great extent (4)
- ○ 5 - Very great extent (5)

Access to finance 6. Our business is able to provide the necessary collateral requirement to access finance

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Access to finance 7. Our business benefits from support provided by government to small businesses

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Access to finance 8. Our business is aware of available funding activities

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Access to finance 9. Our business invests funds for innovation

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Access to finance 10. Financial institutions offer our business affordable rates of interest on loans

- 1 - No extent (1)
- 2 - Limited extent (2)
- 3 - Moderate extent (3)
- 4 - Great extent (4)
- 5 - Very great extent (5)

Social Media 11. We consider our business as a frequent user of social media.

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Media 12. Our business uses the capabilities of social media to the fullest

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)

- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

Social Media 13. Our business uses our social media for most of our business activities

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

Social Media 14. Our business uses many social media concurrently which work well together

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-commerce 15. Using E-commerce would enhance my business effectiveness, my effectiveness on the job.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-commerce 16. E-commerce is useful in my business

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-commerce 17. Using E-commerce increases my business productivity

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)

- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-commerce 18. Using E-commerce enables my staff to accomplish transactions more quickly.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-Commerce 19. Using E-commerce can decrease the time needed for my business transactions.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)

- 7 - Strongly agree (7)

E-commerce 20. If my company uses E-commerce, it will increase the quality of sales of my business.

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

E-Commerce 21. My company has the resources necessary to use E-commerce for example manpower, capital, etc.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-Commerce 22. Using E-commerce fits into our way of doing business.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

E-Commerce 23. Using E-commerce is compatible with all aspects of my business transactions.

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

Page Bre

Entrepreneurial edu. 24. Learning about business planning is very important to me

- ○ 1 - Strongly disagree (1)
- ○ 2 - Disagree (2)
- ○ 3 - Somewhat disagree (3)
- ○ 4 - Neutral (4)
- ○ 5 - Somewhat agree (5)
- ○ 6 - Agree (6)
- ○ 7 - Strongly agree (7)

Entrepreneurial Edu. 25. I received entrepreneurial education at post-secondary school level

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Entrepreneurial Edu. 26. I would prefer to employ graduates who have entrepreneurial education

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Entrepreneurial Edu. 27. I have not heard about entrepreneurial education

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Entrepreneurial Edu. 28. Will receiving entrepreneurial education improve your business performance

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 29. Our business has developed networks through business associations

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 30. Our business has developed networks through the business chamber of commerce

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 31. I build networks during training sessions

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 32. Our relationship with suppliers is based on mutual trust

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 33. I have spent much effort on cultivating connections with suppliers

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Social Capital 34. Our business has no relationship with customers

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

End of Block: Section A

Start of Block: Section B

Firm Performance 35. The company has increased on growth in sales revenue

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 36. The company has increased on profitability

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 37. The company has increased on labour productivity

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 38. The company has increased on level of customer satisfaction

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 39. The company has increased on overall financial performance

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 40. The company has increased on level of customer loyalty

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Firm Performance 41. The company has increased in growth of machine or worker

- 1 - Strongly disagree (1)
- 2 - Disagree (2)
- 3 - Somewhat disagree (3)
- 4 - Neutral (4)
- 5 - Somewhat agree (5)
- 6 - Agree (6)
- 7 - Strongly agree (7)

Page Break

Start of Block: Demographics

Gender 42. What is your gender identity?

- Female (1)
- Male (2)
- Other (3)
- I prefer not to say (4)

Age 43. Please choose your age range

- ○ Below 25 (1)
- ○ 25 - 34 (2)
- ○ 35 - 44 (3)
- ○ 45 - 54 (4)
- ○ 55 - 64 (5)
- ○ 65 & above (6)

Education 44. What is your highest level of education completed?

- ○ No formal qualification (1)
- ○ High School (2)
- ○ Technical/vocational training (3)
- ○ Undergraduate degree (4)
- ○ Postgraduate degree (5)
- ○ Other (6)

Industry 45. Which industry does your business operate in?

- ○ Retail (1)
- ○ Manufacturing (2)
- ○ Agriculture (3)
- ○ Food (4)
- ○ Construction & real estate (5)
- ○ Information Technology (IT) (6)
- ○ Healthcare (7)
- ○ Education (8)
- ○ Beauty (9)
- ○ Other (10) _____

End of Block: Demographics

Start of Block: General Business Information

Tenure 46. Years in business

- ○ Less than 1 year (1)
- ○ 1 - 3 years (2)
- ○ 3 - 5 years (3)
- ○ 5 - 10 years (4)
- ○ More than 10 years (5)

Employee count 47. How many employees do you currently employ?

- 1 - 4 (1)
- 5 - 9 (2)
- 10 - 15 (3)
- 16 - 30 (4)
- More than 30 (5)

Location 48. In which municipality does your business operate in?

- West Rand (1)
- Ekhurleni (2)
- Sedibeng (3)
- Johannesburg (4)
- Tshwane (5)

Social Media 49. Which social media platforms does your business use?

- [ ] Facebook (1)
- [ ] Instagram (2)
- [ ] X (formerly twitter) (3)
- [ ] WhatsApp (4)
- [ ] Telegram (5)
- [ ] Blog (6)
- [ ] TikTok (7)
- [ ] LinkedIn (8)
- [ ] Other (9)

_____

Social media purpose 50. What is the intended purpose of using social media?

- [ ] Attract new customers (1)
- [ ] Increase customer awareness (2)
- [ ] Customer service activities (3)
- [ ] Receive customer feedback (4)
- [ ] Customer relations (5)
- [ ] Public relations (6)
- [ ] Business networking (7)
- [ ] Getting business referrals (8)
- [ ] Cultivate relationship (9)
- [ ] Interact with suppliers (10)
- [ ] Information sharing and search (11)
- [ ] Conduct market research (12)
- [ ] Communicate brand (13)
- [ ] Other (14) _____

APPENDIX B: Ethics clearance

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/DB539264/202
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	Investigating the impact of digital technology on the performance of Sma and Medium Enterprises in South Africa
Investigator / Researcher	Mr Atlegang Mosimanekgosi
Nature of Project	MM (Digital Business)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	8/29/2023
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba ☎ +27 11 717 3976 +27 82 733 6587 pius.oba@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Eth Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research a guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature

11 September 2023
Date: