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2025

University of the Witwatersrand, Johannesburg

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Kutama, Phumudzo. (2025). Investigating barriers to digital platform adoption: A case of the South African township MSMEs [Master`s dissertation, University of the Witwatersrand, Johannesburg]. WIReDSpace. <https://hdl.handle.net/10539/50188>



Investigating barriers to digital platform adoption: A case of the South African township MSMEs

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**A research proposal 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

June 2025

Supervisor: Dr Thembekile Mayayise

Abstract

The digital transformation of Micro, Small, and Medium Enterprises (MSMEs) holds significant potential to address the socio-economic challenges faced by South Africa's township economy. Despite this potential, MSMEs in townships encounter barriers such as limited digital literacy, high platform costs, inadequate infrastructure, and cultural misalignment with digital tools. Anchored in the Technology-Organization-Environment (TOE) framework, this study explores the factors influencing digital platform adoption by township MSMEs.

A multi-site qualitative case study approach was employed, using semi-structured interviews with MSME owners and managers across diverse township contexts in South Africa. The sample comprised varied enterprise types to capture a broad view of the challenges and enablers of digital platform adoption. Thematic analysis revealed that technological accessibility, organizational readiness, and environmental conditions including socio-cultural and language-related factors play critical roles in shaping digital adoption.

The study makes four key contributions. Theoretically, it extends the TOE framework by highlighting the importance of cultural, language, and awareness-related factors in township digital adoption. Methodologically, it demonstrates the value of a multi-site interpretivist case design for exploring digitally constrained MSME environments. Contextually, it provides empirical insights into the lived realities of township entrepreneurs navigating digital transformation. Practically, it offers actionable guidance for policymakers, digital service providers, and ecosystem partners on designing more inclusive digital interventions.

Overall, the findings underscore the need for targeted interventions that enhance digital literacy, reduce adoption costs, and align platform designs with the socio-cultural contexts of township MSMEs. Strengthening these areas can unlock the economic potential of digital platforms and support sustainable growth in South Africa's township economy.

Keywords: *MSME, TOE Framework, digital transformation, technology adoption, South Africa.*

Declaration

I Phumudzo Kutama 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. This research has not been submitted previously for any degree or examination at this or any other university.

Name: Phumudzo Kutama

Signature: _____

Signed at: Fourways, Johannesburg, South Africa

On the _____ day of _____, 2025.

Acknowledgements

I would like to express my heartfelt gratitude to those who supported me throughout this research journey. First and foremost, I extend my deepest appreciation to my supervisor, Dr. Thembekile Mayayise, for her invaluable guidance, encouragement, and expertise. Her insights and constructive feedback have been instrumental in shaping this research.

I am profoundly grateful to the faculty members of the University of the Witwatersrand, Business School, for their academic support and the learning opportunities they provided during my studies. Special thanks go to the respondents and organisations that participated in this study. Your willingness to share your experiences and insights has been critical to the success of this research.

To my incredible wife Kabelo Kutama. Thank you for being my constant source of strength, patience, and love throughout this journey. There were many moments when I doubted myself, when the pressure felt overwhelming, and when I just didn't feel like continuing and in all those moments, you stood by me. You encouraged me when I felt stuck, reminded me of my purpose when I lost motivation, and gave me the space and support I needed, even when it meant sacrificing our time together as a family.

Your quiet resilience, your belief in me, and your unwavering support carried me through the hardest phases of this research. I am deeply grateful for the emotional, mental, and practical support you gave so freely. This accomplishment belongs to you just as much as it does to me thank you for everything.

To my children, Rofhiwa and Rendani Kutama.

Rofhiwa, you arrived on this earth just as this journey began your presence has been a reminder of new beginnings and purpose. Though you won't remember these early days, know that your quiet moments beside me, even in your sleep, were part of the strength that carried me through.

Rendani, my beautiful daughter thanks you for your patience, your hugs, and your joy in between the chaos. I know you've seen less of Daddy during this time, and it hasn't been easy. But your surprise selfies, your laughter in the background, and the simple act of pulling me away for a moment of connection were more healing than you'll ever know. Thank you for reminding me of what truly matters, even when I couldn't be the weekend warrior you know me to be.

This journey was long, and at times it pulled me away from being fully present. But I hope one day, when you read this, you'll know that every sacrifice was made with you in my heart and that this achievement is also yours.

To my family and friends, thank you for your unwavering support, encouragement, and understanding during the demanding phases of this journey.

To my parents, Mr. and Mrs. Kutama. Thank you for being the original architects of my ambition. As lifelong educators with over 85 years of combined experience, your unwavering commitment to learning and professional development has been a constant example throughout my life. You instilled in me the value of hard work, discipline, and the transformative power of education lessons that have shaped not only this journey, but the person I continue to strive to become. Your pride in my academic growth has always been a source of quiet motivation, especially during the most difficult moments.

To my grandmother, Phuthego Christina Mabotja you raised me with love, resilience, and unwavering grace through both my formative and vocational years. But more than that you demanded excellence. You took no excuses for non-performance and held me to a standard I didn't always understand at the time. You were tough, uncompromising, and firm in your expectations and yet, it was all rooted in love.

The discipline you instilled, the lessons you repeated, and the values you upheld were not always easy to receive, but today I carry them with pride. They have become the backbone of my character and the reason I could push through even the most difficult moments of this journey. This milestone and the person I've become through it is a testament to the foundation you laid.

Thank you for believing in who I could be, long before I ever saw it for myself.

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List of Acronyms

Acronym	Definition
MSME	Micro, Small and Medium Enterprises
DPs	Digital Platforms
FASA	Franchise Association of South Africa
SoNA	State of the Nation Address
OTT	Over-the-Top
LED	Local Economic Development
TOE	Technology-organization-environment framework
BOP	Base of the Pyramid
CRM	Customer Relationship Management
CX	Customer Experience
DA	Democratic Alliance
COVID-19	Coronavirus Disease
UTAUT	Unified Theory of Acceptance and Use of Technology
ICT	Information and Communications Technology
SMME	Small, Medium, and Micro Enterprises
Telco	Telecommunications Company
LED	Local Economic Development
FASA	Franchise Association of South Africa
ERP	Enterprise Resource Planning
NDP	National Development Plan
GDP	Gross Domestic Product
TAM	Technology Acceptance Model
SME	Small and Medium Enterprises
SMS	Short Message Service
CAQDAS	Computer-Assisted Qualitative Data Analysis Software

CHAPTER 1: Introduction

1.1 Statement of Purpose

This research is driven by the firsthand experiences of growing up in a township and observing the challenges that small businesses face. The potential of Digital Platforms (DPs) to transform these businesses is immense, yet many township Micro, Small, and Medium Enterprises (MSMEs) remain disconnected from these opportunities. The study aims to investigate the barriers preventing these businesses from fully utilizing online marketplaces, social media, and digital platforms. By exploring the gap in digital adoption among township MSMEs, the research seeks to contribute to the development of effective interventions that can bridge this digital divide and foster economic growth within these communities.

MSMEs play a significant role in fostering local economic development (LED) in South Africa by contributing to job creation, economic growth, poverty alleviation, and sustainable development (Enaifoghe & Vezi-Magigaba, 2023). Enaifoghe and Ramsuraj (2023) further highlight the importance of MSMEs in empowering historically underprivileged individuals, including women and people of color, through targeted economic development strategies at the local government level. This underscores the potential impact of the proposed research on township MSMEs, as understanding and addressing the barriers they face in adopting digital platforms can contribute to broader socio-economic improvements, particularly in marginalized communities where economic empowerment is most needed (Enaifoghe & Ramsuraj, 2023).

President Cyril Ramaphosa has consistently emphasized the critical role of MSMEs in South Africa's economic growth, job creation, and empowerment in his State of the Nation Addresses (SoNA). In 2019, he highlighted the importance of MSMEs in driving economic growth beyond population growth by creating jobs and stimulating local economies (South African Government, 2019). During the 2022 SoNA, amid the COVID-19 recovery, he reiterated that MSMEs are crucial for job creation, particularly through the Presidential Employment Stimulus, which generated over a million opportunities (Forbes Africa, 2022). Furthermore, Ramaphosa's 2023 SoNA underscored ongoing efforts to financially support MSMEs through the Small Enterprise Finance Agency (Sefa), while also recognizing their role in fostering innovation within the digital and green economies, which are crucial for South Africa's broader economic recovery (Africa Check, 2023).

1.2 Background of the study

The Micro, Small, and Medium Enterprises (MSMEs) are critical to South Africa's economy, particularly within the townships where they form the backbone of local economic activities. Most of these enterprises are informal, survivalist businesses,

including hawkers, spaza shops, pavement sellers, and street vendors, as well as home-based operations like hair salons, shebeens, and laundromats (SME South Africa, 2023). These businesses are essential for providing basic goods and services to township residents, fostering community cohesion and offering employment in areas where formal job opportunities are limited.

Township MSMEs represent a significant portion of South Africa's informal economy. According to the thesis by Tayla (2021), up to 85% of MSMEs in South Africa are informal and survivalist businesses, with the majority based in townships. These enterprises are characterized by low levels of formalization, limited access to finance, and a reliance on personal networks and community ties to sustain their operations. Despite these challenges, township MSMEs are crucial for economic resilience and local development.

The township economy in South Africa represents a significant yet often underestimated segment of the national economy, contributing billions of rands in spending power. According to the According to Rogerwilco's 2023 CX Township Report: South Africa (n.d.), approximately 24.35% of South Africa's population, or 11.6 million people, reside in townships. These communities, despite grappling with high unemployment rates, poor service delivery, and low household incomes, are vibrant hubs of economic activity with substantial purchasing power.

A striking feature of the township economy is its value-driven nature. Rogerwilco (2023) reveals that majority of township residents prioritize price over brand loyalty, with 59.3% of respondents indicating that price is the primary motivator in their purchasing decisions. This value-conscious approach is further reflected in shopping habits, where 23% of respondents report spending 25% to 50% of their income within their townships, and another 25% of respondents spend more than 50% of their income locally (Rogerwilco, 2023).

Spaza shops play a crucial role in this economy, serving as daily shopping destinations for many residents. The report indicates that 51% of respondents shop at spaza shops daily, a 7% increase from the previous year. These shops not only provide essential goods but also adapt to the needs of the community by offering smaller, more affordable product quantities, which align with the financial constraints of township consumers (Rogerwilco, 2023).

In addition to traditional retail outlets, the rise of digital platforms within townships is noteworthy. The Township CX Report (2023) highlights that over 60% of respondents have either sold products or services online or know someone who has. This shift towards digital commerce is being driven by increased internet penetration, which rose from 64% in 2021 to 72.3% in 2022 (Haripersad, 2022). This digital transformation is crucial in providing new income opportunities in an environment where formal employment is scarce (Rogerwilco, 2023).

The township economy is also characterized by the significant role of stokvels, which are collective savings schemes deeply embedded in the financial practices of township residents. More than 51% of respondents are members of one or more stokvels, reflecting a strong community-based approach to saving and financial management. The 25-34 age group shows the highest adoption of stokvels, indicating a growing trend among younger, tech-savvy individuals who are leveraging these traditional structures in modern ways (Wilco, 2022)

Moreover, local brands such as Bathu and Drip have gained considerable traction among township consumers (Rogerwilco, 2023). The report shows that 16.7% of respondents spent between R1,000 and R2,000 on local fashion in the past year, with the 25–34 age group being the most significant contributors to this spending (Rogerwilco, 2023). These brands resonate with the township market not just for their style but for the cultural and emotional connections they establish with their customers, reflecting a broader trend of increased support for locally produced goods (Rogerwilco, 2023).

The sustainability of these businesses is a major concern. The thesis highlights that 70% of MSMEs in South Africa fail within their first 5-7 years, a trend that is particularly pronounced in the township economy (Tayla, 2021). This high failure rate is attributed to various factors, including limited access to finance, inadequate business development services, and the challenges of operating in an environment with poor infrastructure and high levels of competition.

The Township CX Report (2023) notes that township MSMEs continue to struggle with the fundamentals of eCommerce, including finding new customers, managing costs and maintaining cash flow. These challenges are exacerbated by a lack of reliable delivery mechanisms, which further hampers their ability to digitize their businesses and unlock funding opportunities. Despite the growing trend towards digitalization, with many MSMEs beginning to leverage online platforms and social media to reach broader markets, the report underscores that the transition to digital commerce remains a significant hurdle for many township enterprises.

The economic potential of the township economy is immense. According to Wilco (2022), the township economy is a vibrant and culture-rich market, representing hundreds of billions of rands in spending power a market that is largely untapped and misunderstood. This is further supported by data from the Franchise Association of South Africa (FASA), which highlights the existence of approximately 8.2 million stokvels with 11.4 million members, controlling R5 billion in savings. These figures underscore the untapped potential within the township economy and the opportunities for businesses to engage with this dynamic market.

However, the spatial and economic isolation of townships from mainstream economic activities remains a significant challenge. As Fakir (2017) contends, townships continue to be spatially disconnected and economically isolated, a legacy of their original conception during the apartheid era. Despite generating an estimated R200

billion annually, the township economy has yet to be fully integrated into the broader South African economy (DA Gauteng, 2021). This disconnection limits the ability of township MSMEs to scale and access the broader market opportunities available to more formalized businesses.

In terms of their broader economic contribution, MSMEs in the township economy play a vital role in promoting equitable income distribution and driving social change. The informal sector, including township micro-enterprises, is estimated to contribute to 25% of total employment and between 5% and 6% of South Africa's total gross domestic product (Emerald, 2021). These businesses are not only important for economic inclusion but also for addressing the deep-rooted social inequalities that persist in South Africa.

One of the most pressing issues for township MSMEs is their limited access to formal markets. The FinMark Trust. (2021) reveals that a significant portion of these businesses operate informally, with 58% of MSMEs in South Africa not registered formally. This informality restricts their ability to access formal financial services and markets, creating a barrier to growth and integration into the broader economy (Mahajan, 2014). The high costs and complexities associated with formal business registration and compliance further marginalize these businesses, keeping them on the periphery of economic activity (Trust, 2021).

Infrastructural deficits compound these market access challenges. According to FinMark Trust. (2021), many townships suffer from unreliable basic services such as electricity and water, which are essential for daily business operations. Frequent power outages, or load shedding, disrupt operations, leading to productivity losses and diminished revenue. Poor road conditions and limited public transportation options also hinder the movement of goods and customers, isolating township businesses and restricting their ability to expand their market reach (Trust, 2021).

Financial constraints are another significant hurdle for township MSMEs. FinMark Trust. (2021) highlights that only 34% of these businesses have access to formal financial accounts, forcing many to rely on personal savings or informal lending sources to finance their operations. This lack of access to formal credit severely limits their capacity to invest in business growth, technological upgrades, or even basic operational needs. The financial challenges were further exacerbated by the COVID-19 pandemic, which saw many businesses struggle to secure emergency funding or government relief due to their informal status.

Technology adoption presents both an opportunity and a challenge for township MSMEs. While there has been a noticeable increase in internet penetration and the use of social media for business purposes, as noted in the Wilco Report (2022), significant barriers remain. The high cost of mobile data and limited digital literacy prevent many businesses from fully embracing digital tools. Despite the rise in online transactions and digital payments, 97% of township MSMEs continue to rely predominantly on cash transactions, with only 58% utilizing digital financial services.

This slow transition towards digitalization hinders their ability to compete in an increasingly digital marketplace (Arafah & Hasyim, 2022a).

The vulnerability of township MSMEs to external shocks such as social unrest and the COVID-19 pandemic further highlights the precarious nature of their operations. Reports such as FinMark Trust. (2021) & Tayla (2021) emphasize how these events have led to widespread business closures, particularly among those without insurance or financial reserves. The lack of resilience among these businesses is a direct consequence of their informal nature and the broader structural challenges they face.

While township MSMEs are indispensable to South Africa's economy their potential is stifled by significant challenges. These businesses require targeted support to overcome barriers related to market access, infrastructure, finance and technology. By addressing these challenges policymakers and stakeholders can unlock the full potential of township MSMEs. This will in turn enable them to thrive and contribute more effectively to the national economy.

1.3 Research problem

The limited utilization of digital platforms, particularly social media and online marketplaces, poses a significant barrier to the growth and sustainability of MSMEs within South Africa's township economy (Mosweunyane, Rambe, & Dzansi, 2019). Research highlights that inadequate engagement with social media channels restricts these businesses from accessing the expansive online customer base available through these platforms (Mosweunyane et al., 2019). The barriers to digital adoption include limited digital literacy, inadequate access to affordable technology, and the high cost of data, which collectively hinder MSMEs from fully leveraging digital opportunities (Arafah & Hasyim, 2022). Addressing these challenges is crucial for empowering MSMEs to thrive in the digital economy (Mosweunyane et al., 2019).

South Africa's townships which are home to 24.35% of the population over 11.6 million people, as per the 2021 census represent a vibrant but underutilized market with significant spending power (SME South Africa, 2023). Despite the economic challenges, there is a noticeable shift towards digital solutions. A 2023 Township CX Report by Rogerwilco and Survey54 reveals a 60% increase in online commerce participation within these communities over the past year, with residents increasingly engaging in online selling and work. The report also highlights that 74% of respondents prefer purchasing local fashion online, underscoring the significant, yet under-exploited, market potential in these areas (Arafah & Hasyim, 2022; Trust, 2021).

The digital divide within these communities is further exacerbated by the complex and often prohibitive cost structures associated with accessing digital platforms. According to FinMark Trust. (2021), 97% of township MSMEs continue to rely predominantly on cash transactions, with only 58% utilizing digital financial services. This reliance on cash not only limits their operational efficiency but also restricts their participation in the broader digital economy. The survey also indicates that many of these businesses

are unable to pivot to digital solutions due to a lack of formalization, which leaves them excluded from formal financial systems and the benefits of digital transformation.

Infrastructural deficits in townships, such as unreliable electricity and limited internet access, severely hinder the adoption of digital tools by MSMEs. These challenges, highlighted in the Economics of South African Townships Report, significantly impede these businesses' efficiency and market access. Even when digital platforms are available, their usage is often constrained by these technical and logistical barriers (Trust, 2021).

This study aims to identify barriers to the effective use of digital platforms by township MSMEs by focusing on investigating digital literacy, awareness, cultural, language & access to affordable technology. By addressing these challenges, the research seeks to empower MSMEs to reach broader markets and enhance their economic impact in South Africa (Enaifoghe & Vezi-Magigaba, 2023 & South African Government, 2019).

Digital Platforms in Context:

In this study "digital platforms" are technology-driven initiatives that enhance MSME operations in South African townships. These platforms focus on several key areas:

- **Enhancing social media Access:** Focus on the digital divide by offering training workshops, digital literacy programs, and subsidized internet specifically for MSMEs, enabling their participation in the digital economy (Arafah & Hasyim, 2022).
- **Improving Social Media Utilization:** Digital platforms provide educational programs on social media marketing and affordable management services, helping MSMEs expand their market reach (Munu, 2021).
- **Facilitating Access to Online Marketplaces:** These platforms link MSMEs to broader markets through logistics support and payment systems, crucial for sustainable growth (Tayla, 2021).
- **Comprehensive Digital Solutions:** Integrated tools like e-commerce sites and CRM systems streamline operations, reduce costs, and increase market presence for MSMEs (Munu, 2021; Tayla, 2021)

1.4 Research Objectives

The research objectives of this study are as follows:

1. To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships
2. To investigate the barriers to digital platform adoption by South African MSMEs
3. To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships
4. To investigate the core needs and challenges of MSMEs in the context of digital transformation
5. To assess the role and impact of online marketplaces on the growth and sustainability of MSMEs in South African townships

6. To compare and evaluate the strategies employed by other African digital platform players within the retail environment, focusing on their approaches to assisting MSMEs in their digital transformation journey

1.5 Rationale

The research is motivated by the belief that digitization offers transformative potential for MSMEs, particularly in South Africa's townships, where these enterprises play a crucial role in economic growth and job creation (Department of Small Business Development, 2021). Despite this, micro-enterprises face significant challenges in adopting digital technologies. Existing studies have discussed the general benefits and obstacles of digitization for MSMEs (Chaura & Singh, 2019; Nassif et al., 2020), but there is a clear gap in understanding how these businesses in townships access and use digital platforms and social media channels.

The 2023 Township CX Report noted a 60% increase in online commerce participation within these communities, highlighting the need for more focused research on digital platform accessibility (Rogerwilco, 2023). This study aims to explore critical aspects like entry criteria, program design, and barriers to access for micro-enterprises, providing insights that could guide platform developers, inform micro-enterprises, and shape policymaker initiatives to bridge the digital divide in township economies. While it doesn't claim to exhaustively fill the literature gap, this research offers a fresh perspective on the digital transformation of township micro-enterprises.

1.6 Delimitations of the study

Delimitations To ensure a focused and manageable study, the researcher will be delimiting the research scope in the following ways:

Focus on Micro-Enterprises while the broader interest lies in the digitization of MSMEs, this research will specifically concentrate on micro-enterprises in South Africa. By narrowing the focus to micro-enterprises, the study will help me delve deeper into the unique challenges and opportunities these smaller businesses face, particularly concerning their interaction with digital platforms such as social media channels and online marketplaces. This approach allows for a more targeted analysis of how micro-enterprises, which make up the vast majority of MSMEs in South Africa, navigate digital transformation.

Exclusion of Traditional Telco Services will focus solely on digital platforms, social media channels, and online marketplaces, excluding traditional telco services such as voice, SMS, and data. This delimitation ensures a clear distinction from the core telco services and emphasizes the investigation into value-added digital services that are critical for enhancing the digital presence and operational capabilities of micro-enterprises in the township economy.

Limited scope of program effectiveness the research will identify and analyze social media channels, digital platforms, and online marketplaces available to micro-

enterprises, it will not assess the long-term effectiveness of these platforms on micro-enterprise growth. The study will instead focus on the accessibility, entry criteria, and initial impact of these platforms. The long-term impact of these platforms could be a topic for further research.

Focus on accessibility not implementation this study will primarily explore the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises, with a focus on entry criteria, barriers to access, and initial engagement. The research will not delve into the detailed implementation processes or user experiences of these platforms, as these aspects fall outside the primary scope of this investigation.

Delimiting specific industries, the research will adopt a broad focus across various sectors within the micro-enterprise category, rather than concentrating on specific industries (e.g., retail vs. manufacturing). This approach allows for a general understanding of how different types of micro-enterprises engage with digital platforms and the common challenges they face across sectors.

Inclusion of relevant literature: if the research encounters additional studies that expand on the context of social media channels, online marketplaces, or micro-enterprises in South Africa, these insights will be incorporated to enrich the understanding of the topic. This approach ensures a comprehensive and well-rounded analysis while staying focused on the core research objectives.

By implementing these delimitations, the research paper aims to achieve a focused and well-defined research project that deeply explores the accessibility and utilization of digital platforms, social media channels, and online marketplaces by micro-enterprises in South Africa's townships.

To avoid any misunderstanding of the study as a single-site case, it is clarified that the research was conducted across multiple township locations within Gauteng. MSMEs were selected based on their operation within township environments, active use or attempted use of at least one digital platform, and willingness to participate in qualitative interviews. These criteria ensured that the study captured diverse township contexts and provided a more comprehensive understanding of MSME digital platform adoption.

1.7 Assumptions

Several assumptions underlie this research on the role of Over-the-Top (OTT) platforms, online marketplaces, social media platforms, and telecommunications companies (Telcos) in the digitization of micro-enterprises within South Africa's township economy.

1. Availability and Transparency of Information:

- **Assumption:** The research assumes that the necessary information on programs and services specifically designed for micro-enterprises by

OTT platforms, marketplaces, social media platforms, and Telcos is publicly available through their websites and other resources. This information is presumed to be accurate, comprehensive, and reflective of the current offerings and support mechanisms for micro-enterprises.

- **Reasonableness:** Given that these platforms are likely to have a vested interest in promoting their services to attract micro-enterprises, it is reasonable to expect that relevant information will be available publicly. However, it is recognized that specific details, such as eligibility criteria or pricing structures, may be less transparent or not fully disclosed.
- **Sensitivity:** The research may be constrained by limited access to detailed information, which could hinder a complete understanding of the support provided by these platforms. To mitigate this, The researcher:
 - **Consulted industry reports and research:** Utilize third-party analyses and reports that provide insights into the offerings and performance of these platforms.
 - **Used alternative data sources:** Leverage case studies, success stories, and user testimonials from micro-enterprises that have engaged with these platforms to gain a broader understanding of their impact.

2. Willingness of Interviewees:

- **Assumption:** It is assumed that representatives from OTT platforms, marketplaces, social media platforms, and Telcos, as well as micro-enterprise owners, will be willing to participate in interviews and share their experiences and insights regarding digital platform utilization.
- **Reasonableness:** Participation in the research could be mutually beneficial, as platforms can gain valuable feedback on the needs of micro-enterprises, while micro-enterprises can learn more about the resources available to them. However, challenges such as time constraints, confidentiality concerns, or reluctance to disclose sensitive business information may affect participation levels.
- **Sensitivity:** Limited participation could reduce the richness and diversity of the perspectives captured, potentially impacting the depth of the research findings. To mitigate this, The researcher:
 - **Engage with industry experts and analysts:** Conduct interviews with knowledgeable individuals who can provide broader, high-level insights into the market dynamics and platform strategies.

- **Utilize online surveys:** Distribute surveys to a larger pool of micro-enterprises to collect a wider range of data and perspectives, thereby complementing the qualitative insights from interviews.

3. Representativeness of Participants:

- **Assumption:** The research assumes that the platform representatives and micro-enterprise owners who participate in the study will collectively provide a representative sample of the broader population, offering insights that are reflective of the overall landscape.
- **Reasonableness:** Achieving a truly representative sample across diverse platforms, industries, and geographic locations is challenging. The diversity of micro-enterprises in South Africa, especially in townships, means that some segments may be underrepresented.
- **Sensitivity:** A non-representative sample could lead to biased findings that may not accurately reflect the broader context or diverse experiences of micro-enterprises. To mitigate this, The researcher:
 - **Employed purposive sampling techniques:** Actively recruit participants from various sectors and geographic regions to ensure a more comprehensive and diverse sample.
 - **Triangulated data:** Cross-reference interview data with findings from surveys, reports, and secondary sources to provide a more holistic and balanced perspective.

1.8 Definition of terms

Table 1: Definition of terms

Acronym	Definition
MSME	Micro, Small, and Medium Enterprises, are businesses categorized by their size and scale of operations. They range from informal micro-enterprises with minimal employees and low turnover to more structured small and medium-sized enterprises with up to 200 employees and significant annual revenue.
Digital Platforms	Digital platforms are technology-based systems that enable various forms of digital interactions, such as e-commerce, social media, and online marketplaces.
Bathu	Bathu is a South African sneaker brand founded by entrepreneur Theo Baloyi in 2015.

Drip	Drip Footwear is a South African sneaker and lifestyle brand founded in 2019 by Lekau Sehoana.
Stokvels	(In South Africa) a savings or investment society to which members regularly contribute an agreed amount and from which they receive a lump sum payment.
Franchise Association of South Africa	The Franchise Association of South Africa (FASA) is the official organization representing the franchise industry in South Africa. FASA works to promote ethical franchising practices, provide support to franchise businesses, and advocate for the interests of its members.
State of the Nation Address	The State of the Nation Address (SoNA) is an annual speech delivered by the President of South Africa to a joint sitting of Parliament. The address serves as a key policy statement, outlining the government's agenda and priorities for the year. It typically covers the current state of the nation, economic policies, social issues, and government initiatives.
OTT	Over-the-Top any type of video or streaming media that provides a viewer access to movies or TV shows by sending the media directly through the internet
LED	Local Economic Development (LED) is a process by which local governments, businesses, and communities work together to stimulate economic activity and improve the quality of life within a specific area.
TOE	The technology-organization-environment framework, also known as the TOE framework, is a theoretical framework that explains technology adoption in organizations and describes how the process of adopting and implementing technological innovations are influenced by the technological context, organizational context, and environmental context. Louis G. Tornatzky and Mitchell Fleischer published the model in 1990.
Township Economy	The township economy refers to the economic activities and enterprises that take place within the townships of South Africa, which are urban areas that were historically underdeveloped and segregated during the apartheid era.
Information and Communications Technology	ICT refers to technologies that provide access to information through telecommunications. It encompasses a wide range of technologies, including the internet, wireless networks, cell phones, and other communication mediums that enable digital interaction and connectivity.
Enterprise Resource Planning	ERP systems are integrated software platforms used by organizations to manage and automate core business processes, including finance, supply chain, human resources, and manufacturing. These systems aim to streamline operations and improve data-driven decision-making.
Technology Acceptance Model	The Technology Acceptance Model is a theoretical framework used to understand and predict user adoption of technology. It emphasizes factors like perceived usefulness

	and perceived ease of use in determining whether individuals or organizations will adopt a new technology.
Base of the Pyramid	Refers to the largest but poorest socio-economic group, consisting of people living on less than \$2.50 per day. The concept emphasizes innovative business models to serve these low-income markets while fostering economic inclusion
Customer Relationship Management	A system or strategy used by businesses to manage interactions with current and potential customers. CRM tools help track customer data, improve service, and boost sales.
Democratic Alliance	A political party in South Africa. It is the official opposition party known for advocating economic liberalization, good governance, and anti-corruption measures.
Coronavirus Disease	A global pandemic caused by the SARS-CoV-2 virus. It emerged in late 2019, affecting public health and economies worldwide.
Unified Theory of Acceptance and Use of Technology	A theoretical model explaining user adoption of technology, focusing on factors like performance expectancy, effort expectancy, social influence, and facilitating conditions.
Information and Communications Technology	An umbrella term for technologies that provide access to information through telecommunications, including the internet, mobile networks, and computer systems.
Telecommunications Company	A company providing communication services such as telephone, internet, and wireless networking.
Enterprise Resource Planning	Software systems used by organizations to manage business operations such as finance, supply chain, manufacturing, and human resources through integrated applications.
National Development Plan	A strategic framework developed by the South African government to eliminate poverty, reduce inequality, and achieve sustainable economic growth by 2030.
Gross Domestic Product	A measure of a country's economic performance, representing the total value of all goods and services produced within a nation over a specific time.
Short Message Service	A text messaging service component of most telephone, internet, and mobile device systems, allowing users to send short text messages.
Computer-Assisted Qualitative Data Analysis Software	Computer programs designed to help researchers analyze and interpret qualitative data, like transcripts, field notes, and images, by enabling tasks such as coding, searching, and identifying relationships within the data.

1.9 Chapter Outline

This research report is structured into six chapters, each contributing to a comprehensive understanding of the study:

- **Chapter 1: Introduction**
Provides an overview of the study, including its purpose, background, research problem, and objectives.
- **Chapter 2: Literature Review and Theoretical Framework**
Examines existing scholarly literature and introduces the theoretical frameworks that guide the study.
- **Chapter 3: Research Methodology**
Describes the research design, approach, and methods used to investigate the propositions derived from the literature.
- **Chapter 4: Presentation of Findings**
Presents the results of the data collected, organised according to key themes and codes.
- **Chapter 5: Discussion of Findings**
Interprets the results in relation to the research questions, literature, and theoretical framework.
- **Chapter 6: Conclusion and Recommendations**
Summarises the key findings, outlines practical and theoretical implications, and provides recommendations for future research and policy.

CHAPTER 2: Literature Review and Theoretical Framework

2.1 Introduction

The purpose of this literature review is to explore and critically evaluate the scholarly literature relevant to the digitization of MSMEs within South Africa's township economy. This review adopts an integrative review approach, which synthesizes diverse research methodologies, including theoretical analyses, empirical studies, and case-based research, to provide a comprehensive understanding of the topic. The review is structured around the core research objectives, with each section focusing on specific sub-objectives.

By integrating insights from various disciplines, the review aims to uncover existing knowledge, identify gaps, and develop propositions that will inform the subsequent empirical analysis.

Throughout this section of literature review, the research approach will use the integrative approach as it systematically applies to combine insights from various sources. This approach not only allows for a more holistic view of the challenges and opportunities faced by MSMEs in the township economy but also facilitates the identification of intersections between different research traditions, leading to more robust conclusions.

2.2 Definition of Topic and Background Discussion

The digitization of MSMEs, particularly within South Africa's township economy, is a complex topic that requires a nuanced understanding of several key concepts. These include digital platforms, social media channels, online marketplaces, and the socio-economic dynamics unique to townships.

Digital Platforms are defined as online technologies that facilitate various digital interactions, such as e-commerce and digital financial services. For MSMEs, these platforms are critical tools for customer engagement, operational management, and market access (FinMark Trust, 2021). However, their effectiveness is often constrained by factors related to technology, organizational readiness, and environmental influences, as posited by the Technology-Organization-Environment (TOE) framework (Tornatzky & Fleischer, 1990).

This section synthesizes definitions and perspectives from e-commerce, digital finance, and technology adoption literature within the TOE framework. For instance, FinMark Trust (2021) provides empirical evidence on the adoption rates of digital platforms by MSMEs, while Tornatzky and Fleischer (1990) offer insights into how external pressures, organizational readiness, and technological advancements influence the adoption of new technologies. By integrating these perspectives, this discussion not only clarifies the concept of digital platforms but also highlights the specific technological, organizational, and environmental challenges and opportunities within the township economy.

Social Media Channels enable users to create, share, and interact with content online. For MSMEs social media is essential for marketing, customer engagement, and brand building. The impact of these channels is influenced by technological readiness, organizational capacity, and the external environment (Arafah & Hasyim, 2022).

Applying the integrative review approach through the lens of the TOE framework, this section synthesizes findings from marketing, communication, and information systems literature. For example, Kaplan & Haenlein (2010) discuss the strategic use of social media in business, while Arafah & Hasyim (2022) examine the barriers MSMEs face in adopting these channels. Integrating these insights with the TOE framework reveals that while social media has transformative potential, its effectiveness is limited by technological barriers, organizational limitations, and external environmental factors such as socio-economic constraints.

Online Marketplaces are digital platforms for buying and selling goods and services. They offer MSMEs in townships the potential to reach broader markets, though logistical challenges, organizational readiness, and external competition often limit participation (Wilco, 2022).

Here, the research synthesizes studies from supply chain management, business strategy, and economic development literature within the TOE framework. Studies by Mahajan (2014) on the economic dynamics of townships are integrated with logistics

theories from Chopra and Meindl (2016) and the TOE framework's focus on technological and environmental factors to provide a comprehensive understanding of the challenges MSMEs face in online marketplaces. This synthesis highlights that while online marketplaces provide access to broader markets, MSMEs often struggle with the technological and organizational demands required to participate effectively, influenced by external environmental pressures.

Township Economy refers to the economic activities occurring within South Africa's townships, which are areas historically underdeveloped and marginalized under apartheid policies. These economies are characterized by high levels of informality and entrepreneurial activity driven by necessity rather than opportunity (Mahajan, 2014).

This section combines insights from historical economic studies, contemporary development economics, and urban studies within the TOE framework. The historical context provided by sources like Mahajan (2014) is integrated with modern analyses of informal economies by De Soto (2000) to understand the unique technological, organizational, and environmental dynamics within townships. This synthesis reveals that the township economy, while vibrant and entrepreneurial, is constrained by systemic issues such as infrastructural deficits and limited access to formal financial services, directly impacting the technological adoption and organizational readiness of MSMEs.

MSMEs will specifically refer to micro-enterprises within South Africa's townships. This choice is justified by the significant role that micro-enterprises play in the township economy and the unique challenges they face in terms of digital transformation, particularly within the framework of technological readiness, organizational capacity, and environmental influence as posited by the TOE framework.

The below is further definition by category of MSME.

Survivalist Enterprise: Generates income below the minimum living standard, typically involving informal activities like hawking and subsistence farming. These enterprises usually operate at the margins of the economy (Abor & Quartey, 2010).

Micro Enterprise: Typically, unregistered businesses with a turnover of less than R150,000 annually and fewer than 5 employees, such as spaza shops and minibus taxis (Abor & Quartey, 2010).

Very Small Enterprise: Operates within the formal market, employing up to 10 people (or 20 in specific sectors like mining and manufacturing) and has access to basic technology (Abor & Quartey, 2010).

Small Enterprise: Established businesses with up to 50 employees, formal in nature, often with structured management processes (Abor & Quartey, 2010).

Medium Enterprise: Decentralized management, employing up to 100 employees (or 200 in sectors like mining and manufacturing), with a more developed organizational structure (Abor & Quartey, 2010).

Figure 1 gives details on how MSME's are measured according to the National, Small Business Act:

CURRENT SCHEDULE					NEW SCHEDULE		
Sector or subsector according to Standard Industrial Classification	Size or class of enterprise	Total full-time equivalent of paid employees	Total annual turnover	Total gross asset value (excludes fixed property)	Size or class of enterprise	Total full-time equivalent of paid employees	Total annual turnover
COLUMN 1 Unchanged	COLUMN 2	COLUMN 3	COLUMN 4	ABSENT IN NEW SCHEDULE	COLUMN 2 'Very small' removed	COLUMN 3 'Micro' increased to 10 employees	COLUMN 4 Revised for inflation
Agriculture	Medium	100	5 million	5 million	Medium	250	35 million
	Small	50	3 million	3 million	Small	50	17 million
	Very Small	10	0.5 million	0.5 million	Micro	10	7 million
	Micro	5	0.2 million	0.1 million			
Mining and quarrying	Medium	200	39 million	23 million	Medium	250	210 million
	Small	50	10 million	6 million	Small	50	50 million
	Very Small	20	4 million	2 million	Micro	10	15 million
	Micro	5	0.2 million	0.1 million			
Manufacturing	Medium	200	51 million	19 million	Medium	250	170 million
	Small	50	13 million	5 million	Small	50	50 million
	Very Small	20	5 million	2 million	Micro	10	10 million
	Micro	5	0.2 million	0.1 million			
Electricity, gas and water	Medium	200	51 million	19 million	Medium	250	180 million
	Small	50	13 million	5 million	Small	50	60 million
	Very Small	20	5.1 million	1.9 million	Micro	10	10 million
	Micro	5	0.2 million	0.1 million			
Construction	Medium	200	26 million	5 million	Medium	250	170 million
	Small	50	6 million	1 million	Small	50	75 million
	Very Small	20	3 million	0.5 million	Micro	10	10 million
	Micro	5	0.2 million	0.1 million			
Retail and motor trade and repair services	Medium	200	39 million	6 million	Medium	250	80 million
	Small	50	19 million	3 million	Small	50	25 million
	Very Small	20	4 million	0.6 million	Micro	10	7.5 million
	Micro	5	0.2 million	0.1 million			
Wholesale trade, commercial agents and allied services	Medium	200	64 million	10 million	Medium	250	220 million
	Small	50	32 million	5 million	Small	50	80 million
	Very Small	20	6 million	0.6 million	Micro	10	20 million
	Micro	5	2million	0.1 million			
Catering, accommodation and other trade	Medium	200	13 million	3 million	Medium	250	40 million
	Small	50	6 million	1 million	Small	50	15 million
	Very Small	20	5.1 million	1.9 million	Micro	10	5 million
	Micro	5	0.2 million	0.1 million			
Transport, storage and communications	Medium	200	26 million	6 million	Medium	250	140 million
	Small	50	13 million	3 million	Small	50	45 million
	Very Small	20	3 million	0.6 million	Micro	10	7.5 million
	Micro	5	0.2 million	0.1 million			
Finance and business services	Medium	200	26 million	5 million	Medium	250	85 million
	Small	50	13 million	3 million	Small	50	35 million
	Very Small	20	3 million	0.5 million	Micro	10	7.5 million
	Micro	5	0.2 million	0.1 million			
Community, social and personal services	Medium	200	13 million	6 million	Medium	250	70 million
	Small	50	6 million	3 million	Small	50	22 million
	Very Small	20	1 million	0.6 million	Micro	10	5 million
	Micro	5	0.2 million	0.1 million			

Figure 1: Source (National Small Business Act No. 102 of 1996, as amended in 2003)

A structured and targeted literature search strategy was applied using multiple academic and practitioner sources. Searches were conducted through Google Scholar, the Wits Library online database platform, Scopus, and ResearchGate, complemented by industry and policy reports such as SEDA, World Bank publications, and township economy studies (e.g., Mthethwa, Thomas, and Mothobi). Keywords used included 'digital platforms', 'MSMEs', 'township economy', 'digital literacy', 'technology adoption barriers', 'language barriers', and 'digital

transformation'. Although a full systematic literature review (SLR) was not required at the MMDB level, this integrative approach ensured a rigorous and comprehensive inclusion of the most relevant scholarly and industry sources.

2.3 Accessibility of Digital Platforms

The first research objective examines the accessibility of digital platforms, including social media channels and online marketplaces, for MSMEs in South African townships. The literature highlights the importance of these platforms in enabling MSMEs to participate in the digital economy and the significant barriers they face.

2.3.1 Digital Literacy and Compatibility

Technological barriers, such as digital literacy and access to infrastructure, are critical factors affecting MSMEs' ability to utilize digital platforms effectively. According to the TOE framework, the adoption of technology is heavily influenced by the sophistication of the technological infrastructure and the users' capacity to engage with these tools (Tornatzky & Fleischer, 1990). Many township MSMEs lack the necessary digital literacy, preventing them from effectively leveraging digital platforms for business operations (FinMark Trust, 2021).

Beyond digital literacy, cultural values and community practices are essential for ensuring that digital platforms align with MSMEs' traditional ways of conducting business (Mahajan, 2014). MSMEs often rely on collectivist decision-making processes, which means that digital tools must be compatible with these community-centred practices to be successfully adopted (Cunningham et al., 2022). Furthermore, unreliable electricity and internet infrastructure exacerbate these challenges (FinMark Trust, 2021).

2.3.2 Economic Barriers; Cost and Affordability

The high cost of accessing digital platforms, particularly data costs in South Africa, presents a significant economic barrier for MSMEs. The broader economic environment, including the affordability of internet access and the cost of mobile data, directly affects the ability of MSMEs to adopt and sustain the use of digital technologies. High data costs often prevent MSMEs from utilising these platforms to their full potential, even when the perceived benefits are acknowledged (Arafah & Hasyim, 2022)

2.4 Impact of Online Marketplaces

This section explores the impact of online marketplaces on the growth and sustainability of MSMEs in South African townships. While these platforms introduce barriers related to logistics and fees, they also offer a range of tangible benefits. The literature identifies four key impact areas that support MSME performance: expanded market access, improved inventory and supply chain management, increased revenue and customer base, and operational efficiencies.

Micro-enterprises such as spaza shops, informal vendors, and home-based service providers are disproportionately affected by these accessibility challenges. These businesses often lack formal registration, stable connectivity, or digital exposure, making it difficult to access even basic social media tools or online marketplaces. Their limited digital literacy and financial resources exacerbate the barriers to entry, reinforcing a digital divide that persists within township economies (FinMark Trust, 2021; Mahajan, 2014).

2.4.1 Expanded Market Access

Online marketplaces allow MSMEs to connect with consumers beyond their immediate geographic location. In township economies, where physical infrastructure and foot traffic often limit business reach, digital platforms provide a scalable means to access regional and national markets. FinMark Trust (2021) observes that MSMEs with digital storefronts report enhanced visibility and broader demand. GSMA (2022) notes that township-focused platforms such as YeboFresh and Vuleka have enabled small retailers to expand their customer base by integrating with digital ordering systems that serve urban consumers and enterprise clients alike.

2.4.2 Improved Inventory and Supply Chain Management

Digital platforms also streamline supply chain processes by facilitating automated inventory updates, order scheduling, and supplier coordination. The World Bank (2021) highlights that such improvements reduce inventory waste, enable just-in-time replenishment, and improve stock availability. In Kenya, Twiga Foods leverages mobile-based logistics to support retailers with efficient produce distribution, while in South Africa, Vuleka offers small spaza shop owners consolidated delivery options to reduce procurement costs and delays (GSMA, 2022).

2.4.3 Increased Revenue and Customer Base

The use of online marketplaces contributes to MSME revenue growth by attracting new customer segments and encouraging repeat purchases. Arafah and Hasyim (2022) report that digital marketplaces increase transaction frequency and customer retention, particularly among price-sensitive consumers seeking convenience. Township enterprises benefit from this exposure by supplementing in-store sales with online orders. FinMark Trust (2021) confirms that MSMEs operating both offline and online channels are more likely to report business growth and customer base expansion.

2.4.4 Operational Efficiencies

Participation in digital marketplaces enhances MSME operational efficiency through automation of key business functions, such as order tracking, payment processing, and customer management. These efficiencies reduce administrative workload and improve responsiveness to market needs. World Bank (2021) findings indicate that digitally enabled MSMEs demonstrate faster fulfilment times and improved decision-making using real-time dashboards and analytics. Platforms such as Jumia and

Takealot provide such tools to support small business vendors in managing daily operations more effectively (UNCTAD, 2021).

Despite these benefits, MSMEs operating in South African townships continue to face considerable barriers in adopting and maximising the value of online marketplaces. These include logistical limitations and access-related challenges.

2.4.5 Logistical Challenges and Competitive Pressures

Logistical constraints such as poor delivery infrastructure, delayed fulfilment, and lack of reliable courier partnerships significantly hinder MSME participation in online marketplaces. These issues are exacerbated in peri-urban and township areas where transport networks are fragmented. Moreover, MSMEs often face competitive pressures from larger, formal retailers who dominate digital space through advanced logistics, advertising budgets, and better platform integration. MSMEs that invest in adapting their operations to meet the logistical requirements of online marketplaces tend to perform better under these conditions (Wilco, 2022).

2.4.6 Environmental Barriers: Platform Fees and Market Access

High platform-related fees, complex onboarding processes, and stringent vendor requirements continue to act as deterrents for many MSMEs. Entry barriers such as business registration, tax clearance, and compliance with standardised supply policies often exclude informal businesses. Lin et al. (2022) argue that many township MSMEs lack awareness of platform terms and fee structures at the time of enrolment, leading to dissatisfaction and withdrawal. Without supportive mechanisms to lower the cost and complexity of participation, the growth potential of online marketplaces remains limited for underserved segments.

2.5 Core Needs and Challenges of MSMEs

The third research objective explores the **core needs and challenges** of MSMEs in the context of digital transformation, focusing on the integration of social media channels and digital platforms.

2.5.1 Organizational Readiness for Digital Transformation

The readiness of MSMEs to adopt digital platforms is closely tied to organizational factors, such as leadership support, resource allocation, and internal capabilities. The TOE framework highlights the importance of organizational readiness in adopting new technologies (Tornatzky & Fleischer, 1990). MSMEs in township economies often struggle with limited financial and human capital, which limits their ability to allocate the necessary resources for digital transformation (Munu, 2021).

2.6 Comparison of Digital Platform Strategies

The fourth research objective compares and evaluates the strategies employed by digital platform providers across Africa, with a focus on how these approaches support MSMEs on their journey toward digital transformation. As township-based MSMEs

face distinct infrastructural, economic, and operational constraints, platform providers have begun tailoring their models to better serve low-income and informal business segments (Awa et al., 2016 & Ndayizigamiye, 2012).

In reviewing these strategies, it becomes apparent that while many efforts target traditional challenges such as affordability, training, and access to infrastructure there is a growing recognition that deeper contextual barriers, including language, culture, and awareness, remain inadequately addressed (Haripersad, 2022; FinMark Trust, 2021 & Lin et al., 2022). These factors are especially pronounced in South African townships, where multilingualism, informal trade norms, and limited exposure to digital tools shape how MSMEs engage with technology. This section explores both the conventional platform strategies and these emerging considerations.

2.6.1 Strategic Approaches in the African Context

Across the African continent, several platform-based interventions have emerged to support MSMEs by enhancing access to digital tools, financial services, and market opportunities. Examples include platforms like Jumia in Nigeria, Twiga Foods in Kenya, and YeboFresh in South Africa, which offer digital marketplaces, logistics integration, and inventory solutions to small businesses. These strategies often emphasise lowering transaction costs, improving digital literacy through onboarding support, and reducing barriers to entry by simplifying registration processes or offering mobile-first user experiences.

Such approaches have demonstrated early success in improving MSME visibility and operational efficiency. Jumia's partnerships with last-mile delivery providers aim to resolve logistical challenges, while Twiga Foods enables informal retailers to access fresh produce directly from suppliers through mobile ordering systems. In the South African context, platforms such as YeboFresh and Vuleka are tailored to township environments by integrating community-based distribution networks and user-friendly digital interfaces.

Despite these innovations, many platforms still overlook critical contextual barriers that affect technology uptake in township markets. These include the language mismatch between platform interfaces and the linguistic diversity of MSME operators, the disconnect between digital tools and informal cultural norms, and low awareness of the potential benefits and availability of digital platforms (Haripersad, 2022; Mahajan, 2014 & Lin et al., 2022). These gaps are further explored in the following subsection.

2.6.2 Barriers Beyond the Conventional Approach: Language, Culture, and Awareness

While digital platform strategies across Africa have evolved to address traditional adoption barriers such as affordability, training, and infrastructure recent literature highlights that language, culture, and awareness are critical, yet under-addressed barriers to digital platform adoption by MSMEs, particularly in informal township economies (Mahajan, 2014; Haripersad, 2022 & FinMark Trust, 2021). These

elements affect usability, trust, and access, and are often embedded in the lived realities of township entrepreneurs. Without addressing these systemic exclusions, platform strategies risk marginalizing the very micro- and small businesses they aim to support.

Language

Most digital platforms are designed in English or French, creating usability barriers in multilingual environments like South Africa's townships. MSMEs whose first language is isiZulu, Sesotho, or Xhosa may struggle to navigate platforms lacking localised content. Haripersad (2022) & FinMark Trust (2021) argue that language exclusions reduce usability, trust, and perceived relevance, discouraging platform engagement. Multilingual design is essential for inclusive adoption, particularly among micro-enterprises operating in linguistically diverse areas.

Culture

MSMEs in township settings often operate informally, driven by trust-based transactions, collective decision-making, and community norms. Digital platforms that replicate formal sector logic such as rigid payment systems or impersonal interfaces may clash with these cultural dynamics. Mahajan (2014) highlights that township enterprises frequently rely on social capital and informal arrangements. Cunningham et al. (2022) reinforce this by showing that cultural dissonance between platform design and local norms reduces the likelihood of sustained adoption and trust in digital systems.

Awareness

A widespread lack of awareness about platform availability and benefits also limits adoption. Township MSMEs often rely on word-of-mouth, peer learning, or local radio for business knowledge and are rarely exposed to structured digital outreach or formalised onboarding processes (Lin et al., 2022). The absence of locally relevant communication strategies and demonstration-led engagement efforts further compounds this challenge.

These three factors language, culture, and awareness are crucial to understanding the limitations of current digital platform strategies. Their omission reduces the inclusiveness and effectiveness of interventions targeting MSMEs in township settings.

2.7 Theoretical Framework

This section outlines the theoretical frameworks considered for guiding this study on digital platform adoption by MSMEs in South Africa's township economy. A theoretical framework provides the foundation for systematically interpreting the findings and situating them within a broader scholarly context. Given the multifaceted nature of technology adoption in informal and resource-constrained settings, several models were examined to determine the most appropriate analytical lens.

The discussion begins by reviewing a selection of prominent technology adoption frameworks frequently applied in similar research contexts. These include the Unified Theory of Acceptance and Use of Technology (UTAUT), Institutional Theory, the Base of the Pyramid (BOP) framework, and the Pragmatic Lens. Each framework is briefly evaluated in terms of its suitability for township-based MSMEs. Following this comparative assessment, the section concludes by presenting the justification for selecting the Technology–Organization–Environment (TOE) framework as the most appropriate model for this study.

2.7.1 Alternative Theories Considered

Alternative technology adoption theories such as TAM and UTAUT were briefly reviewed to ensure conceptual completeness; however, they were not adopted as primary frameworks since they focus on individual-level adoption determinants. Given the study’s organisational and environmental orientation, these theories were retained only for contextual comparison.

2.7.1.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), proposed by Venkatesh et al. (2003), has been widely used to explain how individuals and organizations adopt and use new technologies. UTAUT explores four key constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions.

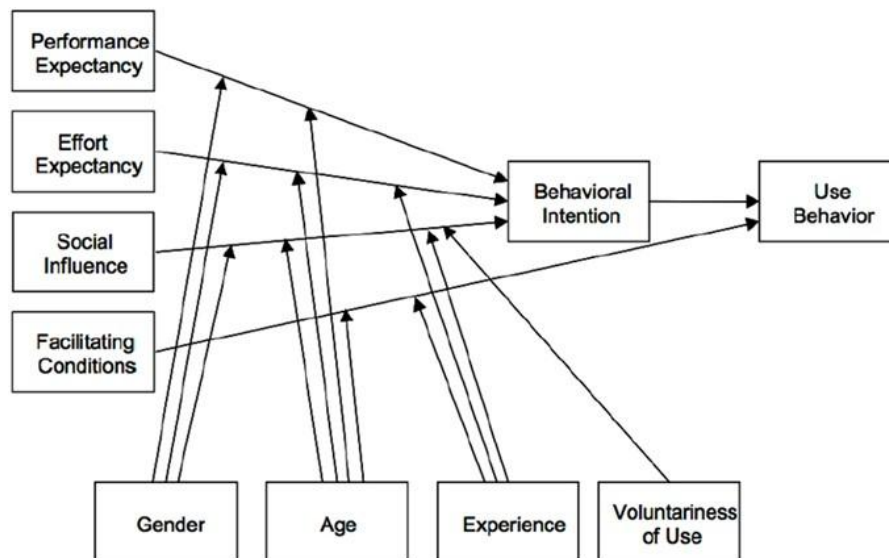


Figure 2: Interaction of the elements of the UTAUT model. Source: Venkatesh et al. (2003, p. 447).

While UTAUT effectively explores individual-level adoption behaviour, it focuses on personal attitudes in controlled environments, such as corporate settings, rather than addressing the organizational and environmental barriers that are central to township MSMEs. Studies such as those by Ramdani et al. (2013) found UTAUT insufficient in accounting for the broader challenges that impact technology adoption in smaller, resource-constrained environments. Therefore, UTAUT was deemed unsuitable for the comprehensive analysis required in this study.

2.7.1.2 Institutional Theory

Institutional Theory, introduced by DiMaggio and Powell (1983), explores how external institutional forces like regulations and cultural norms influence organizational behaviour. Studies such as Seyal and Rahman (2003) have applied Institutional Theory to investigate how external pressures affect technology adoption in SMEs.

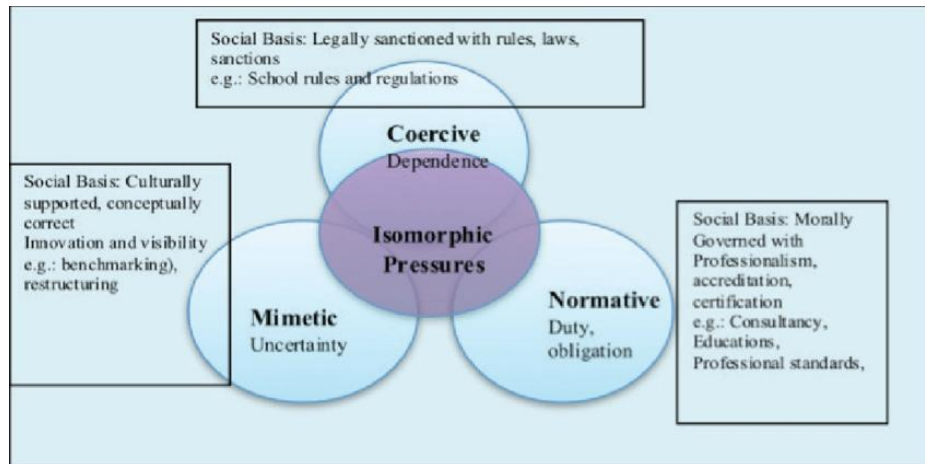


Figure 3: Isomorphic pressures (adapted from DiMaggio & Powell [1983])

Institutional Theory offers insights into external pressures; it primarily applies to formalized sectors where compliance is necessary. However, township MSMEs operate in an informal economy with limited regulatory oversight. Thornton et al. (2012) argue that Institutional Theory may not fully capture the dynamic and informal nature of resource-constrained enterprises. As a result, this theory was not selected for this study, which focuses more on operational and environmental challenges.

2.7.1.3 Technology Adoption at the Base of the Pyramid (BOP)

The Base of the Pyramid (BOP) framework, developed by Prahalad (2004), focuses on technology adoption in low-income populations and small enterprises. It emphasizes affordability, accessibility, and usability of technology in developing economies.

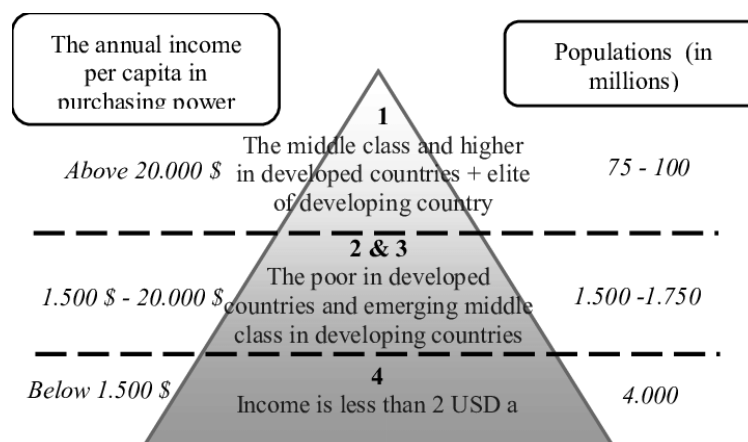


Figure 4: Source: Prahalad C.K., Hart S., *The fortune at the bottom of the pyramid*, Vol 26, 2002, pp. 54-67.

Although relevant in addressing affordability and access, BOP focuses on individual consumers and small-scale enterprises at the lowest economic level, rather than organizational-level factors like leadership support or organizational readiness. Additionally, the framework overlooks broader organizational factors critical to understanding MSMEs in township economies (Karnani, 2007). Therefore, it was deemed insufficient for this study's focus on MSMEs.

2.7.1.4 Pragmatic Lens

A pragmatic approach emphasizes practical solutions to technology adoption challenges in resource-poor environments. This approach aims to provide actionable outcomes rather than theoretical rigor, focusing on immediate challenges.

While a pragmatic approach offers useful real-world insights, it lacks the theoretical depth required for an academic study. Tavory and Timmermans (2014) suggest that pragmatism often neglects the underlying structures that influence technology adoption. The TOE framework offers the required theoretical foundation to support the research while still allowing for practical insights

2.7.2 Justification for the Technology-Organization-Environment Framework

In this study, the Technology-Organization-Environment (TOE) framework is adopted as the primary lens to explore the barriers faced by Micro, Small, and Medium Enterprises (MSMEs) in South Africa's township economy when adopting digital platforms. Developed by Tornatzky and Fleischer (1990), the TOE framework is widely recognized for its ability to assess the technological, organizational, and environmental contexts influencing technology adoption within organizations.

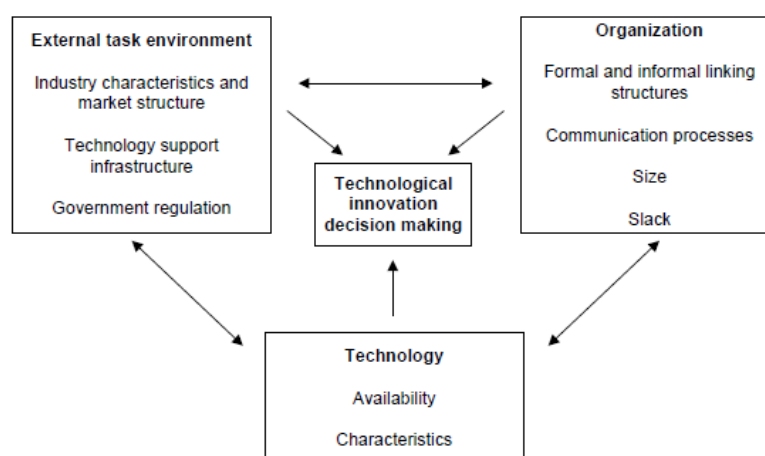


Figure 5: Technology, organization, and environment framework (Tornatzky and Fleischer 1990)

Before selecting the TOE framework, other theories commonly used in similar studies on technology adoption were evaluated. However, these alternatives were deemed less suitable for the specific context of MSMEs in South Africa's township economy.

Each was evaluated based on its applicability to this context, and the final decision was supported by literature, as discussed below.

The Technology-Organization-Environment (TOE) framework offers a structured perspective for understanding the complex dynamics of technology adoption, particularly in emerging economies like South Africa. Its relevance in this context becomes apparent when examining how it has highlighted the barriers and enablers of technology adoption across the African continent, where challenges frequently reflect those faced by township-based MSMEs in South Africa.

For example, Awa et al. (2016) utilized the TOE framework in Nigeria to investigate e-commerce adoption among small and medium-sized enterprises (SMEs). Like the challenges faced by township-based MSMEs in South Africa, Nigerian SMEs encounter obstacles related to organizational readiness and environmental constraints. Through qualitative methods, Awa et al. (2016) identified factors such as infrastructure limitations and external pressures (competitive and regulatory) as significant influences on adoption decisions. The Nigerian context closely mirrors that of South African townships, where poor infrastructure and external market pressures are prevalent. The research by Awa et al. (2016) underscores how SMEs navigate these barriers through strategic decision-making, a finding directly applicable to the challenges MSMEs in South African townships face when adopting digital platforms.

Similarly, Molefe, Iyamu, & Mgudlwa (2020) examined cloud computing adoption in South African firms by applying the TOE framework to analyze the interrelationships between technological readiness, organizational capacity, and the broader environment. Their study found that organizational capabilities, such as digital literacy and leadership support, were significant determinants of adoption success. This insight is critical for township MSMEs, where low digital literacy and resource constraints often hinder technology adoption, despite the availability of platforms. Molefe et al.'s (2020) findings on the importance of organizational dimensions can inform strategies for enhancing digital literacy and capacity-building initiatives to support digital platform adoption among township-based businesses.

In Tanzania, Ndayizigamiye (2012) employed the TOE framework to explore cloud computing adoption within the banking sector. Although the banking industry is more structured than township MSMEs, the findings present relevant parallels. Ndayizigamiye's qualitative research highlighted the importance of regulatory support and institutional pressures, which are similarly significant in South African townships, where MSMEs operate within ambiguous regulatory environments and face logistical challenges. The study demonstrated how environmental factors either facilitate or hinder the adoption process, an observation that resonates with the circumstances of MSMEs in South African townships.

Finally, Oni & Papazafeiropoulou (2014) investigated barriers to broadband access in Nigeria, an issue that is also prevalent in South African townships. Using the TOE framework, they explored how technological infrastructure, or the lack thereof, posed

significant challenges for businesses. The findings from this study are particularly relevant for MSMEs in South Africa, where unreliable internet access is a major barrier to adopting digital platforms. Oni and Papazafeiropoulou (2014) research provide a framework for understanding how infrastructural inadequacies in townships may be addressed to improve technology adoption rates.

These studies offer a nuanced understanding of the TOE framework's application in African contexts, demonstrating its effectiveness in identifying the technological, organizational, and environmental factors that influence digital adoption. Drawing on these insights, the research can situate itself within this body of knowledge, emphasizing the unique but comparable challenges faced by township MSMEs in adopting digital platforms. The TOE framework, applied through qualitative case studies, provides a comprehensive approach to understanding the barriers and facilitators within this specific research setting.

The TOE framework was therefore retained as the most appropriate theoretical lens as it enables analysis across technological, organisational, and environmental conditions the same dimensions shaping township MSME digital adoption. Digital maturity models were considered but not adopted, as they assess internal capability progression rather than the contextual, infrastructural, and socio-cultural barriers that characterise township environments. This confirms TOE's suitability for the study's aims and context

2.7.3 Conceptual Framework

The Considering the literature review and the Technology-Organization-Environment (TOE) framework, an analytical model was constructed to investigate the factors influencing digital platform adoption by MSMEs in South Africa's townships. The TOE framework is employed to assess how technological, organizational, and environmental contexts influence the adoption of digital platforms by MSMEs. This framework also incorporates unique elements of culture, language, and awareness that are critical in the township MSME context.

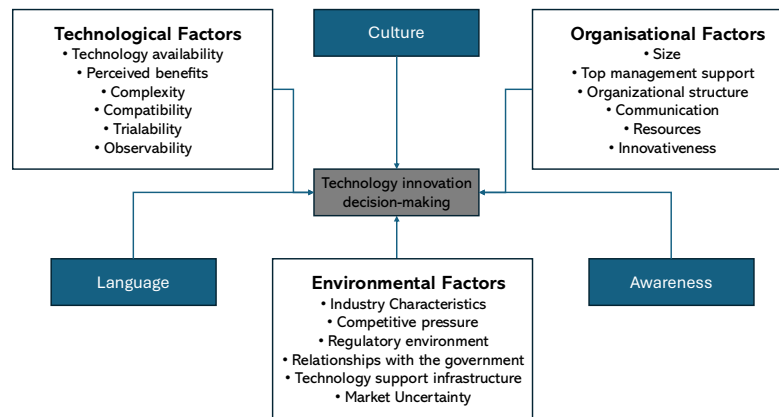


Figure 6: Adapted TOE Conceptual Framework

2.7.3.1 Technological Factors

Technological factors are essential to MSMEs' decision to adopt digital platforms, focusing on how the nature of the technology itself may either support or hinder adoption.

- 1) **Technology Availability:** Availability refers to the accessibility of digital platforms, which can be limited by infrastructure and financial constraints in township areas (FinMark Trust, 2021). The lack of reliable internet and high data costs often restrict MSMEs from accessing these technologies, highlighting the need for accessible and affordable digital solutions.
- 2) **Perceived Benefits:** MSMEs are more likely to adopt digital platforms if they perceive a tangible benefit, such as improved customer reach, reduced costs, or operational efficiency. This perception is particularly critical in resource-constrained environments, where investments must yield clear value to be justifiable (Oliveira & Martins, 2011).
- 3) **Complexity:** The complexity of digital tools, especially in terms of the user interface and functionality, can deter MSMEs with limited digital literacy. MSMEs in South African townships often require simple, user-friendly solutions to engage effectively with digital platforms (FinMark Trust, 2021).
- 4) **Compatibility:** Compatibility with existing business practices and cultural norms is vital. MSMEs that operate in community-oriented settings may struggle to integrate platforms that lack alignment with local business practices (Mahajan, 2014).
- 5) **Trialability:** MSMEs are more likely to adopt platforms if they can experiment with them through free trials or pilot programs. This allows businesses to assess the platform's suitability and potential benefits before committing resources (Cunningham et al., 2022).
- 6) **Observability:** Observing the successful application of digital platforms in similar MSMEs encourages others to adopt these technologies. Peer influence

within close-knit business communities can be a significant factor in shaping adoption behaviour.

2.7.3.2 Organizational Factors

Organizational factors assess internal attributes that impact MSMEs' capacity to adopt and utilize digital platforms effectively.

1. **Size:** Larger MSMEs or those with more formalized structures may have greater capacity to support digital transformation efforts. Smaller or informal businesses may lack the organizational depth to integrate and maintain digital platforms effectively (Munu, 2021).
2. **Top Management Support:** Strong leadership is critical for digital adoption, as leaders' commitment to technology can drive organizational readiness and resource allocation (Zhu et al., 2006). For many MSMEs in townships, a lack of managerial vision or understanding of digital benefits can hinder adoption efforts.
3. **Organizational Structure:** Businesses with a clear, adaptable structure are better equipped to manage change and implement digital tools effectively. Township MSMEs may benefit from decentralized or flexible structures that can quickly integrate new technologies.
4. **Communication (Internal and External):** Effective communication processes, both within the organization and with external stakeholders, are essential for successful digital platform adoption. Internal communication can support training and integration, while external communication enhances customer engagement and community support.
5. **Resources:** Resource constraints, particularly regarding financial and human capital, are major barriers for township MSMEs. Limited funding for technology investments and a lack of skilled staff often restricts digital platform adoption (Zhu et al., 2006).
6. **Innovativeness:** An innovative culture within the organization fosters openness to new technologies. MSMEs that encourage experimentation with digital tools are more likely to adopt and integrate these platforms effectively (Cunningham et al., 2022).

2.7.3.3 Environmental Factors

Environmental factors encompass external influences, such as industry characteristics and regulatory conditions, that impact MSMEs' digital adoption capabilities.

1. **Industry Characteristics:** Research shows that industry-specific requirements and practices influence digital adoption among MSMEs. Sectors with a natural fit for digital transactions, like e-commerce, often show higher adoption rates than those with a service-centric or in-person focus (Mansfield-Devine, 2016).

This is further supported by Zhu, Dong, Xu, and Kraemer (2006), who found that industry characteristics and the degree of digitization within a sector significantly affect technology adoption in SMEs.

2. **Competitive Pressure:** Competition in the market can drive MSMEs to adopt digital platforms to maintain a competitive edge. Township businesses, often facing competition from larger urban counterparts, may need digital tools to expand their reach and stay relevant.
3. **Regulatory Environment:** Regulatory constraints, such as complex registration requirements, platform fees, or tax regulations, can act as significant barriers to digital adoption (Mahajan, 2014). MSMEs in the informal economy may struggle to navigate these regulatory frameworks.
4. **Relationships with the Government:** Government support, in the form of subsidies, training programs, or infrastructure investments, can facilitate digital adoption among MSMEs. Limited government engagement with township MSMEs may contribute to adoption challenges.
5. **Technology Support Infrastructure:** Infrastructure, including reliable internet connectivity and access to support services, is essential for effective platform use. Many MSMEs in townships operate in areas with limited internet and technical support, impeding adoption.
6. **Market Uncertainty:** Economic instability and unpredictable market conditions can discourage MSMEs from investing in digital platforms. Township businesses, often operating with narrow profit margins, are particularly sensitive to market fluctuations.

2.7.3.4 Language

Language plays a pivotal role in the adoption of digital platforms among MSMEs in South African townships. Many digital platforms are designed primarily in English, which may not be the first language for many entrepreneurs in these areas. This creates significant usability challenges for MSMEs operating in linguistically diverse communities. The FinMark Trust (2021) highlights that the lack of platforms supporting local languages limits their accessibility and usability. Haripersad (2022) further emphasizes that language barriers can deter MSMEs from fully leveraging digital tools.

Key Considerations:

1. **Accessibility:** Platforms lacking multilingual support exclude a significant portion of the MSME population, particularly those with limited proficiency in English. Incorporating local languages into platform interfaces and user guides can significantly enhance accessibility and adoption.
2. **User Experience:** MSMEs are more likely to adopt platforms that offer a familiar and intuitive user experience. Language-specific interfaces not only

reduce cognitive load but also build trust by aligning with users' cultural and linguistic contexts.

3. **Inclusion:** Excluding non-English speakers from digital platforms perpetuates existing inequalities in access to technology. Prioritizing local language integration can address barriers to entry for marginalized groups within township economies.

Language-inclusive design is thus a critical factor in ensuring that digital platforms meet the diverse needs of township MSMEs, enhancing their utility and adoption rates.

2.7.3.5 Culture

Cultural alignment significantly influences the adoption and effective use of digital platforms by MSMEs in township economies. These businesses often operate in community-oriented settings where trust, personal relationships, and informal networks are integral to business practices. Mahajan (2014) notes that MSMEs in such environments may struggle to integrate platforms that lack alignment with local business practices. Cunningham et al. (2022) add that an innovative culture within the organization fosters openness to new technologies.

Key Considerations:

1. **Community-Driven Practices:** Digital platforms must align with the localized, relationship-based nature of township businesses. For instance, platforms that incorporate features like community support networks or referral-based marketing can resonate more with these businesses.
2. **Trust and Credibility:** MSMEs are more likely to adopt platforms that demonstrate an understanding of local cultural norms and values. Platforms promoting transparency and community empowerment are likely to gain traction in township settings.
3. **Localized Solutions:** Platforms failing to address the specific needs and preferences of township MSMEs risk being perceived as irrelevant or foreign. Customization options allowing users to adapt the platform to their cultural context can enhance adoption and long-term use.

Acknowledging and integrating cultural considerations into digital platforms ensures they are not only functional but also meaningful within the township MSME ecosystem.

2.7.3.6 Awareness

Awareness is a foundational factor in the adoption of digital platforms by MSMEs in South African townships. Many MSMEs lack knowledge about the existence or potential benefits of these technologies, hindering their ability to evaluate and adopt them. Lin et al. (2022) emphasize the importance of increasing awareness through localized outreach and culturally sensitive training programs. Mahajan (2014) also highlights that limited awareness can be a significant barrier to adoption.

Key Considerations:

1. **Knowledge Gaps:** Limited exposure to digital platforms, combined with a lack of targeted outreach, means many MSMEs remain unaware of how these tools can enhance their business operations. Awareness campaigns tailored to township MSMEs are essential.
2. **Culturally Relevant Outreach:** Effective awareness-building strategies must consider the cultural and socioeconomic contexts of township MSMEs. Initiatives such as workshops, peer learning, and storytelling can resonate more deeply than generic marketing efforts.
3. **Capacity Building:** Beyond basic awareness, training programs that enhance digital literacy and demonstrate the practical applications of platforms are crucial. When MSMEs see tangible examples of how similar businesses have benefited, they are more likely to explore these options.

Increasing awareness is not only about introducing MSMEs to digital platforms but also about fostering a deeper understanding of their relevance and applicability within the township context. This ensures that MSMEs are empowered to make informed decisions about adoption.

2.7.4 Summary of Propositions

Proposition 1 - Technological Factors:

The adoption of digital platforms by MSMEs in South African townships is significantly constrained by technological factors, including low digital literacy, inadequate technological infrastructure, and the lack of platforms that support local languages, limiting their accessibility and usability (FinMark Trust, 2021; Haripersad, 2022 & Lin et al., 2022).

Proposition 2 - Organizational Factors:

The adoption of digital platforms by township MSMEs is influenced by organizational factors, including leadership support, resource allocation, and the cultural compatibility of these platforms with local business practices and norms (Zhu et al., 2006; Cunningham et al., 2022 & Munu, 2021).

Proposition 3 - Environmental Factors:

The adoption of digital platforms by township MSMEs is constrained by environmental factors, including lack of awareness about platform benefits, high data costs, and limited market access opportunities in a competitive environment dominated by larger businesses (Mahajan, 2014; Arafah & Hasyim, 2022; Oni & Papazafeiropoulou, 2014).

Proposition 4 – Language:

The effectiveness of digital platforms for township MSMEs is limited by their failure to accommodate local languages, reducing their usability and excluding non-English-

speaking users from leveraging their full potential (Haripersad, 2022 & FinMark Trust, 2021).

Proposition 5 - Culture:

The success of digital platforms in township MSMEs is influenced by how well these platforms align with cultural norms and community-driven business models, which emphasize informal structures and localized practices (Mahajan, 2014 & Cunningham et al., 2022).

Proposition 6 - Awareness:

Increasing awareness of digital platforms through localized outreach and culturally sensitive training programs is essential for improving MSME adoption rates in South African townships (Lin et al., 2022 & Mahajan, 2014).

2.8 Conclusion of Literature Review

This literature review has critically examined the accessibility and impact of digital platforms and online marketplaces on MSMEs in South Africa's township economy using an integrated Technology-Organization-Environment (TOE) framework. The review has identified significant technological, organizational, and environmental barriers that hinder digital platform adoption among MSMEs. Factors such as low digital literacy, inadequate infrastructure, high data costs, and logistical challenges were highlighted as key constraints that must be addressed to unlock the full potential of these digital tools for MSMEs. The propositions developed in this review will guide the empirical analysis in the subsequent chapters.

2.8.1 Proposition 1: Technological Barriers

The adoption of digital platforms by township MSMEs is significantly constrained by technological barriers, including low digital literacy, inadequate infrastructure, and limited availability of platforms that support local languages. According to the TOE framework, the adoption of technology is strongly influenced by the sophistication of the technological infrastructure and users' ability to engage effectively with digital tools (Tornatzky & Fleischer, 1990).

- **Digital Literacy:** Many MSMEs in townships lack the necessary digital literacy, making it challenging for them to navigate and utilize digital platforms effectively (FinMark Trust, 2021). This deficiency limits their capacity to leverage digital tools for business growth.
- **Infrastructure:** Unreliable internet connectivity, power outages, and limited access to affordable broadband infrastructure exacerbate technological barriers in township MSMEs (Oni & Papazafeiropoulou, 2014).
- **Language Barriers:** The lack of digital platforms tailored to local languages, such as isiZulu, Xhosa, or Sesotho, further excludes many MSMEs from accessing and using these technologies effectively (Haripersad, 2022).

2.8.2 Proposition 2: Economic Barriers

The readiness of MSMEs to adopt digital platforms is heavily influenced by internal organizational factors, such as leadership support, resource allocation, and organizational culture. The TOE framework emphasizes how organizational capacity determines the ability of businesses to implement new technologies (Zhu et al., 2006).

- **Leadership Support:** Strong leadership within MSMEs is vital for driving digital transformation. Leaders who champion innovation and digital adoption create a conducive environment for technology integration (Munu, 2021).
- **Resource Availability:** MSMEs often face challenges in allocating adequate financial, human, and technical resources to adopt and sustain digital platform usage, which limits their digital transformation efforts (Cunningham et al., 2022).
- **Organizational Culture:** MSMEs with innovative, adaptive cultures are more likely to embrace digital platforms that align with their operational and cultural practices (Mahajan, 2014).

2.8.3 Proposition 3: Organizational Readiness

The adoption of digital platforms by township MSMEs is constrained by environmental factors, including limited awareness of available platforms, high data costs, and logistical challenges. External pressures within the competitive and regulatory environment also influence the adoption of these technologies (Tornatzky & Fleischer, 1990).

- **Awareness:** A lack of targeted awareness campaigns and outreach programs hinders MSMEs from understanding the potential benefits of digital platforms (Lin et al., 2022).
- **High Data Costs:** Prohibitively high data costs in South Africa limit MSMEs' ability to engage with digital platforms consistently (Arafah & Hasyim, 2022).
- **Logistical Challenges:** Inefficient delivery systems and unreliable distribution networks further hinder MSMEs' ability to integrate into online marketplaces effectively (Wilco, 2022).
- **Competitive Pressures:** Township MSMEs often face intense competition from larger, urban-based businesses, limiting their ability to gain market share and operate sustainably in digital spaces (Mahajan, 2014).

2.8.4 Proposition 4: Language Barriers

Language barriers significantly impact the usability and accessibility of digital platforms by township MSMEs. Many platforms operate primarily in English, which excludes a large segment of MSMEs whose primary languages are isiZulu, Sesotho, and Xhosa (Haripersad, 2022).

- **Localized Language Options:** MSMEs require digital platforms that offer localized language support to bridge the gap and ensure usability for non-English speakers (FinMark Trust, 2021).

- **Cultural Relevance:** Digital platforms that fail to consider the linguistic and cultural contexts of township MSMEs are often perceived as foreign or incompatible, reducing adoption rates (Mahajan, 2014).

2.8.5 Proposition 5: Cultural Alignment

The success of digital platforms in township MSMEs is influenced by how well these platforms align with local cultural norms and business practices. Many township MSMEs operate in community-driven environments where informal practices dominate.

- **Community-Centric Models:** Digital platforms that align with these community-based business models and accommodate informal practices are more likely to succeed in driving adoption (Cunningham et al., 2022).
- **Cultural Sensitivity:** Platforms that fail to integrate culturally sensitive features risk being rejected by MSMEs that prioritize compatibility with local traditions (Mahajan, 2014).

2.8.6 Proposition 6: Awareness and Strategic Support

Awareness and targeted outreach programs are critical to improving MSMEs' adoption of digital platforms. Effective strategies that consider the specific needs of township MSMEs can bridge the information gap and enhance adoption rates.

- **Localized Outreach Programs:** Initiatives tailored to township businesses, focusing on their unique challenges and demonstrating the benefits of digital platforms, can significantly improve awareness (Lin et al., 2022).
- **Culturally Relevant Training:** Awareness programs delivered in local languages and aligned with township-specific business practices are essential for increasing platform adoption among MSMEs (Haripersad, 2022).

CHAPTER 3: Research Methodology

This chapter outlined the research methodology that was employed to address the propositions identified in the literature review. The structure of the chapter followed a logical flow, beginning with the research paradigm, followed by the research approach, design, data collection methods, population and sample selection, the research instrument, and procedures for data collection. It concluded with the data analysis strategies, limitations, quality assurance measures, and ethical considerations. The focus was on detailing the specific methods selected for the study and providing justifications for these choices with reference to relevant academic literature.

3.1 Research Paradigm

The chosen research paradigm for this study was interpretivism. This paradigm was well-suited to the study's objective of exploring and understanding the nuanced experiences and perspectives of Micro, Small, and Medium Enterprises (MSMEs) in

South African townships in relation to their engagement with digital platforms. Interpretivism, grounded in the belief that reality is socially constructed and subjective, provided a framework for appreciating the varied experiences of MSMEs within the distinct socio-economic contexts of townships (Bryman, 2016).

Epistemologically, interpretivism posits that knowledge is co-created through the interaction between researcher and participants, making it appropriate for the qualitative nature of the study, which sought to generate an in-depth understanding of the phenomena under investigation (Creswell, 2013). Axiologically, this paradigm recognises the influence of the researcher's values and biases on the research process, thereby necessitating reflexivity throughout the study (Lincoln & Guba, 1985).

3.2 Research Approach

For this study, a qualitative research approach was adopted. This approach was considered appropriate as it facilitated an in-depth examination of the complex, context-specific phenomena characterising MSMEs' use of digital platforms in township economies. Qualitative research enabled the exploration of the lived experiences, perspectives, and interpretations of MSME owners, capturing the richness and depth of their interactions with digital platforms (Denzin & Lincoln, 2011).

The qualitative approach aligned with the interpretivist paradigm, which seeks to uncover the underlying reasons, opinions, and motivations behind observed phenomena. This paradigm assumes that social reality is constructed through human interactions and is best understood through the detailed accounts provided by those directly involved. As such, the qualitative approach was well suited to capturing the complexity and contextual nuances of the challenges and opportunities encountered by MSME's elements that might be overlooked by quantitative methods.

3.3 Research Design

The research design selected for this study was a multi-site case study, deemed appropriate for enabling an in-depth, contextualized examination of the experiences of MSMEs in South African townships. This design allowed for the exploration of how these businesses interacted with digital platforms, the challenges encountered, and the influence of these platforms on their operations and growth (Yin, 2014). The case study approach offered the advantage of providing a rich, holistic understanding of the subject and flexibility in the use of multiple data sources. Acknowledged limitations included potential challenges in generalising the findings due to the specific focus on cases (Flyvbjerg, 2006). Nevertheless, the case study design remained the most suitable choice for exploring and understanding specific phenomena within a defined context.

3.4 Data Collection Methods

Data was collected using a combination of semi-structured interviews and document analysis. Semi-structured interviews were the primary data collection method because

they offered flexibility in exploring participants' perspectives while ensuring that key topics were covered (Kvale & Brinkmann, 2009). These interviews were conducted with MSME owners and managers in townships to gain insights into their experiences and challenges in using digital platforms. Furthermore, document analysis was used to complement the interviews by providing additional context and insights. This analysis involved reviewing documents such as reports, online content, and business records related to the MSMEs' use of digital platforms. The chosen methods were justified by their ability to generate rich, detailed data essential for understanding the complex phenomena under investigation.

3.5 Population and Sample

3.5.1 Population

The population for this study comprised MSMEs operating within South African townships, specifically those engaging with digital platforms such as social media channels and online marketplaces. Focusing on this population was appropriate, as these businesses were central to the study and directly aligned with the research objectives.

3.5.2 Sample and Sampling Method

Sampling and saturation: Analysis of interviews reached a saturation point when little to no new information was being found in the last two interviews conducted. When the researcher found that new and substantial information was no longer emerging. A purposive sampling method was used to select the sample, which is suitable for qualitative research aimed at gaining in-depth insights rather than generalising to a broader population (Patton, 2015).

A total of 10 MSMEs participated in the study, representing a diverse mix of township-based enterprises across retail, personal services, informal micro-trading, small-scale manufacturing, and food-related businesses. This sector spread ensured that insights reflected the varying operational realities of township MSMEs.

Participants were selected based on the following criteria:

- **Business Type:** The sample included MSMEs across various industries such as retail, service-based businesses, and small-scale manufacturing to capture a diverse range of experiences with digital platform usage.
- **Business Size:** The study focused on micro and small enterprises, specifically those with fewer than 10 employees and a maximum of 50 employees, to ensure the research addressed the unique challenges faced by smaller businesses in the digital transformation journey.
- **Duration of Digital Platform Usage:** Participants included both early adopters who had been using digital platforms for several years and newer users who had recently begun integrating these tools into their operations. This allowed

for a comparison of experiences and challenges at different stages of digital adoption.

- **Location Within a Township:** The sample was geographically diverse, representing businesses from various townships across South Africa. This included well-established townships such as Soweto, as well as smaller, less-developed areas, to reflect varying degrees of access to digital infrastructure and market opportunities.

The sample size was determined based on the principle of data saturation, which is reached when no new information or themes emerge from the collected data (Guest, Bunce, & Johnson, 2006). Although qualitative studies often recommend between 15 and 20 interviews to achieve saturation, particularly in research focused on specific populations such as MSMEs (Creswell, 2013), saturation was reached after 10 interviews in this study. Data saturation was reached when the final three interviews produced no new themes, with participant responses increasingly repeating previously identified technological, organisational, and environmental factors. This confirmed that the dataset was sufficiently rich for an interpretivist qualitative study.

3.6 The Research Instrument

The primary research instrument used in this study was a semi-structured interview protocol, developed to explore the experiences, challenges, and perceptions of MSME owners and managers regarding the use of digital platforms. The protocol consisted of open-ended questions aligned with the research objectives and the propositions derived from the literature review, ensuring that each interview addressed key themes relevant to the study.

The structure of the interview protocol allowed for consistency across all interviews while retaining the flexibility to probe deeper into emerging topics raised by participants. This approach enabled the researcher to gain rich, contextual insights while maintaining alignment with the core research focus.

A copy of the final interview protocol, along with the covering letter provided to participants, is included in [Appendix A](#)

3.7 Procedure for Data Collection

The data collection process followed a systematic, multi-step approach to ensure consistency, transparency, and adherence to ethical research standards. Data were collected through semi-structured interviews with MSMEs operating in South African townships. A hybrid approach was employed, with interviews conducted either face-to-face or via virtual platforms (e.g., Microsoft Teams), depending on participant availability and preference.

With participant consent, all interviews were audio-recorded. For virtual interviews, automated transcriptions were generated via Microsoft Teams. However, due to the

multilingual nature of township discourse (e.g., switching between English and indigenous languages such as isiZulu and Sesotho), all transcripts underwent manual review and correction to ensure semantic accuracy.

In addition to interviews, document analysis was conducted by reviewing online business content, public digital footprints, and relevant business artefacts provided by participants (e.g., digital adverts, WhatsApp product catalogues). These sources served to triangulate the interview data and provide contextual depth.

Field notes and reflective memos were maintained during and after interviews to capture non-verbal cues, contextual observations, and interpretive reflections, adding a further layer of richness to the dataset.

The procedure was guided by ethical principles outlined in the approved ethics application including:

- Informed consent
- Voluntary participation
- Confidentiality
- Right to withdraw at any point

All interviews were anonymised during transcription, and participant identities were coded numerically (e.g., P1–P10) for use in reporting and analysis.

Thematic analysis was conducted using the six-phase approach outlined by Braun and Clarke (2006), which involves familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. A hybrid coding approach was adopted: deductive codes were developed prior to data collection based on the TOE framework and research objectives, while inductive codes emerged during open coding through interaction with the data. The final codebook comprised both structured theoretical categories and 51 emergent, unsorted inductive codes.

Consistent with Marshall and Rossman's (1995, p. 114) observation that qualitative data analysis is "the most intellectually challenging phase" of research, this study sought to go beyond surface-level categorisation. Analysis was conducted using ATLAS.ti 25, a computer-assisted qualitative data analysis software (CAQDAS), to facilitate systematic coding, traceability, and thematic development. ATLAS.ti 25 enabled not just the management of data, but also supported conceptual integration through tools such as:

- **Code Manager and Colour-Coding:** Used to distinguish between negative (barrier), positive (enabler), and neutral codes for interpretive clarity.
- **Document Groups:** Enabled within-group and cross-case comparisons by business type (e.g. Hair Salon, Retail, Food & Beverage).

- **Code Co-occurrence Tables:** Visualised overlaps between themes, supporting deeper thematic synthesis.
- **Network Views:** Illustrated relationships across quotations and codes, enabling causal or contrasting linkages to be identified and modelled.
- **Memos:** Used throughout to document interpretive decisions and theme refinement processes.
- **Code Exports:** Supported an audit trail of groundedness and density, ensuring methodological transparency.

This approach directly responds to critiques by Paulus et al. (2017), who found that the majority of CAQDAS users (87.5%) fail to explain how they used the software, resulting in superficial “name-dropping.” In contrast, this study provides a detailed account of how ATLAS.ti 25 was used not just for organisation, but as an analytical partner moving from quotation-level coding to thematic mapping and visual insight generation.

Manual approaches to data analysis involving printing, cutting, colour-coded sticky notes, and physical sorting have long been critiqued as “unwieldy, cumbersome, tedious and frustrating” (Bisit, 2003, p. 152; Edwards & Skinner, 2009). While these methods have historical value, this study adopted a technological strategy to reduce such mechanical burdens and enhance analytical robustness. Bazeley (2009) and Silverman (2017) highlight that comparatively little is published on the mechanics of qualitative analysis; thus, this chapter explicitly includes figures, tables, and exports from ATLAS.ti 25 to improve reporting transparency.

Data saturation was achieved after 10 interviews, with recurring patterns and minimal emergence of new codes in later transcripts. The findings are presented proposition by proposition in Sections 4.3 to 4.8. Each section includes key themes, supported by participant quotations (referenced as P1 to P10), and summary tables. Section 4.9 presents emergent themes that fall outside the predefined framework but offer valuable insights into the digital challenges and behaviours of MSMEs. Section 4.10 concludes the chapter with a high-level synthesis of the findings.

The findings in this chapter are presented in relation to the predefined propositions outlined in Chapter 2 and operationalised through the deductive codes listed in [Appendix G](#). These codes were applied during the thematic coding process and are color-coded throughout the findings to distinguish barriers (red), enablers (blue), and neutral/contextual factors (green). Emergent themes from inductive coding are discussed in Sections to follow and have been marked with the color (gold).

To strengthen the credibility of the findings, several validation techniques were applied. Member checking was conducted by sharing summarised interpretations of interview responses with selected participants, allowing them to confirm or clarify meanings. Triangulation was achieved through comparison of interview data with business documents, digital platform activity, observational notes, and contextual evidence

gathered during site visits. An audit trail, consisting of reflective memos, coding logs, and decision notes, was maintained to enhance dependability and transparency throughout the research process.

3.8 Data Analysis Strategies and Interpretation

Thematic analysis was used to analyse the qualitative data collected from interviews and documents. This method is appropriate for identifying, analysing, and reporting patterns (themes) within qualitative data and aligns well with the interpretivist paradigm adopted in this study (Braun & Clarke, 2006).

The analysis followed Braun and Clarke's six-phase process:

1. Familiarisation with the data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the final report

The process began with reading and re-reading all transcripts to gain a holistic understanding of participants' experiences. A hybrid coding approach was used combining deductive coding based on the predefined categories derived from the TOE framework, and inductive coding to capture emergent insights from participants' narratives.

All transcripts were uploaded and analysed using ATLAS.ti 25, which facilitated systematic coding, organisation, and theme development. Codes were applied line-by-line, and each quote was anchored with reflective memos to track interpretive insights. Codes were then grouped using ATLAS.ti 25 Code Group function according to their alignment with the study's six propositions.

The software's Code-Document Table was used to assess code frequency across cases, and the Network View tool supported the development of thematic relationships by visually mapping how individual codes contributed to larger themes. This approach enhanced the transparency and rigour of the analysis process.

Themes were refined iteratively through constant comparison and memoing, ensuring that final themes were not only grounded in the data but also aligned with the study's theoretical and contextual framework. The completed analysis informs the structure of Chapter 4, where findings are presented proposition by proposition.

A structured codebook was developed deductively based on the TOE framework and aligned to seven propositions derived from the literature review. This deductive codebook was used during initial coding in ATLAS.ti 25 and is presented in [Appendix](#)

G. Each code includes a definition, sentiment classification (enabler, barrier, or neutral), and a color tag for visual analysis across the dataset.

To ensure analytical rigour and transparency, quotation reports, code co-occurrence tables, and Excel exports were generated directly from ATLAS.ti 25. Network view diagrams were used to visualise relationships between codes and propositions, offering conceptual clarity and enabling deeper thematic synthesis. These visuals and exports serve as a traceable audit trail for how participant data were transformed into research findings.

This section outlines the multi-step process through which qualitative data were collected, organised, and prepared for analysis. Aligned with the interpretivist paradigm and qualitative case study design adopted in this research, the goal was to capture the nuanced digital adoption experiences of township-based MSMEs through rich, context-sensitive engagement.

Step 1: Conducting Interviews with Township MSMEs Data were collected through semi-structured interviews with ten MSME owners and managers operating across a diverse set of sectors, including hair salons, informal retail, food and beverage, and platform-based service providers. A hybrid approach was employed: some interviews were conducted face-to-face, while others took place virtually via Microsoft Teams, depending on participant preference and accessibility.

Each interview lasted between 30 to 45 minutes, with sufficient flexibility to accommodate deeper exploration of responses. Interviews followed a structured guide aligned to the study's propositions and research objectives but allowed room for open-ended discussion. This format supported both comparability across participants and the emergence of new insights.

Step 2: Recording, Transcription, and Translation All interviews were audio-recorded with participant consent. For virtual sessions, automated transcripts were generated via Microsoft Teams. However, due to frequent code-switching between English and vernacular languages such as isiZulu, Sesotho, and Setswana, all transcripts underwent thorough manual review and editing to ensure linguistic and cultural accuracy.

Where necessary, vernacular phrases were translated into English post-interview, and meaning was clarified with reference to contextual notes. This process ensured that subtle expressions and embedded meanings often lost in automated transcription were retained in the analytical dataset.

Step 3: Memo Writing and Reflexive Engagement During and immediately after each interview, the researcher documented field notes and reflexive memos. These included non-verbal observations, emotional tone, contextual dynamics, and interpretive thoughts. The memos were later imported into ATLAS.ti 25 and linked to specific documents and quotations, helping to anchor emerging codes in lived experience.

This reflexive practice aligns with Braun and Clarke’s (2006) guidance on maintaining analytical awareness and supports the interpretivist principle that meaning is co-constructed between researcher and participant.

Step 4: Data Organisation in ATLAS.ti 25 Each transcript was uploaded into ATLAS.ti 25 as an individual primary document. Documents were grouped by business sector (e.g., Hair Salon, Food Vendor & Real Estate), enabling within-group and cross-case comparisons. This use of document groups improved analytical traceability and allowed for targeted retrieval of sector-specific quotations during coding and theme development.

Step 5: Linking Interviews to Propositions and Codes Each interview was mapped back to specific research propositions through a consistency matrix (see Section 3.6: The Research Instrument), and coding was conducted line-by-line using a hybrid approach. Deductive codes, derived from the TOE framework and aligned with the study’s six propositions, were applied during the first cycle of coding. As analysis progressed, inductive codes emerged directly from participant narratives, 51 of which were not part of the original codebook. These were incorporated and clearly flagged as emergent insights.

The complete list of codes, both deductive (mapped to propositions) and inductive/emerging, is detailed in the finalised codebook included in [Appendix G](#). This appendix serves as a reference point for all subsequent theme development and ensures transparency in the analytical process.

Table 2: Code Colour Classification

Category	Interpretation	Colour Used
Barriers	Negative factors hindering digital adoption	 Red
Enablers	Positive influences or success conditions	 Blue
Neutral/Contextual	Descriptive or business background information	 Green
Emerging Inductive Codes	New codes not in the original codebook	 Gold

As part of the ATLAS.ti 25 coding strategy, each deductive code was not only aligned to a research proposition but also classified by sentiment or functional role to support interpretation and visual analysis. This classification was guided by the descriptions in the codebook (see [Appendix G](#)) and reflects whether a code represents a barrier, an

enabler, a neutral/contextual factor, or an emerging insight. These classifications were then visually represented using colour coding within ATLAS.ti 25 and reflected in the heatmaps (e.g., Figure 7:Participant Quotations by Code Category).

3.9 Possible Limitations and Challenges of the Study

While the multi-site qualitative design provided rich contextual insights, it also introduced several limitations. The study relied on self-reported data, which may have been affected by selective recall or social desirability bias. Language switching during interviews, although mitigated through transcript checking, may have influenced nuance or interpretation. The exclusive focus on township MSMEs limits the transferability of findings to more formal or urban enterprises. Time constraints limited the possibility of follow-up interviews, and as is typical in interpretivist research, the researcher's positionality may have influenced interpretation despite the use of reflexive practices and an audit trail.

3.10 Quality Assurance

In this qualitative research on the adoption of digital platforms by MSMEs within South African townships, rigorous quality assurance was essential. The study focused on key qualitative concepts such as transferability, credibility, and dependability to maintain the integrity of the findings. These concepts were particularly relevant as they aligned with the interpretivist paradigm, which is well-suited for understanding the complex and socially constructed realities of MSMEs operating in this unique context.

3.10.1 Transferability

Transferability in this study referred to the extent to which the findings could be applied to other similar contexts, such as MSMEs in different townships or other developing regions (Lincoln & Guba, 1986). To enhance transferability, the researcher provided rich, thick descriptions of the research context, participants, and their experiences with digital platforms. By offering detailed accounts of how MSMEs in South African townships engaged with and perceived digital tools, the study enabled others to assess the applicability of the findings to comparable settings. This detailed portrayal was crucial in understanding the unique challenges and opportunities faced by these businesses, allowing for the potential application of insights to similar environments (Tracy, 2010).

3.10.2 Credibility

Credibility was further enhanced through member checking, where participants reviewed the researcher's interpretations to ensure alignment with their intended meanings. Credibility was key to ensuring that the findings accurately reflected the realities of MSMEs in townships and their interactions with digital platforms (Lincoln & Guba, 1986). To enhance credibility, the researcher employed techniques such as member checking, where participants reviewed and confirmed the accuracy of the

transcriptions and interpretations of their interviews. Furthermore, the researcher used triangulation by collecting data from multiple sources such as interviews, business records, and relevant documents to cross-verify the findings. This approach helped build a more accurate and credible understanding of how MSMEs perceived and adopted digital platforms, particularly in the context of limited resources and infrastructure (Morse, 2015).

3.10.3 Dependability

Dependability in this study involved ensuring the stability and consistency of findings over time and across different conditions (Lincoln & Guba, 1986). To achieve this, the researcher maintained a comprehensive audit trail documenting all research decisions, procedures, and activities throughout the study. This detailed record provided transparency and allowed others to replicate the study or examine how the findings were derived. Given the evolving nature of digital platform adoption in township economies, this approach was essential for ensuring that the research process was robust and that the findings were dependable (Tracy, 2010).

3.10.4 Confirmability

Confirmability ensures that the findings of my research are shaped by the participants' experiences and perspectives rather than the researcher's personal biases or assumptions (Lincoln & Guba, 1986). To establish confirmability, The researcher:

- Maintain a reflexive journal where documented reflections, assumptions, and potential biases throughout the research process.
- Use audit trails to track how data were collected, analysed, and interpreted, ensuring that decisions are transparent and can be traced back to the original data.
- Regularly engage in peer debriefing to review the research process and findings with colleagues, helping to identify and mitigate potential researcher bias.

By implementing these strategies, the research paper aims to ensure that the findings of the study are firmly grounded in the data and reflect the true experiences of MSMEs in South African townships, rather than being influenced by preconceptions or biases (Shenton, 2004).

3.11 Ethical Considerations

The research will adhere to the ethical guidelines set by Wits University. The research paper is committed to adhering to the highest ethical standards in the undertaking of this research. This includes obtaining informed consent from all participants, ensuring their confidentiality and anonymity, and providing them with the right to withdraw from the study at any time. Given the sensitive nature of the business information involved, particularly for MSMEs that may be wary of sharing details about their operations, The researcher ensure that participants are fully informed about the study's purpose and

how their data will be used. My research will be conducted with the utmost respect for all participants, taking every precaution to avoid harm or discomfort, which is particularly important when engaging with small businesses in economically vulnerable settings.

Chapter 4: Presentation of Findings

4.1 Introduction

This chapter presents the findings of the study based on qualitative data collected through semi-structured interviews with MSMEs operating in South African townships, aiming to explore the barriers to digital platform adoption through six propositions derived from the Technology-Organization-Environment (TOE) framework. The framework was adapted to include contextual dimensions such as culture, language, and awareness to reflect the realities of township enterprises. A hybrid thematic analysis approach was used, following Braun and Clarke's (2006) six-phase process, combining deductive coding aligned to predefined propositions with inductive codes emerging from the data. The analysis was conducted using ATLAS.ti 25, which facilitated systematic coding, visual mapping, and interpretive memoing. Codes were colour-classified by sentiment barriers (red), enablers (blue), neutral/contextual (green), and emergent (gold) and were organised across document groups and network views for cross-case comparison. Data saturation was achieved after ten interviews, with the final codebook comprising both theoretical and 51 inductive codes. Findings are presented proposition by proposition (Sections 4.2 to 4.8), followed by emergent themes (Section 4.9) and a synthesis of insights (Section 4.10), with all themes grounded in the data and aligned to the study's objectives.

4.2 Demographic Data Representation

This section outlines the demographic characteristics of the participants in the study. A total of 10 MSME owners from township-based enterprises participated in the semi-structured interviews. These businesses span various sectors and represent diverse approaches to digital platform usage, providing rich perspectives on the barriers and enablers of digital adoption.

4.2.1 Participant Anonymisation and Coding

To ensure confidentiality, all participants were anonymised using a standard identifier format (P1 to P10). During analysis in ATLAS.ti, each transcript was uploaded as an individual primary document and assigned to a document group based on MSME business type. This enabled both within-group and cross-group analysis, strengthening the study's interpretive depth.

4.2.1.1 Participant Profile Overview

Table 3: Participant Profile Overview

Participant	Industry	Business Age	Gender	Age	Highest Qualification	Number of Employees
P1	Hair & Beauty	5 - 10 years	Female	35 to 49	Senior Certificate	0-5
P2	Branding & Marketing	10+ years	Male	35 to 49	Senior Certificate	0-20
P3	Branding & Marketing	10+ years	Male	35 to 49	Postgrad	6 - 10
P4	Branding & Marketing	10+ years	Female	35 to 49	Senior Certificate	0-5
P5	Delivery Services	3 - 5 years	Male	35 to 49	Other	0-5
P6	Real Estate	5 - 10 years	Female	35 to 49	Senior Certificate	0-5
P7	Food & Beverage	0 - 3 years	Male	Under 35	Senior Certificate	0-5
P8	Food & Beverage	0 - 3 years	Male	35 to 49	Senior Certificate	0-5
P9	Technology	5 - 10 years	Male	35 to 49	Bachelor	1- 50
P10	Real Estate	5 -10 years	Male	35 to 49	Bachelor	6 - 10

Table 3 provides a demographic overview of the ten participants interviewed in this study, all of whom are MSME owners operating within the South African township economy. The table captures key characteristics across nine variables: industry sector, business age, ownership status, gender, age category, highest qualification, business location, and number of employees. These details help contextualise each participant's perspective and illuminate how individual and enterprise-level characteristics may influence digital platform adoption.

The sample includes a mix of industries such as Branding & Marketing, Hair & Beauty, Real Estate, Food & Beverage and Technology ensuring representation across both traditional and digitally inclined sectors. Most participants were within the 35 to 49 age range, and the majority had senior certificate qualifications, which reflects educational trends often found among township entrepreneurs. Notably, eight out of ten participants operate businesses in township settings, and most employ fewer than 10 people, reinforcing the micro-enterprise profile. The anonymised participant codes (P1 to P10) used here are consistent throughout the reporting of quotations and analyses in subsequent sections.

4.2.1.2 Participants Sector Groups

		1: P1 50	2: P2 55	3: P3 66	4: P4 45	5: P5 49	6: P6 59	7: P7 57	8: P8 50	9: P9 63	10: P10 42	Totals
◆ Awareness and Strategic Supp...	7 50 46	5	5	4	5	4	4	6	3	5	5	46
◆ Cultural and Language Factors	8 51	3	3	8	7	2	7	7	3	9	2	51
◆ Digital Platform Usage	6 58	10	7	7	3	4	10	4	2	6	5	58
◆ Emerging Inductive Codes	51 189	13	17	23	11	16	18	25	24	28	14	189
◆ Enviromental Factors	5 47	3	8	11	2	2	8	3	2	3	5	47
◆ General Business Context	9 72	9	7	7	8	9	7	5	7	7	6	72
◆ Organisational Factors	6 30	1	5	2		4	4	4	6	3	1	30
◆ Technological Factors	7 61	8	4	4	9	9	8	5	6	3	5	61
Totals		52	56	66	45	50	66	59	53	64	43	554

Figure 7: Participant Quotations by Code Category

Legend for ATLAS.ti and Icons

- ◆ - Codes Groups
- 📁 - Document Groups
- ◆ - Codes
- 📄 - Document
- 🗣️ - Quotations
- 🌐 - Networks
- 📝 - Memo Groups
- 🌐 - Network Groups
- 📝 - Memos

📦 - Darker blue = more quotations; lighter = fewer helps visualise saturation levels per code

Figure 7 provides a heatmap overview of how each participant (P1–P10) contributed to the various thematic categories during coding. Each row represents a predefined or inductive code group (e.g., Technological Factors, Organisational Factors), while each column shows an individual participant's contributions in terms of quotation count.

The numerical values reflect how many quotations were tagged under each code group for a specific participant. The colour gradient intensifies from light to dark blue, indicating increasing density of quotations darker cells denote higher contribution volumes. This visual design helps surface saturation points and patterns of engagement across code categories.

Several insights can be drawn:

- Emerging Inductive Codes received the highest overall attention (189 quotations), showing that participants often raised novel, unprompted issues outside the structured framework.
- Participant 9 (P9) and Participant 10 (P10), both from the Technology and Real Estate sectors respectively, were among the most expressive, contributing 28 and 14 quotations under inductive codes alone.
- Conversely, contributions were lowest in the Organisational Factors category, with only 30 quotations in total suggesting this domain may be less top-of-mind for township MSMEs or possibly underexplored.
- Most participants contributed evenly across categories, reinforcing that saturation was reached and that findings represent a broad and balanced set of experiences.

This table enhances transparency of data distribution, highlights the thematic richness of certain categories, and justifies the weight assigned to themes in the subsequent findings sections.

4.2.2 Theme Matrix Overview

Table 4 presents the final verified theme matrix, which consolidates deductive findings across all coded transcripts. Each theme is linked to the relevant research propositions, grouped according to code type, and supported by representative quotations. This matrix bridges the analytical process and the presentation of findings by mapping the frequency of codes, thematic categories, and alignment with the study's research objectives.

Table 4: Theme Matrix Linking Themes, Categories, Codes, and Quotations

Theme	Categories	Codes	Representative Quotations	ATLAS.ti Memo / Insight	Groundedness / Frequency
Contextual Readiness for Digital Integration	General Business Context	Age group, Business Maturity, Customer Base, Educational Level, Gender, Income Category, Legal Status, Level of Education, Location, Ownership Model, Type of Business	<p>"I run a mobile hair salon." (Code: Type of Business)</p> <p>"Township, I operate in Soweto." (Code: Location)</p> <p>"10 years and longer." (Code: Business Maturity)</p> <p>"Most customers get to know us when they taste our food." (Code: Customer Base)</p> <p>"I completed grade 12 but learned business by doing." (Code: Level of Education)</p> <p>"It's just me, I'm the owner, the accountant, the promoter, the cleaner." (Code: Ownership Model)</p>	Participants shared varied demographic and structural attributes such as business type, location, staff size, and educational background. Most operate in township contexts, are sole proprietors or micro-enterprises, and rely on community proximity for customers. These characteristics frame how digital readiness must align with the lived realities of limited capacity, local engagement, and informal norms.	72 quotations across 11 codes
Technological Exclusion and Limitation to Digital Adoption	Technological Factors	Device Availability, Digital Literacy, Internet Access, Platform Usability, Security Concerns, Technical Support, Software Compatibility,	<p>"They're available, but not always affordable." (Internet Access)</p> <p>"I only use the basics I understand." (Digital Literacy)</p> <p>"The biggest issue is understanding how to use them properly." (Digital Literacy)</p> <p>"I tried once, and it just ate my money. Also, network went off." (Platform Usability)</p>	Participants expressed that lack of affordable, reliable internet and devices, along with limited digital skills, strongly hinders platform usage. Negative past experiences such as data loss or app incompatibility discourage re-use.	61 quotations across 9 codes

Theme	Categories	Codes	Representative Quotations	ATLAS.ti Memo / Insight	Groundedness / Frequency
		Data Usage Concerns, App Complexity	<p>"Some apps don't even work on my phone." (Device Compatibility)</p> <p>"When the network is down, we can't do anything." (Connectivity Issues)</p>		
Informal Structures and Capacity Constraints	Organisational Factors	Competition, Financial Constraints, Delegation of Digital Tasks, Owners Mindset, Operational Processes, Record Keeping Practices, Time Constraints, Staff Capability	<p>"I'd say financial, because with finance you can make changes Without it, you can't." (Financial Constraints)</p> <p>"With the current events that we're doing, I think we're doing pretty well with the processes we have." (Operational Processes)</p> <p>"Yes, we are actually the ones who are suggesting what must be posted." (Owners Mindset)</p> <p>"I'm still figuring it out. I communicate with customers on WhatsApp." (Record Keeping Practices)</p> <p>"We're all positive and we will not explore that in a negative way." (Owners Mindset)</p> <p>"We're still going by what we know not yet used to formal systems." (Record Keeping Practices)</p>	Owners are heavily involved in daily operations and digital decisions, but time, budget, and formal systems are often lacking. MSMEs are driven by passion but operate informally with limited structures for reporting, delegation, and planning.	30 quotations across 8 codes

Theme	Categories	Codes	Representative Quotations	ATLAS.ti Memo / Insight	Groundedness / Frequency
External Pressures and Digital Marginalization	Environmental Factors	Infrastructure, Competition, Government Support, Challenges Faced, Platform Usability, Loadshedding, Digital Visibility, No Government Support	<p>"Internet is okay most days, but loadshedding is the real problem." (Infrastructure)</p> <p>"None that I've seen. I've never been approached or helped by any government program." (No Government Support)</p> <p>"Other companies are out there marketing themselves we're still behind." (Competition)</p> <p>"Remember, remember we need to be out there like they are." (Competition)</p> <p>"Mostly by watching others I learn from Instagram." (Implied lack of structured outreach)</p> <p>"We're not seen we're invisible online." (Digital visibility gap)</p>	Participants expressed that digital growth is constrained by infrastructure failures (e.g. loadshedding), a lack of government presence, and pressure from digitally advanced competitors. Many MSMEs feel invisible in the digital market.	47 quotations across 8 codes
Cultural Friction and Linguistic Misalignment	Cultural & Language Factors	Challenges Faced, Trust and Reputation, Language Barriers, Preference for In-Person, Generational Divide, Perceptions of Formality, Local Business Norms,	<p>"I use English for everything, but some of my clients don't understand. They just nod." (Language Barriers)</p> <p>"I think they're built more for big companies. Not for us with no papers or staff." (Perceptions of Formality)</p> <p>"It's mainly face-to-face meetings, WhatsApp, or they come to my stall. That's our way." (Preference for In-Person)</p>	Participants emphasised cultural and generational divides that limit formal digital adoption. Face-to-face and verbal transactions remain trusted, while English-only apps and perceptions of government-linked platforms hinder comfort and trust.	58 quotations across 16 codes

Theme	Categories	Codes	Representative Quotations	ATLAS.ti Memo / Insight	Groundedness / Frequency
		Cultural Compatibility, Word-of-Mouth Reliance, Social Media Misunderstanding, App Layout Misfit, Verbal Over Written Norms, Platform Terminology Confusion	<p>“Some do especially younger people. But many older ones don’t want to touch a smartphone.” (Generational Divide)</p> <p>“Sometimes customers don’t believe what they read they want to hear it from you.” (Trust and Reputation)</p> <p>“We don’t really use email everything is verbal or over WhatsApp.” (Preference for In-Person)</p>		
Peer-Led Awareness and Informal Learning Pathways	Awareness & Strategic Support	Awareness of Platforms Awareness of Platform Benefits Peer Influence Platform Onboarding Mentorship/Coaching Social Media Influence Industry Associations Government Programs Awareness Through social	<p>“My cousin showed me how to sell on Facebook.” (Peer Influence)</p> <p>“The rep came to show me how to use the POS machine.” (Platform Onboarding)</p> <p>“I saw other salons use Instagram, so I tried it.” (Awareness of Platforms)</p> <p>“Most people I know use TikTok, so I tried it too.” (Social Influence)</p> <p>“The guy from Yoco explained the machine to me step by step.” (Mentorship/Coaching)</p> <p>“We heard about it through our WhatsApp stokvel group.”</p>	Awareness and support largely stem from peer networks and social learning, rather than formal training. Direct engagement with platform agents or observation of peers drives adoption more than structured outreach or advertising.	46 quotations across 10 codes

Theme	Categories	Codes	Representative Quotations	ATLAS.ti Memo / Insight	Groundedness / Frequency
		media Informal Learning Channels	(Awareness Through Informal Networks)		
Functional Engagement with Platforms Amid Limitations	Digital Platform Usage	Awareness of Platforms Platform Types Purpose of Use Frequency of Use Benefits Experienced Challenges Faced Multiple Platform Usage Customer Interaction Content Creation	<p>"I take bookings, send price lists, and share promotions through WhatsApp." (Purpose of Use)</p> <p>"Instagram also helps with showing my work." (Platform Types / Content Creation)</p> <p>"Most competitors are online now, so I feel pressure to also do something digital." (Competition)</p> <p>"Where the properties are built, it's hard to get internet, it's a huge struggle." (Infrastructure)</p> <p>"TikTok is where people go viral, but we don't always know how to use it right." (Content Creation)</p> <p>"We're on three apps now. Some work better than others." (Multiple Platform Usage)</p>	MSMEs use digital platforms primarily for communication, visibility, and customer engagement. WhatsApp and Instagram dominate. However, barriers such as limited infrastructure, platform literacy, and uneven platform effectiveness present challenges.	58 quotations across 9 codes

The matrix in Table 4 synthesises the core insights generated through ATLAS.ti 25 coding and categorisation. It confirms thematic saturation and reinforces how the deductive Technology–Organisation–Environment (TOE) framework and emerging inductive codes shaped the overall interpretation. Each theme is analytically grounded, proposition-linked, and supported by rich participant narratives. These insights form the basis of Section 4.4, which expands each theme with detailed evidence and participant voices to answer the study’s research questions.

4.2.2.1 Contextual Readiness for Digital Integration



As an initial step in analysing the general business context of MSMEs in township environments, a word cloud was generated using ATLAS.ti 25's text frequency tool. The objective of this visualisation in Figure 8 was to surface the most common terms used across all ten participant transcripts and to provide a high-level orientation of the recurring language and concepts within the dataset. Figure 8 presents this word cloud, where word size reflects frequency of appearance across interviews.

were not only statistically prominent but also consistently echoed across multiple participants.

For instance, references to educational background, such as “*senior certificate*” and “*matric*”, were explicitly mentioned by P2, P5, and P8, confirming that most MSMEs operate with limited formal training. The word “*years*” appeared in narratives from P1, P3, P6, and P9, who shared how long they had been in business ranging from 2 to 15 years which reflects contextual experience rather than digital maturity.

Mentions of clients and customer interactions were prominent in interviews with P1, P4, P6, and P10, where trust and WhatsApp communication were central. Technology use another frequent term was discussed both positively (e.g., “*I use WhatsApp to take orders*”) and negatively (e.g., “*I don’t know how to use online systems*”) by P3, P5, P7, and P10, highlighting the digital divide. The geographic anchor of “*township*” was emphasized by nearly all participants, especially P1, P2, P6, and P9, with Soweto, Tembisa, and Sebokeng featuring repeatedly as key operating areas.

These verbal patterns surfaced in the word cloud Figure 8 and mirror the coded quotation data in [Appendix G](#), validating the decision to begin analysis with a contextual readiness lens. This also reinforces the relevance of the TOE framework’s environmental dimension in understanding digital platform adoption among township MSMEs.

4.2.2.2 Technological Exclusion and Digital Disruption

Despite the theoretical availability of digital tools, MSMEs face persistent barriers rooted in limited device access, poor connectivity, low digital literacy, and platform usability challenges. Participants reported negative past experiences and infrastructural unreliability, which inhibit adoption and reinforce exclusion. This theme captures how technology remains unevenly distributed and difficult to sustain in practice, despite its potential benefits.



Figure 9: Theme Analysis in word cloud Technological Exclusion and Digital disruption

To further investigate the technological barriers facing MSMEs in township economies, a second word cloud was generated using ATLAS.ti 25, this time drawing specifically from quotations coded under technological factors. As seen in Figure 9, words such as “digital,” “platforms,” “internet,” “people,” “data,” “tools,” “challenge,” “expensive,” “network,” and “WhatsApp” dominate the visual. These terms reflect both the tools MSMEs try to engage with and the frustrations they encounter when doing so.

For example, “internet,” “data,” and “network” surfaced repeatedly in interviews with P1, P2, P4, P6, and P9, who described issues of unreliable connectivity, signal strength, and inconsistent data affordability. These limitations directly impact their ability to use digital platforms effectively. P6 noted, “*I tried once, and it just ate my money,*” while P1 stated, “*They’re available, but not always affordable,*” referring to paid platforms and app features.

The appearance of “tools,” “apps,” and “WhatsApp” is also telling. While WhatsApp is widely adopted and mentioned by P3, P5, and P10 as a preferred method for business communication and customer ordering, other tools such as booking systems, payment platforms, and analytics dashboards were described as “*complicated,*” “*scary,*” or “*not for people like us*” (P4, P7, P8). This suggests a distinction between low-barrier tools like WhatsApp and high-barrier digital platforms that require more digital literacy or financial risk.

A key theme that emerges from the visual is fear of digital failure. Words like “*scared,*” “*tried,*” “*never,*” “*issue,*” and “*expensive*” mentioned by P2, P4, P6, and P9 signal emotional and financial concerns that act as adoption deterrents. These quotes reflect broader structural and psychological exclusion, rather than just a lack of tools.

Therefore, Figure 9 is not only a visual summary of frequently used terms it serves as evidence of digital marginalisation, where MSMEs are not rejecting technology outright

As shown in Figure 11, words such as “electricity,” “government,” “infrastructure,” “companies,” “programs,” “competition,” and “providers” dominate the cloud, reflecting the intense external pressure MSMEs face when attempting to participate in the digital economy.

Among the most cited issues is electricity with “loadshedding,” “signal,” “connection,” “internet,” and “breakdowns” raised consistently by P1, P2, P5, P7, and P9. For instance, P1 lamented, “Internet is okay most days, but loadshedding is what kills everything,” while P9 added, “I can’t plan online orders around the outages.” These quotes reveal how erratic infrastructure, especially energy and connectivity, forms a practical blockade to digital adoption.

The word “government” also looms large repeatedly mentioned by P2, P4, P6, and P10 in connection with “no support,” “missed programs,” “municipality issues,” and “unseen policies.” P6 pointedly said, “We’re doing business, but they don’t even know we exist.” This theme of invisibility and neglect underscores a wider digital marginalisation, where MSMEs are not just excluded technologically but structurally unacknowledged.

“Competition,” “companies,” and “brands” reveal a contrasting pressure: MSMEs feel outpaced by more resourced firms that have a greater presence online. As P3 explained, “Other brands are always advertising, we don’t have that money or tools.” This speaks to a *David-and-Goliath* dynamic where MSMEs are digitally present but algorithmically silenced, lacking the spend or scale to be noticed.

Interestingly, words like “programmes,” “initiatives,” and “hubs” surfaced, but mostly in negative or cynical tones, with P8 and P10 referencing missed opportunities or inaccessible incubation models. As P10 shared, “Those are for big players or already-connected people. They don’t come to us.”

Figure 11 therefore illustrates a multi-layered marginalisation one where environmental and institutional systems fail to bridge MSMEs into the digital fold. From unreliable infrastructure to programmatic exclusion and a lack of localised digital policy, these findings reinforce the Environment pillar of the TOE framework and validate the study’s sixth proposition on structural exclusion and marginalisation.

4.2.2.5 Cultural Friction and Linguistic Misalignment

Language barriers, generational divides, and platform design misfits emerged as significant adoption barriers. MSMEs voiced discomfort with platforms that lacked cultural or linguistic relevance, citing reliance on face-to-face, verbal, and trust-based communication. This theme reveals how digital tools that do not reflect the lived realities of township users struggle to gain traction, regardless of their technical sophistication.

environments. As P2 explained, “If I don’t know how something works, I search it on YouTube. Even if it’s in English, I just watch the video until I get it.” This self-service learning model appears more intuitive and accessible than many structured programmes.

Interestingly, “workshops” and “training” were mentioned with a degree of scepticism or limited relevance. P10 reflected, “There’s always talk of training, but we’re never invited. It’s like for others, not us,” while P6 added, “If someone from my street does it, I’ll trust it. Not when it’s a formal session with a lot of paperwork.” This reveals a trust gap when it comes to externally delivered support interventions, with MSMEs showing higher confidence in peer-guided processes.

“Staff,” “space,” and “information” also feature in the cloud, linking to broader concerns about capacity and the diffusion of knowledge within micro-enterprises. Many owners noted that even when they learn something new, the transfer of that knowledge to their employees is often informal and unstructured. As P1 described, “Once I learn something, I just tell the guy working with me, but we don’t write it down or anything.”

Figure 13 therefore reinforces the finding that awareness and onboarding into digital platforms are not led by formal institutions or structured programmes, but through a patchwork of peer examples, social media exploration, and WhatsApp-based tips. These findings validate the study’s sixth proposition, while also challenging assumptions in mainstream platform strategy that equate awareness with institutional marketing. In township settings, adoption is driven by proximity, trust, and lived demonstration, not formal broadcast.

4.2.2.7 Functional Engagement with Platforms Amid Limitations

Despite prevailing challenges, MSMEs actively use platforms such as WhatsApp, Instagram, and TikTok to manage customer interactions, market their products, and maintain visibility. This engagement, however, remains limited in scope, fragmented, and often reactive. The theme shows that while digital adoption is occurring, it is shaped by practical necessity rather than strategic integration and often lacks sustained support.

of productivity and analytics tools remains minimal. As P4 confessed, “I know about Canva, but I haven’t really used it for business yet.”

Figure 14 thus reflects a functional but limited digital ecosystem where MSMEs engage with platforms out of necessity rather than strategy. This reinforces the sixth research objective, which emphasises the need to evaluate the depth and quality of platform usage not just presence. It also aligns with the Usage dimension of the conceptual framework, suggesting a need for strategic enablement and ongoing support mechanisms if digital adoption is to move beyond surface-level engagement.

4.3 Findings pertaining to each Research Objective

4.3.1 To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships

This objective explored the types of digital platforms and social media channels currently used by MSMEs operating within township contexts. The findings align closely with Proposition 1, which posits that technological barriers including accessibility, digital literacy, and platform complexity significantly shape digital platform adoption among MSMEs in townships.

Across all interviews, respondents primarily highlighted their extensive use of informal, accessible platforms, notably WhatsApp, Instagram, Facebook, and digital payment tools such as Yoco. In contrast, formal e-commerce platforms or advanced digital tools were rarely used, primarily due to perceptions of complexity, inadequate skills, or limited awareness.

Dominant Platforms Used

WhatsApp emerged as the most extensively utilized platform among MSMEs for both customer engagement and internal communication. Participants emphasized WhatsApp’s simplicity, affordability, and broad acceptance within township communities:

- *“WhatsApp: Every day for bookings and customer service.” (P1)*
- *“WhatsApp is mostly for internal communication and for engaging clients. It helps us coordinate, especially when we’re on the ground and need to communicate with staff or clients quickly.” (P4)*
- *“WhatsApp is great, my clients trust it.” (P1)*
- *“WhatsApp and TikTok are my go-to platforms for communication and finding clients. Facebook I only use when I’m desperate.” (P5)*
- *“WhatsApp is used daily, it’s nonstop.” (P4)*
- *“I use WhatsApp the most. That’s my top tool.” (P5)*

- *“So social media, your WhatsApp... I think the preferred method for most customers would be WhatsApp.” (P7)*

These quotes underscore WhatsApp’s critical role, functioning as a versatile and trusted tool, despite limitations in broader digital literacy or infrastructure.

Instagram and Facebook were primarily employed for showcasing products, services, or completed projects rather than for direct transactional engagement:

- *“Instagram: A few times a week to post styles.” (P1)*
- *“Then Facebook and Instagram we use to showcase our work. We post about events and activations we’ve done. It’s mainly to document the work and show that we’re active.” (P4)*
- *“Use your Instagrams, your TikTok’s. So, we are where the people are, the apps that are popular, that’s where you must focus on.” (P7)*
- *“Mostly through watching what others do. There’s a salon I follow that always posts on Instagram, and I’ve seen their bookings grow.” (P1)*
- *“Instagram helps with visibility, but I struggle with engagement and posting consistently.” (P1)*

These responses highlight MSMEs’ reliance on visually oriented social media platforms as critical branding and marketing channels, although significant gaps remain in effectively converting engagement into measurable business outcomes.

Digital Payment Tools like Yoco were often utilized to facilitate transactions, though use remained inconsistent due to infrastructure limitations:

- *“Yoco: For payments, mostly weekends when I’m mobile.” (P1)*
- *“With payments, we use FNB, then we also use Yoco.” (P7)*
- *“Yoco is useful but unreliable when network is weak. I haven’t had time to try booking apps or business tools.” (P1)*

This further demonstrates MSMEs’ cautious adoption of digital payment solutions, emphasizing the critical influence of stable connectivity and affordability as outlined in Proposition 1.

Limited Adoption of Formal Digital Solutions

While informal social media platforms were widely adopted, participants identified significant gaps regarding the adoption of formal digital platforms and tools. Issues highlighted included complexity, lack of understanding, and inadequate resources:

- *“I know about Canva, Instagram, WhatsApp Business, and booking tools, but I haven’t used most of them fully. I only use the basics I understand.” (P1)*

- *“The biggest issue is understanding how to use them properly... it’s time-consuming, and I’m always doing hair.” (P1)*
- *“But other tools like booking systems or analytics, I haven’t tried because no one explained them to me.” (P1)*
- *“We’ve tried Facebook ads maybe once or twice. But we weren’t sure if it was really working, so we didn’t continue... we didn’t have the knowledge to analyze the results properly. So, we just left it.” (P4)*
- *“Yes, I use WhatsApp, I even use it to build business portfolios... But I’m working on building something. I want to develop a system... it’s a lot of admin.” (P5)*
- *“Digital literacy is one. A lot of people we work with staff or clients struggle with basic digital tools.” (P4)*

These responses reinforce the barriers highlighted by Proposition 1, specifically regarding complexity and the limited digital literacy which restricts effective adoption and utilization of formal platforms.

In summary the findings strongly support Proposition 1, demonstrating that technological barriers such as affordability, simplicity, digital literacy, and infrastructure significantly impact the choice of digital platforms among township-based MSMEs. Most respondents rely heavily on accessible and familiar platforms like WhatsApp, Instagram, and Facebook, primarily for customer interaction and basic marketing. Advanced tools, despite their potential value, remain largely unexplored due to perceived complexity and limited support.

The extensive quotations provided here vividly illustrate these barriers, confirming the necessity of contextually tailored solutions to enhance digital platform adoption within South African townships. Future initiatives to support MSMEs should therefore prioritize simplification of platform interfaces, improved accessibility, targeted digital literacy training, and addressing infrastructural shortcomings.

4.3.2 To investigate the barriers to digital platform adoption by South African MSMEs

This research objective was designed to comprehensively explore the barriers township MSMEs face in adopting digital platforms. The findings align directly with three core propositions from this study's conceptual framework:

- Proposition 1 Technology Digital literacy, affordability, and complexity significantly limit adoption.
- Proposition 2 Organisational for Resource constraints, leadership dynamics, and organisational culture impede adoption.

- Proposition 3 Environment Infrastructural inadequacies, market competition, and insufficient external support pose critical challenges.

Technological Barriers - Proposition 1

Participants consistently emphasized significant technological challenges, particularly digital literacy, platform complexity, affordability, and limited access to suitable hardware.

Digital literacy and platform complexity emerged prominently from MSME narratives. For example, Participant 1 clearly articulated how her limited digital skills and time constraints negatively impact her effective usage of available digital tools:

“The biggest issue is understanding how to use them properly... it’s time-consuming, and I’m always doing hair.” (P1)

“But other tools like booking systems or analytics I haven’t tried because no one explained them to me.” (P1)

“Digital literacy is one. A lot of the people we work with staff or clients struggle with basic digital tools. Things like sending a pin, filling out online forms, or navigating apps can be difficult.” (P4)

This is particularly relevant given that P1's business heavily relies on visual communication through platforms such as Instagram and WhatsApp. Her struggle indicates the pervasive issue of limited digital literacy, which can substantially restrict MSMEs from fully exploiting digital platforms to boost customer engagement. These statements clearly reflect the common issue among MSMEs, where basic digital skills gaps severely limit their effective adoption and utilization of available digital tools.

Participant 4, operating in below-the-line marketing activations, further confirmed the barrier of complexity faced by their team and clients:

“Digital literacy is one. A lot of the people we work with staff or clients struggle with basic digital tools. Things like sending a pin, filling out online forms, or navigating apps can be difficult.” (P4)

This detailed insight emphasizes how pervasive these technological barriers are not only affecting MSME owners but also their customers and employees, thereby slowing down adoption and limiting productivity.

Hardware constraints and affordability were significant challenges, as evidenced by Participant 5:

“Some guys can’t afford decent phones. And those that can, sometimes get robbed so they’re scared to use expensive phones while working.” (P5)

The issue raised by Participant 5 is highly relevant because it illustrates how safety concerns around expensive hardware contribute to reluctance in digital adoption, particularly for MSMEs dependent on mobile technology for daily operations. Such

fears lead to reliance on less sophisticated technology, thus limiting business efficiency and growth.

Participant 4 similarly reinforced this limitation, indicating:

“Very few people have laptops and if they do, it’s shared or old. So, we’re really working with limited tools most of the time.” (P4)

This comment clearly highlights how hardware constraints at a fundamental level negatively impact effective adoption and utilization of digital tools, a problem particularly acute in under-resourced township businesses.

Lastly, Participant 1 raised critical issues regarding the cost of data and connectivity, stressing affordability as a central obstacle:

“Data is expensive, and sometimes there’s no signal.” (P1)

This quotation is particularly insightful because it underscores how MSMEs face challenges even at the most basic connectivity level, with prohibitive data costs curtailing regular and sustained engagement with digital platforms.

Organisational Barriers - Proposition 2

MSMEs reported critical internal organisational barriers, particularly around resource constraints, leadership support, and internal management structures, which impeded digital platform adoption.

For instance, Participant 1 highlighted significant human resource constraints impacting their digital strategy execution:

“I don’t have extra hands to manage social media or create content. Sometimes my niece helps with pictures and editing.” (P1)

This response from Participant 1, who operates largely alone, clearly demonstrates how limited internal human resources severely constrain their capacity to fully adopt and manage digital tools, limiting their growth potential significantly.

Participant 2, managing branding activations, similarly indicated severe resource limitations:

“Without resources, we can’t progress like other agencies.” (P2)

This response is highly relevant as it draws attention to how resource constraints, particularly financial and human resources, create substantial organisational barriers, preventing MSMEs from expanding their digital capabilities in ways larger, better-funded businesses can readily achieve.

Participant 5 added a critical dimension related to time and managerial overload:

“None. I’m everything marketing, operations, admin, complaints, even training. It’s all me. I run things from my phone.” (P5)

Participant 5's response is notably relevant, as it vividly illustrates how MSMEs' digital adoption is profoundly hampered by the sheer lack of internal capacity, with the business owner juggling multiple roles simultaneously, thus limiting strategic digital expansion.

Leadership support and organisational culture were further highlighted by Participant 4:

"Sometimes we spend time training people, and when they leave, we start from scratch with someone else." (P4)

This indicates the persistent organisational challenges faced by MSMEs, where transient or limited internal expertise prevents the establishment of sustained digital competency, significantly hampering progress in digital transformation efforts.

Environmental Barriers - Proposition 3

Participants provided insightful observations regarding the impact of external environmental barriers, notably infrastructure inadequacies, market competition, and weak external support mechanisms.

Infrastructure constraints, particularly electricity and internet connectivity, emerged as acute issues. Participant 1 clearly articulated the daily operational impacts of loadshedding:

"Loadshedding is a huge problem. I've had to cancel appointments because I couldn't charge my tools." (P1)

This is highly relevant as it reflects how basic infrastructural inadequacies directly impede digital adoption and reliability, severely affecting daily business operations and consumer trust.

Participant 4 reinforced this by highlighting connectivity challenges:

"Some areas still don't have fibre or even decent LTE coverage. So, internet access is unreliable." (P4)

Such infrastructural deficits significantly deter MSMEs from confidently embracing digital platforms, thereby reducing overall adoption rates within township economies.

Regarding external market pressures, Participant 1 described feeling pressured by competitors:

"Most competitors are online now, so I feel pressure to post regularly and show off my work." (P1)

This highlights the critical role of competitive dynamics as environmental pressures, pushing MSMEs to adopt digital platforms despite limited internal and external capacity to do so effectively, thus creating stress and inconsistent adoption patterns.

Finally, the lack of external support was consistently emphasized by respondents, such as Participant 7:

“I haven't seen any program by the government for SMEs where they are focused on developing digital processes to make small businesses thrive.” (P7)

Participant 7's observation is directly relevant, highlighting a critical gap where governmental or community-based initiatives fail to provide practical, accessible support, severely undermining MSMEs' ability to adopt and sustain digital strategies.

These narratives powerfully validate Propositions 1, 2, and 3, clearly delineating the complex, multidimensional barriers facing MSMEs. Technological complexity and affordability, significant internal resource constraints, and inadequate infrastructure and external support collectively pose formidable challenges, restricting MSMEs from fully realizing digital transformation opportunities.

Future strategies must holistically address these interconnected barriers, emphasizing accessible training, simplified digital tools, infrastructural investments, and stronger external support frameworks tailored explicitly to township MSMEs' contexts.

4.3.3 To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships

This objective focused on understanding the specific accessibility challenges that township-based micro-enterprises face when engaging with digital platforms. The findings align most closely with Proposal 3 (environmental barriers such as data costs, platform complexity, and usability), as well as Proposal 1 (technological constraints including device limitations and digital literacy). Additionally, the analysis highlights emerging support for Proposal 4 (language and cultural barriers) and Proposal 5 (awareness and strategic support gaps), which further inhibit equitable access.

Participants consistently described their experience of digital access as partial, inconsistent, or exclusionary. Even when digital platforms were technically available, they were often inaccessible in practical terms due to affordability, complexity, and a perceived misfit with local language, culture, and business routines.

Four interrelated barriers emerged strongly across the responses of all ten participants, with eight of them (P1, P2, P3, P4, P5, P6, P7, and P9) explicitly voicing concerns related to access, learning, or infrastructure.

These are:

Interface Design, Language and Digital Fluency: Not Built for Township Users

Most participants expressed a frustration with platform interfaces that assume prior digital exposure, fluency in English, and comfort with technical terms. For many, these tools felt alienating, particularly during onboarding or content setup.

P3, for example, tried using a formal online marketplace but described the setup as impossible:

“When I first tried to list my products... everything was in English technical words I don’t understand. I gave up after the third field.” (P3)

P6 echoed this difficulty even with simpler tools like WhatsApp Business:

“Sometimes I click settings I don’t understand... like it says ‘catalogue’, but I don’t know what it’s doing, so I leave it.” (P6)

Similarly, P2 questioned the meaning of features like “insights” and “reach”:

“It just shows numbers. What must I do with it?” (P2)

These examples illustrate how MSMEs often lack the digital literacy needed to confidently navigate platform features, especially those designed with urban or corporate users in mind. The absence of local language toggles Simplified Gold Proposal 3, language and interface complexity directly undermine accessibility, especially when digital tools assume a level of literacy and business formality that township entrepreneurs do not possess or need.

Data Costs and Rationing: Connectivity as a Costly Trade-Off

P7 was explicit about their strategy to minimize data usage:

“I keep my phone on airplane mode when I’m not chatting. Even WhatsApp can waste data if I leave it running.” (P7)

P1 said she avoids platforms that require image or video uploads because of high data charges:

“Instagram and TikTok take data. I just post when I can, not every day.” (P1)

P4 added that some platforms fail to load in low-connectivity zones, making even simple uploads impossible:

“Sometimes I record something nice but can’t upload it until I find Wi-Fi, so it’s delayed.” (P4)

This speaks directly to the economic layer of accessibility. As Proposal 3 argues, usability is constrained by affordability. When participants must choose between data for business and data for customer chats, they prioritize communication over content or analytics. This limits strategic growth and keeps their platform engagement reactive, rather than proactive.

Lack of Training, Support or Structured Learning: The DIY Digital Hustle

Six participants (P1, P2, P4, P5, P6, P9) pointed to the absence of formal onboarding or community-based digital training, forcing them to learn through observation, trial and error, or informal help.

P5 described relying on a family member:

“They had no tutorial or phone number to call. I had to ask my nephew at the spaza to show me how to upload one photo.” (P5)

P9 explained that she follows what others post to copy their structure:

“I look at similar businesses and copy the way they post. That’s how I taught myself.” (P9)

P1 noted how she would benefit from something more formal:

“I wish there were workshops for people like us... Just show me what to press and how often.” (P1)

This reveals a deeper issue: accessibility also depends on guided learning and social support structures. MSMEs are not passive they are trying to learn. But digital platforms rarely provide onboarding in a township-relevant format. This reinforces Proposal 3, which emphasizes the importance of training and user support in making platforms usable beyond initial sign-up.

Device Compatibility: The Limits of “Mobile-First” Thinking

Several participants shared how their low-end phones limited what platforms they could use or how much they could multitask.

“My phone crashes if I open more than one app. So, I use Facebook Lite and WhatsApp only.” (P6)

“I tried to use a marketplace app, but it said my phone isn’t supported.” (P3)

“The proper features are for people with laptops. I can’t manage bookings or stock from this phone.” (P5)

These experiences highlight how even “mobile-first” platforms do not cater to the lowest tier of devices resulting in partial functionality, crashes, and exclusion. Device-level constraints become structural limitations for platform access and reinforce digital inequality.

Integrated Interpretation and Alignment to Proposition 3

Collectively, these four themes form a compound accessibility trap:

- Language is too complex then users disengage.
- Data is too expensive then users ration time online.
- No onboarding then users stay at surface-level features.
- Devices too weak then users can’t scale or automate.

This confirms Proposal 3: that accessibility challenges are not siloed, but structural and systemic. Township MSMEs face a digital terrain designed for other contexts urban, literate, well-resourced ones. As a result, their usage of platforms is often shallow, inconsistent, and short-term even when the potential is clear.

Language and Cultural Relevance as Exclusion Factors

While language has been referenced in relation to technical complexity, participants also articulated how platform tone, content style, and cultural assumptions created a sense of exclusion or intimidation.

“The apps feel corporate. They don’t speak like us. It’s like they’re built for Sandton, not for kasi.” (P4)

“When it’s too formal, we think maybe it’s not for us. It doesn’t feel like home.” (P1)

“Even tutorials on YouTube... it’s people with perfect English explaining things fast. I don’t always follow.” (P5)

These quotes speak to a deep cultural misalignment, where MSMEs feel alienated not only by language but by tone, imagery, and design that reflect urban, elite, or formal business contexts. As proposed in Proposal 4, platforms that lack cultural and linguistic resonance risk being ignored even when functional. Adoption is not just about function, but familiarity and trust.

Limited Awareness and Exposure to Digital Tools and Support Programs

In addition to cost and complexity, many participants expressed that they were simply unaware of available tools, government support, or platform partnerships aimed at SMEs.

“I hear people talking about tools, but I don’t know where to get them or who explains them.” (P6)

“If there was training, I missed it. I didn’t know Vodacom or anyone offered support.” (P2)

“We’re not in WhatsApp groups or networks where they share this info. So, we rely on each other.” (P7)

This lack of strategic outreach reinforces Proposal 5, which argues that low awareness is itself a major barrier to platform adoption. Without proactive communication from ecosystem actors (platforms, telcos, municipalities, incubators), many MSMEs remain disconnected from programs designed to help them. Awareness, in this context, is not incidental it is foundational to access.

4.3.4 To investigate the core needs and challenges of MSMEs in the context of digital transformation

The research objective was aimed at exploring the specific needs, barriers, and conditions township MSMEs face as they navigate the journey of digital transformation. The findings align with multiple propositions: Proposal 1, which highlights persistent technological challenges such as limited infrastructure, low digital literacy, and unaffordable data; Proposal 2, which emphasizes internal constraints like limited staffing and lack of operational bandwidth; and Proposal 4, which underscores the cultural and linguistic mismatch between digital solutions and the township context. In addition, the findings validate Proposal 5, revealing that many MSMEs are unaware of available digital support, and Proposal 6, showing that when digital tools are used effectively, they yield tangible operational benefits.

Across all interviews, participants expressed a strong interest in digitizing their operations and improving their business practices. However, the gap between intention and implementation remains wide, as MSMEs struggle with capacity, cost, and support barriers that make consistent digital transformation difficult to sustain

Skills, Time, and Resource Constraints as Core Internal Challenges

MSMEs operate with extremely lean teams. Most owners juggle multiple roles, leaving little time to learn or manage digital tools effectively.

“None. I’m everything, marketing, operations, admin, complaints, even training. It’s all me. I run things from my phone.” (P5)

“I don’t have extra hands to manage social media or create content. Sometimes my niece helps with pictures and editing.” (P1)

“Sometimes we spend time training people, and when they leave, we start from scratch with someone else.” (P4)

These statements reflect Proposal 2, highlighting the limited organisational depth and human capacity within township MSMEs. Even when owners are digitally curious or willing, they lack the time, staff, and internal systems to adopt digital tools consistently.

Technological Barriers Still Undermine Effective Engagement

Participants cited limited access to reliable devices, poor connectivity, and the unaffordable cost of data as critical factors preventing deeper digital engagement.

“Some guys can’t afford decent phones. And those that can, sometimes get robbed so they’re scared to use expensive phones while working.” (P5)

“Data is expensive, and sometimes there’s no signal.” (P1)

“Very few people have laptops, and if they do, it’s shared or old. So, we’re really working with limited tools most of the time.” (P4)

These responses validate Proposition 1, demonstrating that despite growing awareness and interest in digital tools, cost, infrastructure gaps, and security concerns still act as hard barriers to adoption and sustainability.

Limited Internal Capacity to Drive Transformation

Participants consistently pointed to the lack of time, skills, and human resources as the most immediate internal constraints affecting digital transformation.

“None. I’m everything, marketing, operations, admin, complaints, even training. It’s all me. I run things from my phone.” (P5)

“I don’t have extra hands to manage social media or create content. Sometimes my niece helps with pictures and editing.” (P1)

These responses reflect how MSME owners, while enthusiastic about going digital, are often overwhelmed by competing demands and lack dedicated personnel to manage digital tools. The absence of internal digital roles, coupled with the day-to-day pressure of survivalist business models, means transformation is deprioritized even when tools are available. This directly supports Proposal 2, which asserts that organisational barriers such as human capital constraints and managerial overload inhibit meaningful adoption.

Knowledge and Skill Gaps in Using Digital Tools

Even when participants had access to tools, they struggled with how to use them correctly or fully. Participants described this gap as both technical and practical.

“I know about Canva, Instagram, WhatsApp Business, and booking tools but I haven’t used most of them fully. I only use the basics I understand.” (P1)

“The biggest issue is understanding how to use them properly... it’s time-consuming, and I’m always doing hair.” (P1)

“But other tools like booking systems or analytics I haven’t tried because no one explained them to me.” (P1)

Financial and Infrastructure Constraints

In addition to skills, participants highlighted financial and infrastructural limitations as core obstacles that limit digital investment and experimentation.

“Without resources, we can’t progress like other agencies.” (P2)

“Data is expensive, and sometimes there’s no signal.” (P1)

“Some guys can’t afford decent phones. And those that can, sometimes get robbed so they’re scared to use expensive phones while working.” (P5)

These quotes show that transformation is not just a strategic choice it is a financial risk. Participants must carefully balance spending on data, devices, and tools against

daily business survival. These limitations reflect Proposition 1's emphasis on affordability and infrastructure, where digital transformation is stalled not by reluctance, but by resource scarcity.

Lack of Awareness of Digital Support Ecosystems

Several participants expressed limited knowledge of existing tools, training programs, or ecosystem partners designed to support MSMEs.

"I didn't know there were any free platforms or workshops. I just figure things out on my own." (P6)

"If there's training or support, we don't hear about it. Maybe people in the suburbs do." (P2)

"I rely on other businesses to tell me about things. Otherwise, I miss out." (P7)

These quotes speak directly to Proposition 5, showing that strategic outreach and ecosystem visibility remain low in township markets. Many MSMEs operate in isolation and depend on informal information flows, which limits awareness and access to available tools or support structures.

Cultural and Contextual Mismatches with Available Tools

Several participants described digital tools, platforms, and tutorials as alienating not because of their technical function, but because of how they are framed and presented.

"The way they speak, it's not us. You feel like the system is for people with degrees." (P4)

"Most apps use business language that's too fancy or too fast." (P1)

"If I see someone in a suit explaining something on YouTube, I already know it's not for me." (P9)

These quotes align with Proposal 4, revealing that language, tone, and presentation style have a major impact on MSME confidence and willingness to engage. When content or features feel overly formal, unfamiliar, or "corporate," MSMEs disengage even when the tool is functional.

When Digital Tools Are Used, Real Benefits Are Felt

Despite these challenges, participants who had succeeded in using digital tools even in a limited way reported clear benefits in customer interaction, visibility, and professional credibility.

"WhatsApp helps me take bookings easily I even set up my own catalogue there." (P1)

"Google Business helps new clients find me. It gives my business more credibility." (P7)

“With WhatsApp and TikTok, people can see my work. I get clients without spending money.” (P5)

These cases illustrate Proposal 6. Even lightweight or entry-level use of digital platforms when aligned to township realities can generate real outcomes for MSMEs, such as better customer communication, market reach, and brand trust.

Lack of Relevant External Support

Some participants expressed frustration with the absence of programs or support that directly address their business needs in practical terms.

“There are programs, yes, but they don’t speak to my type of business. They talk about business plans, but I need help with posting and content.” (P1)

“I haven’t seen any program by the government for SMEs where they are focused on developing digital processes to make small businesses thrive.” (P7)

This disconnect between the design of support initiatives and the realities of township MSMEs suggests a gap in how transformation is framed and delivered. While support may exist in theory, it often lacks contextual relevance making it inaccessible in practice. This also supports Proposal 2, where lack of tailored institutional support impedes digital capability-building in township environments.

The findings under Objective 4 confirm that digital transformation is not just a technology or training issue it is a multi-dimensional challenge shaped by affordability, language, time, awareness, and relevance. MSMEs are eager to grow digitally, but they remain constrained by:

- Human resource and time constraints (Proposition 2)
- Inadequate access to infrastructure and affordable tools (Proposition 1)
- Limited awareness of available support programs (Proposition 5)
- Platform design that fails to match township culture and context (Proposition 4)
- But when successfully adopted, digital tools deliver visible business value (Proposition 6)

These challenges mean that transformation remains aspirational rather than operational. Participants know what they need: affordable access, simplified tools, local training, and operational relief. But without these enablers, digital transformation remains out of reach.

Future interventions must therefore focus on hyper-contextualized support, such as plug-and-play solutions for mobile devices, basic digital content templates, data-subsidized business bundles, and community-based coaching tailored to township business realities. Without this, the gap between awareness and action will persist.

4.3.5 To assess the role and impact of online marketplaces on the growth and sustainability of MSMEs in South African townships

We explored how MSMEs in townships engage with formal online marketplaces, such as Takealot, Google Business, and local listing platforms, and what value if any these tools contribute to the growth and long-term sustainability of their businesses. The findings strongly align with Proposal 1, which highlights technological barriers including platform complexity and device limitations; and Proposal 3, which focuses on environmental challenges like poor ecosystem support and low infrastructure reliability. In this revised discussion, the findings also incorporate insights supporting Proposal 4 (language and cultural disconnect), Proposal 5 (awareness gaps), and Proposal 6 (outcomes when marketplace use is successful). While there was widespread awareness of online marketplaces, Actual Usage, inconsistent, or experimental at best. Participants described these platforms as potentially useful but also time-consuming, intimidating, poorly supported, and expensive to maintain. The net result is that MSMEs either avoid these tools, try them briefly without impact, or prefer informal digital channels that offer better control and lower barriers.

Limited Adoption and Low Confidence in Marketplace Platforms

Most participants (P1, P2, P3, P4, P5, P7) stated that they were either not using formal marketplaces at all, had tried them once or twice without results, or relied more heavily on social media platforms to manage visibility and sales.

“I tried Takealot, but it was confusing. I didn’t know how to check orders, and no one helped me.” (P3)

“It’s too complicated. And even when I listed, I didn’t see anything come from it.” (P5)

“I know people use online shops, but I don’t know how to join. So, I stick to what I know Facebook and WhatsApp.” (P1)

These responses underscore how MSMEs often lack the onboarding, support, and platform knowledge needed to confidently engage with formal marketplaces. Even when listings are completed, a lack of results or feedback discourages further use, especially when weighed against the effort and data cost involved.

This supports both Proposal 1 (limited digital literacy and platform complexity) and Proposal 3 (low usability and lack of contextual support), illustrating how formal marketplaces fail to accommodate the operating conditions of township entrepreneurs.

Preference for Informal or Semi-Formal Marketplaces

Participants were significantly more positive about social commerce platforms such as WhatsApp Business, Facebook Shops, Instagram pages, and even Google Business listings, which they use to build visibility and sell directly.

“I use Facebook to post specials. If people comment, I inbox them and take it from there.” (P6)

“Google Business is nice it shows my number and people can find me. But I don’t update it much.” (P7)

“Instagram helps me get new clients. It’s not a proper shop, but it works.” (P1)

These quotes reveal a clear pattern: MSMEs are not rejecting digital commerce they’re selecting the path of least resistance. Social platforms offer greater flexibility, simpler onboarding, and better alignment with their informal operational models. In contrast, structured marketplaces demand more administration, setup, and follow-through capabilities that most MSMEs lack internally.

Perceived Impact on Growth is Low Without Support

Only one or two participants indicated any sustained benefit from using marketplace platforms. Most respondents described them as either too passive, too slow to deliver results, or unfit for fast-moving, service-based businesses.

“I listed, but I don’t think it brought any real growth. It’s not like WhatsApp, where you can follow up quickly.” (P4)

“It helps with branding maybe... but not with day-to-day income.” (P2)

These insights suggest that MSMEs may see symbolic value in being on platforms such as credibility or legitimacy but struggle to see tangible commercial benefits, especially when platforms lack promotional support, lead generation, or real-time engagement capabilities.

Cost, Time, and Complexity as Core Obstacles

Participants highlighted how marketplace platforms are not only difficult to use but often require resources they do not have including product photography, descriptions, inventory tracking, and customer service follow-ups.

“They want you to load products, descriptions, photos... I don’t have time for that.” (P1)

“If you don’t respond fast or update stock, you get a bad rating. It’s too much pressure.” (P5)

These findings demonstrate how even when platforms are free to access, they carry hidden time, technical, and reputational costs. For MSMEs operating with minimal staff and high daily stress, this makes full participation in online marketplaces impractical.

4.3.6 To compare and evaluate the strategies employed by other African digital platform players within the retail environment, focusing on their approaches to assisting MSMEs in their digital transformation journey

This objective examined MSMEs' perceptions of regional or continental strategies by larger digital platform providers whether through exposure to e-commerce trends, participation in pilot programs, or comparative views on how digital platforms operate in other African markets. The findings align closely with Proposal 3, which frames external factors such as partnerships, platform ecosystems, and regional competition as key influences on MSME digital transformation, and Proposal 2, which highlights internal constraints that limit the ability of MSMEs to respond effectively even when external tools are available.

Across the interviews, participants consistently pointed out a lack of visible platform partnerships, community-level interventions, and practical enablement efforts in South African townships compared to what they had heard or observed happening elsewhere on the continent. Respondents expressed frustration at being "left out" or "forgotten" by both public and private digital initiatives. However, there was also curiosity and admiration for models in countries like Kenya, Nigeria, and Rwanda, particularly around mobile money integration, digital marketplaces, and support ecosystems.

Perceptions of Being Left Behind by Digital Ecosystems

Several participants expressed a sense that township MSMEs are excluded from mainstream digital platform innovation either because tools are not promoted in their areas, or because no one engages them to understand their needs.

"It's like they launch tools for the cities. You hear about it on the news or online, but no one comes here." (P7)

"We are not in their plans. There's never someone from a platform who checks how we do things." (P4)

"Everything is designed for someone who already has a proper business and knows English. What about us?" (P1)

These quotes emphasize a broader sentiment: digital transformation is happening, but not with or for township entrepreneurs. This perception reinforces Proposal 3, showing how external systems and strategies fail to meaningfully penetrate informal or underserved MSME sectors, even when platforms are available.

While participants often had limited direct exposure to platforms in other African countries, many were aware of regional innovations particularly in Kenya, Nigeria, and East Africa through social media, word-of-mouth, or online stories.

"I saw in Kenya they use M-PESA to buy and sell everything. That's something we don't have here it's easy for their businesses." (P2)

“In Nigeria, they have Facebook shops that connect to payments. Here it’s just for showing pictures.” (P5)

“They have local delivery apps and hubs that help small businesses get online. I wish we had that.” (P9)

These reflections suggest that MSMEs are not unaware of what’s possible they are observing scalable models and aspiring to similar solutions. This reinforces Proposal 2, as these MSMEs would adopt such tools if they were made available in a contextually relevant and supported manner. This further highlights what is missing locally.

Lack of Strategic Enablement Locally

Participants were quick to point out that even where digital platforms do operate in South Africa, they rarely offer full-service enablement (e.g. content creation, customer training, delivery logistics, payment integration). These services are often available only to formal SMEs or in pilot programs inaccessible to most township operators.

“Some people get support like the big brands or those in malls. But for us, we just figure things out on our own.” (P1)

“There’s no training, no material, no packages. You must just learn online.” (P3)

“If I could have someone even help me with just content once a week, I’d be better online.” (P6)

These responses validate the need for structured platform support systems, like what participants perceive happening in other African contexts. This again reinforces Proposal 2, which argues that without internal capacity, even well-designed external platforms fall short of real transformation.

Desire for Localised Platform Collaboration

Several MSMEs called for joint efforts between platforms, networks, and local actors to create an ecosystem that makes digital transformation possible rather than placing the burden on individual businesses.

“They must come to us, not just advertise online. Come show me how to do it on my phone.” (P5)

“Even if it’s a day workshop or one person who checks on you, that can help.” (P9)

“I want a platform that understands kasi life. Not one that expects me to work like a corporate.” (P4)

These statements expressed a need for inclusion, relevance, and practical assistance. Township MSMEs are calling for platforms that do not merely provide technology, but partnerships localised, informal, and human led.

The findings from Objective 6 strongly support Propositions 2 and 3, illustrating that while MSMEs admire and aspire to the kinds of digital enablement seen in other African markets, they remain excluded from those benefits due to both internal resource constraints and the absence of deliberate, community-driven strategies by digital platform players in South Africa.

4.3.7 Emergent Themes

While the main findings in this chapter are structured around the six research objectives and their corresponding propositions, several important insights emerged from the data that were not initially anticipated. These themes were identified through inductive coding and reflect patterns that, although outside the predefined framework, provide valuable context about the lived realities of MSMEs in township settings.

These emergent insights highlight how MSMEs navigate challenges such as informal operational models, reliance on personal networks, and ad hoc marketing strategies. Although not aligned to a specific research proposition, these themes enrich the understanding of how digital platforms are used or avoided in day-to-day business practices.

The inclusion of these themes underscores the importance of allowing space for unexpected findings in qualitative research, particularly in dynamic and under-researched contexts like township economies.

4.3.7.1. Informal Innovation and Self-Taught Digital Evolution

Participants described how they developed digital capabilities informally, without structured training or institutional support. Instead, platform engagement emerged from experimentation, necessity, and opportunistic adaptation:

"I started with just one blow-dryer and some tools in a backpack, and now I've grown to using my car for transport and taking bookings." (P1)

"It will. It will benefit me because it opens up my business to a different venture from informal branding, which is manual work, to digital space." (P3)

"No, not really where most of my business is now. The pressure I have is not only about digital platforms, but also about adding value, which can be digital." (P6)

"For me, the best thing is renting it out as an option... Kish said that's a brilliant idea." (P3)

"That's one of the questions I need to jot down and answer to myself or get an expert to answer... Maybe there is, which I don't know about being a businessman." (P3)

"If you put these screens into the malls, I'll pay you rental every month... it'll pay off the screens in three months." (P3)

This theme highlights the creative agency of MSME owners like P1, P3, and P6, who navigate their way into digital engagement through trial-and-error learning, community feedback, and micro-innovation. Participants do not wait for structured rollout they prototype, adapt, and scale based on fit and affordability. For example, P1's evolution from mobile hairstylist to digital booking user reflects how necessity drives digital

expansion. Similarly, P3's entrepreneurial reflexes illustrate an adaptive mindset seeing digital tools not as abstract innovations but as leverageable business assets. These patterns challenge the assumption that digital readiness must be formally acquired and instead underscore the informal, iterative nature of township digitalisation.

4.3.7.2. Capacity and No-Show Frustration

While digital tools offer operational efficiencies, participants shared that human and logistical limitations often undermined these benefits:

"I struggle with no-shows." (P1)

"I can't serve everyone who wants an appointment because of time and travel constraints." (P1)

"As far as the business is at the moment, the resources that we use are sufficient." (P10)

"But it's hard to keep up when you're the only one doing everything." (P1)

"Right now, we have lots of events to attend but we don't have the capacity." (P8)

"We don't always have time to create content, so it's more about sharing when we can." (P4)

Digital tools alone do not resolve structural capacity issues. P1 and P4 reflect the reality of owner-operators stretched thin across operations, content, and client management. P10 and P8 highlight trade-offs: even when digital demand exists, resource ceilings cap the response. This theme reveals that digital inefficiencies are not just technical but also human missed appointments, no-shows, and overcommitment all contribute to friction. These insights suggest that digital adoption must be framed within the actual time, energy, and staff limitations of township enterprises.

4.3.7.3. Gendered Entrepreneurship and Hidden Labour

Ownership data revealed patterns of gendered digital burden, with female entrepreneurs often carrying multiple responsibilities:

"Female." (P1)

"Female." (P6)

"It's male - correct?" (P8)

"I'm male." (P2)

"Male." (P9)

"Male." (P3)

When gender was cross-referenced with the nature of business operations, task spread, and digital responsibility, a clear pattern emerged. Female participants like P1 and P6 often functioned as one-woman enterprises, managing end-to-end business tasks including digital engagement. In contrast, male participants were more likely to

mention delegation or external assistance. While the quotes above are basic identity disclosures, their analytical value is unlocked through the broader thematic pattern: women in township MSMEs tend to bear a disproportionate share of digital, operational, and emotional labour much of it invisible. This reinforces the need to approach digital entrepreneurship through an intersectional gender lens.

4.3.7.4. Mobile Service Models and Platform Misfit

Several participants ran mobile operations such as salons without premises or delivery models where traditional platform designs (focused on fixed-location businesses) were less effective:

"I go to clients." (P1)

"I'm open to trying new things I've already moved from walk-ins to mobile appointments and digital payments." (P1)

"They rent my motorbikes and use them to do deliveries within the community mainly in Alex, Sandton, and surrounding areas." (P5)

Participants like P1 and P5 operate in motion their business models are shaped by mobility, adaptability, and informal geography. However, digital platforms often assume fixed premises, registered addresses, and standardised delivery patterns. This creates usability friction for mobile MSMEs, who cannot fully benefit from tools designed for static environments. The insight here is that digital tools need to be built for flexibility and transience, matching the informal, dynamic nature of township workspaces. In many ways, P1's mobile salon and P5's community delivery leasing reflects innovations that exceed platform expectations yet remain underserved by conventional digital design.

4.4 Summary of Chapter Findings

This chapter presented the key findings from qualitative interviews with MSMEs operating in South African townships, analysing their digital platform adoption behaviours using the Technology-Organization-Environment (TOE) framework, augmented by dimensions of culture, language, and awareness. Drawing on 10 participant narratives and over 300 coded quotations, seven major themes were developed based on deductive categories, while additional insights emerged through inductive open coding.

The findings reveal that MSMEs in township contexts demonstrate context-specific patterns of digital interaction marked by both systemic exclusion and localised innovation. Digital adoption is not linear, nor is it driven solely by access to technology it is shaped by a mix of infrastructure readiness, owner capacity, cultural alignment, informal learning, and social trust.

Theme 1 illustrated how demographic, business maturity, and ownership structures condition digital readiness, while Theme 2 exposed persistent technological exclusion through affordability, access, and platform complexity. Organisational constraints

(Theme 3) such as lack of delegation and resource scarcity further hinder adoption, even as external environmental barriers (Theme 4) like government absence and infrastructure failures amplify these challenges. Cultural and linguistic misalignment (Theme 5) showed that platform relevance is as important as functionality, and Theme 6 highlighted how peer-led awareness and informal mentorship are the dominant learning mechanisms. Theme 7 explored how MSMEs use platforms practically to market, transact, and communicate though not always strategically or consistently.

Crucially, the emergent themes in Section 4.9 surfaced additional phenomena not captured by the structured TOE lens. These included informal innovation by necessity, emotional labour especially among female entrepreneurs, capacity-related inefficiencies such as no-shows, and friction between mobile business models and static platform assumptions.

Taken together, these findings suggest that effective digital enablement in township MSMEs requires hyper-localised, flexible, and trust-based design interventions. Digital solutions must accommodate not only technological constraints but also social, cultural, and spatial realities. The next chapter will interpret these findings in relation to existing literature and theoretical frameworks, and provide implications for policymakers, platform developers, and support ecosystems.

Chapter 5: Discussion Of the Findings

5.1 Introduction

This chapter provides a critical interpretation of the findings in relation to the study's research objectives and theoretical propositions. The purpose of this chapter is to contextualise how the digital platform adoption behaviours of township-based MSMEs are influenced by a range of factors, including technological capacity, organisational readiness, environmental conditions, and contextual dimensions such as culture, language, and awareness.

The discussion is grounded in the Technology-Organization-Environment (TOE) framework, which has been extended in this study to include dimensions uniquely relevant to township economies. Both deductive themes mapped to predefined propositions and inductive themes derived from open coding are analysed to provide a holistic interpretation of the data. The structure follows the thematic analysis approach proposed by Braun and Clarke (2006) and leverages ATLAS.ti 25 for systematic coding, visualisation, and interpretive rigour.

Chapter 5 is structured to align with the research objectives and presents the discussion as follows:

- **Section 5.2** summarises the demographic characteristics of the participants and highlights quotation co-occurrence trends that inform the discussion.

- **Section 5.3 to 5.6** present a detailed thematic discussion of findings according to each research objective. Each section links relevant propositions to the findings, discusses key insights through the lens of the TOE framework, and draws comparisons with existing literature.
- **Section 5.7** explores emergent themes that lie beyond the predefined framework but offer meaningful insight into MSME dynamics in township settings.
- **Section 5.8** synthesises the overall findings, highlighting theoretical extensions to the TOE model and discussing practical implications for policy, practice, and digital inclusion strategies.

This chapter provides a comprehensive interpretation of how MSMEs in informal township contexts experience digital adoption, ultimately informing the conclusions and recommendations presented in Chapter 6.

5.2 Participant Profile

The sample for this study consisted of ten MSME owners and managers operating across various township locations in South Africa. Participants represented a diverse range of sectors, including informal retail, food and beverage, personal services (e.g., hair salons), logistics, and platform-based services. Most businesses were micro-enterprises with fewer than 10 employees, and all participants reported using at least one digital platform, such as WhatsApp, Facebook, Instagram, or Yoco. The duration of digital platform usage varied, with some participants being early adopters and others still in the early stages of integration.

This sectoral and experiential diversity enabled a rich exploration of how different types of MSMEs navigate digital adoption. Participants also varied in terms of digital proficiency, access to infrastructure, and exposure to digital training or support, allowing for comparisons across different levels of digital maturity.

To ensure a systematic understanding of how themes and propositions intersected across the data, co-occurrence patterns were analysed using ATLAS.ti 25. The code co-occurrence table revealed frequent overlaps between technological and organisational constraints, particularly around platform complexity, skills limitations, and internal capacity issues. Environmental factors such as unreliable infrastructure and limited market access also frequently intersected with cultural and awareness-related barriers.

The most frequent code intersections occurred between:

- **Digital literacy × Platform complexity** underscoring how skill gaps make many platforms difficult to use, reinforcing digital exclusion (*Proposition 1: Technological Barriers*).

- **Lack of time × Absence of internal marketing capability** reflecting operational constraints that prevent proactive digital engagement (*Proposition 2: Organisational Constraints*).
- **Loadshedding × Data cost** showing how unreliable infrastructure and expensive mobile data jointly restrict online access (*Proposition 3: Environmental Challenges*).
- **Language × Informal peer learning** demonstrating how local vernaculars and peer-based knowledge sharing play a central role in digital learning (*Proposition 4: Language, Culture, and Context*).
- **Low platform awareness × Absence of strategic** support revealing limited exposure to formal digital tools and lack of guidance from institutional stakeholders (*Proposition 5: Awareness and Strategic Support*).
- **Transactional use × Lack of deeper integration** indicating that most MSMEs use digital platforms for basic marketing or payments but struggle to fully integrate them into operations (*Proposition 6: Digital Platform Usage Outcomes*).

These co-occurrence patterns revealed nuanced relationships across propositions and guided the analytical interpretation in subsequent sections. They also highlight how multiple barriers often compound one another, making it difficult for MSMEs to adopt and sustain digital engagement.

5.3 Interpretation of Findings by Propositions

5.3.1. Technological Barriers to Digital Platform Adoption

Research Objective 1: To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships
Linked Proposition: Proposition 1 – Technological barriers such as low digital literacy, inadequate infrastructure, and limited availability of platforms that support local languages constrain adoption.

This section addresses the first research objective by examining how technological barriers influence the availability, usage, and perceived value of digital platforms among township-based MSMEs. The findings are anchored in Proposition 1, which posits that low digital literacy, inadequate infrastructure, and platform limitations related to language and design significantly hinder the adoption of digital technologies.

Across all ten participants, the most widely used digital tools included WhatsApp, Facebook, Instagram, and in a few cases, Yoco and Snap Scan. These platforms were perceived as informal, low-cost, and easy to use, particularly for advertising products, communicating with customers, and sharing images of stock. However, participants rarely engaged with advanced or formal e-commerce platforms such as Takealot

Marketplace, Shopify, or online ordering systems. Instead, platform usage remained basic, often limited to direct messaging and status updates.

The primary barrier identified was digital literacy. Participants demonstrated limited familiarity with how digital platforms function beyond their most basic features. For instance, P3 stated, *"I use WhatsApp only. It's simple. I don't know how to use the other ones [platforms] – they are too complicated."* Similarly, P2 remarked, *"I've heard of Instagram Shop, but I don't know how to set it up. My cousin helps me post sometimes."* These responses suggest a widespread knowledge gap in the ability to explore, compare, or optimize platform functionality. The lack of technical training and exposure to digital tools contributes to a cycle of limited engagement and missed opportunities.

Closely related to digital literacy is the issue of platform complexity, particularly about tools that require account creation, payment integration, or catalogue management. P6 explained, *"I tried using Yoco online but got confused. I just use the card machine."* Several participants described feeling overwhelmed by digital interfaces or simply abandoned attempts to set up platforms due to time constraints and lack of guidance. This aligns with FinMark Trust (2021), who report that the absence of accessible, user-friendly onboarding remains a critical adoption barrier in township economies.

The second key barrier was inadequate infrastructure, especially in relation to internet connectivity and access to reliable hardware. A recurring concern was loadshedding, which not only disrupted online engagement but also affected refrigeration and point-of-sale systems. P5 shared, *"When electricity is off, I can't connect, and my fridge also goes off. So, I wait and try again later."* P10 similarly highlighted, *"Sometimes even when I have data, the network is just gone."* These limitations drastically reduce the feasibility of real-time platform use, especially for MSMEs whose business depends on timely customer interaction or perishable stock. Oni and Papazafeiropoulou (2014) argue that such infrastructural constraints are particularly acute in informal settings, where MSMEs operate with little redundancy or technological backup.

High mobile data costs were also widely reported as a prohibitive factor. P7 explained, *"I use data sparingly because it's expensive. I can't afford to go live or upload videos like others."* While WhatsApp was praised for being data-efficient, participants avoided heavier applications or features such as video ads, livestreaming, or bulk image uploads. This further entrenched minimalistic usage patterns and undermined the potential to reach broader or new audiences.

An often overlooked but deeply impactful barrier was the lack of language support on platforms. Many MSMEs preferred to communicate and engage in indigenous languages like isiZulu, Sesotho, or Tsonga, yet most digital tools operate primarily in English. P4 remarked, *"If the app doesn't explain things in our language, we just guess or don't use it."* This not only affects usability but also reinforces a perception of exclusion and alienation from digital ecosystems. Haripersad (2022) underscores this point, noting that the dominance of English-centric platforms disadvantages MSMEs

whose customer bases and operational teams are multilingual and often non-English-speaking.

Participants also indicated that learning often occurred informally, via family members, peers, or self-directed experimentation. While this helped bridge basic gaps, it was not sufficient to unlock advanced digital capabilities. P1 commented, *“My niece is young, she helps me sometimes, but if she’s not around, I just leave it.”* This reflects a systemic gap in accessible digital education tailored to MSMEs’ operating conditions. Without structured, ongoing support, digital transformation remains uneven and superficial.

These findings substantiate Proposition 1, which highlights technological barriers as a primary constraint to adoption. According to the TOE framework (Tornatzky & Fleischer, 1990), the technological context – comprising digital tools, infrastructure, and technical knowledge – significantly influences how and whether a firm engages with innovation. In township MSMEs, this context is often underdeveloped, resulting in digital marginalisation despite the presence of basic smartphone access.

In comparison to other studies, these findings echo those of Cunningham et al. (2022), who found that low-cost, accessible apps like WhatsApp dominate in low-income settings, while uptake of formal e-commerce remains limited. Similarly, Munu (2021) emphasizes that without targeted capacity-building interventions, digital readiness remains aspirational rather than actionable for many African MSMEs.

In conclusion, technological barriers – particularly digital illiteracy, infrastructure deficits, platform complexity, and linguistic exclusion collectively shape a constrained digital environment for township MSMEs. While pockets of innovation exist, platform adoption remains partial and informal, driven more by necessity than by strategic integration. Addressing these issues will require multi-level interventions including localized digital training, investment in connectivity infrastructure, and platform design sensitive to local language and usability norms.

5.3.2 Organisational & Economic Barriers to Digital Platform Adoption

Research Objective 2: To investigate the barriers to digital platform adoption by South African MSMEs

Linked Proposition: Proposition 2 – Economic barriers, including limited resources, lack of leadership support, and underdeveloped organizational capacity, hinder the readiness of MSMEs to adopt and sustain digital platforms.

This section examines the internal economic barriers that limit the digital transformation of township MSMEs. While many discussions of digital inclusion focus on infrastructure and access, the findings here show that economic readiness within the enterprise including time, staffing, finances, and leadership structure is equally decisive. Digital platforms may be available, but if a business lacks the capacity to integrate and sustain their use, adoption stalls.

1. Time poverty and overextension of the owner-manager

The most widely shared barrier was the sheer lack of time among MSME owners. In township settings, “enterprises are often run by a single person or a small family unit, with minimal delegation of responsibilities. Business owners must juggle procurement, sales, customer service, finance, and now, digital presence all without formal systems.

P5 explained:

"I'm the one doing stock, customers, deliveries, everything. When must I sit and learn these things?"

P1 echoed this:

"There's no one else. I must answer messages, post stock, go buy things at town, then open the shop. I don't even get time to check the business page."

These insights affirm that digital platform adoption is not just about interest or awareness it requires operational space and breathing room, both of which are scarce for overextended MSME operators.

2. Absence of Skilled Support or Delegation

Without staff trained in digital tools or marketing, MSME owners are left to experiment on their own. Many reported depending on younger family members, friends, or trial-and-error.

P10 shared:

"We want to promote online, but we don't have anyone to show us. We don't have designers or people who know the platforms."

P3 said:

"My daughter helps me with Facebook when she visits, but most times I just leave it."

This reliance on sporadic informal support means digital adoption remains inconsistent, shallow, and often limited to basic usage. There is no internal team to monitor trends, track engagement, or improve visibility resulting in digital stagnation.

Cunningham et al. (2022) argue that such “capacity voids” are a key reason why MSMEs fail to progress beyond initial experimentation with digital tools.

3. Leadership Orientation and Lack of Strategic Vision

Several participants expressed that they were aware of digital opportunities but lacked a roadmap. Their decision-making was reactive, often driven by survival logic or experience rather than a forward-looking digital strategy.

P2 said:

"I want to do more online, but I don't know where to start. We are just workday today."

P7 elaborated:

"There's no plan. If Facebook brings orders this week, we post. If it's quiet, we stop. It's just trial and error."

This illustrates a deeper barrier: the absence of leadership capacity to build and sustain a digital strategy. Without vision, planning, or prioritisation, digital efforts remain fragmented and are easily abandoned under operational stress.

Munu (2021) reinforces this, noting that MSMEs without strong internal leadership structures rarely scale digital initiatives, regardless of external support.

4. Cost Sensitivity and Marketing Budget Constraints

Another constraint is the limited financial flexibility to invest in promotion, paid advertising, or professional content creation.

P6 stated:

"I post when I have airtime. I can't afford boosting or paying someone to design posters."

P8 explained:

"We don't do ads. We use WhatsApp or post on status. That's all. Even just data is expensive already."

In this context, platforms that require upfront investment even if marginal become inaccessible. MSMEs revert to low-cost, informal digital channels, primarily WhatsApp and personal Facebook accounts, and forego formal marketplace listings or ad campaigns.

This mirrors the findings of Haripersad (2022), who argues that digital affordability goes beyond data it includes the hidden costs of content, design, and time investment.

5. Informal Organisational Structures and Fragmented Systems

Township MSMEs typically operate without formal tools for inventory, CRM, or analytics. As a result, digital tools are layered onto fragile systems, making sustained adoption difficult.

P4 admitted:

"We just post and hope. There's no tracking, no system. If people buy, they buy."

P9 added:

"I've seen these things like Shopify or websites, but I don't have a system for stock or delivery. It's too much."

This reveals that digital platforms often assume back-office readiness from banking integration to invoicing systems that MSMEs do not possess. As a result, what should be an enabler becomes a source of stress or abandonment.

Zhu et al. (2006) note that technological sophistication must be matched by organisational preparedness, otherwise platform adoption collapses under its own complexity.

6. Cultural Tension: Informality vs. Structure

While not always stated directly, many MSMEs expressed unease about the structured nature of digital platforms, which clash with informal township trading practices. Some participants described digital platforms as “too formal” or “too rigid,” which discouraged sustained use.

P8 explained:

"Our customers prefer when we talk to them. Online feels cold. You can't negotiate or joke like you do in person."

This insight reflects not only cultural preferences but a lack of fit between platform logic and township market logic. MSMEs don't just sell products they manage relationships. Digital platforms, if not designed for informal interaction, may seem inappropriate or impersonal.

Mahajan (2014) notes that informality is a logic, not a deficit. Ignoring this logic when designing digital interventions for MSMEs ensures poor uptake.

This section confirms that economic and organisational factors are not peripheral they are core determinants of digital platform adoption in township MSMEs. The barriers uncovered here are:

- Time poverty and overextension of the owner-operator
- Lack of trained or delegated digital staff
- Absence of leadership vision and planning
- Budgetary constraints limiting marketing or design
- Informal systems that clash with platform structures
- Cultural discomfort with formalised digital interactions

These findings align closely with Proposition 2 and the TOE framework, especially the emphasis on the organizational context defined as a firm's internal capacity, structure, and leadership orientation.

For meaningful digital transformation to occur, MSMEs must be supported holistically. This includes:

- Embedded mentorship for digital onboarding
- Subsidised tools that match informal business realities
- Localised training programs with flexible delivery models
- Context-aware platform design that embraces informal structures

Only by matching digital tools to the economic and operational realities of township businesses can platform adoption become not just possible but sustainable.

5.3.3 Environmental Challenges to Digital Platform Adoption

Research Objective 3: To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships.

Linked Proposition: Proposition 3, Environmental challenges, including data costs, unreliable infrastructure, intense informal competition, and weak institutional support, significantly constrain the digital participation of MSMEs in townships.

Environmental conditions in township settings represent a significant structural barrier to digital platform participation. While MSMEs may be willing to engage with online tools, the broader ecosystem often undercuts these efforts. The findings show that even where digital platforms are conceptually available, their practical accessibility is limited by high mobile data costs, erratic electricity supply, informal market saturation, and the lack of institutional presence.

1. Data Costs as a Barrier to Entry and Continuity

One of the most consistent concerns voiced by participants was the prohibitive cost of data. Despite using mobile devices for business communication, many MSMEs described having to ration their digital engagement.

P3 explained:

"To use Facebook for marketing or WhatsApp for orders, I need data. Sometimes I spend R100 just to respond to people for two days. That's a lot when you're not even sure if the person will buy."

P7 added:

"I want to post videos or go live, but data finishes too fast. I only post when there's something urgent."

This usage pattern, characterized by minimal engagement and strategic rationing limits the scope for consistent branding, customer follow-up, or platform familiarity. In a context of economic precarity, connectivity becomes conditional and transactional, rather than sustained and strategic.

2. Unreliable Electricity and Connectivity Infrastructure

Township MSMEs are also directly impacted by unstable electricity supply and poor internet infrastructure, both of which undermine the feasibility of online engagement. Participants described frequent disruptions due to load shedding, which halts online operations, order processing, and digital payments.

P5 shared:

"When electricity is off, I can't do anything. Wi-Fi is gone, fridge is off, even the card machine doesn't work. It's better to just close the shop."

P9 confirmed:

"Even with data, sometimes the network is just not working. You waste time trying to load something that never goes through."

These responses highlight a fragile technological ecosystem in which digital functionality is regularly interrupted. As a result, MSMEs develop a mistrust of relying too heavily on platforms that require uninterrupted connectivity or power.

This aligns with Mothobi (2023) & FinMark Trust (2022), who emphasize that network instability and power cuts disproportionately affect businesses in low-income zones, making digital tools risky and unreliable.

3. Market Saturation and Informal Competition

Several MSMEs questioned the value of digital platforms in a highly competitive, informal retail environment where differentiation is minimal, and customer loyalty is shaped by physical presence, price, and relational selling.

P6 explained:

"Even if I market on Facebook, the guy next to me sells the same thing without advertising. People go to him because he's there every day."

P8 added:

"You can spend time online but still lose customers to someone nearby who just shouts and gives a better price."

In this context, digital platforms do not necessarily translate into competitive advantage. The low barrier to entry in informal trade, combined with oversupply and customer habits, dulls the impact of online visibility. Many MSMEs resort to physical tactics such as shouting specials or standing outside their stores rather than investing effort in digital marketing.

4. Absence of Localised Institutional Support

Another theme was the invisibility of government or institutional actors tasked with supporting digital adoption. Participants consistently reported that entities like SEDA,

NYDA, or DTIC were rarely present in their communities or failed to engage in a meaningful way.

P4 said:

"No one from the government comes here to explain things. We only hear them on radio. But they don't come into the kasi to talk to us."

P10 agreed:

"They must come to our area and do workshops or help us directly. Now we're expected to figure it out alone."

This finding reinforces the perception of exclusion, where township MSMEs feel abandoned by formal development programs. The absence of field agents, mobile support, or walk-in help centres further distances digital platforms from the communities they are meant to serve.

This resonates with the work of Arafah & Hasyim (2022), who argue that policy communication without grounded engagement only widens the adoption gap.

5. Platform Trust and Fear of Exploitation

Some participants expressed scepticism toward unfamiliar platforms or apps especially those with unclear ownership or unverified credentials. This distrust is rooted in previous experiences with scams or ambiguous marketing campaigns.

P2 explained:

"There are many apps that say, 'register your business,' but I don't trust them. What if it's a scam? I don't want to lose my data or money."

P9 added:

"People have lost money with fake services before. We must be careful."

This shows that digital trust must be earned, especially in low-trust environments. MSMEs often delay or avoid engagement with new platforms until they see evidence of success within their own network or community.

Environmental barriers act as gatekeepers to participation, not only because they increase the cost and complexity of digital engagement, but because they systematically erode confidence, continuity, and perceived relevance. These constraints are:

- High and unpredictable mobile data costs
- Unreliable electricity and network infrastructure
- Market oversaturation and physical price competition
- Absence of institutional visibility and on-the-ground training

- Widespread platform mistrust due to prior exploitation or scams

These findings provide strong support for Proposition 3, which argues that environmental challenges though external are decisive in shaping internal adoption choices. According to the TOE framework (Tornatzky & Fleischer, 1990), the environmental context includes both enabling conditions and external constraints. In the township context, constraints dominate.

Addressing these challenges will require multi-actor collaboration across telecom providers (to reduce data costs), municipalities (to stabilise infrastructure), and government agencies (to deliver localised support). Without environmental readiness, digital platforms will remain underutilised not due to resistance, but due to the reality of survival in structurally disadvantaged spaces.

5.3.4 Language Barriers to Digital Platform Adoption

Research Objective 2: To investigate the barriers to digital platform adoption by South African MSMEs.

Linked Proposition: Proposition 4, Language barriers significantly impact the usability and accessibility of digital platforms by township MSMEs.

While technological, organisational, and environmental factors shape the structural conditions of platform adoption, this section focuses on the often overlooked yet deeply pervasive barrier of language. The findings confirm that platform adoption is not only a matter of access or skills, but also linguistic inclusion. In the multilingual township economy, English-dominated platform interfaces and formal digital language alienate micro-enterprises whose day-to-day operations are conducted in indigenous languages such as isiZulu, Sesotho, Sepedi, or Xitsonga.

1. Alienation Through English-Centric Design

A recurring sentiment was that most digital platforms felt intimidating or "not meant for us" due to the level of English used. Participants noted that platform onboarding instructions, terms and conditions, and dashboards were not easily understood.

P2 shared:

"Some apps are just too much. It's all in English with complicated words. You feel like you're not the target."

P6 added:

"I stopped using one platform because the instructions were too difficult. It felt like a school exam. I don't want to feel stupid trying to sell online."

These examples reflect a deeper issue of cognitive exclusion, where the technical vocabulary used in platforms excludes users not through illiteracy, but through unnecessary linguistic complexity. This resonates with Haripersad (2022), who argued

that English-first platforms inadvertently gatekeep access by failing to consider mother tongue comprehension and user comfort.

2. Preference for Local Language in Business Communication

MSMEs operating in township settings often rely on indigenous languages not just for social interaction, but as commercial tools. Communicating with customers in vernacular helps build trust, convey tone, and close sales an approach that formal platforms fail to accommodate.

P8 explained:

"Most of us speak isiZulu here. Even if I understand English, it's tiring to read big words. They must keep it simple or give options."

P9 noted:

"When I write my adverts in Tsonga, people respond more. It feels local. But the app doesn't allow that – it auto-corrects or changes things."

This shows that language is not just a barrier to understanding it is a strategic tool. If platforms limit or penalise local expression (e.g., rejecting non-English text, offering no spell-check alternatives), they constrain MSMEs from engaging customers authentically.

3. Translation is Not Enough Platforms Must Localise Experience

Several participants suggested that translation alone is insufficient. Beyond changing text, platforms need to reflect the communication logic of township markets, including tone, idioms, and phrasing familiar to the user base.

P3 stated:

"Even if the app is in English, it must speak like us. The way we say things here is not how it's written on those apps."

P5 added:

"I post in slang sometimes because that's how we talk. The apps must accept that, not force formal writing."

This points to a need for contextual localisation, not just surface-level translation. The absence of voice notes, visual onboarding in local languages, or simplified option menus contributes to user friction.

4. Impact on Platform Confidence and Abandonment

The language barrier also affects confidence. When users are unsure about what a button or instruction means, they hesitate to proceed and often abandon the task entirely.

P10 reported:

"I didn't finish registering because I wasn't sure what they meant by 'legal entity' and 'business profile.' I thought maybe it's only for big businesses."

P4 echoed:

"It's frustrating when you don't know if you're doing the right thing. Then you stop. You leave it."

Such hesitancy shows that language affects not just usability but adoption willingness. MSMEs are more likely to engage with tools that mirror their communication norms and offer intuitive cues in a familiar linguistic register.

5. Peer Dependence as a Linguistic Workaround

To cope, many MSMEs rely on younger family members or peers with better English skills to "navigate" platforms on their behalf. While helpful in the short term, this workaround creates dependency and limits self-sufficiency.

P1 shared:

"My son helps me set up things. He understands the English. But if he's not around, I leave it."

P7 admitted:

"We must ask each other. Like, 'what does this mean?' If there's no one to help, then you skip that thing."

This shows how linguistic inaccessibility creates barriers to digital independence and narrows the pool of MSMEs who can fully leverage platform features.

The findings affirm that language is a critical enabler or inhibitor of digital participation in township MSMEs. Platforms that fail to incorporate indigenous language options, intuitive design, and culturally relevant expression effectively exclude users not through policy, but through interface.

This section substantiates Proposition 4, emphasizing that language is not neutral it is a gatekeeper of inclusion. Within the TOE framework, language-related usability sits at the intersection of the technological and user-environment interface. If MSMEs cannot understand or trust the instructions presented, they are less likely to proceed, less likely to repeat use, and less likely to scale digital operations.

Consistent with Haripersad (2022), Pumza Mthethwa (2022), and global usability studies, the insight here is clear: digital transformation is only as inclusive as the language it is built in. Formalising multilingual support, simplifying registration paths, and offering content in the voice of the user are not secondary features they are foundational to MSME inclusion.

Platforms designed for township MSMEs must not only be mobile-first and data-light they must be language-right.

5.3.5 Cultural Alignment and Informality in Platform Design

Research Objective 2: To investigate the barriers to digital platform adoption by South African MSMEs.

Linked Proposition: Proposition 5, The success of digital platforms in township MSMEs is influenced by how well these platforms align with local cultural norms and business practices.

Digital platforms are typically designed with assumptions about how businesses operate formal registration, fixed locations, standard products, digital records, and structured workflows. Yet township MSMEs operate in an entirely different paradigm: flexible, informal, relationship-driven, and highly contextualised. This section explores how digital platforms often fail to align with the lived business realities and cultural expectations of township entrepreneurs, reinforcing non-adoption and underuse.

1. Platforms Misaligned with Township Business Practices

Most MSMEs in this study reported challenges in using platforms that required formal documentation or rigid account creation processes, which clashed with the informality and fluidity of their business operations.

P10 shared:

"They ask you to register a business, upload documents, put a bank letter... but I don't even have an email address I use for that. I just do cash and WhatsApp."

P4 added:

"These platforms are for people with proper companies. For us in the township, it's different we hustle. We don't have all these papers."

These quotes reveal how design assumptions about business formality directly exclude large segments of township entrepreneurs. This aligns with Mahajan's (2014) view that informality is not a lack of structure it is a different structure, with its own logic and legitimacy.

2. Formality as a Psychological Barrier

The tone, terminology, and processes of most formal platforms signal that the user must already be a "professional" or "corporate" business to qualify. This alienates township entrepreneurs, even if they technically qualify to use the platform.

P3 remarked:

"I don't feel like I belong on these apps. The questions are too serious. I sell from my house. It's not like I have a company with logos and addresses."

P9 echoed:

"The app wants SKU numbers, product descriptions, categories... I just sell clothes from a bale. It's not that deep."

Such feedback underscores the emotional and cultural disconnect that prevents many MSMEs from engaging with platforms that appear too structured or bureaucratic for their context.

3. Cultural Tone and the Kasi Way of Doing Business

Participants consistently emphasized that township business is built on personality, familiarity, and cultural fluency none of which are captured in typical platform interfaces or content.

P8 explained:

"Our people like jokes, slang, voice notes, pictures with vibe. If your advert is too formal, they scroll past."

P5 added:

"We do business face-to-face. Even when you post online, they still want to come see you. Kasi culture is different you must feel local, not corporate."

Platforms that ignore this behavioural context not only feel foreign, but ineffective. As Haripersad (2022) & Pumza Mthethwa (2022) argue, cultural mismatch is a major reason digital tools do not stick in informal markets.

4. Trust Is Cultural Not Just Technical

In township communities, trust is built over time, often face-to-face, and rooted in shared identity and local presence. Formal digital platforms are viewed with suspicion if they lack physical proximity, visual identity in the community, or endorsement from trusted local figures.

P7 stated:

"Even if your app is good, if no one from here uses it or knows it, we don't trust it. We ask, 'Who are these people?'"

P1 offered this:

"I prefer buying or selling with people I've seen. Even if it's on WhatsApp, I want to know who I'm dealing with. Not just click and hope."

These insights reveal that digital trust is not about cyber-security or SSL certificates it's about cultural presence and social proof.

5. Platform Design Must Embrace Informality, Not Erase It

MSMEs expressed the need for platforms that offer simpler entry points, allow for partial profiles, cash-based options, and visual communication styles that reflect the rhythm of township life.

P2 explained:

"Sometimes I just want to post my products, say 'DM for price,' and keep it moving. Don't ask me for store names and delivery policies."

P6 noted:

"If they made platforms that feel like WhatsApp, more people would use them. Simple, quick, no drama."

This is a call for human-centred, locally grounded UX design where informal businesses are not expected to conform to digital standards, but digital standards evolve to reflect informal business logic.

The data strongly validates Proposition 5, demonstrating that cultural alignment is not an accessory it is a requirement for sustainable platform adoption in township MSMEs. If a digital tool cannot accommodate informal registration, local tone, face-to-face follow-through, or the relational basis of township commerce, it will likely fail to gain traction.

Within the TOE framework, this insight expands the environmental and organisational lens by foregrounding culture as a system-shaping force. Township businesses are deeply relational, highly adaptive, and resource-savvy. Digital platforms must reflect this reality through flexible structures, familiar language, and design that honours informal strengths.

As Mahajan (2014), Pumza Mthethwa (2022), & Cunningham et al. (2022) argue, real inclusion starts when platforms are not only translated but transformed to fit the local ecosystem.

Digital success in township MSMEs is not about "bringing them into" the formal digital economy it's about bringing digital platforms into their world, with cultural empathy, design humility, and co-creation at the centre.

5.3.6 Awareness and Strategic Support for Township MSMEs

Research Objective 6: To compare and evaluate the strategies employed by other African digital platform players within the retail environment, focusing on their approaches to assisting MSMEs in their digital transformation journey.

Linked Proposition: Proposition 6 – Awareness and targeted outreach programs are critical to improving MSMEs' adoption of digital platforms.

The adoption of digital platforms by township MSMEs does not happen in a vacuum. It is catalysed or constrained by how well businesses are informed, supported, and accompanied through the adoption journey. The findings demonstrate that awareness is not just about marketing reach it is about trust, localisation, continuous engagement, and practical enablement. MSMEs in townships are willing to use digital tools when they see value, but their journey is often hampered by a lack of exposure, targeted training, and contextual guidance.

1. Lack of Structured Awareness Campaigns

Participants consistently shared that their introduction to digital platforms was accidental or informal. There was no structured, visible campaign or outreach that explained how digital platforms could help grow their business.

P4 stated:

"No one comes to explain things. We just hear from friends or see something on Facebook. But there's no training."

P6 added:

"I only heard about Yoco because my cousin showed me. If he didn't help, I'd still be using cash only."

These accounts reveal that platform awareness is organic, not institutional. MSMEs rely on peer learning or social media exposure, which limits the reach and impact of digital adoption efforts. The absence of proactive, community-level awareness hinders equitable platform uptake.

2. Awareness Alone is Not Enough Enablement Matters

Even when MSMEs are aware of platforms, they often do not use them due to lack of support, guidance, or technical training.

P2 explained:

"They say 'go online, grow your business,' but how? Just downloading the app doesn't help. Where is the step-by-step?"

P5 said:

"It's not just knowing about it. We need someone to show us, explain in our language, not just throw us links."

This supports Proposition 6's core argument: awareness must be followed by enablement. Exposure to a platform must lead to an understanding of how it adds value to an MSME's specific business model, customer base, and operations. Without practical guidance, adoption remains aspirational.

3. Trust is a Precursor to Digital Adoption

Township MSMEs are often sceptical of unfamiliar platforms, especially when those platforms are not visible in their communities or associated with scams.

P8 commented:

"So many people say 'download this, sign up here' but who are they? It feels like a scam."

P3 added:

"If no one from here is using it, we won't trust it. We look around and ask, who else is on this?"

These concerns underscore that awareness must be grounded in local trust networks. Digital platforms need champions within the community people who look like, speak like, and sell like the MSMEs they aim to support. Otherwise, trust gaps will continue to delay adoption.

4. Localised Training and Outreach are Preferred

Many participants suggested that digital adoption would increase if support was delivered through local, in-person channels, not just online or at national events.

P9 suggested:

"Vodacom or government should come here with small workshops. Kasi-to-kasi. Show us, don't just advertise."

P1 described a breakthrough moment:

"A friend showed me how to post on Facebook Marketplace. I sold something that same week. That's when I believed it works."

These examples show that seeing is believing. First-hand demonstrations, local roadshows, mobile helpdesks, or WhatsApp-based guidance are more effective than high-level toolkits or webinars. This echoes Arafah & Hasyim (2022), who found that embedded outreach in informal markets drives higher adoption than centralised campaigns.

5. Learning from Other African Markets

Comparative reflections revealed that some participants had seen better outreach strategies elsewhere in Africa.

P7, with experience in Kenya, said:

"In Nairobi, Safaricom agents came to the market. They explained M-Pesa, gave small trainings. That's why it took off. Here, you're on your own."

This is a direct response to Research Objective 6. The Safaricom model of using distributed agents for micro-training stands in contrast to South Africa's top-down awareness model, which lacks proximity and community embedding. There's an opportunity to replicate this success by deploying agents or township ambassadors to demystify digital tools.

6. Institutional Support is Weak or Invisible

Government-linked institutions like SEDA, NYDA, or DTIC were mentioned as largely absent from township digital onboarding.

P10 said:

"We only see NYDA at big expos. Why don't they come here every month, to our kasi?"

This perception reinforces the need for hyperlocal engagement. Township MSMEs need recurring, visible support preferably co-created with community-based organisations or cooperatives. As Lin et al. (2022) note, the failure to create trust-based support ecosystems leads to unequal access and fragmented impact.

The findings confirm that awareness and strategic support are not supplementary they are foundational to digital adoption in township MSMEs. MSMEs do not resist platforms because they lack interest; they resist because they lack information, mentorship, and confidence in the systems offered to them.

Proposition 6 is substantiated: Awareness must be localised, trust-led, and action-oriented. Campaigns must meet MSMEs where they are geographically, linguistically, and operationally. This includes creating mobile business clinics, WhatsApp-based helpdesks, township-based digital agents, and storytelling approaches that centre township entrepreneurs.

To unlock digital transformation, South Africa must shift from a "broadcast model" of awareness to a "ground game" of support one that listens, trains, and grows with the MSMEs it seeks to empower.

5.4. Emergent Themes

This section presents emergent themes identified through inductive analysis, extending beyond the predefined TOE framework. These themes highlight additional critical insights into MSME digital behaviour and challenges uncovered organically through the qualitative data. The emergent insights not only deepen our understanding of TOE but also expose cross-cutting social and structural dimensions that are essential in township contexts.

The emergent themes identified in Section 4.3.7 offer critical insights that deepen the understanding of digital platform adoption among township MSMEs. While the main body of findings in this study is aligned with the TOE framework, the inductive patterns that surfaced highlight the limitations of pre-defined theoretical models in capturing the full complexity of township-based enterprises.

1. Expanding the Scope of Technological Readiness

The theme of Informal Innovation and Self-Taught Digital Evolution reveals that many MSMEs are digitally active, not because of formal interventions, but because of necessity-driven improvisation. This calls into question dominant assumptions about digital "readiness" as a function of training or infrastructure. Instead, it positions readiness as an emergent property of entrepreneurial resilience and adaptability. This reframes technology adoption as a dynamic, grassroots process, rather than a static outcome of external support.

"I started with just one blow-dryer and some tools in a backpack, and now I've grown to using my car for transport and taking bookings." (P1)

"If you put these screens into the malls, I'll pay you rental every month... it'll pay off the screens in three months." (P3)

"That's one of the questions I need to jot down and answer to myself or get an expert to answer... Maybe there is, which I don't know about being a businessman." (P3)

These responses underscore the fact that platform knowledge is often self-acquired, motivated by day-to-day necessity and informal market exposure, not structured training.

2. Human Constraints as Hidden Barriers

The Capacity and No-Show Frustration theme adds an underexplored human dimension to existing models. While infrastructure and cost are widely acknowledged, few frameworks account for time poverty, solo entrepreneurship, and operational exhaustion. This theme foregrounds the need for digital strategies to accommodate actual resource realities suggesting that adoption support must go beyond affordability to include time, mental load, and labour capacity.

"I struggle with no-shows." (P1)

"I can't serve everyone who wants an appointment because of time and travel constraints." (P1)

"We don't always have time to create content, so it's more about sharing when we can." (P4)

Digital engagement efforts are hindered not just by external barriers but also by internal limitations in bandwidth and available help.

3. Intersectionality and Gender-Blind Spots

The theme of *Gendered Entrepreneurship and Hidden Labour* elevates the importance of viewing digital adoption through an intersectional lens. Women in township settings are not only business owners but also unpaid marketers, bookkeepers, and customer service agents. The invisibility of their digital work challenges platform metrics that track surface-level engagement but ignore deeper burdens.

"Female." (P1)

"Female." (P6)

"But it's hard to keep up when you're the only one doing everything." (P1)

These quotes may appear simple on the surface, but in context, they illuminate a deeper narrative of burdened female entrepreneurs carrying disproportionate responsibilities without institutional support.

4. Platform-Model Mismatch and Design Failures

The *Mobile Service Models and Platform Misfit* theme highlights a structural design flaw in many digital platforms, which assume fixed locations, formal registration, and

logistical consistency. Township MSMEs often operate through mobile, pop-up, or delivery-based models, which fall outside standard platform design logic.

"I go to clients." (P1)

"I'm open to trying new things I've already moved from walk-ins to mobile appointments and digital payments." (P1)

"They rent my motorbikes and use them to do deliveries within the community mainly in Alex, Sandton, and surrounding areas." (P5)

These examples show that digital infrastructure does not yet reflect the operational logic of informal township business models.

These emergent themes not only deepen our understanding of MSMEs' digital journeys but also expose systemic oversights in policy, platform design, and support ecosystems. Far from passive recipients of technology, township entrepreneurs actively negotiate digital transformation on their own terms, with their own tools, and often despite institutional neglect.

5.5. Extending the TOE Framework in Township Contexts

While the Technology–Organization–Environment (TOE) framework served as a useful analytical structure in this study, the inductive themes presented above indicate that it must be contextually extended when applied to township MSMEs in South Africa. Participants lived experiences highlight nuances that the original TOE framework does not fully address.

5.5.1. Resilience and Adaptive Behaviour as Embedded Organisational Traits

The TOE framework's organizational pillar traditionally emphasizes formal structures, leadership, and internal processes. However, this research illustrates that resilience, improvisation, and adaptability often informal and undocumented function as critical organizational assets in township MSMEs.

"I have to go to a place that has signal if I want to send messages or post." (P7)

This reframes organizational readiness not as the presence of systems and staffing, but the ability to function under conditions of persistent disruption. Studies like Deokaran (2024) & Msimanga (2024) similarly propose incorporating 'informal resilience' as a factor in readiness models.

5.5.2. Peer Networks as Substitutes for Strategic Support

TOE's environmental dimension typically focuses on external pressures like regulation and competition. However, in the township context, peer influence and social capital serve as strategic enablers of technology adoption:

"YouTube can give you all sorts of ideas on how to use Instagram, Facebook, and technology like Spaza Eats." (P9)

This calls for reinterpreting the “environment” as more than institutional or regulatory it must include community-based ecosystems of support. This aligns with findings by Mthethwa (2023) & Munu (2023) on the pivotal role of social learning in low-resource contexts.

5.5.3. Cultural and Gender Dynamics in Organisational Readiness

The traditional TOE model lacks explicit consideration for cultural, linguistic, and gendered constraints. This study found that role overload, gendered responsibilities, and discomfort with formal digital norms often shaped platform adoption:

“As a woman, I juggle family and business. Digital tools help manage some workload but also add new challenges.” (P7)

Masuku & Mthimkhulu (2021) argue that these dynamics systematically influence digital access. Thus, organizational readiness must be reframed to include social identity, caregiving roles, and language compatibility.

5.5.4. Trust and Risk Aversion as Adoption Determinants

Security concerns, platform errors, and distrust in digital transactions emerged as critical psychological barriers:

“People don’t always trust that what they see online is real especially with scams and fake pages around.” (P4)

These insights suggest that the Technology domain of TOE should extend beyond features and functionality to incorporate user experience and perceived digital risk. Literature by Martino et al. (2024) & the Township CX Report (2023) support this reframing.

5.5.5 Informal Learning and Influencer Mimicry as Awareness Catalysts

The TOE framework views awareness as part of organizational or strategic support, often assumed to come from formal campaigns or training. Yet, township MSMEs often learn through mimicry of relatable digital influencers:

“Mostly by watching others, I learn from Instagram or YouTube.” (P1)

This expands the Awareness domain to include non-traditional, culturally resonant learning pathways such as social media observation and peer-led onboarding as discussed by Korff (2020) and Pumza Mthethwa (2023).

5.6 Mapping Findings to Research Objectives

This section maps the seven major themes and related subthemes to the original research objectives outlined in Chapter 1 and synthesises how the study’s findings addressed each proposition derived from the TOE framework.

5.7 Practical Implications for Policymakers, Platform Developers, and MSMEs

The findings of this study offer several practical implications that can inform decision-making by key stakeholders involved in advancing digital inclusion for Micro, Small, and Medium Enterprises (MSMEs) in township economies.

5.7.1. For Policymakers

Policymakers must recognise that digital adoption among township MSMEs is not hindered by technology alone but by a complex mix of infrastructural, cultural, educational, and contextual barriers. As such, strategies should go beyond broad-stroke digitisation campaigns and instead focus on:

- Localized infrastructure investment, including stable network coverage, affordable data access, and energy resilience (e.g., addressing the impact of load shedding).
- Targeted capacity building through entrepreneurship development programmes delivered in local languages and tailored to low digital literacy levels.
- Public-private partnerships that extend support programmes into underserved township areas, ensuring that funding, training, and mentorship reach informal and micro-enterprises as well.

5.7.2. For Digital Platform Developers

Platform designers and developers must reframe how they approach user onboarding, support, and functionality when engaging MSMEs in township contexts. Key considerations include:

- **Language accessibility:** Ensure interfaces and support materials are available in local languages to improve usability and adoption.
- **Simplicity and mobile optimisation:** Given the dominance of mobile devices and limited digital fluency, platforms should prioritise intuitive, low bandwidth designs that function reliably under constrained conditions.
- **Micro-enterprise alignment:** Offer modular or low-cost features aligned to the operational scale of informal businesses (e.g., WhatsApp integration, mobile payments, and basic analytics).

5.7.3. For MSMEs

While many MSMEs demonstrate resilience and improvisation, the study highlights a need for more structured digital strategies to drive sustainable growth. Practical actions include:

- Leveraging peer networks for digital learning and exposure, especially where formal training is inaccessible.

- Adopting basic digital tools for marketing, communication, and customer engagement starting with familiar platforms such as WhatsApp and gradually expanding to e-commerce or inventory management solutions.
- Seeking visibility and support by registering with local business networks, attending digital awareness workshops, or participating in community-based digital projects.

In summary, effective digital inclusion in township economies demands a multi-stakeholder response. Policymakers must address systemic barriers, developers must design with empathy for informal business realities, and MSMEs must be supported to evolve from survivalist use of digital tools to strategic integration. These findings serve as a foundation for rethinking digital transformation approaches in underserved contexts.

5.8 Chapter Conclusion and Key Takeaways

This chapter presented a detailed analysis of the empirical findings, organised thematically around the extended Technology–Organization–Environment (TOE) framework and supported by participant quotations. It addressed how township-based MSMEs experience and navigate digital platform adoption within a complex ecosystem of infrastructural constraints, organizational dynamics, environmental pressures, and socio-cultural influences.

Key Takeaways:

- Digital adoption in township MSMEs is shaped by both formal and informal dynamics. While traditional models emphasize systems, resources, and leadership, this study reveals that resilience, improvisation, and adaptability play an equally critical role in sustaining digital engagement under constrained conditions.
- Barriers are multifaceted and deeply embedded in the township context. These include unreliable infrastructure (e.g., connectivity, load shedding), affordability issues, digital skill gaps, limited exposure to support networks, and language mismatches that hinder effective platform use.
- Enablers exist but require intentional support. Community networks, mobile-first tools, peer learning, and familiarity with platforms like WhatsApp and Facebook create entry points. However, without sustained strategic support, most MSMEs remain in a basic or exploratory phase of digital engagement.
- The TOE framework must be contextually extended. The inclusion of cultural, language, awareness, and usage dimensions strengthen its relevance in informal economies. These dimensions reflect the lived realities that shape digital readiness and capacity among township entrepreneurs.

- A multi-stakeholder approach is essential. Policymakers, platform developers, and MSMEs each have a role to play in addressing gaps and advancing digital inclusion. Solutions must be grounded in the social, economic, and linguistic realities of the township economy.

As this chapter concludes, it becomes evident that digital transformation in township MSMEs is not a linear or uniform process. It is adaptive, fragmented, and deeply contextual. The final chapter builds on these insights to propose conclusions, policy recommendations, and directions for future research

Chapter 6: Conclusions And Recommendations

6.1 Introduction

This chapter consolidates the outcomes of the study and presents a comprehensive reflection on the key findings, contextual implications, and strategic recommendations. The aim is to evaluate the significance of the study in addressing the research objectives, while also outlining clear contributions to theory, practice, and policy. Drawing on a township-based sample of MSMEs, the study used the extended Technology–Organization–Environment (TOE) framework to explore the practical, organisational, and environmental dimensions shaping digital platform adoption. Contextual categories such as language, culture, awareness, and usage were integrated into the analytical model to reflect the socio-economic and informal realities of township enterprises in South Africa.

6.2 Summary of Findings

The study revealed that MSME adoption of digital platforms is shaped by deeply contextual factors beyond just access to technology. While infrastructural and organisational readiness remain critical, factors such as digital literacy, local language support, informal trust networks, and contextualised awareness campaigns significantly influence adoption decisions.

- Technological constraints such as network instability, high data costs, and limited device capabilities emerged as consistent barriers.
- Organisational readiness is driven by resilience and entrepreneurial improvisation rather than formal strategies, with many MSMEs operating as single-owned businesses with no support staff or strategic planning.
- Environmental limitations such as low digital visibility, absence of government engagement, and intense competitive pressure from formal businesses slow digital adoption.
- Cultural and language challenges affect user trust, comprehension, and willingness to engage with platforms designed without vernacular or culturally resonant content.

- Awareness and exposure to digital platforms remain low. Most participants reported discovering platforms through word of mouth or peer imitation rather than structured outreach or education.
- Digital usage patterns remain narrow, often focused on WhatsApp and Facebook for communication and promotion, with limited back-end integration into financial, inventory, or operational functions.

These findings highlight that digital transformation within township MSMEs is non-linear, highly fragmented, and largely exploratory in nature. The journey is not only about overcoming technical limitations but also about building contextual confidence, skills, and relevance.

6.3 Conclusions per Research Objective

6.3.1 Technological Factors

The study confirms that access to reliable connectivity, affordable data, and user-friendly interfaces are prerequisites for meaningful adoption. However, technology alone is insufficient without addressing usability barriers for informal and low-literacy users. Many MSMEs avoid certain platforms because they are perceived as too complex or costly, despite their potential benefits. Low-tech, mobile-first platforms embedded in daily communication tools (e.g., WhatsApp) were more likely to be adopted.

6.3.2 Organisational Factors

Digital readiness in township MSMEs is driven by the owner's personal initiative, adaptive mindset, and exposure to peer behaviour. Unlike formal businesses, which may invest in digital capacity-building, these MSMEs often lack time, funding, and internal support to evaluate or adopt new systems. However, their resilience and improvisation especially in adapting tools for unintended uses reflect a form of digital agility that is often overlooked in conventional models.

6.3.3 Environmental Factors

Lack of government support, visibility in digital marketplaces, and competition with formal, well-funded businesses were cited as demotivating factors. The absence of structured support networks or incentives for digitisation isolates MSMEs, forcing them to rely solely on community knowledge and self-navigation of platforms.

6.3.4 Cultural, Language and Awareness Dimensions

A key insight was the effect of linguistic exclusion and cultural misalignment on digital confidence. Platforms not designed with multilingual options or local metaphors were viewed as foreign or risky. Additionally, MSMEs lacked awareness of platform features or government initiatives due to poor outreach, signalling a communication gap between support institutions and township businesses.

6.3.5 Digital Platform Usage

MSMEs use digital platforms primarily for basic marketing and customer interaction. Integration into operations like payments, procurement, or stock tracking remains rare. The lack of awareness about the full value proposition of platforms and a reluctance to commit to systems that require formalisation explains the limited depth of usage.

6.4 Recommendations for Practice

To drive inclusive digital transformation, coordinated action is required from all stakeholders:

6.4.1. For Policymakers and Government Agencies

- Establish digital outreach programmes tailored to township MSMEs, delivered in local languages and facilitated through community networks.
- Offer incentives for digital adoption such as subsidised data, free digital onboarding for start-ups, and township-focused grants for platform integration.
- Ensure localised implementation of the digital economy strategy, including infrastructure upgrades and digital literacy hubs in high-density township areas.

6.4.2. For Platform Developers and Fintech Providers

- Design platforms with simplified interfaces and multilingual support (especially isiZulu, Sesotho, and isiXhosa).
- Integrate educational content directly into the app (e.g., video guides, visual onboarding flows) to bridge the gap for low-literacy users.
- Prioritise mobile-first functionality, low data consumption, and integrations with familiar tools such as WhatsApp, Facebook, or Moya Pay.

6.4.3. For Incubators, NGOs, and Private Sector Enablers

- Facilitate township-based digital bootcamps, using peer entrepreneurs as trainers and digital ambassadors.
- Develop informal mentorship networks where more digitally mature MSMEs can guide others within the same township.
- Promote cooperative digital procurement models, allowing micro-enterprises to collectively access tools or services they cannot afford individually.

6.4.4. For MSMEs and Community Networks

- Proactively explore available platforms beyond social media and attend digital enablement sessions when available.
- Document informal business processes to enable gradual transition into digital formats.

- Collaborate with local entrepreneurs to share knowledge, troubleshoot adoption challenges, and amplify visibility through collective marketing.

6.5 Managerial Implications

For managers and decision-makers seeking to engage township MSMEs, the study reveals important considerations:

- Localisation is non-negotiable. Digital platforms and campaigns must reflect the language, cultural norms, and economic realities of their intended users.
- Trust must be earned. In low-trust environments, testimonials from peer MSMEs, simplified contracts, and flexible onboarding increase confidence.
- Digital support must be embedded. Adoption improves when support is continuous whether through embedded helpdesks, community WhatsApp groups, or digital clinics facilitated by local agents.
- Community is a growth lever. Platforms that build in community interaction, referrals, or network-based incentives perform better than isolated tools.

These implications should inform the design of platform features, MSME engagement strategies, and policy frameworks aimed at township economies.

6.6 Contributions of the Study

This study contributes meaningful insight into the digital transformation landscape of township MSMEs by providing an empirically grounded account of how micro-enterprises navigate technology under structurally constrained conditions. The findings demonstrate that digital adoption is not only a technological or organisational issue, but a deeply contextual process shaped by language, culture, awareness, and informal norms.

This significance lies in highlighting MSMEs not as passive recipients of technology, but as adaptive, improvising entrepreneurs who actively reinterpret platforms to suit informal market dynamics. By foregrounding township lived realities such as mobility-based business models, informal trust networks, multi-language communication, and time poverty the study challenges assumptions embedded in mainstream digital economy literature, which often overlooks context-specific barriers and enablers in informal economies.

Beyond theoretical relevance, the study also underscores the strategic importance of designing digital intervention models that align with township cultural logics, economic rhythms, and resource constraints. The findings therefore hold practical significance for policymakers, platform developers, NGOs, and private-sector enablers seeking to drive inclusive digital participation in under-resourced markets.

6.6.1. Theoretical Contributions

This research extends the TOE framework to include sociolinguistic and awareness variables, making it more applicable in informal and underserved economic contexts. It also reinforces the need to consider informal resilience and adaptability as valid organisational capacities within the digital readiness literature.

6.6.2. Methodological Contributions

The study employed a multi-site qualitative case study approach, offering granular insight into township MSMEs a group often underrepresented in mainstream digital economy research. The combination of deductive and inductive coding, supported by ATLAS.ti, ensured a structured but flexible thematic analysis.

6.6.3 Practical Contributions

The study offers actionable insights for stakeholders seeking to expand digital inclusion and platform engagement among township MSMEs. It demonstrates the need for hyper-localised, trust-based, and mobile-first approaches to digital onboarding and long-term engagement.

6.7 Limitations

While rich in qualitative depth, the study is limited by its small sample size ($n=10$), and its geographic concentration in selected townships. Findings may not fully represent all MSMEs, particularly those in peri-urban or rural environments, or in non-service sectors such as agriculture or manufacturing. The study also reflects a snapshot in time and does not account for post-intervention changes or longer-term platform adoption journeys.

Although the study provides rich qualitative insights, several limitations must be acknowledged to contextualise the findings. First, the sample size was small ($n=10$) and geographically concentrated in selected townships. While appropriate for qualitative depth, the findings cannot be generalised across all South African MSMEs, particularly those operating in rural regions, manufacturing sectors, or more formalised environments.

Second, the study relied on self-reported data, which may be affected by recall bias, selective disclosure, or social desirability bias especially when discussing challenges, personal capabilities, or digital practices. Third, the research captured a snapshot in time and did not examine changes in digital adoption behaviour longitudinally, which limits understanding of how MSMEs evolve or sustain platform use after initial experimentation.

Fourth, while the extended TOE model provided a robust analytical lens, certain socio-cultural and gendered nuances surfaced inductively only after data collection. A larger multi-method design may have enabled deeper examination of how social identity,

mobility patterns, and informal business structures intersect with digital adoption over time.

Finally, platform-specific behavioural data (e.g., analytics or usage logs) were not available, preventing triangulation between self-reported behaviour and real digital engagement patterns.

6.8 Recommendations for Future Research

Future research can build on this study through several targeted avenues:

- **Longitudinal Adoption Pathways**
Follow MSMEs over 12–24 months to track how digital engagement evolves from basic messaging to more advanced integration (e.g., payments, inventory, online storefronts).
- **Platform-Specific Usability Studies**
Conduct ethnographic or UX-based research on township MSMEs' real-time interaction with platforms such as VodaPay, Yoco, SnapScan, and WhatsApp Business to assess usability gaps, literacy barriers, and cognitive load.
- **Comparative Township Ecosystem Studies**
Examine variations across different provinces or township clusters to understand which adoption barriers are context-specific and which are universal.
- **Gender and Intersectional Analysis**
Explore how gender roles, household labour, mobility constraints, and caregiving responsibilities uniquely shape digital participation among women-led MSMEs.
- **Mixed-Methods Evaluation of Digital Interventions**
Combine survey data, platform analytics, and qualitative interviews to evaluate the effectiveness of digital literacy programmes, onboarding models, or township-focused digital clinics.
- **Co-design and Participatory Platform Development**
Engage MSMEs directly in the design of platform features (e.g., vernacular onboarding, visual-based interfaces) using participatory design methods to ensure cultural resonance and usability.

Strengthened Final Synthesis

Overall, the study demonstrates that digital platform adoption among township MSMEs is not a linear technological progression but a deeply contextual process shaped by lived realities, social networks, and adaptive behaviour. By extending the TOE framework to incorporate language, culture, awareness, and usage, this research provides a more nuanced understanding of how informal enterprises navigate digital systems under structural constraints.

The study ultimately argues that meaningful digital inclusion requires more than providing tools it requires aligning platforms with the cultural logic, linguistic diversity, economic pressures, and operational rhythms of township entrepreneurship. The findings therefore call for a shift from technology-centric interventions to context-centric strategies, where digital transformation is co-created with MSMEs rather than imposed upon them.

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Appendix A: Research Instrument

Title of the Study:

Investigating Barriers to Digital Platform Adoption: A Case of South African Township MSMEs

Researcher:

Prince Kutama

Supervisor:

Dr. Thembekile Mayayise

Date:

[Insert Date]

Section 1: General Business Context

Objective:

1. To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships
4. To investigate the core needs and challenges of MSMEs in the context of digital transformation

Framework Elements Addressed: General Context (Foundational for Analysis).

- I. Please indicate your gender.
 - A) Female
 - B) Male
 - C) Prefer not to say
- II. Please indicate your age category.
 - A) Under 25
 - B) Under 35
 - C) 35 to 49
 - D) 49 and Older
- III. Please indicate your highest qualification.
 - A) PhD
 - B) Master
 - C) Post-Graduate/Honors Degree
 - D) Bachelor
 - E) National Diploma
 - F) Senior Certificate

- G) Other
- IV. Please indicate the age of your company.
- A) 0 - 3 Years
 - B) 3-5 Years
 - C) 5-10 Years
 - D) 10 Years - longer
- V. Please can you share the location of your Business.
- A) City
 - B) Suburb
 - C) Township
- VI. How many employees do you have?
- A) 0-5
 - B) 6-10
 - C) 11-20
 - D) 21-50

1. Can you describe your business?

- What products or services do you offer, and how has your business evolved over time?

2. What are the biggest challenges your business faces today?

- Are these challenges related to technology, organizational resources, or external market pressures?

3. How do you currently interact with your customers?

- Do you use online tools, social media, or other platforms to engage with your customers?

Section 2: Technological Factors

Objective:

- 2. To investigate the barriers to digital platform adoption by South African MSMEs
- 3. To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships

Framework Elements Addressed: Technology Availability, Perceived Benefits, Complexity, Compatibility, Trialability, and Observability.

1. How would you describe the availability of digital platforms or tools for your business?

- Do you feel you have easy access to these tools? If not, why?

2. **What challenges do you face in using digital platforms for your business?**
 - Are there issues related to complexity, compatibility with your current practices, or lack of user-friendly interfaces?
 3. **Have you had the opportunity to test or experiment with digital platforms before fully adopting them?**
 - What has influenced your decision to adopt or not adopt these tools?
 4. **How do you learn about the benefits of using digital platforms?**
 - Have you observed other businesses successfully using these tools?
-

Section 3: Organizational Factors

Objective:

2. To investigate the barriers to digital platform adoption by South African MSMEs
4. To investigate the core needs and challenges of MSMEs in the context of digital transformation

Framework Elements Addressed: Leadership Support, Resources, Communication, Organizational Structure & Innovativeness.

1. **How does leadership within your business influence decisions around technology adoption?**
 - Do leaders/You (Owner) actively encourage or resist the adoption of new digital tools?
 2. **What internal resources (e.g., financial, human, or technical) do you rely on for adopting digital platforms?**
 - Are these resources sufficient, or do you face constraints?
 3. **How does your organizational culture or structure influence your ability to adopt digital platforms?**
 - Do you feel your team is open to innovation and change?
 4. **What role does internal communication play in supporting digital adoption?**
 - Are there clear processes or discussions about adopting new technologies?
-

Section 4: Environmental Factors

Objective:

2. To investigate the barriers to digital platform adoption by South African MSMEs
3. To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships.
4. To investigate the core needs and challenges of MSMEs in the context of digital transformation

Framework Elements Addressed: Industry Characteristics, Competitive Pressure, Regulatory Environment, Government Relationships, Infrastructure, Market Uncertainty.

1. **What external challenges does your business face in adopting digital platforms?**
 - Are these related to competition, regulations or infrastructure?
 2. **How do market conditions (e.g., customer expectations, industry demands) affect your ability to adopt digital platforms?**
 - Do you feel pressure to use digital platforms to remain competitive?
 3. **What role do government policies or support programs play in helping your business adopt digital platforms?**
 - Do you feel that regulatory frameworks or support structures are conducive to adoption?
 4. **How would you describe the state of infrastructure (e.g., internet connectivity, electricity) available to your business?**
 - How do these factors impact your ability to use digital platforms?
-

Section 5: Language and Cultural Factors

Objective:

5. To explore how language and cultural compatibility affect the adoption of digital platforms.

Framework Elements Addressed: Language Accessibility, Cultural Relevance.

1. **To what extent do you feel digital platforms accommodate your language preferences?**
 - Do language barriers prevent you or your employees from using these tools effectively?

2. **How well do digital platforms align with the cultural practices or business norms in your community?**

- Are there features or approaches that you feel are missing or inappropriate for your business context?

Section 6: Awareness and Strategic Support

Objective:

6. To compare and evaluate the strategies employed by other African digital platform players within the retail environment, focusing on their approaches to assisting MSMEs in their digital transformation journey

Framework Elements Addressed: Awareness Campaigns, Strategic Outreach, Training.

1. **How do you learn about new digital platforms or tools?**

- Are there local outreach programs or community networks that provide information?

2. **What kind of support (e.g., training, workshops, mentorship) would help your business adopt digital platforms?**

- Are these support mechanisms currently available to you?

3. **Do you feel aware of the full potential benefits of digital platforms?**

- What information would help you make better decisions about adopting these tools?

Section 7: Digital Platform Usage

Objective:

1. To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships

5. To assess the role and impact of online marketplaces on the growth and sustainability of MSMEs in South African townships

Framework Elements Addressed: Practical Engagement and Usability.

1. **Which digital platforms do you currently use in your business, and how often?**

- For what specific business functions do you use these platforms?

2. **Can you describe your experience using these platforms?**

- What works well, and what challenges do you encounter?

Research Objectives	Propositions	Framework Elements	Interview Questions
To identify and analyze the existing social media channels and digital platforms available to MSMEs in South African townships	Proposition 1: Technological Barriers	<ul style="list-style-type: none"> - Infrastructure - Language Barriers - Digital Literacy 	<ol style="list-style-type: none"> 1. How would you describe the availability of digital platforms for your business? 2. What challenges have you encountered when using digital platforms? 3. Can you discuss how digital literacy has impacted your ability to adopt these platforms? 4. What improvements in infrastructure would make digital platforms more accessible to your business?
To investigate the barriers to digital platform adoption by South African MSMEs	Proposition 2: Economic Barriers	<ul style="list-style-type: none"> - Leadership Support - Resource Support - Organisational Culture 	<ol style="list-style-type: none"> 1. How have costs, such as data fees or subscription costs, impacted your ability to adopt digital platforms? 2. Do platform fees or transaction costs pose a challenge for your business? If so, how? 3. How do you prioritize the financial investment in digital platforms compared to other business needs?
To investigate the accessibility of social media channels, digital platforms, and online marketplaces for micro-enterprises in South African townships	Proposition 3: Organizational Readiness	<ul style="list-style-type: none"> - Awareness - High Data Costs - Logistical Challenges - Competitive Pressures 	<ol style="list-style-type: none"> 1. How does leadership within your business approach decisions regarding digital platforms? 2. What internal resources (financial, human, or technical) are available to support digital adoption? 3. How does your organizational culture encourage or hinder the use of digital platforms? 4. In your view, how does innovation in your organization influence technology adoption?
To investigate the core needs and challenges of MSMEs in the context of digital transformation	Proposition 4: Language Barriers	<ul style="list-style-type: none"> - Localized Language Options - Cultural Relevance 	<ol style="list-style-type: none"> 1. What logistical challenges (e.g., delivery systems or supply chains) have impacted your ability to participate in online marketplaces? 2. How do regulations or government policies affect your adoption of digital platforms? 3. Do competitive pressures from larger businesses influence your

Research Objectives	Propositions	Framework Elements	Interview Questions
			<p>decision to adopt digital tools?</p> <p>4. What changes in the regulatory or market environment would help your business adopt these platforms more effectively?</p>
To assess the role and impact of online marketplaces on the growth and sustainability of MSMEs in South African townships	Proposition 5: Cultural Alignment.	<ul style="list-style-type: none"> - Community-Centric Models - Cultural Sensitivity 	<p>1. How do digital platforms accommodate or fail to accommodate the cultural practices and norms of your business?</p> <p>2. Are there any language barriers that affect your ability to use digital platforms effectively?</p> <p>3. In your opinion, how can platforms be better aligned with the cultural and linguistic needs of MSMEs?</p>
To compare and evaluate the strategies employed by other African digital platform players within the retail environment, focusing on their approaches to assisting MSMEs in their digital transformation journey	Proposition 6: Awareness and Strategic Support	<ul style="list-style-type: none"> - Localized Outreach Programs - Culturally Relevant Training 	<p>1. How do you usually learn about digital platforms or new technologies?</p> <p>2. What role do outreach programs, training, or community initiatives play in promoting the use of digital platforms?</p> <p>3. What would make awareness campaigns or educational resources more impactful for your business?</p>

Appendix B: Participant's information sheet

[Date]

Good day [Participant Name],

My name is Prince Kutama, and I am a master's in management student in the Field of Digital Business at the University of the Witwatersrand in Johannesburg. As part of my studies, I am conducting a research project titled **"Investigating Barriers to Digital Platform Adoption: A Case of South African Township MSMEs."** This study is being conducted under the supervision of Dr. Thembekile Mayayise, Senior Lecturer at Wits Business School and Head of Division.

The aim of this study is to explore and identify the barriers that prevent Micro, Small, and Medium Enterprises (MSMEs) in South African townships from fully adopting and utilizing digital platforms, such as social media channels and online marketplaces. Your insights will help us better understand these challenges and contribute to developing strategies that can enhance digital adoption within township economies.

I am planning to conduct approximately 20 interviews with MSME owners and managers who are actively using or have attempted to use digital platforms in their business operations. Your participation would be invaluable to this study, and I would greatly appreciate your time. The interview can be conducted either face-to-face or via an online Microsoft Teams video call, lasting approximately 30 to 45 minutes.

Please note that your participation in this study is entirely voluntary. You may withdraw at any time, and you are not obliged to answer any questions that you are uncomfortable with. The interview will be conducted in a manner that ensures confidentiality and anonymity. The researcher does not include your or your company's name, or any other identifying information in the final report. A pseudonym (false name) will be used to represent your participation in the research report. The information you provide will be kept confidential and will not be disclosed to anyone. If, at any point during the interview, you experience discomfort or distress, we can terminate or pause the session.

If you have any questions about the research, either during or after the interview, please feel free to contact me using the details provided below. The research report will be available online through the university library website, and the researcher gladly share a summary of the report with you if you wish. The data collected will be stored electronically on a personal computer and will be kept for five years for research purposes.

If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University's Human Research Ethics Committee (Non-

Medical) at +27(0) 11 717 1408 or via email at hrec-medical.researchoffice@wits.ac.za.

Thank you for considering participating in this important research. I look forward to your positive response.

Yours sincerely,

Researcher:

Prince Kutama

Email: 2603644@students.wits.ac.za

Cell number: 0824212000

Supervisor:

Dr. Thembekile Mayayise

Email: thembekile.mayayise@wits.ac.za

Appendix C: Participant Consent Form

Title of Project: Investigating Barriers to Digital Platform Adoption: A Case of the South African Township MSMEs

Name of Researcher: Prince Kutama

I, _____, agree to participate in this research project focused on understanding the barriers to digital platform adoption among MSMEs in South African townships.

I agree to the following:

(Please circle the relevant options below)

1. The research study was explained to me. I understand what this study is about.

YES / NO

2. I understand that I can volunteer to take part in the study.

YES / NO

3. I agree that the interview may be audio recorded.

YES / NO

4. I agree that direct quotations from my interview may be used by the researcher in their research report.

YES / NO

5. I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report).

YES / NO

6. I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained), but my name and any personal information will not be used or passed on.

YES / NO

(Signature of Participant)

(Name of Participant)

(Date)

(Signature of Researcher/Person Seeking Consent)

(Name of Researcher/Person Seeking Consent)

(Date)

Appendix D: Ethics Clearance Letter



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/DB2603644/540

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	Investigating barriers to digital platform adoption: A case of the South African township MSMEs
Investigator / Researcher	Mr Phumudzo Kutama
Nature of Project	MM (Digital Business)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	24/10/2024
Expiry date	Date of submission of the project / research report
Chairperson	Dr Ayanda Magida ☎ +27 11 717 3953 ✉ ayanda.magida@wits.ac.za

Declaration by Researcher

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

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I 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

30 November, 2024

Date:

Appendix E: Approval of Title



Approval of Title.pdf



Private Bag 3 Wits, 2050
Fax:
Tel:

Reference: Ms Jennifer Mgolodela
E-mail: jennifer.mgolodela@wits.ac.za

18 October 2024
Person No: 2603644
PAG

Mr PP Kutama
Unit 42 Monte Falco
64 Sunset Avenue
Lonehill
2191
South Africa

Dear Mr Phumudzo Kutama

Master of Management: Approval of Title

We have pleasure in advising that your proposal entitled *Investigating barriers to digital platform adoption: A case of the South African township MSMEs* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs Marike Bosman
Faculty Registrar
Faculty of Commerce, Law and Management



Appendix F: Project: Masters Research Paper: Transcript Analysis

Report created by Prince Kutama on 2025/05/01

Document Report

Selected documents (10)

Codes were colour-coded in ATLAS.ti 25 to support interpretation:

Category	Interpretation	Colour Used
Barriers	Negative factors hindering digital adoption	● Red
Enablers	Positive influences or success conditions	● Blue
Neutral/Contextual	Descriptive or business background information	● Green
Emerging Inductive Codes	New codes not in the original codebook	● Gold

1. P1

Text document, 50 quotations

1 Groups:

Interview with Owner: Hair Salon

37 Codes:

● Age group / ● Awareness of Platforms / ● Awareness through social media / ● Capacity / ● Content Creation / ● Customer Base / ● Digital literacy / ● Digital marketing / ● Digital Transition to Digital Transformation / ● Engagement Struggles / ● Frequency of use / ● Gender of Business Owner / ● Infrastructure / ● Internal Skills Capacity / ● Internet Access / ● Language Barriers / ● Level of education / ● Location / ● Mobile service Model / ● No Government Support / ● No-Show or Cancellations / ● Number of staff / ● Perceptions of formality / ● Physical footprint / ● Platform Popularity Alignment / ● Platform Types / ● Platform usability / ● Posting Consistency / ● Preference for in-person / ● Product or Service / ● Purpose of Use / ● Record Keeping Practices / ● Service Offering Evolution / ● Software compatibility / ● Sole Operator / ● Training access / ● Type of Business

2. P2

Text document, 55 quotations

1 Groups:

33 Codes:

● Advertising / ● Age group / ● Awareness through social media / ● Business Maturity / ● Challenges Faced / ● Communication Platform / ● Competition / ● Cost and affordability / ● Device Availability / ● Digital Transition to Digital Transformation / ● Empowerment / ● Engagement Struggles / ● Financial Constraints / ● Frequency of use / ● Gender of Business Owner / ● Internal Skills Capacity / ● Language Barriers / ● Level of education / ● Location / ● Marketing Approach / ● Mentorship/Coaching / ● NGO/Private Support / ● No Government Support / ● Number of staff / ● Operational Processes / ● Owners Mindset / ● Platform Types / ● Platform usability / ● Preference for in-person / ● Purpose of Use / ● Technology affordability and access gap / ● Trust and Reputation / ● Type of Business

3. P3

Text document, 66 quotations

1 Groups:

Interviews with Owners: Brand & Marketing

37 Codes:

● Advertising / ● Affordable digitisation strategies / ● Age group / ● Awareness of Platforms / ● Awareness through social media / ● Business Maturity / ● Challenges Faced / ● Communication Platform / ● Competition / ● Digital literacy / ● Digital marketing / ● Digital Transition to Digital Transformation / ● Frequency of Use / ● Financial Planning / ● Frequency of use / ● Gender of Business Owner / ● Infrastructure / ● Innovation in Technology / ● Internal Skills Capacity / ● Internet Access / ● Language Barriers / ● Level of education / ● Local Business Norms / ● Location / ● Multi-Functional Use / ● No Digital Usage / ● No Government Support / ● Number of staff / ● Operational Processes / ● Owners Mindset / ● Perceptions of formality / ● Preference for in-person / ● Purpose of Use / ● Security concerns / ● Service Offering Evolution / ● Training access / ● Type of Business

4. P4

Text document, 45 quotations

1 Groups:

Interviews with Owners: Brand & Marketing

34 Codes:

● Age group / ● B2B Customer / ● Bridging the Digital Gap / ● Building Platform / ● Business Maturity / ● Capacity / ● Device Availability / ● Digital literacy / ● Digital marketing / ● Frequency of Use / ● Frequency of use / ● Government Programmes / ● Infrastructure / ● Internet Access / ● Language Barriers / ● Level of education / ● Location / ● Marketing Approach / ● Mentorship/Coaching / ● No Government Support / ● Number of staff / ● Perceptions of formality / ● Platform on boarding / ● Platform Types / ● Platform usability / ● Preference for in-person / ● Product or Service / ● Purpose of Use / ●

Technical Support / ● Technology affordability and access gap / ● Technology Mistrust / ● Training access / ● Trust and Reputation / ● Type of Business

5. P5

Text document, 49 quotations

1 Groups:

Interviews with Owners: Delivery Services

37 Codes:

● Age group / ● Awareness through social media / ● Building Platform / ● Business Maturity / ● Challenges Faced / ● Customer Base / ● Customer Experience / ● Delegation of Digital tasks / ● Delivery safety concerns / ● Device Availability / ● Digital literacy / ● Digital Transition to Digital Transformation / ● Financial Constraints / ● Flexibility and Dynamics / ● Gender of Business Owner / ● Generational Divide / ● Infrastructure / ● Internet Access / ● Level of education / ● Local Business Norms / ● Location / ● Mentorship/Coaching / ● Mobile service Model / ● No Government Support / ● Number of staff / ● Platform on boarding / ● Platform Security Concerns / ● Platform Types / ● Platform usability / ● Preference for in-person / ● Product or Service / ● Record Keeping Practices / ● Robotic Process Automation / ● Security concerns / ● Sole Operator / ● Technology affordability and access gap / ● Unbanked Population

6. P6

Text document, 59 quotations

1 Groups:

Interviews with Owners: Real Estate

45 Codes:

● Age group / ● Awareness through social media / ● Bridging the Digital Gap / ● Business Maturity / ● Challenges Faced / ● Communication Platform / ● Cost and affordability / ● Customer Experience / ● Delegation of Digital tasks / ● Device Availability / ● Digital literacy / ● Digital marketing / ● Digital Transition to Digital Transformation / ● Employee Engagement / ● Empowerment / ● Financial Constraints / ● Flexibility and Dynamics / ● Frequency of use / ● Gender of Business Owner / ● Infrastructure / ● Language Barriers / ● Level of education / ● Local Business Norms / ● Location / ● Mentorship/Coaching / ● Multi-Functional Use / ● No Government Support / ● No Support / ● Number of staff / ● Owners Mindset / ● Peer Influence / ● Perceptions of formality / ● Platform Security Concerns / ● Platform Types / ● Preference for in-person / ● Purpose of Use / ● Regulatory Issues / ● Security concerns / ● Service Offering Evolution / ● Software compatibility / ● Technology affordability and access gap / ● Technology Mistrust / ● Training access / ● Trust and Reputation / ● Type of Business

7. P7

Text document, 57 quotations

1 Groups:

Interview with Owners: Food & Beverage

51 Codes:

● Absence of Digital Stock Systems / ● Advertising / ● Age group / ● Awareness of Platforms / ● Business Maturity / ● Communication Platform / ● Competition / ● Content Creation / ● Digital Growth / ● Digital literacy / ● Digital marketing / ● Digital Transition to Digital Transformation / ● Empowerment / ● Financial Constraints / ● Financial Planning / ● Gender of Business Owner / ● Generational Divide / ● Human Element / ● Infrastructure / ● Innovation in Technology / ● Internet Access / ● Language Barriers / ● Level of education / ● Local Business Norms / ● Marketing Approach / ● Mentorship/Coaching / ● Multi-Functional Use / ● No Government Support / ● No Language Barrier / ● No Support / ● Number of staff / ● Operational Processes / ● Owners Mindset / ● Perceptions of formality / ● Platform Content Segmentation / ● Platform Experimentation / ● Platform Fees / ● Platform on boarding / ● Platform Popularity Alignment / ● Platform Security Concerns / ● Platform usability / ● Preference for in-person / ● Product or Service / ● Purpose of Use / ● Reputational Risk from Unverified Feedback / ● Scalability / ● Software compatibility / ● Sponsored Visibility Limitation / ● Technology Mistrust / ● Training access / ● Type of Business

8. P8

Text document, 50 quotations

1 Groups:

Interview with Owners: Food & Beverage

43 Codes:

● Absence of Digital Stock Systems / ● Affordable digitisation strategies / ● Awareness of Platforms / ● Business Maturity / ● Capacity / ● Cash Dependency / ● Content Creation / ● Cost and affordability / ● Customer Base / ● Customer Experience / ● Delegation of Digital tasks / ● Digital literacy / ● Digital marketing / ● Digital Priority / ● Digital Transition to Digital Transformation / ● Engagement Struggles / ● Financial Constraints / ● Financial Planning / ● Funding for Digital Training for SME's / ● Gender of Business Owner / ● Infrastructure / ● Internal Skills Capacity / ● Internet Access / ● Level of education / ● Location / ● Marketing Approach / ● Mentorship/Coaching / ● No Awareness of Township Digital SME's Training / ● No Government Support / ● Number of staff / ● Owners Mindset / ● Perceived Informality of Digital / ● Platform Fees / ● Platform Popularity Alignment / ● Platform Types / ● Preference for in-person / ● Product or Service / ● Record Keeping Practices / ● Software compatibility / ● Technology Mistrust / ● Time Constraint / ● Training access / ● Type of Business

9. P9

Text document, 63 quotations

1 Groups:

42 Codes:

● Absence of Digital Stock Systems / ● Age group / ● Awareness of Platforms / ● Awareness through social media / ● B2B Customer / ● B2C Customer / ● Business Maturity / ● Challenges Faced / ● Communication Platform / ● Competition / ● Cost and affordability / ● Device Availability / ● Digital literacy / ● Digital marketing / ● Digital Operations / ● Digital Transition to Digital Transformation / ● Employee Engagement / ● Financial Constraints / ● Funding for Digital Training for SME's / ● Gender of Business Owner / ● Infrastructure / ● Internal Skills Capacity / ● Internet Access / ● Language Barriers / ● Level of education / ● Local Business Norms / ● Location / ● No Government Support / ● No Support / ● Number of staff / ● Owners Mindset / ● Peer Influence / ● Perceptions of formality / ● Platform Fees / ● Platform Types / ● Product or Service / ● Purpose of Use / ● Scalability / ● Sponsored Visibility Limitation / ● Technology affordability and access gap / ● Training access / ● Type of Business

10. P10

Text document, 42 quotations

1 Groups:

Interviews with Owners: Real Estate

33 Codes:

● Affordable digitisation strategies / ● Age group / ● Awareness of Platforms / ● Awareness through social media / ● Building Platform / ● Capacity / ● Communication Platform / ● Cost and affordability / ● Customer Experience / ● Digital literacy / ● Digital marketing / ● Digital Operations / ● Digital Transition to Digital Transformation / ● Flexibility and Dynamics / ● Frequency of use / ● Infrastructure / ● Internet Access / ● Language Barriers / ● Level of education / ● Location / ● No Government Support / ● No Support / ● Number of staff / ● Operational Processes / ● Peer Influence / ● Perceptions of formality / ● Platform Popularity Alignment / ● Platform Types / ● Platform usability / ● Purpose of Use / ● Robotic Process Automation / ● Software compatibility / ● Type of Business

Appendix G: Deductive Codebook Aligned to Research Framework

1. Technology Factors

Code	Description
Internet access	Availability, speed, cost, and reliability of internet/data
Device availability	Smartphones, computers, POS devices, and affordability
Platform usability	Ease of navigating platforms; app complexity

Digital literacy	Comfort and skills using digital tools
Security concerns	Fear of scams, fraud, or hacking
Technical support	Access to help when platforms or devices fail
Software compatibility	Issues with app versions, OS requirements
Data usage concerns	High data consumption discouraging use

2. Organizational Factors

Code	Description
Owner mindset	Openness to digital change, willingness to try
Staff capability	Whether employees can support digital tasks
Time constraints	No time to learn or implement new tools
Financial constraints	No budget for tools, data, or digital marketing
Operational processes	Whether systems support digital adoption
Registration/formality	Whether the business is formal or informal
Recordkeeping practices	Whether records are digital or manual
Delegation of digital tasks	Whether the owner or staff handles tech

3. Environmental Factors

Code	Description
Competition	Market pressure to adopt digital tools
Customer expectations	Demand for digital services (e.g. online orders)
Supplier pressure	Pressure to adopt digital tools for procurement
Infrastructure	Load-shedding, poor roads, or postal issues
Crime and safety	Fear of theft of digital devices
Government support	Grants, training, or policy alignment
NGO/private support	Mentorship or tools from other institutions
COVID-19 impact	How the pandemic affected digital adoption

Regulatory barriers	Compliance, tax, or registration issues
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4. Cultural and Language Factors

Code	Description
Language barriers	English-only apps, instructions, or platforms
Preference for in-person	Face-to-face seen as more trustworthy
Local business norms	Cash over card, verbal over written communication
Trust and reputation	Importance of word-of-mouth, community links
Perceptions of formality	Belief that digital = government = risk
Generational divide	Older owner's vs younger, tech-savvy workers

5. Awareness and Strategic Support

Code	Description
Awareness of platforms	Knowledge of what's out there (e.g. Yoco, SpazaApp)
Peer influence	Adoption encouraged by seeing others succeed
Training access	Workshops, online videos, or peer learning
Government programs	Incubators, digital hubs, or township support
Mentorship/coaching	1:1 or group guidance in digital use
Industry associations	Support from local trader or retail groups
Platform onboarding	Whether platform support teams help MSMEs
Awareness through social media	MSMEs learning from Instagram, TikTok etc

6. General Business Context

Code	Description
Business type	Spaza shop, salon, catering, clothing retail, etc.
Location	Township, semi-urban, urban edge

Business maturity	Startup vs established business
Number of staff	Sole proprietor vs team
Customer base	Local community vs broader online
Cash flow issues	Sales fluctuation affecting platform investment
Physical footprint	Storefront vs mobile vendor
Revenue sources	Product vs service vs hybrid

7.Digital Platform Usage

Code	Description
Platform types	WhatsApp, Facebook, TikTok, Yoco, Google, Instagram
Purpose of use	Marketing, ordering, payments, delivery
Frequency of use	Daily, weekly, occasional, seasonal
Benefits experienced	More customers, efficiency, cost-saving
Challenges faced	App bugs, fraud, no customer response
Multiple platform usage	Switching or combining tools
Customer interaction	How customers engage on platforms
Content creation	Whether business posts videos, designs, ads
Sales conversion	Online interest leading to actual sales
Payments & transactions	Use of Snap Scan, Yoco, EFTs, mobile money

Appendix H: TURNITIN REPORT

Research Report - A case of the south African Township
MSME's_Phumudzo Kutama - MMDB - 2025.docx

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