How do the key social barriers influence digital adoption in the informal trade?

05159483

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

3 November 2025

ABSTRACT

Digital transformation has become a key priority across sectors, yet informal trade in emerging markets continues to show low levels of digital adoption. This research investigates the social barriers that hinder the uptake among informal traders in South African townships. While existing models such as the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) explain adoption based on perceived usefulness and ease of use, they often fail to account for the lived realities and social dynamics of the informal economy. Using a Qualitative research approach, this study draws on in-depth interviews and thematic analysis to explore the role of trust, community influence, digital literacy and cultural fit in shaping resistance or reluctance to adopt digital tools. The research offers theoretical contributions to digital inclusion literature and provides practical insights for designing culturally fit digital strategies that align with the contextualised realities of the informal trade.

KEYWORDS

Digital adoption, Social barriers, Informal trade, Inclusive Innovation

PLAGIARISM DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

05159483 - 3 November 2025

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: DEFINING THE PROBLEM AND PURPOSE

1. INTRODUCTION

Digital adoption in South Africa's informal trade cannot be overemphasised, as it enhances business efficiency, expands market access, improves consumer engagement, and promotes financial inclusion. As the economy continues to digitise, these informal enterprises have the opportunity to achieve sustainable growth. Existing research predominantly concentrates on economic and infrastructure-related challenges, often overlooking the crucial human and social dimensions contributing to the lack of digital adoption. The study seeks to understand how social barriers influence digital adoption within informal trade by examining perceptions and lived experiences of stakeholders (consumers and traders) in this sector.

1.1. THE ROLE INFORMAL TRADE PLAYS

Scholars have endeavoured to comprehend the informal economy underlying its status in development, poverty and labour. Keith Hart conceived the term “informal economy” in 1973 while talking about urban economies of developing nations (Hart, 1973). The term informal economy describes alternative forms of employment and commercial ventures that people pursue to bring income and generate revenue but do not come within official institutional regulatory frameworks (Hart, 1973).

Informal trade plays a vital role in developing countries such as South Africa and its African partners. The informal sector employment accounts for 18,5% of total employment, contributing 6% to the SA GDP (Stats SA, 2024) . Globally, the informal trade provides livelihoods to almost two billion workers, constituting 60% of the adult labour force (Mpedi & Marwala, 2025). This is more prevalent in more pronounced regions, where Sub-Saharan Africa (SSA) suggests over 85% of employment is informal (Cottica & Gustale, 2023), contributing significantly to GDP, with figures cited around 50-55% (Karombe, 2025).

Characteristically, businesses within the informal economy operate under significant resource constraints, face challenges of inadequate and often irregular incomes (Ebrahim & Van den Berg, 2024), and function largely outside of formal regulatory frameworks without registration (Statssa, 2025). It is evident that informal trade aids in

eliminating unemployment and contributing to the economy, but it has limited resources. It encompasses various activities, including street vendors, spaza owners, service home-based providers and small-scale manufacturers (Lobsy, Else, Kingslow, Edgcomb & Malm, 2002). Unofficial occupations include street vendors, spaza shops, midi-wholesalers, mechanics, laundromats, waste recyclers, taxi drivers, and handymen. It's interesting to observe how crucial it is to equip informal trade owners with the necessary tools and skills. Unlike their formal trade counterparts, who benefit from established structures that provide them with capital and support, those in less formal trades often lack similar advantages. This disparity highlights the need for targeted resources to help them thrive in their fields.

Research highlights significant diversity within this sector, identifying distinct segments as 'survivalists' operating purely out of necessity to provide for their families, 'constrained gazelle' with potential for growth but facing specific obstacles and 'top performers' who achieve higher levels of success even within the informal context (Cottica & Gustale, 2023). The inherent diversity within informal businesses implies various experiences, challenges, and motivations concerning digital adoption and practices across different business types. Such as food businesses wanting to reach more customers through direct-to-consumer delivery platforms and service businesses looking for ways to evolve through digital experiences. This observation suggests that they exist to fulfil various purposes, each catering to the unique needs and demands of their respective consumers.

While estimates vary, the informal sector accounts for a substantial portion of employment, "with 1.9 million South Africans running non-VAT registered businesses in 2023, compared to 1.5 million a decade earlier" (Statssa, 2025), with Black Africans dominating the business space, making up 88.9% of the owners in 2023.

Digital tools, particularly those involving financial transactions and online platforms, often require regulation and increase visibility by creating data trails (UNDP, n.d.). While this visibility may pose trust challenges as the heightened visibility may be perceived as a significant risk by businesses seeking to avoid regulatory scrutiny or taxation (Dickerson, 2014), potentially acting as a direct disincentive to adoption, the benefits could be access to credit (Karombe, 2025). The challenge that emerges from this context revolves around identifying the delicate balance between leveraging digital platforms and

technology for business growth and maintaining a sense of security from scrutiny. How can research illuminate effective strategies that allow businesses to thrive in the digital landscape while ensuring that they operate in a manner that safeguards their integrity and supports their fundamental need to sustain their families?

Digital adoption is pivotal for growth and efficiency, development of the economy of South Africa's informal trade, and how small, medium and micro businesses (SMME's), specifically small businesses, only make enough money to support their families (Bvuma & Marnewick, 2020). The paper focuses on micro-enterprises (informal spaza shops and traders), arguing that embracing information and technologies (ICT) such as mobile payment systems, ecommerce platforms, and other digital tools substantially improves business performance and sustainability. The authors substantiate why adopting these digital technologies aids in the reduction of costs and increase in productivity (for example, streamlining transactions and inventory management) and expand their market access beyond their immediate community (Ebrahim & Van den Berg, 2024). Adopting digital platforms offers businesses numerous benefits, however, the persistence of informal businesses operating without these technologies suggests that social barriers may be at play.

Building on the problem definition and purpose, exploring the key factors that either expedite or impede the adoption of digital tools in these communities. Examining hindrance factors to digital adoption, for example restricted access to technology, lack of digital literacy, cultural resistance, or economic constraints, research has the potential to reveal insights into the obstacles encountered by informal businesses.

1.2. IMPORTANCE OF THE RESEARCH QUESTION AND ITS CONTRIBUTION TO THE LITERATURE

1.2.1. Significance of this investigation

1.2.1.1. Contribution to literature

This investigation is significant as it addresses a critical and underexplored aspect of digital uptake in emerging market contexts, specifically the influence of social barriers that informal traders face. While existing literature focuses on infrastructure and economic barriers, this research shall focus on social factors that shape the adoption behaviour, such as trust, community influence, perceived usefulness and digital literacy.

Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) frameworks offer a useful foundation by identifying perceived usefulness and social influence as key drivers of adoption. Where informal businesses' mistrust of formal systems and peer dynamics play a central role, these models often fail to notice contextual realities of informal trade. By grounding this study in the township context, this research brings in a deeper understanding of the overlooked dynamics.

This study harnesses the Technology Organisation and Environment (TOE) framework to explore how digital tools are or are not adopted within socially networked communities, highlighting the role of opinion leaders and peer norms. The TOE framework offers a multi-level lens to capture the influence of technological, organisational characteristics and broader environmental conditions specifically in context to the community norms, practices and values. Through these lenses, this research adopts a multidisciplinary approach, integrating technological studies, sociology and behavioural economics to enrich the academic discourse on digital transformation. Capturing stakeholders' lived experiences in this context surfaces the subtle social dynamics that surveys often miss. These insights contribute to theory-building and the design of inclusive, community-informed digital policies that are more likely to succeed in informal, trust-sensitive environments.

1.2.1.2. Contribution to business

Driven by economic, business, policy, and social equity factors, this research holds significant importance and potential for positive impact. The informal economy constitutes a massive workforce and economic activity segment, particularly in developing nations like South Africa (Kiaga & Leung, 2020). Digitisation has tremendous potential to transform this sector by boosting productivity, improving access, encouraging innovation, contributing to national GDP and reducing poverty (Karombe, 2025). However, the continued low adoption of digital tools creates a barrier that prevents the realisation of these significant economic benefits (Maziva, 2023). Therefore, addressing this barrier is a financial necessity.

From a business perspective, informal enterprises can significantly benefit from improved operational efficiency, expanded customer reach, better financial management, and increased competitiveness through digital tools (Kiaga & Leung, 2020). In today’s digital global economy, understanding and overcoming the barriers that prevent these

businesses from leveraging these advantages, as this is crucial for their survival, growth, and ability to provide sustainable livelihoods (Girollet, 2023). There is a clear need within the informal business community for practical insights on navigating the digital transition effectively.

Considering the South African government's current efforts to regulate informal trade (Balde, 2024), this research could play a significant role in shaping policy decisions and frameworks. Governments, development organisations, and NGOs actively invest in programs to promote digital inclusion, support small enterprises and facilitate formalisation (Mpedi & Marwala, 2025). The success of these interventions depends on accurately diagnosing the problem. Policies that rely on insufficient information and flawed theoretical models, failing to consider the particular context of informal trade risks, prove ineffective, waste resources, and could lead to unintended harmful outcomes (Moore, Dau & Mingo, 2021).

The significance of the study lies in the fact that, in developing economies, the informal sector is a primary source of livelihood for a vast proportion of the population and is evident in countries such as India, Nigeria and South Africa (Ashiru, Nakpodia & You, 2022). South Africa’s informal sector accounts for 18.6% of employment, second to formal trade, contributing 6% to the GDP (Ebrahim & Van den Berg, 2024). This unique environment must be thoroughly understood to effectively analyse digital, particularly given its significant role and the large workforce it supports.

1.2.2. Document outline

This document is structured to present the argument that social barriers, deeply embedded in cultural norms, social structures, trust dynamics and varying levels of digital literacy and skills are critical determinants of digital adoption in the informal trade. Chapter 2 establishes the conceptual foundations by defining key terms such as informal trade and township economy. It then provides justification for the selection of Soweto as the area of study more specifically Diepkloof and Orlando context, concluding this section with an overview of digital adoption in the context of informal trade. A discussion of the Technology Organisation Environment (TOE) framework as the key theoretical tool for the apprehension of digital adoption, along with a view of platforms and digital technologies in informal trade drawing on empirical evidence from Nigeria and India to

summarise the key social barriers. Chapter 3 outlines the development of the research propositions based on the synthesis of identified gaps in existing literature and restatement of the research questions. Chapter 4, provide detail on the selected research methodology after restating the research problem and its formulation and how the researcher went about the research process. Chapter 5 provides detailed review of the research results from the interviews conducted in Diepkloof and Soweto. Followed by Chapter 6 that provides a detailed discussion of the findings and linkages to initial TOE framework, research questions with the propositions linkage. The last chapter brings the entire document together by concluding the intended exploration of the research question, literature review, findings and results.

CHAPTER 2: THEORY AND LITERATURE REVIEW

In the developing world, informal trade is important for economic development, providing income, essential goods, and services. Several factors often limit its potential, including restricted access to capital, government and police interference, harassment, corruption (Charman, Petersen & Govender., 2020), and the adoption of digital technologies that enhance productivity.

This literature review examines the landscape of informal trade in township economies, highlighting the inconsistent use of digital technologies even though they offer significant potential benefits. It analyses the digital adoption landscape, relevant theoretical frameworks and critically assesses the social barriers hindering uptake. The central argument is that deeply embedded social systems, norms and nuances often constrain the integration of digital technologies into informal trade operations. The emphasis is that the evolving digital divide (Aissaoui, 2022) is not solely due to technological or economic factors but also involves the social capacity for effective technology use, for example digital skills of stokvels with older women. Therefore, strategies focusing only on infrastructure or cost reduction may fail if social barriers are not addressed or acknowledged. Neglecting these barriers opens up risks, widening existing inequalities by preventing marginalised economic actors from fully benefiting from the digital revolution, as highlighted by the United Nations Development Programme (UNDP) on harnessing the power of digitisation. Understanding these social obstacles is crucial for effective interventions.

2. THE CONTEXT: INFORMAL TRADE WITHIN THE TOWNSHIP ECONOMY

2.1.1. Defining and describing the township economy

In the South African context “township economy” refers to the economic activities concentrated in historically segregated, often peri-urban, residential areas established during the apartheid era (Charman et al., 2020). Township economy, sometimes known as ‘kasinomics’, represents a vibrant, resilient and adaptive economic sphere, providing essential services and products tailored to the communities’ needs. Characteristics often include a predominance of micro-enterprises, often resource-constrained, operating with high levels of informality but deeply embedded within the community's social fabric. "Informal economy" means the informal economic activities that can happen anywhere, regardless of location, as Scheba & Turok (2020) described.

The grey economy, otherwise known as the informal economy, encompasses all economic activities undertaken by business owners and employees that operate independently of formalised structures and firms (International Labour Organisation, 2024). Key characteristics often include “skills gained outside of formal education systems, relative ease of entry for participants, a general lack of stable employer-employee relationships”, and operations that are typically small in scale (International Labour Organisation, 2024). Transactions are frequently cash-based, and participants often lack access to secure income, benefits, healthcare or formal representation as they aim to operate under the radar (Dell'Anno, 2021).

In countries like India and Nigeria, the informal economy constitutes a large portion of overall economic activity and employment, with the majority of retail being informal, similar to the South African township economy. While specific data on the precise scale in these nations is not detailed in materials, studies on digital adoption barriers within their informal sectors highlight its significance (Dutta, Kar & Guha, 2023). For instance, research in India points to the need to consider the specific needs of “youth and women within the informal sector, which sustains a large percentage of the workforce” (Dutta et al., 2023). A study by the ILO (International Labour Organisation, 2025) states that women-led enterprises in Africa stand at 95.3% vs men at 92.8%, with a 10% variance in Southern Africa, with women leading the ownership percentage. Studies in Nigeria underscore the vulnerabilities of SMEs, many of which operate informally to economic shocks and their challenges in adopting digital tools (Shahadat, Nekmahmud, Ebrahimi & Fekete-Farkas, 2023). The pervasiveness of informality in these contexts makes understanding the barriers to digitisation a critical policy concern.

‘Township’ usually refers to neighbourhoods designed to separate people, making it a spatial concept. Based on their historical and governance origins, there are three types of townships: **informal settlements,** often arising organically through land occupation and lacking formal infrastructure and tenure; **post-apartheid townships,** developed under democratic housing programs such as Reconstruction and Development Programme/ Breaking New Ground (RDP/ BNG); and **apartheid townships**, created to serve as labour dormitories under segregated policies (Scheba & Turok, 2020).

Despite the differences in townships, they tend to share some features such as high unemployment rates, low household incomes, undeveloped infrastructure, high population density, inadequate public services and exposure to social ills, especially crimes. Weak governance arrangements and fragmented local economies compound these. Studying digital adoption in this context is crucial due to its large scale, potential for inclusive growth and unique challenges and opportunities compared to formal trade. Digitisation can significantly boost productivity, market access and incomes for informal trades, thus aiding job creation and alleviating poverty in these townships (UNDP, n.d.).

2.1.2. The informal trade landscape in township economies: A unique manifestation of informality

The historical context in which townships were born is important to take into account, as it has profoundly shaped the nature and trajectory of economic activity within these areas. The informality observed in the township economies is not merely a matter of lacking formal registration. It is deeply intertwined with legacies of spatial segregation, economic exclusion and systematic disadvantage. Townships are historically designated urban areas established during the apartheid era to house Black African, Coloured and Indian populations, often on the peripheries of cities and within limited infrastructure and economic opportunities (Todes & Houghton, 2021). This historical path dependency means that the social barriers to digital adoption in such contexts are likely to be compounded by issues of trust in formal institutions, access to resources, and the specific social networks that evolved in response to marginalisation. If these townships were created to segregate people, what reason would the very people have to trust the “formalised” way of life?

The informal trade landscape within township economies is diverse and dynamic. It hosts different types of businesses, often called micro and small enterprises (MSEs) or Small, Medium and Micro Enterprises (SMMEs), and they often operate outside formal regulatory frameworks (Bvuma & Marnewick, 2020). The typical types of businesses would include spaza shops (small informal convenience stores often home run in a container), street vendors and hawkers selling everything from food to clothing, shebeens (informal taverns), bakeries, informal service providers (e.g childcare services, hairdressers, mechanics) and artisanal or small-scale manufacturing activities (Charman et al., 2020). Other activities such as backroom rentals, vehicle mechanics, minibus taxi operations, panel beaters and metal fabricators. While these businesses provide

essential services and goods to the township residents and contribute to local employment, they often operate under challenging conditions. Cash-based transactions, limited access to formal credit and business development services, reliance on local supply chains and social networks are the typical characteristics of these businesses (Scholtz, Cronje & Cilliers, 2023). Operational characteristics of township businesses often include limited access to finance, inadequate infrastructure (such as reliable electricity or internet connectivity) and vulnerability to crime (Scheba & Turok, 2020).

A township's economic viability is also influenced by its location within the broader urban system. McGaffin et al (2015; Scheba & Turok, 2020) classify townships as: Core: Relatively well situated with some detachment from economic centre (e.g Alexandra), Periphery: Situated on the urban fringe with limited access to economic nodes (e.g Soweto, Khayelitsha) and Displaced: Physically distant and economically disconnected, often relying on the city for employment and services (e.g Evaton and Orange Farm). This provides an interesting view on the relationship between geographic placement and economic activities.

While providing opportunities, the "easy entry" of many informal businesses can also mean that many operate at a survivalist level with minimal capital, skills, or capacity for growth and investment in new technologies like digital tools. This creates a potential low-equilibrium trap where the very factors that allow participation also constrain advancement through digitisation, a situation exacerbated by social barriers.

2.1.3. Justification for Soweto as the selected area of study

South Western Township, known by its acronym Soweto, provides a compelling and highly relevant geographic location case study for several interconnected reasons for investigating social barriers to digital adoption in the informal trade sector.

Firstly, historical context, Soweto's origins are deeply rooted in the policies of racial segregation and economic marginalisation of South Africa's apartheid era. Crucially, these townships were designed as residential dormitories with deliberately limited formal economic opportunities, effectively functioning as non-generative economic spaces (Metych, 2025). This historical legacy directly fostered a vibrant and necessary informal economy to service the needs of its large population, as formal retail and commercial development were severely restricted, with an initial move of 75,000 black people to

Soweto during apartheid (Christopher, 1994; van Ham, Tammaru, Ubarevičienė & Janssen, 2021). This unique historical trajectory has shaped the social fabric, economic practices and institutional trust levels within Soweto, all of which are pertinent to understanding current digital adoption and how businesses are affected by the social elements.

Secondly, its socio-economic profile. Soweto is South Africa's largest residential area, with over a million people (Metych, 2025) (43% of greater Johannesburg), and contributes disproportionately little (4%) to the formal economy. Soweto, containing "1.8 million people, a third of the city's population" (van Ham et al., 2021). This highlights a significant informal sector with diverse income levels and a predominantly Black African population of 78% (van Ham et al., 2021). This forms a rich tapestry of social networks, cultural norms, and varying infrastructure access levels, making it an ideal microcosm for exploring the connections between multiple variable criteria.

Research has indicated a spectrum from extreme poverty to emerging affluence within Soweto (Lynge, Visagie, Scheba, Turok, Everatt & Abrahams, 2022), which allows for an investigation of how socioeconomic status might interact with social barriers to digital adoption. Existing studies have highlighted the challenges related to SME development and digital uptake in Soweto (Mazibuko, 2023) and the negative impact of formal retailers moving into the informal trade (Nkwana & Roberson, 2025), providing a foundation upon which this research can build by focusing specifically on the social dimensions of these barriers.

The structure of the informal economy in Soweto provides an interesting landscape to study. Historically, the informal economy in Soweto has been dominated by food stalls and liquor, with shebeens recognised as important special institutions, but now various other businesses are trading in this space (Moagi, Ivanovic & Adinolfi, 2021). While acknowledging its unique aspects, Soweto's representativeness allows for findings that could offer valuable insights for other South African townships and potentially urban informal economies in similar developmental contexts.

2.1.4. The divided landscape of Soweto

The name Soweto evokes a powerful, singular image of resistance against apartheid, largely defined by the 1976 student uprising. However, this monolithic view obscures the

reality of Soweto as a complex mosaic of over 37 distinct suburbs, each with a unique history and character forged by apartheid's specific logistics (Shap!, n.d.). To understand the enduring legacies of spatial segregation, a granular analysis is required. To create context for this research, the two townships will be discussed: Diepkloof, a space of engineered class division and Orlando, a site of long-term resilience and self-organisation.

2.1.4.1. Diepkloof: the stark map of social engineering

The township of Diepkloof offers a compelling case study in the evolution of apartheid's spatial strategies. Its history is not one of organic growth but of deliberate state intervention, first as a holder for populations displaced by slum clearance and later as a laboratory for a sophisticated policy of social engineering. The physical and social landscape of Diepkloof today is a direct legacy of these interventions, presenting a striking topography of inequality that encapsulates the broader contradictions of late-apartheid rule.

Diepkloof's history is one of deliberate state intervention in which PW Botha's administration deliberately created this area for a stabilised middle class (Harrison & Harrison, 2014). Established in 1959, a designation it shared with the neighbouring area of Meadowlands, it was created to house thousands of families forcibly removed from Alexandra township and the relocation of households from Sophiatown. The initial landscape was typical of apartheid planning, consisting of standardised "matchbox" houses, small, grey three or four-roomed dwellings allocated on a rental basis. In Zone six, alongside the family units, a crucial feature of Diepkloof's landscape was single-sex hostels for male migrant workers.

The township's defining chapter began in the early 1980s with the development of Diepkloof Extensions, also known as the more affluent suburbs. This was a direct response to the political crisis following the 1976 Uprising. The apartheid state, shifting its strategy from pure oppression, sought to cultivate a black middle class that would act as a conservative buffer against the radicalised working class. The Extensions were conceived as an elite suburb for professionals and civil servants, with the state facilitating private homeownership through 100% loans, a clear "divide and rule" tactic aimed at fragmenting the black population along class lines (Harrison & Harrison, 2014).

The combination of family housing and migrant hostels created a complex social environment from the outset, reflecting the dual role of the township as both a site of permanent settlement and a reservoir of temporary labour.

The result is a township of extreme internal inequality. Diepkloof today is a stark map of this social engineering, comprising four distinct areas. The “Old” Zones (1-6) are the “old” Diepkloof, dominated by the original, grey high-density “matchbox” houses still characterised by overcrowding and legacies of poverty; these houses were built in the cheapest way possible (South African History Online, 2024). Over decades, residents have invested their own resources to extend and improve these basic structures, often adding rooms or even second stories. However, the area’s origins in poverty remain evident. The Marthinus Smuts Drive road separating Extension Phase two and Zone four is an example of the contrast of housing.

Secondly, the Extensions (also known as Phase 1-3) are an affluent, upper-middle-class enclave with large, owner-built homes, colloquially known as “Rich Man’s Acre” (Mbuyi, 2017), where property values are among the highest in Soweto. Houses in these areas are typically bigger than the matchbox four-bedroom houses. Ranging from double stories to up to eight-bedroom houses, a few with small swimming pools and landscaped gardens. Diepkloof Phase Two was home to the likes of Dr Nthato Motlana, the writer Professor Randall Langa Peteni, and Reverend Frank Chikane are a mix of Doctors, Writers, Lawyers and Prominent Social figures. Home to a lot of black professionals, prominent political figures and celebrities with socio-economic status comparable to that of affluent, formerly all-white suburbs like Edenvale or Parkhurst (Mbuyi, 2017). House prices in Extensions are among the highest in Soweto, reflecting the superior quality of the housing stock, well-maintained roads and better-resourced schools.

Thirdly, the Hostels' original structures, built to house migrant labourers, represented a different form of state-controlled existence. These hostels still exist after Phase 3 is the men's hostel.

Lastly, the Motsoaledi Informal Settlement, a community of informal shack dwellings lacking basic services, exists in stark contrast to the wealth of the Extensions. This stark area is formally known as Mandela Village. This area consists of informal shack dwellings and lacks the basic services and amenities, such as reliable water, sanitation

and electricity, that are taken for granted in Extensions (South African History Online, 2024). Its existence within the boundaries of Diepkloof serves as a constant and visible reminder of the deep poverty and inequality that persist alongside pockets of extreme wealth.

The juxtaposition of the affluent Extensions, the working-class “match box” zones, the migrant hostels, and the Motsoaledi informal settlement within a single township creates a microcosm of South Africa’s national inequality. The internal fragmentation challenges any simplistic narrative of a unified “Black experience" under apartheid. It demonstrated that even within a racially defined and segregated space, the state was capable of producing and exploiting extreme class divisions. This dynamic, tested and refined in Diepkloof in the 1980’s prefigured the post-1994 reality where the legacy of racial inequality has been compounded by rapidly growing intra-racial class stratification. Diepkloof is thus a living museum of late-apartheid strategy, physically embodying the state's attempt to manage resistance by creating and exploiting class divisions within racially segregated space.

2.1.4.2. Orlando, the model native township

As the political and symbolic heart of the anti-apartheid struggle, Orlando provides the essential historical and cultural context against which the unique stories of other townships can be understood. It is the site where Soweto’s identity as a centre of resistance was forged, and its landscape today is a dense tapestry of memory and heritage.

Orlando was established in 1931-32, making it significantly older than Diepkloof but younger than Pimville’s origins as Klipsruit (South African History Online, 2011). Named after the former Johannesburg mayor Edwin Orlando Leake, it was conceived by the authorities as a “model native township” (South African History Online, 2011). The official rhetoric promised a planned community along the lines of a “garden city” with tree-lined streets and recreational facilities, designed to house black families being evicted from the slums of central Johannesburg (South African History Online, 2011). The reality, however, fell far short of this vision. The housing provided was the same basic, mass-produced stock seen across Soweto, and the township was subject to the same regime of control and segregation as any other.

On June 16 1976, the Soweto Uprising began in Orlando when students marched to protest the imposition of Afrikaans as a medium of instruction. The peaceful protest was met with brutal police violence. This event marked a definitive turning point, igniting years of sustained, militant resistance that brought unprecedented international condemnation and significantly contributed to apartheid's eventual downfall (Kondo, 2023).

Today, Orlando is a landscape of memory lane and heritage, attracting visitors from around the globe. Its key landmarks serve as powerful reminders of the struggle for freedom and have become a source of income for local families, creating a mini hub of various businesses. Vilakazi Street, the only street in the world to have been home to two Nobel Peace Prize laureates, Nelson Mandela and Archbishop Desmond Tutu (Kondo, 2023). Mandela's former home is now a museum. Hector Pieterson Memorial and Museum is a powerful museum near the site where he was killed, commemorating the students who lost their lives in the uprising (Kondo, 2023). Regina Mundi Catholic Church, known as "the people's church", served as a sanctuary for activists and a venue for political meetings when all the other gatherings were banned (Kondo, 2023).

Orlando's history is not one of engineered social division but of unified political struggle. Making it the undeniable spirit of Soweto's resistance.

Mbuyi's (2017) dissertation takes a look at 2011 Census data that indicates that both Orlando and Diepkloof remain predominantly Black African suburbs, reflecting the enduring spatial and demographic legacies of apartheid. While formal brick dwellings constitute the majority of housing, processes of densification are evident through the proliferation of backyard shacks and rental units, signalling both accommodation pressures and informal extensions of housing stock. An interesting stat on education levels in the dissertation, showcasing higher levels of education in Diepkloof versus Orlando and income levels. This current view provides an interesting landscape to unpack the microeconomic activities and how development may be driven or not from within.

In conclusion, the juxtaposition of Diepkloof and Orlando provides the essential context for a meaningful study of Soweto. These two townships represent the opposing forces that define the apartheid city: the state's strategy of control versus the people's spirit of

resistance. Diepkloof is the product of top-down social engineering, a calculated attempt by the late apartheid state to manage dissent by fragmenting the Black community along class lines. It reveals the mechanisms of a sophisticated “divide and rule” policy. In stark contrast, Orlando embodies the bottom-up response of mass political mobilisation. It is the crucible where a unified resistance was forged, creating a powerful political identity that challenged the very foundations of the state.

A study grounded in these two contexts and narratives is therefore uniquely positioned to capture the dual nature of Soweto. It was simultaneously a laboratory for apartheid’s most insidious social experiments and the epicentre of revolutionary struggle that ultimately defeated them. Understanding Diepkloof's engineered division alongside Orlando’s historic unity is crucial to grasping the complex legacy of apartheid and the ongoing project of building a new integrated South African society.

2.1.4.3. How history has shaped digital adoption in the informal trade

This legacy of fragmentation fosters social barriers such as low social capital and deep mistrust between segregated class groups, alongside a stark internal digital divide. For an informal trader in the impoverished zones of Diepkloof, barriers to digital adoption are likely rooted in a lack of digital literacy, the high costs of data and a deep-seated distrust of formal financial systems that digital tools often represent. Conversely, a home-based business in the Extensions may face social pressures to adopt digital payment systems to align with their wealthier neighbours, but may find little incentive to engage with the broader, cash-based township economy.

In contrast, Orlando’s history as the epicentre of unified political struggle has forged a strong community identity, which now intersects with a vibrant, tourism-driven economy centred around heritage sites like Vilakazi Street. For informal traders in Orlando, the key social barriers may be different or not. While there is a clear economic incentive to adopt digital payment methods to cater to international tourists, this is often counteracted by a community-wide preference for cash, high crime targeting electronic devices and a lack of adequate infrastructure to support digital transactions securely.

Therefore, understanding how these historically shaped social fabrics, one of internal division and the other of external engagement, influence trust, digital literacy and

economic pressures is fundamental to answering how social barriers impact digital adoption in the informal trade.

2.2. DIGITAL ADOPTION IN THE CONTEXT OF INFORMAL TRADE

In the context of informal trade, digital adoption goes beyond access to a smartphone or internet connection. It includes the meaningful integration and utilisation of digital technology, platforms and technologies to improve business operations. This can range from cashless payments for transactions, harnessing social media for marketing, messaging platforms to share promotional content or trade presenters, using basic e-commerce for direct-to-consumer delivery, to using digital tools to run and manage store inventory, operations and record keeping. For a business to use digital platforms, it would need to integrate them sustainably.

2.2.1. Current state and perceived benefits or challenges of digital adoption by informal traders

While smartphone penetration is increasing amongst the SA population, the use of sophisticated applications remains limited for many (Buthelezi, Chatikobo & Dalvit, 2020). Some of the stated benefits reported often include improved access to a wider audience, access to markets across geographic areas, procurements of goods or products, simpler management of stakeholders and customers and making data-led decisions (Bvuma & Marnewick, 2020), better record-keeping and access to new markets.

In contrast, some challenges that hinder adoption exist, such as high data costs, availability of stable network as a result of infrastructure networks (fibre and electricity), hesitance on cyber security and data privacy, ‘lack of technological skills and digital literacy’ and a firm reliance on cash transactions (Bvuma & Marnewick, 2020). The integration of digital tools in the current climate, with social media and the likes of CheckersSixty60 and ShopriteSixty60, provides case studies that could be explored from a social perspective, providing a different lens on how the community may or may not follow these advancements for convenience.

While it is evident that the pros outweigh the cons, this study will focus on the social barriers that are often intertwined yet distinct. If segments of the informal economy are unable to overcome these social barriers to adoption, especially those rooted in social or

societal norms and structures, they risk becoming redundant. Addressing social barriers is crucial for inclusive development and ensuring the benefits of this transformation are widely shared. Neglecting these barriers can worsen the digital divide (Aissaoui, 2022) in skills, usage and socio-economic outcomes. This study challenges the techno-deterministic view by highlighting the need for socio-technical perspectives that take into account the interplay between technology and society, especially with this township's informal economy.

2.2.2. A spectrum of adoption: defining adopter archetypes

Digital adoption in the informal economy is not a simple binary of ‘adopters’ versus ‘non-adopters’. Instead, it exists on a spectrum, with traders exhibiting varying degrees and patterns of technology use based on their characteristics, motivations and the barriers they face. The literature on the Diffusion of Innovations is a foundational framework for understanding these differences through adopter archetypes (Rogers, 2003; García-Avilés, 2020). While Rogers’ original categories (Innovators, Early Adopters, Early/Late Majority, Laggards) are useful for the context of informal trade, they can be consolidated into three practical archetypes that reflect the realities of resource-constrained environments.

Firstly, the Advanced Adopter, this archetype aligns with Rogers’ (2003; García-Avilés, 2020) ‘Innovators’ and ‘Early adopters’. These traders are proactive and often tech-savvy, viewing digital tools not just as a convenience but as a strategic asset for growth, efficiency and compliance. They tend to have higher levels of digital literacy and are more willing to experiment with complex integrated systems like Point of Sale (POS) with stock management or accounting software. As the literature on the digital divide suggests, these individuals may have greater access to financial and educational resources, enabling them to overcome initial cost barriers and navigate technical complexities (Aissaoui, 2022). They are less deterred by perceived risks and actively seek out new solutions to business problems.

Secondly, the Partial or Hesitant Adopter. This archetype represents the largest and most diverse group, aligning with Rogers’ (2003; García-Avilés, 2020) ‘Early and Late Majority’. These traders are pragmatic and often adopt technology reactively rather than proactively. Their adoption is typically driven by clear, immediate pressures, such as

customer demand for card payment or the visible success of peers (Bvuma & Marnewick, 2020). Their engagement is often fragmented; they might use a simple payment device or WhatsApp for marketing, but continue to rely on manual methods for more complex tasks like inventory. This group is highly sensitive to the social barriers of cost, complexity and trust and their adoption journey is characterised by a cautious piecemeal approach (Ebrahim & Van den Berg, 2024).

Thirdly are the Non-Adopters or Forced Analogue. This archetype aligns with Rogers' (2003; García-Avilés, 2020) 'Laggards" but reframes the concept to acknowledge structural constraints. In the informal economy, non-adoption is often not a choice born of tradition or resistance, but a rational response to insurmountable environmental barriers (Scheba & Turok, 2020). These traders may perceive the benefits of technology but are fundamentally blocked by factors like a lack of reliable electricity, prohibitive costs of data or backup power, or severe security risks. Their 'analogue' status is therefore not a reflection of their mindset but a consequence of their operating environment, a reality often overlooked by traditional adoption models.

By using these three archetypes, Advanced, Partial and Forced Analogue, this research can analyse how different traders perceive and navigate social barriers, providing a more nuanced understanding than a one-size-fits-all approach.

2.3. ANTECEDENTS: SOCIAL BARRIERS TO DIGITAL ADOPTION

While the economic and infrastructural challenges are significant, social barriers rooted in community structures, norms, and relationships play a crucial, often underestimated role.

2.3.1. Definition of social barriers in the context of digital adoption

Digital adoption in the informal trade sector faces social barriers rooted in societal structures, norms, and history. These barriers, evident in India, Nigeria, and South Africa (specifically Soweto), encompass shared beliefs, cultural norms, social pressures, relationships, trust, community dynamics, and social learning. They differ from technical or individual economic limitations but often intertwine. Addressing these social deterrents is crucial for successful digital adoption beyond technical or financial solutions.

2.3.2. Key social barriers identified in the literature

Social barriers to digital adoption have been widely documented in emerging markets, particularly in countries with prominent informal sectors, as seen in India, Nigeria, and South Africa. Studies in these areas uncover recurring themes, which include distrust, digital literacy, social influence, and hesistance to change, lack of social protection (Ebrahim & Van den Berg, 2024), which manifest differently depending on local socio-economic and historical conditions.

In India, a key barrier is limited digital literacy, not only at the individual level but across entire communities where access to digital training and peer learning is scarce (Bajwa, 2023). The concept of social cognitive theory is expanded on by Tau, Tselepis & Niewenhuizen (2024), who discuss that digital literacy isn't only formed from formal training but also socially constructed through seeing your peers use technology. This lack of digital competency is often tied to educational inequalities and social segmentation, particularly caste and class lines. Social networks can become closed loops where innovation diffusion is restricted within tightly knit, homogenous groups, limiting exposure to new tools or platforms. Additionally, mistrust in digital financial systems, including concerns around fraud and data security, remains high (Gupta, Perez& Agrawal, 2020), especially where institutional trust is already weak. Long-standing cultural preferences for cash transactions and face-to-face business dealings are often perceived as more secure and socially acceptable than impersonal digital systems, even with street vendors in Mumbai and the Thane Region (Mathews & Bhosale, 2021).

In Nigeria, where SMEs account for nearly 50% of their GDP, they struggle with economic shocks because they don't have sufficient business practices, work within minimal margins with minimal contingency plans (Otokiti, Igwe, Ewim, Ibeh, & Sikhakhane-Nwokediegwu, 2022). Moreover, negative social influence plays a significant role if the broader community and key role models don’t believe in the value of digital tools. Similar to India, mistrust in e-commerce and mobile payment platforms continues to limit adoption, especially in the absence of credible safeguards or support for informal businesses.

In South Africa and specifically in township contexts like Soweto, similar but context-specific dynamics are at play. There is a deeply ingrained preference for cash, seen as immediate, secure and cost-free compared to digital alternatives, which are

often viewed as unreliable or inaccessible (Ong, Yusri & Ibrahim, 2023). Limited digital competency, especially among older traders and women, remains a significant barrier, as well as a lack of understanding regarding the concrete advantages of embracing digital technologies (Munyoka, 2022). Security concerns, both in terms of cybersecurity and physical theft of devices, are heightened by local crime rates, thus reducing willingness to invest in or use digital tools (Ong et al., 2023). Additionally, community norms and word-of-mouth marketing practices remain dominant, with many traders relying on long-standing relationships and informal networks rather than digital platforms for customer engagement. The absence of local digital mentors, lack of training in local languages, and perceptions that digital tools are not culturally relevant or designed with local needs in mind also contribute to low uptake (Patil, Tamilmani, Rana & Raghavan, 2020) and need to be built with these traders in mind (Ebrahim & Van den Berg, 2024).

These cross-country insights point to a consistent set of social barriers that can be categorised into four main groups:

1. Trust-related barriers, including fear of scams, lack of confidence in digital systems, and low institutional trust
2. Knowledge and skills-related barriers, such as community-wide digital illiteracy and a lack of peer learning ecosystems
3. Normative and cultural barriers: including traditional preference for cash, analogue systems and culturally rooted resistance to change
4. Barriers related to network and influence encompass exclusion from digital-savvy networks and the impact of peers and community leaders who may hinder adoption.

These findings suggest that successful digital transformation strategies for informal trade must go beyond infrastructure and affordability and instead address the social structures, norms, and relationships that shape how informal traders engage with technology.

2.3.3. Linking social barriers to digital adoption in informal trade

The social barriers identified in research do not exist alone but tend to be intertwined, creating a complex web that plays a role in digital adoption. For example, lack of trust (barrier Category 1) in digital payment options, with community anecdotes of scams, may lead to hesitation and revert to cash transactions even if traders realise the benefits

of going cashless. Low digital literacy (category 2) shows that although applications and tools are available, some traders fear their inability to use them effectively, leading to reduced confidence with no peer support. Strong social norms (category 3) that value culture and traditions, face-to-face business ways of working often create inaction, where early adopters of digital tools might become skeptic or even left outside by peers. Lastly, negative social influence from key figures within the trader's network (category 4), where positive digital experiences are shared, can influence adoption and trial. These barriers altogether reduce the perceived value and increase the perceived complexity and risk associated with digital technologies, ultimately slowing down their adoption in the informal trade.

2.4. DIGITAL AND TECHNOLOGICAL PLATFORMS AND INNOVATIONS

There are different platforms, services and technologies for informal traders, but their success is based on overcoming the barriers mentioned above.

2.4.1. Overview of relevant platforms

The digital landscape offers several types of platforms and innovations that could, in principle, aid the informal traders; these include, but are not limited to;

- Mobile money and payment platforms: Services like FNB ewallet and cash send, and app-based payment solutions (e.g Snapscan, Zapper, bank-specific apps) for cashless transactions (GSMA, 2023). Point of Sale (POS) devices allow for value-added services
- Social media and messaging apps: Some traders allow their customers to purchase through WhatsApp, TikTok, Facebook Marketplace and Instagram. This allows them to engage with customers and market (Ebrahim & Van den Berg, 2024)
- Emerging technologies: Business management tools and ICT to assist with book-keeping, inventory management and supplier or customer communication
- Financial Access platforms: Platforms offering access to market prices, business assistance, and links to microfinance
- Direct-to-consumer delivery: Uber Eats and Mr Deliver, KotaBites and Delivery Ka Speed (Maritz, 2025)

Sgori (2023) also reports on the top five mobile apps created for the township business, which include: Kasi Eats for restaurant delivery, Vuleka for spaza shop bulk purchasing

and Khwela for taxi route and fare information, Explore Ikasi provides a marketing directory for various local businesses, and Stokvella simplifies the management of communal savings clubs.

While they may exist in different forms across various platforms and in different regions, they aren't always tailored to suit the informal trade. They also don’t adequately consider the specific social contexts, trust thresholds, levels of poverty, usability requirements and ease of use for traders and consumers in Soweto or other informal markets. The argument is that the availability of technology is a necessity, but not always sufficient and adapted for the market. Thus, introduces the social and economic factors influencing the townships. Ebrahim & Van den Berg (2024) explore the traders’ experiences, providing insights into customer profiles and their interactions. This raises questions about how social barriers influence traders' adoption.

2.5. THEORETICAL FRAMEWORKS FOR UNDERSTANDING DIGITAL ADOPTION

Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) and Diffusion of Innovations (DOI) offer frameworks for understanding adoption, but their direct application to informal economies in developing countries has limitations. While they help identify individual-level adoption factors (as seen in the Cape Town study using UTAUT (Ebrahim & Van den Berg, 2024) to analyse barriers like cash preference and loadshedding), they can oversimplify complex realities. TAM’s focus on perceived usefulness and ease of use may neglect critical issues like trust, cultural norms and infrastructure defects. TAM and UTAUT tend to underemphasise broader socio-cultural, structural and institutional influences in informal economies where uncertainty, limited resources and social networks play significant roles.

To systematically analyse the social barriers to digital adoption, it is useful to leverage an established theoretical framework, as this will assist in unpacking the complex process by which individuals and business owners in this informal trade adopt or delay digital adoption. The Technology Organisation Environment framework (TOE) developed by Tornatzky and Fleischer in 1990 (Arpaci, Yardimci, Ozkan & Turetken, 2012) is a suitable theory to explain the adoption of informal traders. It suggests that the acceptance and implementation of a technological innovation are shaped by three key elements within a business or organisation: the technological, the organisational and the environment.

2.5.1. Components of the TOE framework

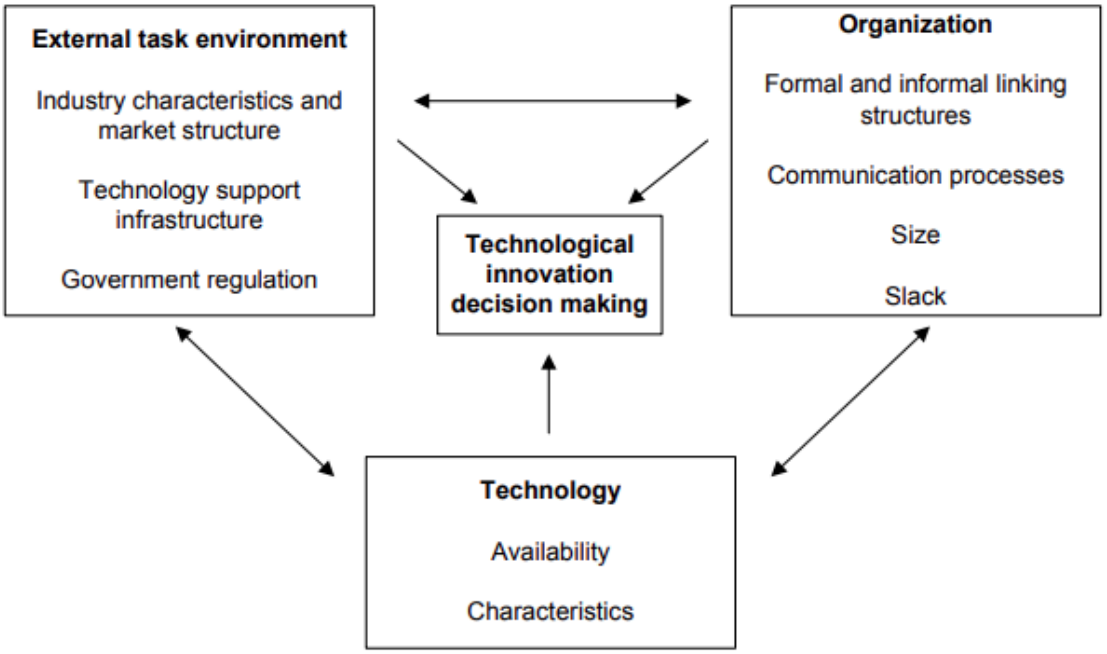


Figure 2.1: Technology, Organisation and Environment framework (Tornatzky and Fleisher 1990)

The TOE framework consists of three key components that interact or shape adoption decisions (Arpaci et al., 2012). Internal and external technologies available to the business are described in the Technological component. Characteristics of the technologies, both those already in use by the business and those available in the industry (Oliveira & Martins, 2011), are examined in this component. Key factors include the perceived value, relative advantage of the new technology, its compatibility with pre-existing systems and practices, its complexity, its ease of use, its availability and its potential trialability. For informal traders, this could relate to the functionality of a point of sale device and how they believe it is easy or not to use, compatibility with their current device or the perceived risk of usage.

Organisational context pertains to the internal traits of the organisation and considers elements that may promote or obstruct adoption (Oliveira & Martins, 2011). These factors could include the size of the business and its structure, the quality of employees (such as technical skills), the amount of resources available for investment, formal and informal communication structures, management support or the leaders' attitude toward change and the overall innovativeness (Oliveira & Martins, 2011). In informal trade, this

would refer to the owners' or traders' skills and mindset, financial capacity, size of their operation and the influence of the immediate social or family network on the business. Environmental context encompasses the external environment in which an organisation conducts business (Oliveira & Martins, 2011). This includes the industry structure and traits, the presence and intensity of competition, availability of technology support infrastructure (as discussed, reliable internet and electricity), the regulatory environment (government regulations), broader market conditions, and social and cultural norms (Oliveira & Martins, 2011). This specific context will help identify the research gap by exploring the social aspect and various levels of influence that the environment has on how informal traders operate. While existing literature has addressed a significant portion of the regulations, this context will shift focus to emphasise social dimensions.

The TOE framework's comprehensive approach provides a nuanced understanding compared to the other, more technologically focused frameworks, which focus on the adoption levels as opposed to the influencing factors. This framework is flexible and easily applied to a variety of technologies and organisational settings, including SMMEs commonly found in this township economy, therefore making it applicable for developing countries (Oliveira & Martins, 2011). TOE has a robust theoretical foundation and is consistent in verifiable support across various IT adoption studies, including e-commerce, Enterprise Resource Planning (ERP) systems and open systems (Arpaci et al., 2012). The inclusion of the environmental context is seen as a significant enhancement over theories such as DOI, as it explicitly accounts for external pressures and opportunities that influence adoption.

2.5.2. Critical review and application to the research problem

While the TOE framework furnishes a valuable analytical lens, its application to the unique circumstances of the informal economy, particularly micro-enterprises and informal traders, requires critical consideration.

The three components of the TOE framework are broadly relevant to informal traders and SMEs. The technological environment is essential since the perceived advantages, expenses, intrinsicity and affinity of digital tools (for example, social media, messaging apps, smartphones) directly influence traders' willingness to adopt. The organisational context in this economy translates to the individual characteristics of the trader (their

digital literacy, risk aversion and entrepreneurial mindset), their limited financial and human capital and the informal nature of their business operations (for example, unregulated labour practices, reliance on family labour and lack of formal planning). Then the environmental context is particularly salient, encompassing unreliable infrastructure (power and internet), high data costs, increased competition, lack of support from government policies, exposure to crime and deeply ingrained norms like cash and specific trust dynamics, as mentioned above in the classification of social barriers.

Despite the TOE framework's strengths, it has limitations when applied to informal trade. Firstly, the TOE framework has been criticised for being too static, primarily focusing on identifying factors that influence adoption at a point in time, rather than explaining the dynamic and often complex process of adoption and assimilation over time (Sadiq, Hack-Polay, Fuller & Rahman, 2022). This is a significant limitation in the fluid and rapidly evolving informal economy.

Secondly, while flexible, the specific components in the TOE constructs can differ significantly across various contexts (Ebrahim & Van den Berg, 2024). Models developed for formal enterprises in advanced economies may not adequately capture the realities of informal micro-enterprises in developing countries without significant adaptation (Nkwana & Roberson, 2025). Studies often find the need to extend the TOE framework by adding specific context variables such as “education” for SMEs in South Africa to improve its explanatory power (Sadiq et al., 2022).

Lastly, the TOE framework standard factors may not accommodate the unique socio-cultural and structural realities of this economy. For example, while “trading partner readiness” or “security” can be technological or environmental factors, the deeply rooted trust issues in formal institutions, prevalent in informal settings, might require more theorisation.

2.6. SYNTHESIS, GAPS AND RESEARCH QUESTIONS

2.6.1. Synthesis and identified gaps

This literature review has highlighted the significance of the informal economy in developing countries where resources are constrained. Digital adoption offers significant potential but faces headwinds from infrastructural and social barriers. Key findings reveal

that these barriers are multifaceted, encompassing issues of trust (in technology, platforms, institutions and data security), digital literacy and skills (ranging from basic operational skills to strategic business application), the nature and influence of social networks and relational practices (which can be both enable and constrain), deeply ingrained normative and cultural preferences (such as cash transactions and traditional business methods, and broader socio-economic and structural factors (like cost, infrastructure and crime) that have distinct social dimensions.

Evidence from India shows how social structures, such as social status, can hinder technology diffusion and underscore the importance of skills and trust. In Nigeria, challenges related to digital literacy, trust in e-commerce, and inadequate infrastructure are significant issues. In Soweto, South Africa, there is a strong preference for cash, along with digital incompetence problems, security concerns, and the effects of unreliable infrastructure. Moreover, distinctive community dynamics contribute to shaping technology uptake. This was linked to the historical context that provided a rich topography of how history shapes social constructs.

The TOE framework provides a useful structure for categorising these influences. Its standard application, however, may fall short in comprehensively addressing the complex, culturally embedded, and structurally conditioned realities of informal economies. To improve its effectiveness, specific adaptations of the social and consumer perspective will be unpacked further within this framework.

2.6.2. Identified gaps in research

Despite a growing body of research, several gaps persist in the literature.

Deep qualitative contextual understanding: There is a need for more in-depth context-specific research that explores how diverse social barriers interact and are navigated by informal traders in their daily lives and business operations. Comparative studies that go beyond single locations but retain qualitative richness are particularly scarce. There is a need to explore how these barriers manifest within the socio-cultural fabric of Soweto's diverse informal economy. How are these barriers perceived, narrated and navigated by the traders themselves?

Interplay and prioritisation of social barriers: Many studies list barriers, but fewer explore the nuanced interplay between them. For example, in what ways does a lack of

trust enhance the effects of insufficient digital literacy in the community? There is a need for research to comprehend the significance and prioritisation of various social obstacles from the viewpoint of informal traders in Soweto.

Comparative nuances: While India and Nigeria offer valuable parallels, a focused study is needed to explore how these social barriers are similar or different in the unique post-apartheid context of a South African township like Soweto, which has its own historical and social specificities

Role of Specific Social Structures: There is a gap in understanding how specific social structures within Soweto (e.g., stokvels, local business associations, community leadership, family structures) act as conduits or impediments for digital adoption, particularly concerning social learning and influence.

Intersectionality of Barriers: Limited research has systematically examined the intersectionality of social barriers, for example, how factors like gender, age, ethnicity, and education level intersect with digital literacy, access to social networks, and cultural norms to create compounded disadvantages or unique adoption pathways for specific subgroups within the informal economy.

CHAPTER 3: DEVELOPING PROPOSITIONS FOR THE PROPOSED RESEARCH

3. PROPOSITIONS FOR THE PROPOSED RESEARCH

Drawing from a thorough evaluation of existing literature and recognising the interplay between social barriers and digital adoption, the subsequent propositions are put forward to guide future qualitative research. These propositions aim to explore the nuanced relationships and the relative importance and interaction effects of different social barriers and theoretical constructs, moving beyond treating each in isolation.

P1: The Interplay of Social Capital and Network Structure in Digital Diffusion:
Higher levels of bonding social capital are associated with slower, more insular, and limited diffusion patterns

P2: Institutional (Mis)Alignment and Perceived Legitimacy of Digital Technologies:
Uptake of digital technologies by informal traders depends on the alignment between their existing trade norms and the formal institutional logic of the technologies (Ebrahim & Van den Berg, 2024).

P3: Agency, Structure, and the Co-construction of Digital Practices (Digital Bricolage):
Informal traders' choices regarding digital tools reflect their agency and shape the social structures of their informal economies (Karanasios, Senya, Effah & Zorina, 2025).

P4: Mediating Roles of Digital Literacy and Trust on Core Adoption Perceptions:
Low digital literacy and high levels of distrust in digital systems adversely affect informal traders' views on the usefulness and user-friendliness of digital platforms, no matter how advantageous or user-friendly these platforms are (Ebrahim & Van den Berg, 2024).

P5 (Soweto Specific): Historical Legacy and Institutional Trust as Barriers:
The historical marginalisation of Soweto’s communities fosters distrust in formal institutions, posing a barrier to the adoption of digital technologies associated with these businesses (Scheba & Turok, 2020).

These propositions are designed to encourage an exploration of how adoption occurs (or fails to occur) in the presence of complex social barriers, rather than merely if it occurs, thereby aiming for a more nuanced and contextually rich understanding.

3.1. RESTATEMENT OF THE RESEARCH PROBLEM AND FORMULATION OF THE RESEARCH QUESTION

The study seeks to investigate the intricate social obstacles that interact within the context of Soweto. The focus is not on identifying these barriers but instead on understanding how they influence traders' adoption of digital technologies. Situated within the technological, organisational and environmental contexts shaping digital uptake patterns. While it is important to recognise the key barriers and their influence on the level of digital adoption among these traders, the primary goal is to delve into the specific nuances of the local context, specifically the Soweto township informal trade. The ultimate goal is to inform the design of more effective, equitable and contextually appropriate digitisation strategies for informal trade.

The primary question can be divided into several sub-questions.
RQ1: How do varying levels of digital literacy, skills and confidence, alongside different degrees of trust (in digital systems, providers and data security) influence informal trades' perceptions (for example perceived usefulness, ease of use, risk) and actual engagement with specific digital platforms (e.g mobile payments, social media commerce, direct to home delivery) in Soweto?

RQ2: How do varying levels of social trust (in technology, digital platform providers, peer adopters and in the security of digital interactions) influence the willingness of Soweto traders to adopt digital tools, specifically for financial transactions?

RQ3: In what ways do social networks and prevailing community norms influence trade adoption of digital tools in how they interact and engage with customers (specifically when social, messaging or e-commerce platforms are introduced)?

RQ4: How do informal traders in Soweto perceive the alignment, or misalignment, of available digital technologies with their established, often relational and flexible business practices and cultural values, and how does this perception affect their adoption decisions?

RQ5: How does the historical legacy of Soweto and its rich socio-economic environment (including factors like crime, infrastructure reliability and competition from formal retail -

all key environmental factors in TOE) exacerbate or interact with the identified social barriers to digital adoption?

The research will be guided by the proposition which links specific social barriers to theoretical constructs, viewed through TOE. The figure below provides a visual representation of the TOE framework and where each of the research questions fit in. an additional addition is the placement of the propositions.

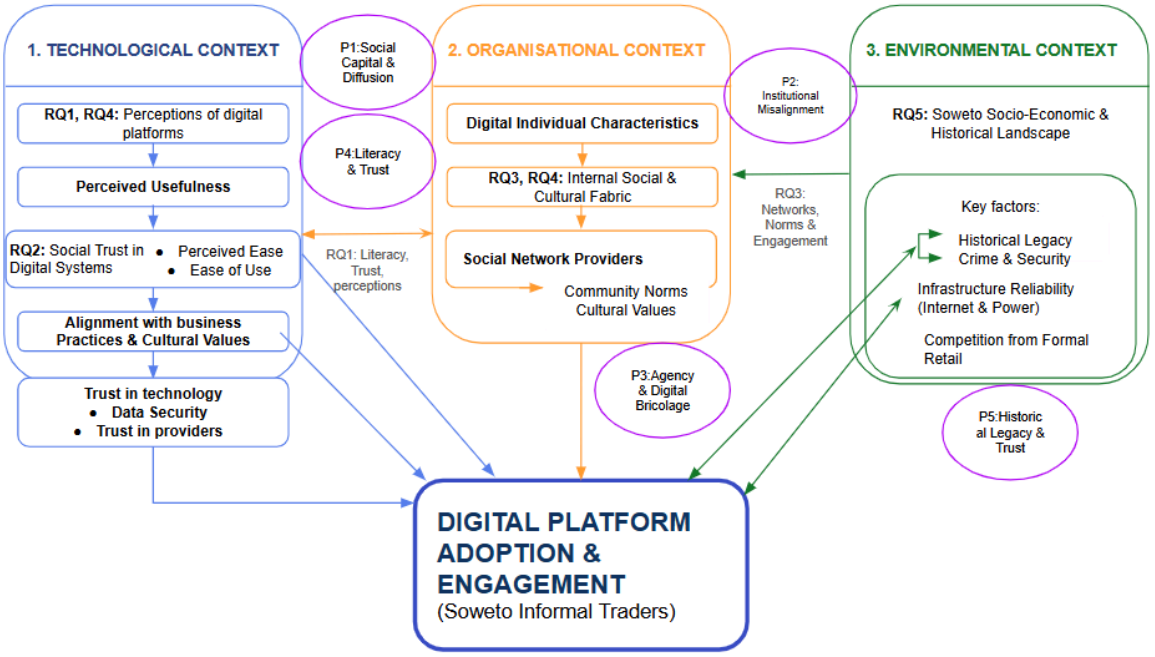


Figure 3.2: TOE framework link to the proposed research questions and propositions

CHAPTER 4: PROPOSED RESEARCH METHODOLOGY AND DESIGN

4. CHOICE OF METHODOLOGY

4.1.1. Purpose and strategy of the research design

This research employed a qualitative research design grounded in interpretivist philosophy. The aim was to thoroughly investigate the intricate social and organisational barriers that influence the digital adoption decision of informal food and liquor traders in Soweto. The goal was to achieve a detailed and nuanced comprehension of the complex, multifaceted social barriers hindering digital adoption. This philosophy is thus aligned to the intent of studying a "social phenomenon in its natural environment" (Saunders & Lewis, 2017, 108).

Given the under-researched nature of this topic in the township context, this exploratory study aimed to generate rich contextual insights rather than testing pre-existing hypotheses. Aligned with the TOE framework, the study examined how perceived technology characteristics, trader dynamics and broader socio-environmental conditions shape or constrain digital uptake. In line with best practice in qualitative research (Nassaji, 2020), an inductive approach was applied to build conceptual understanding from the lived experiences of traders. This inductive approach affords us to build theory, "bottom-up", through observation of the 'social actors', traders, gaining understanding of the impact or influence of human behaviour on their digital adoption (Saunders & Lewis, 2017, 113).

A case-based, exploratory strategy was employed as the aim was to seek an understanding of digital uptake, which is not fully understood in research in this context (Saunders & Lewis, 2017, 115). Informal traders served as embedded units of analysis, enabling the research to surface recurring themes across different business types and levels of digital engagement. This was appropriate for uncovering context-dependent knowledge (Yin, 2018), particularly in informal settings where formalised data is often lacking.

The research took on a combination of case study strategy, which is aligned to asking "why" and "how", thus enabling the researcher to get a detailed understanding of digital adoption in the context (Saunders & Lewis, 2017, 122). The second being narrative inquiry, as the research aimed to get insight into individual business owners' experience

of digital adoption and how they perceive the social barriers (Saunders & Lewis, 2017, p. 126). This combination enabled an in-depth understanding of the context and exploration of individual experiences in complete stories, thus providing the researcher with a flow of events or decisions.

Time horizons in research typically refer to the length of time used for the research; cross-sectional provides a ‘snapshot’ in time versus longitudinal, which is a study of change over a longer time period (Saunders & Lewis, 2017, 129). The research utilised a cross-sectional time frame, gathering a snapshot of traders’ experiences and perceptions at a specific point in time. This is aligned with practical constraints and the study’s aim to document current digital adoption patterns in Soweto (Diepkloof and Orlando) in 2025.

4.2. UNIT OF ANALYSIS

The use of “embedded units of analysis” is a critical component of a robust case-based strategy. To strengthen the justification for this, it is beneficial to articulate precisely how treating each trader as an embedded unit facilitated the generation of the “rich, contextual insight” that was sought by this study. The unit of analysis was the individual trader, acknowledging that business decisions are often influenced by both personal and community-level factors. The literature review sought to capture “contextual observations where feasible, but the primary source of evidence was the interviews. This aligned with the core principle of case study research, which advocated for using multiple sources to construct a holistic understanding of each “case”. This detailed approach to data collection within each unit of analysis ensured that the subsequent cross-case analysis was grounded in deeply understood individual realities.

4.3. TARGET POPULATION

Saunders & Lewis (2017) define a population in research as the complete set of group members or complete set and the sample is the subgroup of this. Depending on the research aim and questions, it is key to carefully consider the population of the study. The research aimed to understand the complete set of informal trade business owners as the population in Soweto. Due to time constraints, the target population consisted of informal food and liquor traders operating in various high-traffic areas of Diepkloof and Orlando (e.g., taverns, bars, restaurants, barber shops and mobile food vendors).

4.4. SAMPLING METHOD AND SAMPLE SIZE

The proposed sampling strategy involved purposive sampling to select information-rich participants who met predefined criteria, supplemented by snowball sampling to identify additional participants through trader networks.

Farrell, Howorth and Wright (2008) discuss the ‘unknowable’ population size in the informal trade, which makes it harder to quantify populations, therefore limiting representative samples. Non-probability sampling was most applicable for this research as there isn't a complete list of businesses in the informal trade; therefore, the probability technique was not applicable (Saunders & Lewis, 2017). Recent literature supported the use of purposive sampling in a context similar to this study. Ebrahim & Van den Berg (2024) explicitly utilised “purposive sampling to collect data from 14 informal business owners in Cape Town”, with selection criteria (being an informal business owner) analogous to the primary criterion of the current study. This provided a direct contemporary example of purposive sampling applied to the same target population type within South Africa.

A purposive sampling approach was employed to select 10–15 information-rich participants who met the following criteria:

- They were located in diverse Soweto neighbourhoods to capture spatial variation
- Operate in the food, personal care, services or liquor trade
- Had varying levels of digital engagement (non-users, partial users, advanced adopters)
- Represented a mix of genders, ages, and years of trading experience

Snowball sampling was used to identify additional participants, mainly due to the fact that it may be hard to identify members (Saunders & Lewis, 2017) of the informal trade population. This sampling method assisted by identifying potential respondents through trader networks and associations. Access was facilitated through partnerships with local development forums and community gatekeepers.

The proposed sample size of 10-20 participants for this qualitative exploratory study was well-supported by recent methodological literature. According to Wutich et al. (2024), theme saturation, defined as the point at which no new themes emerge, can typically be reached with as few as nine in-depth interviews, particularly when the research objective

is to identify dominant patterns and perceptions. Given that this study aimed to uncover common experiences, challenges and perspectives among informal traders rather than develop a fully grounded theory or quantify variation across all contexts, the selected range was methodologically sound. Furthermore, the relatively homogenous nature of the participant group, traders operating within the Soweto informal economy, enhanced the likelihood of reaching saturation with a smaller sample.

The experience of Ebrahim et al. (2024) in their study achieved saturation by the twelfth interview and conducted two additional interviews for confirmation (a total of fourteen), offering further contextual support. While their final sample size was smaller, their ability to reach saturation within a similar context suggests that a range of ten to twenty participants is more than adequate to achieve depth of saturation, especially given the current study's aim to capture diverse participant characteristics (varying levels of digital engagement, gender, age, experience and location).

4.5. DATA COLLECTION

4.5.1. Instrumentation

The plan was to use a semi-structured interview guide structure around the TOE domains, featuring open-ended questions with interviews conducted in the participants' language of choice and audio-recorded with consent is a sound approach. Questions were open-ended, exploratory, and culturally sensitive, allowing participants to express their own meanings and narratives. Saunders et al. (2017) state that semi-structured interviews aid in creating a bit of structure that can be thematically analysed, unlike unstructured that allow participants to speak freely. Field notes and contextual observations were to complement interviews, where feasible, and these aided in creating deeper meaning from the context of the findings. Guidance for developing such interview guides is available in recent literature. Roberts (2020) provides practical advice for crafting interview guides that effectively structure the interview process while maintaining the flexibility crucial for semi-structured formats. This supports the proposed approach to guide development.

Data was gathered through a semi-structured interview framework designed around the three TOE domains (Oliveira & Martins, 2011):

- Technology: Perceived ease of use, usefulness, compatibility, and reliability.
- Organisation: Individual capacity, routines, support structures, and digital literacy.

- Environment: Trust in service providers, infrastructure access, community influence, safety, and data cost concerns.

4.5.2. Data Gathering Process

- Interviews were conducted in the participant's language of choice (with translation support if needed) at their business premises or a neutral, safe location.
- All interviews were audio-recorded with consent, anonymised, and transcribed verbatim.
- Interviews were 30–45 minutes long, with flexibility based on participant comfort.
- Ethical approval was secured, and all participants received informed consent forms and assurances of confidentiality and voluntary participation.

4.6. DATA ANALYSIS APPROACH

The choice of thematic analysis, following the widely recognised steps outlined by Braun & Clarke (2006), including familiarisation with data, coding (both TOE-aligned and emergent,) development of broader thematic categories, iterative refinement and the potential use of qualitative data analysis software like NVivo or Atlas.ti is highly appropriate for this study. Braun & Clarke's (2006) framework remains a seminal and robust approach for thematic analysis in qualitative research.

The selection of Braun and Clarke's (2006) six-step thematic analysis provided a robust and methodologically sound foundation for this study. Its suitability is not merely theoretical but is affirmed by its recent and successful application in research directly analogous to this one. The efficacy of this framework for investigating technology adoption within South Africa's informal economy is demonstrated by Ebrahim et al. (2024), who successfully applied the Braun and Clarke (2006) model in their study of informal businesses in Cape Town.

This precedent is further strengthened by its proven applicability within contemporary Gauteng township contexts, as shown by Sibanda and Tshehla (2025). Moreover, the scholarly prominence and current viability of this are underscored by its use in high-level synthesis, such as the 2025 thematic review by Ashta et al. (2023) on innovation in the informal sector. The consistent application of Braun and Clarke's framework in high-quality, recent, and contextually-specific research confirms its status as a rigorous and

definitive analytical tool for generating new, credible knowledge in this specific domain of inquiry.

The plan to conduct coding according to both “TOE-aligned themes and emergent patterns” reflected a sophisticated understanding of thematic analysis. Braun & Clarke’s approach accommodates deductive (theory-driven), inductive (data-driven) or combined analytical strategies. In this study, the TOE framework provided a deductive starting point, guiding the initial exploration of the data. However, the exploratory and interpretive nature of the research, which aimed to generate rich contextual insights, necessitated an openness to themes that emerged directly from the participants’ narratives and may not fit neatly within the pre-defined TOE categories.

To elaborate on how this balance between deductive and inductive coding was to be achieved, the initial phase of coding focused on identifying segments of data that relate broadly to the Technology, Organisation and Environmental domains, not forgetting the social aspect of the research. Subsequently, more detailed coding, possibly in the second cycle, delved deeper to identify specific sub-themes within these overarching categories. Crucially, this later stage also involved a careful search for any significant patterns, concepts, or themes that fell outside the direct purview of the TOE domains but were clearly vital to understanding the trader’s experiences with digital adoption. This iterative process, moving between the theoretical framework (TOE) and the empirical data, is a hallmark of rigorous thematic analysis. The approach of Ebrahim et al. (2024), who mentioned creating codes based on the UTAUT framework and collating these into themes, suggests a similar framework-guided yet data-sensitive analytical process. This ensured that while the study was theoretically informed, it remained grounded in and responsive to the unique perspectives of the Soweto traders.

Thematic analysis was employed to discover recurring patterns and meanings across the data. The process included:

1. Familiarisation with transcripts.
2. Generating initial codes. Coding of text according to TOE-aligned themes and emergent patterns.
3. Searching for themes. Development of broader thematic categories.
4. Reviewing potential threats. Asking relevant questions of the data in terms of the themes vs code

5. Defining and naming themes. Iterative refinement and linking of themes back to the research questions and theoretical framework.
6. Producing the report. Logical connection of themes to ensure it answered the research question.

Reflective memos were kept throughout to ensure awareness of the researcher's bias and positionality.

4.7. RESEARCH ETHICS

Approval from the university's ethics committee was secured before commencing fieldwork. Participants received full information about the study and verbal consent before they took part. All collected data was kept securely, and identities were be anonymised. Participants were made aware of their right to withdraw at any point without facing any repercussions.

These contemporary perspectives suggest that the “Ethical Considerations” section can be significantly enhanced by moving beyond a focus solely on procedural ethics to also address relational ethics. This involves considering:
Building trust with community gatekeepers: How will trust be established and maintained with local development forums and community gatekeepers, moving beyond a purely transactional relationship for access? The insights from the 2025 Health Expectations article on brokerage and the importance of trust are pertinent here.
Managing community expectations: How will the study manage the expectations of the community and the participating traders regarding research outcomes and potential direct benefits? The same article discussed the tensions that can arise from differing expectations.
Reflexivity on research Positionality: How will the planned reflexive memos specifically address the researcher’s own positionality (e.g., as a potential outsider in the Soweto context, academic affiliation) and how this might shape interactions, data collection, and interpretation?

4.8. QUALITY CONTROLS

The proposal outlined several established strategies to enhance the trustworthiness of the study, specifically its credibility, dependability and transferability, including member

checking, peer debriefing, maintaining an audit trail and providing thick description. These are foundational to rigorous qualitative inquiry.

The core criteria for trustworthiness in qualitative research, as articulated by Lincoln and Guba (1985; Lim, 2025) and widely accepted, include credibility (confidence in the truth of the findings), transferability (the extent to which findings can apply to other contexts), dependability (the stability of findings over time) and the confirmability (the neutrality of the findings). A 2024 article reviewing trustworthiness in qualitative research reaffirms these criteria, noting that while ensuring them is complex, it is crucial for the integrity of studies.

For member checking, a technique aimed at enhancing credibility, recent literature offers refinements to traditional practice. An article published in the American Journal of Qualitative Research in 2023, titled “Meaningful member checking: A structured Approach to member checking”, proposes a more effective method than simply asking participants to review raw transcripts. This structured approach involves presenting the analysed findings (such as themes and interpretations) to a subset of participants and engaging them in a brief interview using specific questions, for example, “How accurately do you feel the findings captured your thoughts or experiences?” and “What could be added to the findings to capture your experience better?”. This approach is more likely to elicit substantive feedback and genuinely enhance the credibility of the interpretations. Adopting this more robust, contemporary method for member checking as opposed to relying solely on transcript review (which the 2023 article notes often yields little feedback) would significantly strengthen this aspect of the methodology.

Peer debriefing is another valuable strategy for bolstering both credibility and dependability. As highlighted in the same 2022 article referencing Lincoln & Guba (1985; Lim, 2025) discussions with a research supervisor or uninvolved colleagues about coding, interpretations and methodological decisions can provide critical perspectives, challenge biases and confirm emergent understandings, Such debriefing acts as a “solid communication habit that creates trust” and can enhance the dependability of the research process by ensuring consistency and thoughtful reflection.

The maintenance of an audit trail and the provision of thick description are also key. While specific 2020-2025 journal articles detailing these practices were not extensively

covered in the provided materials beyond general affirmations of their importance for trustworthiness, they are well-established qualitative techniques. An audit trail, which includes keeping detailed records of all research activities, supports dependability by allowing an external reviewer to trace the research process and decisions. To operationalise this, the audit trail should document raw data (e.g., codebooks, thematic maps, analytical memos), records of methodological choices and their rationals, participant consent forms and ethical approval documentation. This comprehensive record demonstrates a transparent and systematic research process. Thick description involves providing rich, detailed contextual information about the setting and participants, and is essential for transferability. It allows readers to make informed judgments about the applicability of the findings to other, similar contexts. A 2020 article on hermeneutic phenomenology, for instance, emphasises the provision of “rich textual descriptions” aligning with the principle of thick description.

The credibility, dependability, and transferability of the study were enhanced through:

- Member checking: returning themes to a subset of participants for feedback.
- Peer debriefing: reviewing coding and interpretations with a research supervisor or colleague.
- Audit trail: keeping detailed records of data collection, coding, and analysis decisions.
- Thick description: providing rich contextual detail to support transferability to similar township contexts.

4.9. LIMITATIONS

The purposive sampling limits generalisability but is appropriate for depth over breadth. Findings will be context-specific to Soweto and may not be fully transferable to other township economies. Language and literacy barriers may affect some participant responses, mitigated through flexible, responsive interviewing. Access to informal traders may be limited, given the minimal staff complement, which could limit the amount of time for the interview. Most of the business owners were not based on site and therefore had limited access to them, and in some cases, interviews were conducted with Managers or the second in command. Safety was a concern which is why the researcher was accompanied by another individual in these spaces. Confidentiality of their business practices, as some might be operating under the law.

CHAPTER 5: RESEARCH RESULTS

5. INTRODUCTION OF RESEARCH RESULTS

This chapter presents the findings derived from the semi-structured interviews with the informal traders in Soweto Diepkloof and Orlando. The primary objective is to analyse the key social barriers that influence digital adoption within this context, addressing the central research question:
"How do social barriers influence digital adoption in the informal trade?".

The analysis is structured around the Technology Organisation Environment (TOE) framework, which provides a robust lens for categorising the multifaceted factors shaping these informal traders' decisions. Adhering to the proposed methodology, a thematic analysis was conducted following the six-step process outlined by Braun and Clarke (2006): (1) data familiarisation, (2) systematic coding, (3) theme development, (4) theme review, (5) theme definition and naming and (6) report generation. This inductive approach allows for the emergence of rich context-specific themes from the lived experiences of the participants, while the TOE framework provides a deductive structure for organising and interpreting these themes.

The findings reveal a complex and often contradictory landscape, especially by the age of the business and owners. While traders universally recognise the potential of digital tools, their adoption is heavily mediated by a web of interconnected social, organisational and environmental factors. This chapter will unpack these themes, using extended quotations to ground the analysis in the traders' own voices and providing cross-case comparisons to highlight the diversity of experiences.

5.1. DESCRIPTION OF THE SAMPLE

The findings presented in this chapter are derived from in-depth, semi-structured interviews with 11 participants involved in the informal trade in Soweto. The purposive and snowball sampling strategy detailed in Chapter 4 yielded a diverse sample of businesses, providing rich, contextual data. The final sample consisted of individual business owners, family members involved in the business, managers and employees, reflecting the varied operational structures within the informal economy.

To ensure confidentiality, participants have been assigned generic roles. The composition of the sample is detailed in Table 5.1 below, providing an overview of the business types and the roles of the interviewees. This diversity allowed for cross-case analysis of perspectives, from established, family-run enterprises to newer, individual-led ventures and captured experiences across different levels of digital adoption. What the findings will also reveal across these diverse businesses and age groups is the similarities and differences across the groups. In some cases, the expected similarities are contrary to popular belief.

Table 5.1: Profile of research participants

Participant ID	Business Type	Role of Interviewee	Key characteristics/ Digital adoption level
Interviewee 1	Sneaker Wash	Manager	Partial adopter: Uses Yoco, Instagram, Facebook, and WhatsApp for business
Interviewee 2	Butchery	Co-Owner (Family business)	Forced Analogue Adopter: Uses POS system, digital pricing system and VAS POS device (airtime and electricity)
Interviewee 3	Fast food (Wings & Chips)	Employee	Partial adopter: Business uses POS, social media and delivery apps (Uber Eats). The employee has limited decision-making power
Interviewee 4	Barbershop	Employee (Barber)	Partial adopter: Business uses a payment device (Ikhokha) and has a Facebook page. Employee not involved in media
Interviewee 5	Fast food (Kota & Mexican)	Owner	Advanced Adopter: Tech-savvy. Uses POS accounting software (Sage, Xero), Social media and delivery apps (Mr D)
Interviewee 6	Fashion designer	Owner	Hesitant adopter: Finds tech complex. Uses EFT and courier services but avoids social media due to trust issues of design theft
Interviewee 7	Cocktail Bar	Owner	Advanced adopter: Tech-savvy, uses POS for stock management, Yoco and social media for marketing.
Interviewee 8	Bar/Lounge	Owner	Advanced adopter: Tech-savvy (IT background). Uses Yoco, POS, Instagram and Facebook. Active in a traders' WhatsApp group.
Interviewee 9	Franchise (Food, B&B, Offices)	Employee	Partial adopter: Corporate franchise structure. Uses POS and WhatsApp for orders, but also has no decision-making authority
Interviewee 10	Car wash	Co-Owner (with younger brother)	Partial adopter: uses Ikhokha a payment device, a generator for power and successfully uses TikTok for marketing
Interviewee 11	Shisanyama	Employee	Partial adopter: Uses the Yoco device but no generator for the massive fridge of meat.

5.2. CROSS-CASE ANALYSIS, A TYPOLOGY OF DIGITAL ADOPTERS IN SOWETO

The results reveal that the participants fall into three distinct adopter archetypes as conceptualised in the literature review: the Advanced Adopter, the Partial Adopter and the Forced Analogue. This typology provides a valuable framework for a cross-case comparison, illustrating how social barriers are experienced and navigated differently depending on a trader's resources, skills, and mindset.

Table 5.2: Archetype Results

Adopter Archetype	Primary Motivation for Adoption	Key Characteristics & Behaviours	Experience of Social & Environmental Barriers
Advanced Adopter	Strategic Advantage: Using technology for efficiency, growth, and operational control.	Proactive and tech-savvy, often with an IT background. Actively researches and uses complex, integrated systems (POS, accounting software). Views technology as a core strategic asset for the business.	Fast-Food (5) Cocktail Bar Owner (7) Bar/Lounge Owner (8)
Partial / Hesitant Adopter	Reactive Necessity: Adopting tools due to external pressures like customer demand or peer adoption	Pragmatic; uses simple, standalone tools (e.g., Yoco, WhatsApp, TikTok). Adoption is fragmented (e.g., digital payments but manual stock-keeping). Often has lower digital confidence and relies on informal social networks (family, friends) for help	Sneaker Wash(1) Fast Food Employee (3) Fashion Designer(6) Car Wash (10) Shisanyama (11)
Forced Analogue	Blocked Aspiration: Understands and desires the benefits of technology (e.g., safety, convenience) but is prevented from adopting.	Non-adoption is a rational, not preferential, choice. Forced to rely on manual methods despite knowing the digital alternative is better. Articulates a clear business case for technology but cannot implement it.	Butchery Owner (2)

5.2.1. The Advanced Adopters: Strategic and Proactive

This group, which includes the Fast-Food Manager (Interviewee 5), the Cocktail Bar Owner (Interviewee 7) and the Bar/Lounge Owner (Interviewee 8), demonstrated a strategic and proactive approach to technology. A key characteristic was their high personal digital literacy, with two having an IT background. They viewed technology as integral to their business, using integrated systems for stock management, accounting and sales. For them, digital tools were not just for payments but for control and

efficiency. The Fast-Food Manager's active search for an all-in-one system to manage stock and financials underscores this strategic mindset:

> *"The problem is that I don't have a system that can do everything. That's why I use different systems. If it's stock, I'm using this one and for accounting I'm using this one. I wanted something to do the stock and accounting in one." (Interviewee 3)*

These adopters were not immune to social and environmental barriers, but they possessed the resources and skills to actively mitigate them. While the Cocktail Bar Owner faced staff resistance and low digital skills, his own confidence enabled him to invest time in training, even if it was a "challenge". Similarly, the Bar/Lounge Owner mitigated infrastructural issues by investing in a generator and the cost of the diesel. Their digital literacy also gave them higher confidence to overcome institutional distrust, as the Fast-Food Manager noted, "most systems available are protected; they are much safer". These adopters were very comfortable with technology and understood that the business potential could be driven by the ability to use the right tools correctly.

5.2.2. The Partial Adopters: Pragmatic and Reactive

This was the largest group in the sample, including the Sneaker Wash Manager (1), Fast-Food Employee (3), Barber (4), Fashion Designer (6), Car Wash Owner (10) and Shisanyama Employee (11). Their adoption journey was pragmatic, reactive and often fragmented. They adopted simple, high-impact tools primarily in response to external pressures. The key driver was customer demand, as articulated by the Sneaker Wash Manager:

> *"Yeah, I can agree on that because the customers even said to us that instead of having so much cash on hand, you'd rather have it in the account. They also trust it. It's safer for them. It's also safer for us." (Interviewee 1)*

This group was highly susceptible to social barriers. The Fashion Designer's lack of confidence made technology feel "too complicated" and "mind-boggling", creating a dependency on her family for support. Their adoption was gradual; the Car Wash used an iKhokha payment device and TikTok, but managed stock manually in a book. They were also highly influenced by peer networks, adopting tools like Yoco because it was

seen as “reasonable and affordable” in the community. For this group, technology was a tool of necessity, not a core strategic asset.

5.2.3. The Forced Analogue: Constrained by Environment

The Butchery Owner (Interviewee 2) represents a critical archetype whose lack of digital adoption is not a choice but a rational response to insurmountable environmental barriers. She expressed a clear desire for digital tools and understood their benefits, particularly for safety and serving her elderly community. However, her business was fundamentally constrained by infrastructure.

The crippling impact of loadshedding, combined with the prohibitive cost of backup power for a low-margin, family-run business, rendered digital systems non-viable. Her testimony powerfully illustrates how environmental barriers can create a situation of forced non-adoption:

> *“And then we also went through a patch for the past two years where Eskom was a big issue. We didn't have power. So it impacted the business quite badly. We were closed for about six months…And backup power is expensive. And for a small family-run business, it's not the ideal situation” (Interviewee 2)*

For this archetype, the discussion of social barriers like trust in apps or peer influence is secondary. The primary barrier is the failure of the basic environmental and infrastructural context, which effectively locks the business out of the digital economy. This finding challenges any characterisation of non-adopters as simply being “resistant to change”, highlighting instead the structural constraints they face.

5.3. THEME DEVELOPMENT

The thematic analysis of the eleven interviews was conducted following the process outlined by Braun and Clarke (2006). The coding process identified numerous recurring concepts, which were subsequently organised into seven primary theses structured around the TOE framework. To support the derivation of these themes and demonstrate their prevalence across the dataset, a frequency analysis was conducted.

Table 5.2 provides a summary of the final themes, their associated codes and the number of participants (out of 11) who contributed to each theme. This table serves as a transparent overview of the findings, indicating the dominant patterns that emerged from the traders' experiences.

Table 5.3: Summary of Themes, Codes and Participant Frequency (N=11)

TOE Component	Theme	Associated Codes/ Concepts	Participant frequency
Technology	**1. Perceived Usefulness as a primary motivator**	Customer demand for cards, Efficiency/time-saving, Professionalism, Market access/new customers, Safer than cash	11/11
	2. Complexity & fragmentation as significant deterrents	Complicated to use, lack of integrated systems, Technical failures/unreliability, needing a tech background	7/11
Organisation	**3. Digital literacy as a Key enabler and Bottleneck**	Owner's personal confidence, Staff skill gaps, Reliance on informal learning (family/YouTube), Lack of formal training	9/11
	4. Staff Resistance & Top-Down Decision-Making	Staff resistance to change, Owner-led decisions, Cost constraints (data, fees, hardware)	8/11
Environment	**5. Pervasive Insecurity (Crime and Safety)**	Fear of device theft, Fear of digital fraud (scams, reversals), Previous experience with robbery, Need for physical security (burglar bars)	9/11
	6. Infrastructural Deficiences	Load shedding impact, Cost of backup power (generators), Unrealistic/slow internet signal	7/11
	7. Community Influence & Embedded Trust dynamics	Peer influence/recommendations, Distrust in service providers (hidden fees), Community norms (e.g., cash for privacy), Need for community goodwill	11/11

Based on the above systematic coding, we then proceeded to develop different levels of codes to build on identified themes, starting with the TOE component, refined category, and specific concept, with examples of quotes from the interviews, which then resulted in final themes identified. The table below is a depiction of the 3 code levels and the final theme link, which will be discussed and unpacked further with specific examples from the interviews.

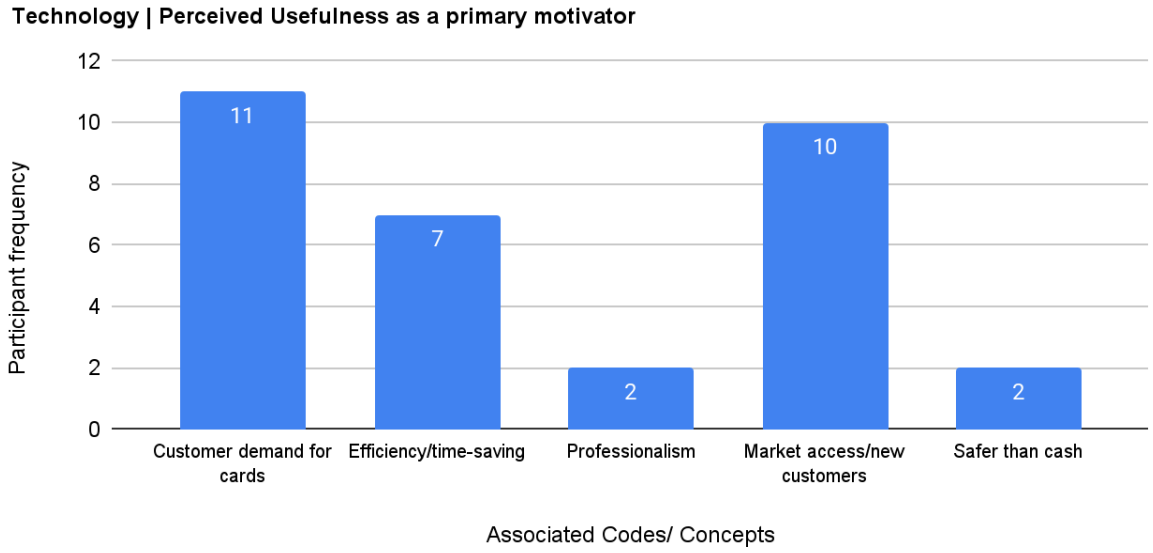
Table 5.3: Coding tree for the thematic analysis

Level 1 Code (Broad category)	Level 2 Code (Refined category	Level 3 Code (Specific concept)	Example Quote snippet	Final theme
Technology perceptions	Benefits of digital tools	Customer demand	"Customers said to us that instead of having so much hard cash on hand..."	1. Perceived Usefulness
		Efficiency & Convenience	"They are accurate number one, they save me time"	
	Challenges with digital tools	Complexity & Usability	"I find it too complicated for me"	2. Complexity & Fragmentation
		Reliability & Failures	"Some machines were not working, like the keyboard, other times it was the hard drive…"	
Organisational Factors	Internal Skills & Knowledge	Owners confidence	"I'm confident using it personally"	3. Digital literacy
		Staff Capabilities	"You often have to teach them from scratch"	
		Informal Learning	"..I go to Youtube and then I take a course.."	
	Internal dynamics	Staff resistance	"They often feel like learning new systems complicates their lives"	4. Staff resistance & decision-making
		Decision-making authority	"It's the owner"	
		Resource constraints	"Back up power is expensive…its not the ideal situation"	
Environmental Factors	External pressures	Crime &Safety	"Security has gone up because we've been held up so many times"	5. Perceived insecurity
		Infrastructure	"Eskom was a big issue. We didn't have power"	6. Infrastructural deficiencies
	Community & Social Norms	Peer Influence & Networks	"Ive seen so many traders using Yoco… it was more reasonable and affordable"	7. Community Influence & Trust
		Customer Norms	"Some customers prefer cash so they leave no "trail" of alcohol purchases.."	
		District providers	"Im always afraid of fraud…they start increasing the prices"	

5.4. TECHNOLOGY CONTEXT: THE TENSION BETWEEN PERCEIVED VALUE AND PRACTICAL HURDLES

The technology component of the TOE framework examines the characteristics of the digital tools themselves and how traders perceive them. This section primarily addresses Research Question 1, which explores how digital literacy and trust influence traders' perceptions of usefulness, ease of use and risk. It also touches on Research Question 4 by examining the perceived alignment of available technologies with traders' operational needs. The findings indicate significant tension; traders clearly see the relative advantage of digital tools but are often deterred by their complexity, compatibility issues and perceived unreliability. This creates a cycle of hesitant adoption, where the potential benefits are weighed against immediate practical frustrations.

5.4.1. Theme 1: Perceived Usefulness as a Primary Motivator



Across all 11 interviews, a consistent theme was the recognition that digital tools are no longer a luxury but a necessity for survival and growth. This perception was driven by three main factors: meeting customer demand (11/11), market access/new customers (10/11) and enhancing operational efficiency (7/11). A primary driver for the adoption of digital payments is the shifting behaviour of customers. The owner of the sneaker wash explained that the move was almost non-negotiable, as digital payments offered a clear advantage over a cash-only model that was becoming obsolete.

> "*Yeah, I can agree on that because the customers even said to us that instead of having so much cash on hand, you'd rather have it in the account. They also trust it. It's safer for them. It's also safer for us" (Interviewee 1)*

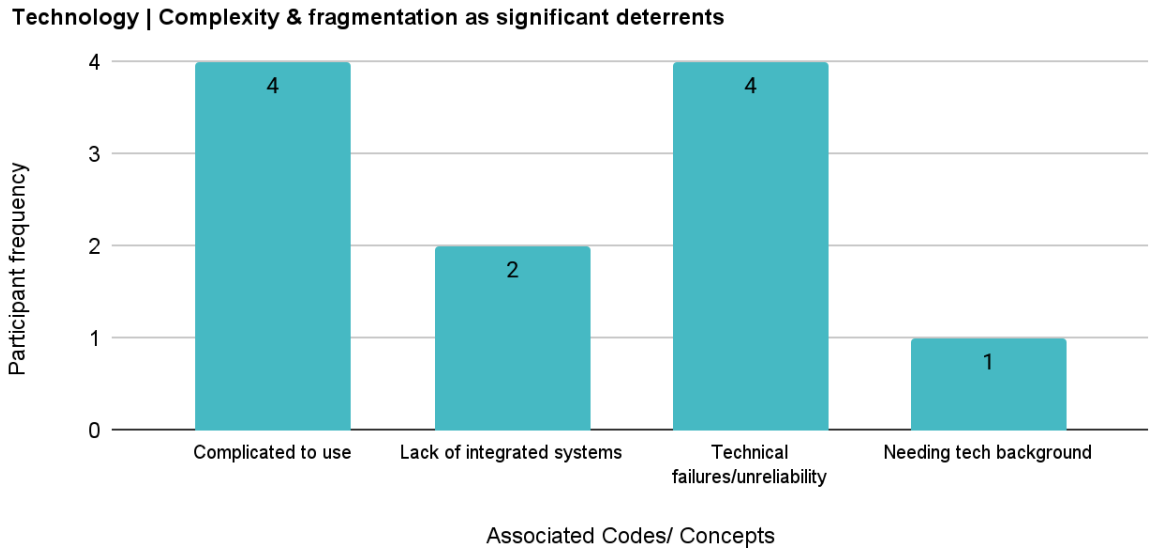
The sneaker wash business started as a table outside the front yard of the house on a busy main road, and now they operate from the garage inside the premises. The shift only made sense as business grew, their concern for both the customers' safety and business safety grew more important, and handling cash out in the street made them vulnerable to theft. For the fast-food employee, the logic was purely commercial. In a competitive market, failing to offer digital payment options translates directly into lost revenue, a risk the business could not afford.

> *"Because if we're not using the payment, the speedpoint or something we're going to lose some customers. When they're paying, they pay with Speedpoint, they don't usually use cash mostly…when you only taking cash only without a speedpoint you are losing customers" (Interviewee 3)*

Beyond payments, traders saw digital marketing as a powerful tool for customer acquisition. The car wash owner, who successfully uses TikTok, directly links his social media presence to business growth, illustrating the perceived advantage of platforms that can reach a wide, local audience.

> *"Yes, I have a TikTok account… Yes definitely (it brings in customers)" (Interviewee 10)*

5.4.2. Theme 2: Complexity and fragmentation as significant deterrents



While the *why* of adoption was clear, the *how* presented significant barriers. Traders struggled with technologies that were not user-friendly, reliable or integrated into a single seamless system. Some of the respondents alluded to having to use multiple platforms for different functions, and others stated that the staff's literacy levels limited their ability to understand or become familiar with new software or platforms. This was a major source of frustration that often overshadowed the perceived benefits.

The Fast Food Manager, despite being tech-savvy, found that most available software is not designed for users without a technical background. His search for an all-in-one solution highlights the fragmentation of the current digital offerings for small businesses.

> *"Some of them, the ones I saw online, they need someone with that background. They are not easy, a bit complicated…The problem is that I don't have a system that can do everything. That's why I use different systems. If it's stock, I'm using one and for accounting, using another one" (Interviewee 5)*

This sentiment was echoed by the Fashion Designer, whose creative skills did not translate into digital confidence, although she is eager to learn. Her experience illustrates how perceived complexity can lead to a complete delegation of digital tasks, creating a dependency on others.

“At the moment, I haven't really done much myself. I normally get somebody who has an idea how to do it, to do it for me, because I find it too complicated for me” (Interviewee 6)

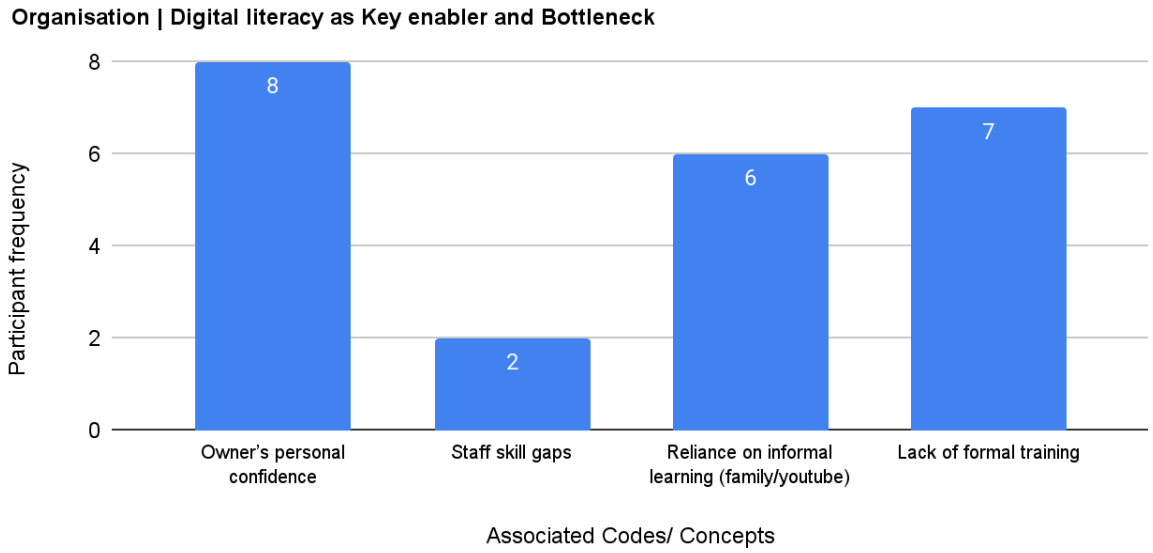
Even when traders invested in technology, its unreliability was a major issue. The Bar/Lounge Owner’s experience with his POS system shows how technical failures can disrupt business and undermine trust in digital tools, pushing him to seek alternatives.

“As I said with this one that I'm using currently, the times I have, some machines are not working, like the keyboard. Other times it was a hard drive, I don't know what happened. I had to take it back, and it's also slow” (Interviewee 8)

5.5. ORGANISATIONAL CONTENT: INTERNAL CAPABILITIES AND SOCIAL STRUCTURES

The organisational context focuses on the internal characteristics of the business, including the skills of the owner and staff, resource availability and internal decision-making processes. This section provides a deep analysis of Research Question 1 by focusing on the role of digital literacy, skills and confidence. It also directly informs Research Question 4 by showing how internal business practices and resource limitations affect the alignment of technology. The findings reveal that digital literacy is a critical bottleneck, and staff resistance constitutes a significant social barrier. Furthermore, decision-making is heavily influenced by the owner’s mindset and the informal, often resource-constrained nature of business.

5.5.1. Theme 3: Digital literacy as a key enabler and bottleneck



A stark divide emerged between traders who were personally comfortable with technology and those who were not. Most of the ones that were comfortable used smartphones as their personal devices, but age difference played a role as well. This total literacy gap directly influenced the depth and success of digital integration. Interestingly, the Butchery Owner and Fashion Designer seemed to be close in age and both used smartphones for personal use, but their levels of digital literacy and comfort varied. Whilst they were both eager to learn, they still relied on their kids or daughter to assist with more complex technology tools.

The Cocktail Bar Owner, who was personally confident with technology, identified that the primary organisational barrier was not his own ability but the challenge of transferring the knowledge to his staff, who often lacked foundational digital skills and education. This was also a similar experience for the fast food owner, who said his staff is comfortable using basic tools but not the complicated Excel or Sage tools.

> *"Im confident using it personally. But passing down the knowledge to staff becomes a bit of a challenge… Capabilities are the biggest challenge making them understand how the systems need to be used… You often have to teach them from scratch" (Interviewee 7)*

In contrast, the Fashion Designer's lack of confidence created a dependency on her family, particularly her children. This illustrated how digital adoption within a family business can be shaped by intergenerational skill differences.

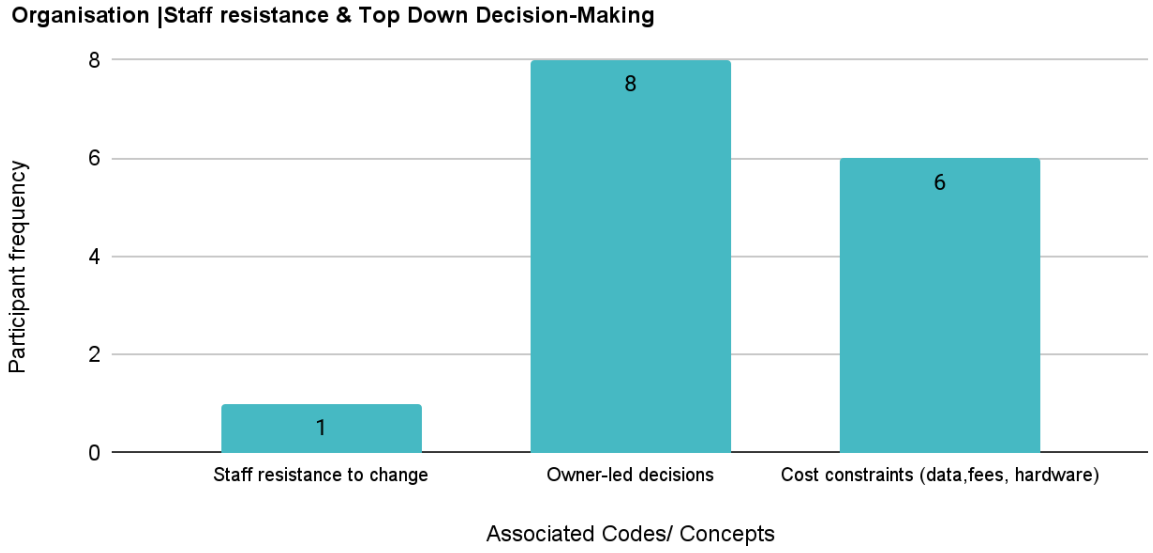
> *"Well in most cases, I end up asking my kids, because they are more savvy than me when it comes to technology. They always encourage but for me I find it to be mind-boggling. So I always give it to them." (Interviewee 6)*

This reliance on informal, self-directed learning was common. The Fast Food Manager's use of online tutorials shows resourcefulness but also points to the absence of structured, accessible training tailored to the needs of informal traders.

> *"I use YouTube. I go onto YouTube and then I take a course like 'how to use this software' that's how I learn to use them" (Interviewee 5)*

It was also evident that there isn't much social learning across various traders in the same or different industries along one street. They conduct their business quite privately, which limits the ability to learn from each other or introduce each other to new technologies or working technologies.

5.5.2. Theme 4: A staff resistance and Top-down decision making



Beyond skills, a significant social barrier was staff resistance to change. Employees

often perceived new technologies not as tools for empowerment, but as an added complication to their work. This dynamic reinforced a top-down approach to decision-making. Although in very few instances where the staff was younger, it was a ‘group discussion and decision’. The Cocktail Bar Owner directly experienced this resistance, highlighting an internal social friction that can derail the successful implementation of new systems.

> *“There’s some resistance. They often feel like learning new systems complicates their lives. So I get a bit of resistance from them.” (Interviewee 7)*

He also added that a lot of the staff had to be recruited from the community (Orlando) he operates in, which means the majority of them have very little to no education and are not accustomed to learning new concepts, tools or systems beyond matric qualifications. This recruitment was intentional to ensure buy-in from the community and limit social limitations in the community. This resistance may explain why, in many cases, the decision to adopt new technology is made solely by the owner. The employee at the fast food shop and the barber both confirmed that such decisions were the owner's prerogative, indicating a clear hierarchical structure.

Interviewer: “And in the business, who decides whether or not to use a new payment platform or social media app, is it the family or the staff?”

> *Shop Employee: “ It’s the owner” (Interviewee 3)*

However, some owners, like the Sneaker Wash Manager, fostered a more collaborative environment, similar to the other Fast Food Owner who would seek customer feedback from the front-line staff. This approach suggests an awareness that staff buy-in is crucial for effective adoption and business improvement.

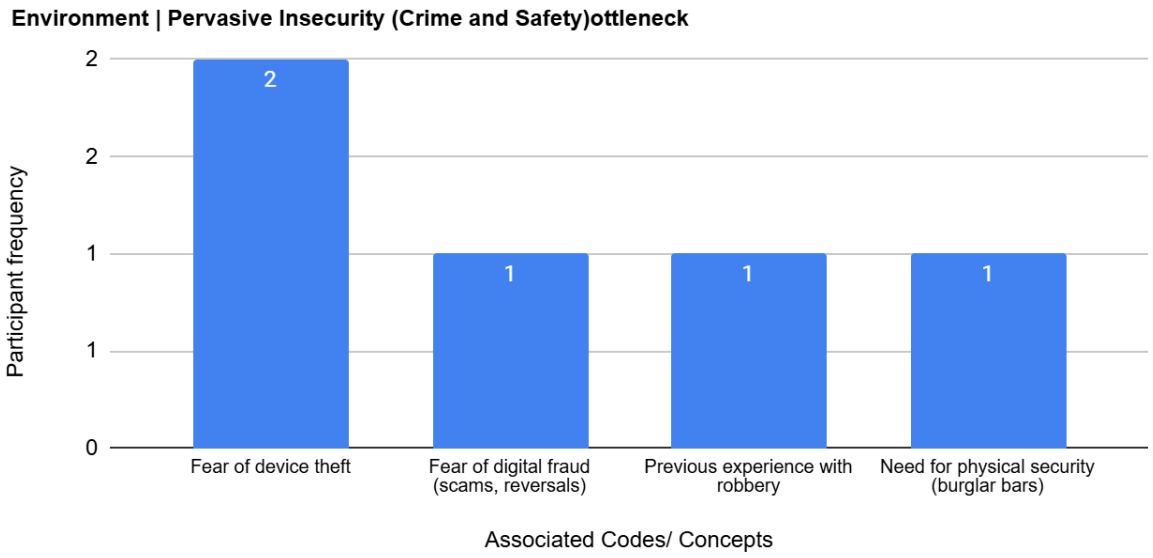
> *“We sit down as colleagues and brainstorm how we can do better, and how we can do marketing” (Interviewee 1)*

5.6. ENVIRONMENTAL CONTEXT: PERVASIVE INSECURITY AND SOCIAL PRESSURES

The environmental context examines the external factors that shape adoption, including infrastructure, competition and the broader socio-cultural landscape. This section is

central to answering Research Question 2 (on social trust), Research Question 3 (on social network and norms) and Research Question 5 (on the impact of the socio-economic environment of pervasive insecurity, defined by unreliable infrastructure and high crime rates). This insecurity, combined with strong community influencers and norms, creates a set of formidable social barriers to digital adoption.

5.6.1. Theme 5: Pervasive insecurity (Crime and safety)



The fear of crime was a dominant theme, although not as extensive as expected across all the traders, directly impacting business operations and decisions around technology. This is not an abstract risk but a lived reality that forces traders to make significant investments in physical security, which in turn influences their willingness to handle cash or display expensive digital devices.

The Butchery Owner's testimony is a scratch illustration of this reality. The need to install burglar bars and the constant threat of being robbed have made reducing cash-on-hand a primary business objective, directly driving the need for digital payments. She mentioned that when they initially started the business 50-60 years ago, safety was not an issue and that they didn't have any burglar bars back then because everyone in the community was family and there were very high levels of trust.

> *"In the past couple of years, security has gone up because we've been held up so many times. So whenever possible, we avoid having large amounts of cash.*

Back in the day, you had a safe, but even that is not safe anymore because you get held up when you're leaving" (Interviewee 2)

She also mentioned that she serves an elderly community and often, the older grandparents would send the smaller kids, sometimes 6-year-olds, to come and purchase airtime or food, and they would get turned back because they can't use SASSA grant cards on their machine,s which means sending these little kids with cash is also a high risk.

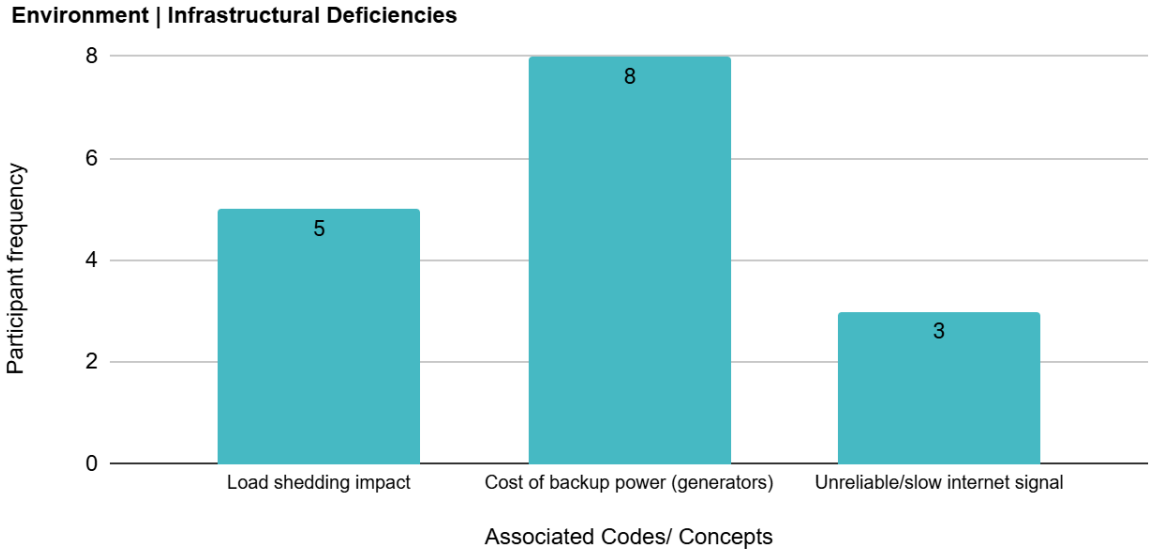
The insecurity extends to the digital realm. The same owner recounted the experience of a nearby vendor who was a victim of digital fraud. This vendor used to sell archaar outside the butchery using a Yoco device, showing that cashless operations are not immune to crime and that new technologies bring new risks.

"There was a gentleman who was outside here, and an outside vendor. He used to have a Yoco machine, but he went through so much drama where people would swipe and as they turned the corner, they reversed the charges. People do atrocious things out here." (Interviewee 2)

The Fashion Designer also voiced concerns about the safety of her devices, reflecting a widespread anxiety that phone theft is not just about losing a device but also about the potential for subsequent financial fraud. She also mentioned that she is reluctant to post her designs or clothes online because people can easily steal your designs too.

"Yes, especially when it comes to phones because once they steal your phone and then you have those that can easily go, even if you lock your phone they have a way of opening in" (Interviewee 6).

5.6.2. Theme 6: Infrastructural Deficiencies



Beyond crime, the unreliable state of basic infrastructure, particularly electricity, poses a fundamental barrier. For a business to digitise, it needs consistent power and the chronic "load shedding" in South Africa severely undermines this.

The Butchery Owner's business was directly threatened by power outages, forcing prolonged closures (up to 6 months) because the cost of alternative power sources like generators was prohibitive for a small, family-run enterprise, and she kept mentioning that they had to keep such a close eye on their bottom line.

> *"And then we also went through a patch for the past two years where Eskom was a big issue. We didn't have power. So it impacted the business quite badly. We were closed for about six months… And backup power is expensive. And for a small family-run business, it's not the ideal situation" (Interviewee 2)*

She said this whilst pointing at all the refrigerators for the meat and cold drinks, suggesting that a lot of the products in the store can not survive a broken cold chain. Similarly, the Bar/Lounge Owner highlighted the significant operational cost of load shedding, which affects everything from lighting to the DJ music booth for music, necessitating investment in a generator.

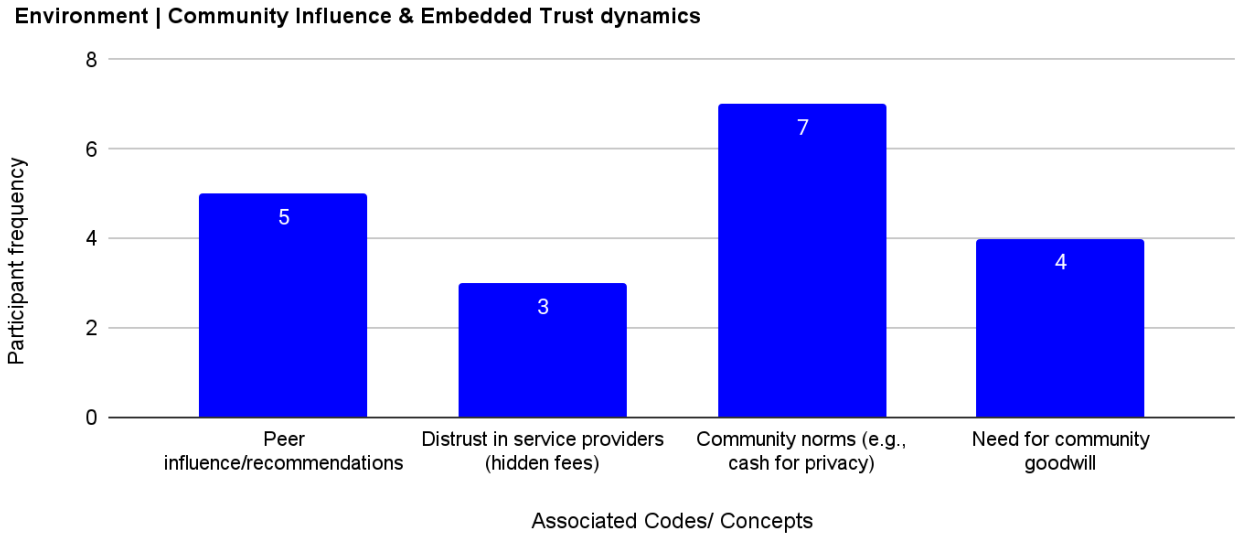
"Load shedding is a lot that affects a lot of businesses… for me, I would say it affects me a lot, because nowadays I need electricity…I need a generator because I have DJ's playing songs and all of that" (Interviewee 8)

Also mentioning that buying fuel or diesel is very expensive. A poor mobile network was another critical issue. The Fashion Designer noted that their entire area suffered from poor connectivity, making any internet-dependent digital tool unreliable and frustrating to use.

"At school, we have a problem with the network. A serious problem with the network. And it's not only us, the whole areas around Bara they have a problem with the network" (Interviewee 6)

The Bara area is always buzzing with commuters coming in and out of Soweto, so surely that impacts their ability to digitise to a certain extent too.

5.6.3. Theme 7: Community influence and embedded trust dynamics



Traders are deeply embedded in their local communities, and their decisions are sometimes influenced by the actions, norms and trust dynamics within those communities. Peer networks serve as crucial channels for information and validation, while community-specific norms can create unique barriers.

The Bar/Lounge Owner explicitly described how he relies on his peers for recommendations, illustrating the power of informal trader networks in validating and diffusing new technologies.

> *“And traders, ask questions: is it working for you, how is it so far. Like when I got this POS system, I asked one of my friends who also has the same shop down the road. He took me to his gut and I put it up. So I got basically one of the tills.” (Interviewee 8)*

This peer effect can create a domino effect. There wasn’t strong evidence of established network groups across all the traders' interviews but each of them had a friend or a small circle. The Sneaker Wash Manager's observation that many local traders were using Yoco because it was seen as affordable and effective likely influenced his own decision to adopt it.

> *“Yes, I've seen so many traders using Yoco. Most of them are using Yoco because it was the first electronic device that was more reasonable and affordable” (Interviewee 1)*

However, community norms can also act as a powerful barrier. The Cocktail Bar Owner’s insight into why some customers prefer cash to avoid the digital paper trail of their alcohol consumption is a potent example of a social norm directly hindering the move to a fully cashless system. He mentioned that some of the patrons have insurance that will track back their card purchases.

> *“ Yes, especially around cash vs cards. Some customers prefer cash, so they leave no trail of alcohol purchases after a certain time. For example, I swipe alcohol, I get into an accident and then there is a paper trail” (Interviewee 7)*

This also raises an interesting perspective because in the northern suburbs people would typically Uber or e-haul back home after a hectic night, but in the south, these e-hauling services may not be as welcomed, forcing patrons to use their own vehicle to and from a night out.

Finally, there is a layer on institutional districts. The Fashion Designer's fear of being locked into contracts with escalating hidden fees reflects a broader suspicion of formal service providers, a sentiment that can act as a significant barrier to adopting subscription-based digital services. Although the majority of the other interviewees did not express this strong sentiment, it is important to note that some traders may still be hesitant.

> *"I'm always afraid of… at first they offer your things at a very low price and now you are relaxed and they say we have a price adjustment and then they start increasing the prices and that time you've signed a contract" (Interviewee 6)*

5.7. SUMMARY OF TOE FRAMEWORK SUMMARY FINDINGS

Table 5.4 provides a consolidated view of the findings, organising the multitude of factors influencing digital adoption into key enablers and barriers within the TOE framework. The summary makes it clear that while informal traders are pulled towards digitalisation by a consistent set of enablers, their journey is fraught with a larger and more formidable set of social and structural barriers. The impact and experience of these factors are not uniform across the sample; rather, they are filtered through distinct characteristics of the three adopter archetypes: the Advanced Adopter, the Partial Adopter and the Forced Analogue.

A. The Technology Context: A conflict between Aspiration and Usability

In the technology context, the findings reveal a fundamental conflict. On one hand, the enablers confirm the literature's emphasis on perceived usefulness (Bvuma & Marnewick, 2020). All participants, regardless of archetype, recognised the "pull" of digital tools for enhancing efficiency, meeting customer demand for cashless payments, and achieving a more professional market presence.

However, the barriers of complexity, fragmentation and unreliability create a significant "push-back". This is where the adopter archetypes diverge.

The Advanced Adopters, like the Fast-Food Manager, are driven by the enablers and possess the digital literacy to cut through the barriers of complexity. Their frustration with fragmentation motivates them to actively seek better, integrated solutions, demonstrating a strategic approach to overcoming technology limitations.

The Partial Adopters, in contrast, are highly susceptible to these barriers. For the Fashion Designer, the perceived complexity of social media was so high that it negated its usefulness, leading her to delegate the task entirely. Their adoption is limited to simple, reliable tools like Yoco, while more complex systems are avoided, leading to the fragmented digital footprint characteristics of this group.

The Forced Analogue archetype, represented by the Butchery Owner, understands the enablers but is prevented from engaging with technology long enough to even upgrade with its complexity due to overwhelming external factors, citing “formal stores”, “older generation customers” and “infrastructure and loadshedding”.

B. The Organisational Context: A divide in Capacity and Resources

The Organisational context highlights the critical role of internal capabilities and resources. The key enabler is the owner’s personal digital literacy, which was a defining characteristic of the Advanced Adopter. This internal skill set allows them to lead the digital charge within their business.

The barriers, however, reveal a deep social and economic divide within the informal sector.

The Advanced Adopters, while facing staff skill gaps, have the confidence and capacity to mitigate this barrier through training, as seen with the Cocktail Bar Owner. They can absorb the resource constraints and make strategic decisions to invest in technology.

The Partial Adopters embody the struggle within this context. They are constrained by their own limited digital skills and the low digital literacy of their staff. Crucially, they operate with significant resource constraints, making the costs of data, devices, and transaction fees a major consideration, a finding consistent with the literature (Ebrahim & Van den Berg, 2024). Their reliance on informal learning from family underscores the lack of formal support structures within their organisational environment.

In the Forced Analogue archetype, the resource constraints are absolute. The Butchery Owner’s inability to afford backup is an organisational-level financial decision that completely blocks any technological progress.

C. The Environmental Context: Overwhelming External Pressures

The Environmental context emerges from the findings as the most powerful and often determinant factor. While positive enablers like peer influence and customer pressure exist, they are significantly overshadowed by a hostile operating environment.

This is where the lived realities of the different archetypes are most stark.

The Advanced Adopters are not immune to this environment, but they actively invest in mitigating its effects. They buy generators to counteract infrastructural failures and rely on their tech-saviness to navigate institutional distrust. They use peer networks proactively to gather information and derisk their technology investments.

The Partial Adopters are highly influenced by both the enablers and barriers. Peer recommendations are a major driver for their adoption of simple tools like Yoco. However, they are highly vulnerable to environmental barriers. The fear of crime, as articulated by the Fashion Designer regarding phone theft, and the impact of poor internet signals, are constant operational threats that they have limited resources to mitigate.

The Forced Analogue archetype is ultimately a product of this hostile environment. For the Butchery Owner, the infrastructural deficiency of unreliable electricity was not just a challenge to be managed but a fatal blow to any digital aspiration. This demonstrates that for some traders, the environmental barriers described by Scheba and Turok (2020), such as inadequate infrastructure and vulnerability, are not just influencing factors but definitive constraints that make digital adoption impossible.

In summary, table 5.4 illustrates that the path to digital adoption is not a simple linear progression. It is a constant negotiation between the clear benefits of technology and a set of deeply embedded social and structural barriers. The ability of a trader to navigate this path depends heavily on their internal capacities and resources, which are themselves shaped by the challenging environmental context of the township economy.

Table 5.4: TOE Framework Summary of Findings

TOE Component	Key Enablers for Digital Adoption		Key Social and Structural Barriers		
Technology	Perceived Usefulness: Clear recognition of benefits like efficiency, professionalism, and meeting customer demand.	Relative Advantage: Digital tools seen as essential for survival and attracting new customers (e.g., TikTok for marketing).	Complexity & Fragmentation: Tools are often not user-friendly, requiring technical skills. Lack of integrated, all-in-one systems for small businesses.	Unreliability: Frequent hardware failures and slow performance undermine confidence.	
Organisation	Owner's Digital Literacy: Tech-savvy owners are more proactive and confident in adopting new tools.	Collaborative Decision-Making: Involving staff and responding to customer feedback fosters relevant adoption.	Staff Skill Gaps & Resistance: Low digital literacy among staff is a major bottleneck. Employees may resist new systems, viewing them as a complication.	Resource Constraints: High costs of data, devices, and backup power are prohibitive for many.	
Environment	Customer & Supplier Pressure: Shift to cashless payments by customers and suppliers forces adoption.	Positive Peer Influence: Recommendations and visible success from other traders encourage trial and adoption.	Pervasive Insecurity: High crime rates (theft, fraud) create fear around using and investing in digital devices.	Infrastructural Deficiencies: Unreliable electricity (load shedding) and poor mobile networks fundamentally disrupt digital operations.	Negative Community Norms & Distrust: Specific social norms (e.g., avoiding a "paper trail") maintain cash preference. Distrust in formal service providers due to fear of exploitation.

To enhance transparency and demonstrate the rigour of the analytic process, the table below presents the progression from initial codes to sub-themes and overarching themes derived from the interview transcripts. Following Braun and Clarke's (2006) six-step approach to thematic analysis, participant quotations were first coded inductively, capturing patterns of meaning related to the research question. These codes were then clustered into sub-themes, which were subsequently consolidated into broader themes aligned with the TOE framework. The table also indicates which

research questions (RQ1-RQ5) each theme directly addresses. This structure illustrates how the raw data were systematically organised into coherent findings, thereby ensuring that the interpretations presented in this chapter remain firmly grounded in participants' lived experiences.

Table 5.5: Linking the findings to the research questions

Codes (raw data extracts)	Sub-themes	Overarching Themes (TOE)	RQ Link
"Technology is easier and convenient… people hardly carry cash." (Sneaker Wash Owner) "If you don't have a card machine, you are losing customers." (Fast-Food Employee)	Perceived usefulness; customer demand as driver	Technology Context – Perceived Value vs Practical Hurdles	RQ1, RQ2 (Digital literacy & trust shape usefulness perceptions; customer-driven adoption of financial tools)
"POS is fast and effective to keep records." (Bar/Lounge Owner) "Social media promotes and finds new clients." (Barber)	Convenience, efficiency, professionalism, market access	Technology Context – Perceived Usefulness	RQ1, RQ4 (Perceptions of usefulness; misalignment with flexible practices if too complex)
"The system is slow, the keyboard broke, the hard drive failed." (Bar/Lounge Owner) "Social media is too complicated, I ask my daughter to post for me." (Fashion Designer)	Complexity, technical failures, reliance on others	Technology Context – Complexity & Compatibility	RQ1, RQ4 (Ease of use & digital literacy affect engagement; misalignment with relational practices)
"Teach staff from scratch… some resist learning new systems." (Cocktail Bar Owner) "Mind boggling, I prefer others to handle apps." (Fashion Designer)	Staff resistance; uneven literacy/confidence	Organisational Context – Internal Capacities	RQ1, RQ2 (Digital literacy and trust in staff capacity influence engagement)
"We brainstorm as a team on what people ask for." (Sneaker Wash Owner) "Finance manager or family member decides." (Franchise/Bar Owner)	Collaborative vs owner-driven decisions	Organisational Context – Decision-Making & Resources	RQ1, RQ4 (Leadership style & inclusivity influence adoption alignment with business practices)
"Commission fees are too high… customers are price-sensitive." (Cocktail Bar Owner) "POS not viable for income level." (Butchery Owner)	Cost as a barrier; resource constraints	Organisational Context – Financial Barriers	RQ4 (Misalignment between digital solutions and low-margin operations)
"Suppliers don't take cash anymore." (Butchery Owner) "My customers told me to get Yoco, safer for both parties." (Sneaker Wash Owner)	Supplier requirements; customer pressure	Environmental Context – External Pressures	RQ2, RQ3 (Social trust in suppliers & customers forces adoption; peer/customer-driven behaviour)

Table 5.5: Linking the findings to the research questions cont.

Codes (raw data extracts)	Sub-themes	Overarching Themes (TOE)	RQ Link
“I've seen many traders using Yoco, it’s reasonable and affordable.” (Sneaker Wash Owner) “I ask other businesses about tools before trying.” (Cocktail Bar Owner)	Peer influence: WhatsApp networks	Environmental Context – Community Influence & Norms	RQ3 (Community norms & networks influence adoption of tools for engagement)
“Loadshedding forces us to close, backup power too expensive.” (Butchery Owner) “Phone theft… criminals unlock them.” (Fashion Designer)	Infrastructure failures, crime risk, and digital fraud	Environmental Context – Safety & Infrastructure	RQ5 (Soweto’s socio-economic environment interacts with adoption barriers)
“I’m afraid of fraud… prices go up after contracts.” (Fashion Designer) “Most systems are protected, I trust them.” (Fast-Food Manager, IT background)	Distrust of providers; confidence via digital skills	Environmental Context – Trust in Providers	RQ2, RQ5 (Social trust differences affect financial adoption & are shaped by environment)

CHAPTER 6: DISCUSSION OF RESULTS

6. INTRODUCTION

This chapter provides a detailed discussion of the research findings presented in Chapter 5, interpreting their significance in the context of the literature reviewed in Chapter 2. The primary aim is to synthesise the empirical data with existing theory to answer the overarching research question: *How do social barriers influence digital adoption in the informal trade?*

This chapter is structured around 5 key research sub-questions (RQs) that guided the inquiry, along with the propositions put forward. Each section will systematically compare the findings of this study to the established body of research cited in the literature review, highlighting areas where the results confirm, extend or contradict prior knowledge. This process facilitates a deep analysis of the complex interplay between technology, organisational capacities and the socio-economic environment of Soweto's informal economy.

A central argument of this discussion is that social barriers are not merely external obstacles but are deeply embedded within every facet of the digital adoption process. They shape how technology is perceived (RQ1, RQ4), mediate the crucial role of trust (RQ2), govern the influence of community networks (RQ3) and are intensified by the historical and environmental context of Soweto (RQ5). By linking the findings back to the TOE framework, this chapter will build a case for a more nuanced, socially-aware understanding of digital transformation in informal economies. The chapter concludes by summarising the theoretical contributions, outlining practical implications, and suggesting avenues for future research.

By linking the TOE framework, this chapter will build a case for more nuanced, socially aware understanding of digital transformation. The conceptual map presented in Figure 6.1 below provides a visual roadmap for this discussion. It illustrates how the central research problem is unpacked through the three TOE contexts, summarises key findings as they relate to each research question, and culminates in the study's primary theoretical contribution. This map will serve as a guide for the arguments to follow.

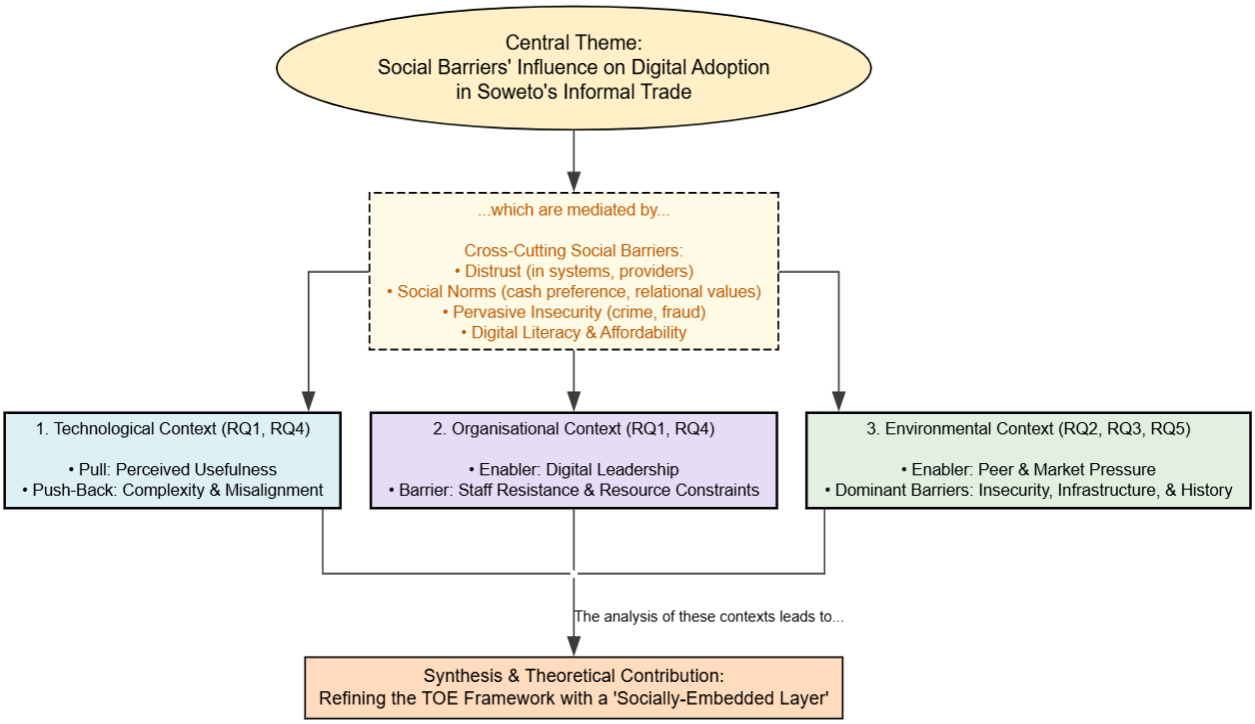


Figure 6.1: Road map of TOE and Findings discussion

6.1. RQ1 AND RQ4: PERCEPTIONS OF USEFULNESS, EASE OF USE AND ALIGNMENT WITH THE BUSINESS PRACTICES

Research Question 1: How do varying levels of digital literacy, skills and confidence, alongside different degrees of trust (in digital systems, providers and data security) influence informal trades' perceptions (for example perceived usefulness, ease of use, risk) and actual engagement with specific digital platforms (e.g mobile payments, social media commerce, direct to home delivery) in Soweto?

Research Question 4: How do informal traders in Soweto perceive the alignment, or misalignment, of available digital technologies with their established, often relational and flexible business practices and cultural values, and how does this perception affect their adoption decisions?

The findings related to these questions confirm that the decision to adopt technology is a complex cost-benefit analysis, heavily influenced by social factors. The study found that perceived usefulness is a primary motivator, strongly supporting the arguments of Bvuma & Marnewick (2020) that ICT adoption can improve business performance in township enterprises. The universal recognition among participants (11/11) that digital

tools were essential for efficiency, safety and meeting customer demand for cashless payments underscores this.

In addition, adoption of technology depends on how their internal capabilities and external trust dynamics shape their perception of a tool's value and fit. The Sneaker Wash Owner's motivation to adopt Yoco because customers "hardly carry cash" is a direct reflection of the literature's assertion that digitalisation enhances consumer engagement and expands market access, as he also stated the potential of an app that could give customers in the north of Johannesburg access to their services.

However, the findings powerfully demonstrate how social barriers mediate these perceptions. This offers strong empirical support for Proposition 4 (P4), which posited that low digital literacy and high levels of distrust adversely affect traders' views on the usefulness and user-friendliness of digital platforms. The contrast between the tech-savvy Fast Food Manager and the hesitant Fashion Designer is telling. While both perceived the potential benefits, the manager's high digital literacy allowed him to see past complexity and actively seek solutions. Conversely, the designer's low confidence magnified her perception of complexity ("mind-boggling") and risk, leading to delegation and avoidance. This confirms the literature's emphasis on "lack of technology skills and digital literacy" as a primary barrier (Bvuma & Marnewick, 2020; Munyoka, 2022) but extends it by showing that perceived ease of use is not an intrinsic quality of technology but is co-created by the user's skills and the social support systems (or lack thereof) available to them.

While the literature from India highlights community-wide digital literacy as a barrier (Bajwa, 2023), this study provides a micro-level view of how this manifests within a single organisation or family business through intergenerational skill gaps where children are relied upon for technical support. This may also be influenced by the levels of education among the employees, as found in the Cocktail Bar owners' experiences of the staff hired from the community having low literacy levels.

Furthermore, the findings reveal a significant misalignment between available technologies and the lived realities of informal traders, directly answering RQ4 and supporting Proposition 2 (P2). This proposition suggests that uptake depends on the alignment between trade norms and the technology's institutional logic. The Fast Food

Manager's frustration with the lack of an affordable, all-in-one system highlights a technical and economic misalignment. This confirms arguments by Patil et al. (2020) and Ebrahim and Van den Berg (2024) that many digital tools are not designed with the needs of the informal traders in mind. Which was also mentioned by the traders that they would like products that are suitable for their environment, business type and affordability.

As found during the interviews that these tools do not take into account literacy levels, costing that accommodates small business and consideration of the nature of business, therefore a stock management and POS system that works for a formal Mc Donalds franchise outlet may not be economically viable for a single Fast Food store in the township even though the same features may be beneficial for the nature of both.

More profoundly, this study uncovers a deep *cultural misalignment.* The Fashion Designer's view of digital interaction as "inhuman" and her preference for "face-to-face" business dealings reflect a direct clash with her established, relational trade norms. This extends the literature's general observation of a preference for cash (Ong et al., 2023) by explaining the underlying cultural value. Also identified in the literature review, which was prominent in greater Africa and India business dealings and family business operations. Her fear of design theft online introduces a professional trust issue that complicates the simple "perceived usefulness" calculation.

The finding suggests that for some traders, the "opaqueness" and personal nature of traditional business are not bugs to be fixed by digitalisation, but features that offer social value, thus creating a powerful cultural barrier to adoption. This confirms the literature's point that long-standing cultural preferences, as seen with street vendors in India (Mathews & Bhosale, 2021), can create a powerful resistance to impersonal digital systems. For these traders, the technology misaligns not just with their workflow, but with their cultural values and professional identity.

The findings related to the Technology context of the TOE framework are visually summarised in Figure 6.2. The diagram illustrated the fundamental conflict experienced by informal traders: a strong "pull" from the recognised benefits of technology versus a significant "push-back" from the practical and social drawbacks of the available tools.

On one side, the Pull Factors represent the clear motivations for adoption. As the findings show, every participant recognised the value of digitisation for meeting customer demand in an increasingly cashless market, a key driver for sustainability (Bvuma & Marnewick, 2020). The desire for operational efficiency, enhanced security over cash, and the potential to access new markets through social media platforms like TikTok were powerful incentives pulling traders towards adoption.

On the other side, the Push-back Factors represent the significant barriers that temper this enthusiasm. The findings revealed that technology is often perceived as too complex, requiring a technical background that many traders do not possess, which aligns with the literature on the digital literacy barrier (Munyoka, 2022). Furthermore, the lack of affordable, all-in-one systems leads to a frustrating experience with fragmented, disconnected tools, a key finding from the Advanced Adopters who were actively seeking better solutions. This is compounded by the unreliability of some technologies, as seen in the Bar/Lounge Owner's experience with a faulty POS system. Finally, a crucial barrier is the cultural misalignment, where tools are perceived as "inhuman" and incompatible with the relational, face-to-face nature of business that traders value, a sentiment echoed in studies on the street vendors in India (Mathews & Bhosale, 2021)

This diagram, therefore, illustrates the central tension: for successful adoption to occur, the pull forces must be strong enough to overcome the significant push-back. For many Partial Adopters, the push-back from complexity and cultural concerns is strong enough to limit their engagement to only the simplest, most essential tools.

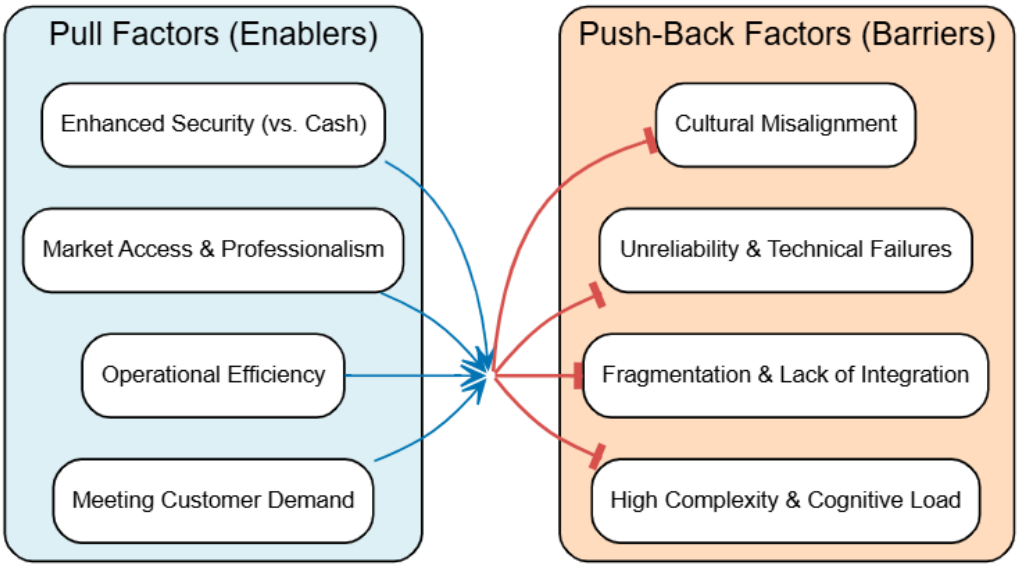


Figure 6.2: Pull And Push-Back Factors Of The Technological Context

6.2. RQ2: THE PERVASIVE INFLUENCE OF SOCIAL TRUST ON FINANCIAL TECHNOLOGY ADOPTION

Research Question 2: How do varying levels of social trust (in technology, digital platform providers, peer adopters and in the security of digital interactions) influence the willingness of Soweto traders to adopt digital tools, specifically for financial transactions?

The findings powerfully confirm that social trust is a cornerstone of digital adoption, particularly for financial technologies. The literature review categorised “Trust-related barriers” as a primary obstacle, including fear of scams and low institutional trust. The findings of this study (Themes 5 and 7) provide rich empirical evidence for this, breaking down trust into three critical interconnected layers as experienced by the traders.

6.2.1. Institutional Distrust

First, the findings reveal a significant level of institutional distrust, a direct social barrier within the Environmental context of the TOE framework. The Fashion Designer’s fear of being exploited by service providers with hidden fees and escalating contract prices confirms the literature's emphasis on low institutional trust, particularly where it is already weak (Gupta et al, 2020). This study extends this by connecting it to Proposition 5 (P5), which links this sentiment to the historical legacy of Soweto. The deep-seated suspicion of formal institutions is not an abstract fear but is rooted in a history of marginalisation, making traders rationally risk-averse to binding digital contracts. This historical context, described by Harrison & Harrison (2014), where formal systems were often tools of control, provides the backdrop for this contemporary distrust.

6.2.2. Relational Trust

Second, the study highlights the paramount importance of relational trust within the Organisational context of TOE, specifically trust in peer adopters. The Bar/Lounge Owner’s decision to adopt a POS system was validated through his friend's recommendation, while the Sneaker Wash Owner was encouraged by the widespread, successful use of Yoco among his peers (Theme 7). This confirms the importance of

“informal linking structure” in the TOE model and shows that innovations are legitimised and de-risked through trusted informal social channels before they are formally adopted.

It is key to note that although there wasn't a strong sense of inter-organisational connection, the business owners informally learned or leveraged from close peers in the same business. This differs vastly in more formal environments where there are associations that serve to cross-share information and innovation across various organisations, making the learning and adoption of practices and technologies more fluid and quicker.

Figure 6.3 provides a detailed view of the Organisational Context, illustrating how key internal factors, skills, social dynamics and resources can function as a double-edged sword, acting as either a powerful enabler or a significant barrier to digital adoption. The diagram breaks down this duality.

First, Digital literacy & Skills emerge as a primary determinant. As the upwards path shows, when an owner is tech-savvy, they act as an internal champion, driving strategic adoption and possessing the confidence to train others. This was evident in the Advanced Adopters, such as the Fast Food Manager. Conversely, the downward path illustrates how low digital literacy acts as a major barrier. This was seen with the Partial Adopters, like the Fashion Designer, whose low confidence created a dependency on her family and an avoidance of complex tools, confirming this study's fourth proposition (P4)

Second, Internal Social Dynamics play a crucial role. The enabling path highlights how a collaborative culture, where colleagues brainstorm together, fosters buy-in and leads to more relevant technology choices, as seen with the Sneaker Wash. The inhibiting path, however, shows how staff resistance to change, often linked to their own low digital skills, can stall or sabotage implementation. The Cocktail Bar Owner’s experience of having to “teach them from scratch” while facing resistance is a clear example of this internal social barrier.

Finally, Resource Allocation is a foundational factor. While access to capital enables investment in both technology and mitigation strategies (like generators), this diagram shows how severe resource constraints act as an absolute barrier. This is most

powerfully illustrated by the Forced Analogue archetype, the Butchery Owner, whose inability to afford backup power made any digital investment non-viable. This finding strongly supports the literature on the financial precarity and resource constraints that define many informal businesses (Ebrahim & Van den Berg, 2024). The diagram thus demonstrated that an organisation's capacity for digital adoption is ultimately determined by whether the enabling side of these internal factors is strong enough to overcome the inhibiting side.

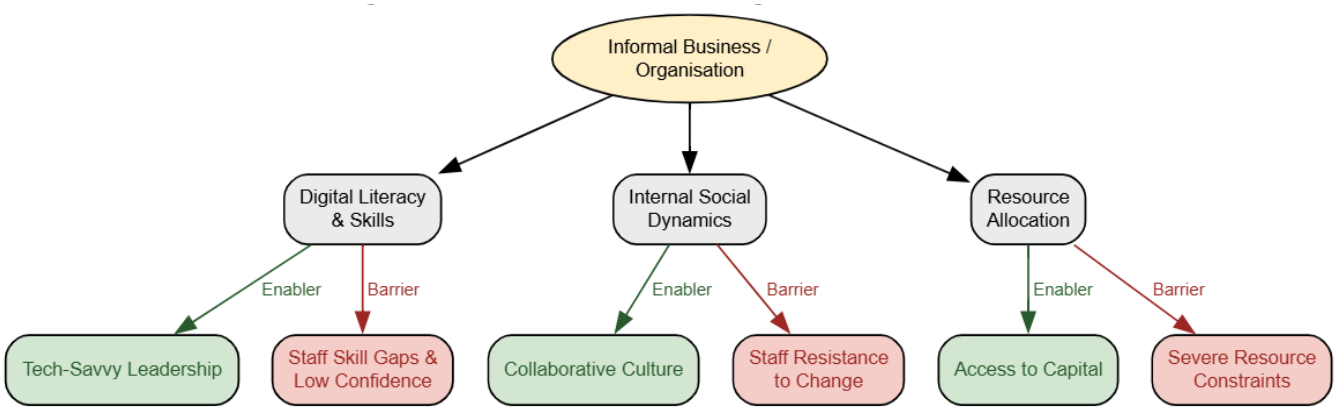


Figure 6.3: The Influence of the Organisation Context

6.2.3. Security-Based trust

A third of the trust layers is security-based trust, or the belief in the safety of digital interactions, was profoundly shaped by the trader's environment. The Butchery Owner's story of a vendor being defrauded through digital chargebacks is a stark manifestation of the security concerns highlighted in literature for South Africa (Ong, Yusri & Ibrahim, 2023).

This finding extends the literature by showing how abstract fears of cybersecurity become concrete social realities, amplified by community anecdotes that destroy trust in the security of digital interactions. The willingness to adopt financial tools is therefore not just about the technology security features, which seemed largely trusted, but about the trader's perception of safety within their immediate social and physical environment, which is fraught with both physical and digital crime. The sense across all the traders is that there is a level of safety in the community, especially in the Diepkloof area, although, if compared to "back in the day", there is a concern about the shift in sense of security.

6.3. RQ3: THE DUAL ROLE OF SOCIAL NETWORKS AND COMMUNITY NORMS

Research Question 3: In what ways do social networks and prevailing community norms influence trade adoption of digital tools in how they interact and engage with customers (specifically when social, messaging or e-commerce platforms are introduced)?

This research confirms that social networks and community norms, key elements of the Environmental context in the TOE framework, play a powerful dual role in digital adoption.

6.3.1. Social Networks as Channels for Diffusion

The role of social networks as enablers of adoption was clearly evidenced, aligning with the literature from Nigeria that highlights the importance of peer effects (Aishiru et al., 2022). The Bar/Lounge Owner's "traders WhatsApp group" and his reliance on peer recommendation (Theme 7) are modern embodiments of the "informal communication processes" described within the TOE framework. These findings provide nuanced support for Proposition 1 (P1). While the close-knot peer network (bonding social capital) enabled the diffusion of simple, trusted innovations like Yoco, the general privacy among traders ("They conduct their business quite privately") suggests these networks can also be "insular", potentially slowing the diffusion of more complex or less understood technologies.

This confirms the literature's assertion that social networks are critical for innovation diffusion. The findings from the research also highlighted how certain technological tools became known by a phrase, so instead of saying payment device, it was informally referred to as the Yoco payment tool.

6.3.2. Community Norms as Resilient Barriers to Adoption

However, this study's key contribution, as outlined in the literature review gaps, is its illumination of how community norms can act as powerful social barriers. The Cocktail Bar Owner's insight that some customers prefer cash to avoid a digital "paper trail" is a profound finding. It reveals a community norm rooted in the desire for privacy that directly contradicts the formalising logic of digital payments. It extends the literature's general observation of a "deeply ingrained preference for cash" (Ong et al., 2023) by

explaining the specific, socially embedded reason behind that preference. There was evidence with the Butchery owner that because the community she services consists of a lot of elderly people, who may send their small grandkids to the store with cash and the fact that they can't swipe their grant cards at the store, also provides a different context of cash preference due to limitations of usage. The social norm creates a direct conflict with the logic of digital financial services. This behaviour can be interpreted as an act of strategic informality, a rational tactic to maintain privacy from formal systems, which connects to the literature on regulatory scrutiny (Dickerson, 2014). It suggests the "'opaqueness" of cash is a valued social feature, not a bug to be fixed.

Similarly, the Fashion Designer's emphasis on the value of "face-to-face" interaction aligns with a cultural norm that prioritises relational business practices. This confirms the literature about "long-standing cultural preferences for face-to-face business dealings" (Mathews & Bhosale, 2021). Her perception that technology is "inhuman" represents a cultural barrier where the social cost of losing personal connection is perceived as higher than the economic gain from digital tools. It is also important to consider the nature of business because fast food or sneaker washing doesn't necessarily need interaction, as it may be deemed more transactional, and the customer experience may have more weight on the quality of food or the cleanliness of the sneakers. This supports the argument that successful digital inclusion requires culturally-sensitive innovation (Munyoka, 2022), with the context of the business it is applied to.

6.4. RQ5: THE EXACERBATING EFFECT OF THE SOCIO-ECONOMIC AND HISTORICAL ENVIRONMENT

Research Question 5: How does the historical legacy of Soweto and its rich socio-economic environment (including factors like crime, infrastructure reliability and competition from formal retail - all key environmental factors in TOE) exacerbate or interact with the identified social barriers to digital adoption?

6.4.1. The Dominance of Infrastructural Failure

The findings provide a resounding answer: the socio-economic and historical environment of Soweto does not just contain social barriers; it actively creates and exacerbates them. This confirms that the Environmental context in the TOE framework is

arguably the most dominant force shaping digital adoption in this informal economy. This dynamic is visually represented in Figure 6.4 below. The diagram is deliberately asymmetrical to illustrate how the significant and deeply embedded environmental barriers, such as pervasive insecurity and infrastructural failure, overwhelm the weaker enabling pressures from the market and peers. This hostile environment, as will be discussed, fundamentally constrains the agency of traders and intensifies the social barriers of distrust and resistance to change.

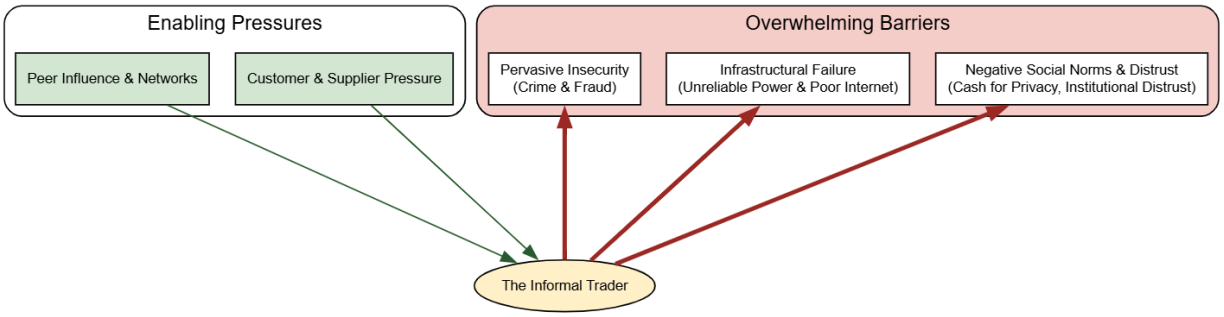


Figure 6.4: The Dominance of Environmental Barriers

Figure 6.4 shows the Enabling pressures as smaller forces. Peer influence and market pressure from customers and suppliers do encourage adoption, confirming the literature (Bvuma & Marnewick, 2020). The widespread adoption of Yoco, for instance, was driven by both customer demand and the fact that many traders saw their peers using it successfully.

However, these enablers are dwarfed by the Overwhelming Barriers. The diagram visually represents these as heavy, imposing forces pressing on the trader.

A. First, Pervasive Insecurity from crime and fraud creates a climate of fear that erodes trust and discourages investment in valuable digital devices, a finding that confirms existing literature (Ong et al., 2023; Scheba & Turok, 2020).
B. Second, Infrastructural Failure, particularly unreliable power from load shedding and poor internet connectivity, makes digital tools useless for significant periods. This was a definitive constraint for the Butchery Owner, who was forced to close her business for months.
C. Third, Negative Social Norms and Distrust, such as the community preferences for cash to avoid a “paper trail” and the historically rooted institutional distrust

stemming from Soweto's legacy of marginalisation (Harrison & Harrison, 2014), create a social fabric that is inherently resistant to formal digital systems.

This figure visually argues that for many traders, particularly the Partial and Forced Analogue archetypes, their agency to adopt technology is severely constrained by an environment where the social and structural barriers are not just challenges to be overcome, but are dominant, defining features of their reality.

6.4.2. The 'Security Paradox' Crime as Both Driver and Barrier

The literature review unpacked the historical and current context of Diepkloof and Orlando, which provided an interesting landscape for the study. When this is taken into account with the findings, it becomes evident that Diepkloof's more affluent market also has traces of historical impact. Many of the owners were a younger generation and the older generation owners (especially family-owned businesses) were highly influenced by their background from both a safety comparison perspective and digital literacy, showcasing the lack of exposure to certain innovations in the past.

The most visceral environmental factor identified was pervasive insecurity due to crime (Theme 5), which directly confirms the literature's identification of crime as a key challenge in township economies (Scheba & Turok, 2020) and a barrier to digital adoption (Ong et al., 2023). This study extends the literature by demonstrating how this environmental factor interacts with the social barrier of trust. The high risk of device theft and fraud creates a climate of fear that erodes the collective trust needed for a digital ecosystem to flourish. Although the crime and fear of theft extends to stock and cash theft, it is key to note that this may act as a strong barrier as well. The need for burglar bars, as described by the Butchery Owner, is a physical manifestation of a social reality. This was evident in all the establishments, regardless of the nature of the business. This fundamentally shapes all business decisions, including technology investment.

Secondly, the findings on infrastructural deficiencies (Theme 6) provide strong empirical support for the literature's emphasis on inadequate infrastructure as a defining characteristic of township economies (Scheba & Turok, 2020) and a barrier to digital adoption (Bvuma & Marnewick, 2020). This study's contribution lies in showing how these structural failures interact with social and psychological barriers. For the Butchery

Owner, the unaffordability of backup power led to a rational decision to delay digitisation, reinforcing a reliance on analogue methods. She emphasised that the growth of formal retailers in the areas has affected their business and therefore bottom line, and instead of investing in backup power or technology, they are just trying to keep afloat. This creates a vicious cycle: infrastructure failures make digital tools unreliable, which reduces their perceived usefulness and reinforces a cultural preference for non-digital alternatives.

6.4.3. The Enduring Shadow of Historical Legacy

Finally, the historical legacy of Soweto, as detailed in the literature review through the analysis of Diepkloof (Harrison & Harrison, 2014), casts a long shadow over the findings. The deep-seated institutional distrust expressed by the Fashion Designer (Theme 7) can be interpreted as a direct consequence of a history of marginalisation and exploitation by formal systems (P5). The very existence of Soweto's informal economy is a response to historical economic exclusion (Metych, 2025). Therefore, the reluctance to embrace digital tools associated with formal institutions is not merely a contemporary economic decision but a socio-political one, rooted in a collective memory of systemic disadvantage.

These findings also offer insight into Proposition 3 (P3) regarding agency and structure. The environment has a powerful "structure". The Advanced Adopters demonstrate high agency by actively mitigating these constraints (buying generators). The Partial Adopters exhibit "digital bricolage" by adapting simple tools to their needs. However, the Forced Analogue archetype shows how environmental structures, or constraints, can severely constrain agency, making digital adoption almost impossible, a finding that challenges simplistic views of adoption as a free choice.

6.5. THE MODERATING ROLE OF THE ADOPTER ARCHETYPE: A CROSS-CASE DISCUSSION

The findings reveal that social barriers are not experienced uniformly: their impact is moderated by the trader's adopter archetype, as defined in the literature review. This typology allows for a deeper understanding of the nuances within the data.

Consider the barrier of staff skill gaps (Theme 3). For the Advanced Adopter, like the Cocktail Bar Owners, this was an acknowledged “challenge” to be actively managed through training. His own digital literacy and resources allowed him to treat it as a solvable problem. In contrast, for the Partial Adopter, like the Fashion Designer, her own low confidence (“mind boggling”), combined with a lack of skilled staff, creates a dependency on family, stalling deeper digital integration. The barrier is not just external; it is internalised and reinforcing.

Similarly, the Environmental barrier or Pervasive Insecurity (Theme 5) is navigated differently. The Advanced Adopters invest in mitigation strategies like generators and comprehensive POS systems that reduce cash handling. The Partial Adopters, like the Sneaker Wash Manager, also adopt digital payments for safety but may not have the resources for backup power, leaving them vulnerable to infrastructure failures. This could also be justified by the fact that the business is manual washing of sneakers and is more dependent on human resources than on machines like fridges, but having hot water may be a requirement, which would necessitate a generator or solar geyser.

For the Forced Analogue archetype, the discussion is moot. The Butchery Owner is so constrained by the environmental barriers that application complexity is a secondary concern; she cannot even afford to address it. This demonstrates that the hierarchy and impact of social barriers are directly linked to the trader’s position on the adoption spectrum.

6.6. SYNTHESIS OF DISCUSSION

This chapter has provided an in-depth discussion of the research findings, systematically linking them to the guiding five research questions and the established literature. This analysis, framed within the TOE model, confirms many assertions from prior research while also extending them with nuanced, context-specific insights from the lived experiences of traders in Soweto, Diepkloof and Orlando.

The findings underscore that perceived usefulness drives interest in technology, but this is heavily constrained by interconnected social barriers of complexity, trust, literacy and cost. The study extends the literature by highlighting the significance of cultural misalignment and specific community norms (like “paper trail” avoidance) that act as powerful social barriers. Most importantly, the discussion illustrates how the harsh

environmental realities of crime and poor infrastructure exacerbate these social barriers, creating a challenging ecosystem for digital transformation.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7. SYNTHESISING THE RESEARCH JOURNEY

This final chapter serves to synthesise the preceding six chapters into a cohesive and conclusive whole. Its purpose is not merely to summarise the research undertaken but to interpret the findings in relation to the initial research problem, provide definitive answers to the guiding research questions and articulate the study's unique theoretical and practical significance. This research sought to move beyond conventional techno-economic explanations for low digital adoption in informal economies by exploring the deeply embedded social barriers that shape the lived realities of traders. By drawing together the problem definition, literature review, methodology, findings and discussion, this chapter presents the culminating arguments of the study. The structure of this conclusion methodically addresses the core components of the research journey, from the initial problem to the implications for future inquiry and practice, thereby providing a comprehensive resolution to the investigation.

7.1. THE RESEARCH PROBLEM REVISITED: SOCIAL BARRIERS IN THE DIGITAL AGE

This study investigated the critical and underexplored social barrier that influences the adoption of digital technologies among informal traders in Soweto, South Africa. As established in the initial framing of the research, while digital transformation is a global priority, its benefits remain largely inaccessible to the informal sector, which constitutes a significant portion of employment and economic activity in emerging markets. The importance of this investigation lies in its direct challenge to conventional technology adoption models, such as the TAM and UTAUT. These frameworks, which prioritise factors like perceived usefulness and ease of use, often "fail to account for the lived realities and social dynamics of the informal economy".

The core of the problem lies in the fundamental clash between the inherent logic of digital technology and the operational logic of the township's informal economy. Digital tools, by their nature, promote formalisation by creating transparent "data trails" often requiring integration with formal banking systems. This stands in stark contrast to the logic of many informal enterprises, which rely on flexibility, relational trust and a degree of opacity to navigate regulatory and economic uncertainties. Consequently, the

research problem is not simply about a lack of access to technology but about the inherent friction between these two systems. This study matters because failing to understand and address these socio-cultural barriers risks perpetuating and even deepening the digital divide, further marginalising a vital economic sector from the benefits of digitisation.

7.2. THE RESEARCH JOURNEY

The research was situated within the informal trade sector of Soweto, South Africa's largest and most historically significant township. The selection of Soweto was not incidental but was critical to the research design, as its history is deeply rooted in the policies of racial segregation and economic marginalisation of the apartheid era. This context is an active variable in the research, not a passive backdrop. Soweto was deliberately designed as a "non-generative economic space", a residential dormitory with severely restricted formal economic opportunities, which directly fostered the emergence of a vibrant and necessary informal economy to serve its population.

This unique trajectory has profoundly shaped the social fabric, economic practices and institutional trust levels that persist today. The internal divisions within Soweto, exemplified by the stark contrast between Diepkloof, a space of engineered class division and Orlando, a site of unified resistance, provide a rich microcosm for studying how historical legacies manifest as contemporary social barriers. This context is crucial because it allows for an analysis of how deep-seated historical factors, particularly a rational and learned distrust of formal institutions, continue to influence economic behaviour in the digital age. The historical analysis reveals that the "distrust" observed in the findings is not merely a psychological trait of individuals but a historically conditioned community response. When formal institutions were historically instruments of state control and oppression, a contemporary reluctance to engage with formal digital platforms that represent these institutions becomes an understandable and rational position.

7.3. SITUATING THE STUDY WITHIN THE SCHOLARLY CONVERSATION

The scholarly literature, reviewed extensively in Chapter 2, had already established that digital adoption in informal economies is hindered by a range of infrastructural and economic barriers, such as high data costs, unreliable electricity and limited access to finance. Frameworks like the TOE model provided a useful, high-level structure for

categorising these factors. Furthermore, comparative evidence from other emerging markets, such as India and Nigeria, confirmed the cross-cutting importance of barriers like low digital literacy and a cultural preference for cash transactions.

However, as identified in the literature gap analysis, significant unknowns remained. There was a distinct lack of deep qualitative contextual understanding of how these barriers are perceived, narrated and navigated by informal traders in their daily lives. The existing literature often presented a list of discrete barriers but offered little exploration of the nuanced interplay between them. For instance, it was unclear how low institutional trust might amplify the negative effects of low digital literacy, or how community norms might interact with security concerns. This study was designed specifically to address these gaps by providing a rich, qualitative exploration of the interactive and socially-embedded nature of these barriers within the unique post-apartheid context of Soweto, moving beyond *what* the barriers are the understand *how* they function as a complex, interconnected system.

7.4. ANSWERING THE RESEARCH QUESTIONS

This study provided comprehensive answers to the five research questions that guided the inquiry, synthesising the empirical findings from Chapters 5 and 6

- **RQ1 and RQ4 (Perceptions, Alignment and Literacy)**

The research found that while traders universally perceive the usefulness of digital tools, this perception is heavily mediated by their digital literacy and the tools' alignment with their business practices. High perceived usefulness, driven by customer demand and the promise of efficiency, acts as a powerful motivator. However, low digital literacy magnifies perceptions of complexity, which one participant described as “mind-boggling”, and risk, creating a significant psychological barrier. In addition, a lack of affordable, integrated, all-in-one systems creates a technical and economic misalignment with the operational realities of small, constrained resource businesses, forcing them to patch together fragmented solutions.

- **RQ2 (Social trust)**

Social trust was revealed to be a pervasive and multi-layered influence on the adoption of financial technologies. The findings show that the traders’ willingness to engage is

contingent on a fragile ecosystem of trust comprising three distinct layers: 1) Institutional trust, which is generally low due to historical legacy and fear of exploitation by formal service provider; 2) Relational Trust, which is high, with peer recommendations and visible success within social networks acting as a key driver for adoption; and 3) Security based Trust, which is low, undermined by the pervasive environmental risks of crime and digital fraud.

- **RQ3 (Social Networks and Norms)**

Social networks and community norms were found to play a powerful dual role. Networks act as crucial channels for the diffusion of simple, validated technologies like the Yovo payment device, with traders relying on peers to de-risk their investment. However, these networks can also be insular, potentially slowing the spread of more complex innovations. Prevailing community norms emerged as a resilient cultural barrier. The finding that some customers prefer cash to avoid a digital “paper trail” of their purchases illustrates a community norm rooted in a desire for privacy that directly clashes with the formalising logic of digital payments.

- **RQ5 (Socio-Economic Environment)**

The socio-economic environment of Soweto was found to be a dominant, exacerbating force. Pervasive insecurity from crime and critical infrastructural failures, most notably chronic power outages (loadshedding) and not merely background challenges, but currently experienced, overwhelming constraints. This hostile operating environment intensifies all other social barriers, eroding trust, making digital tools unreliable and increasing the financial risk of investment, and can render digital adoption non-viable regardless of a trader’s individual motivation or skills.

7.5. METHODOLOGICAL APPROACH: A LENS ON LIVED EXPERIENCE

To answer these nuanced questions, this study employed a qualitative research design grounded in an interprevist philosophy, as detailed in Chapter 4. The primary method for data collection involved in-depth, semi-structured interviews with a sample of 11 informal food, liquor and service traders operating in Diepkloof and Orlando. Participants were selected using a combination of purposive and snowball sampling to ensure a diversity of business types, locations and levels of digital engagement.

This qualitative approach was essential for achieving the study's aim of generating a detailed, nuanced comprehension of the complex, multifaceted social barriers at play. While a quantitative survey could have measured adoption levels, it would have been incapable of uncovering the *why* behind those rates, the lived experience, the cultural meanings attached to technology and the intricate social dynamics that shape traders' decisions. The use of thematic analysis, structured by the TOE framework, allowed for the identification of rich, emergent themes directly from the participants' own narratives. This ensured that the findings and interpretations remained deeply grounded in the reality of the traders themselves, providing a bottom-up perspective that is often missing from technology adoption research.

7.6. SYNTHESIS OF THE FINDINGS: A SOCIALLY-EMBEDDED REALITY

The study's central finding is that digital adoption in Diepkloof and Orlando's informal trade is not a simple technical or economic choice, but a complex social negotiation conducted within a challenging and often hostile environment. This negotiation is best understood through two key interpretive lenses that emerged from the data: the identification of distinct Adopter Archetypes and recognition of the dominance of the environmental context.

The research identified three archetypes that illustrate a spectrum of adoption shaped by the interplay between individual agency and structural constraints:

The Advanced Adopter, proactive, strategic, and often possessing high personal digital literacy, this trader actively uses technology for growth and leverages their skills and resources to mitigate environmental barriers (e.g., by purchasing a generator).

The Partial Adopter, pragmatic and reactive, this trader represents the majority. They adopt simple, high-impact tools (like a payment device) primarily out of necessity and customer demand but are constrained by limited skills, resources and confidence, resulting in a fragmented digital footprint.

The Forced Analogue is a critical finding in the study. This archetype is not resistant to technology but is actively *blocked* from adopting it by insurmountable environmental barriers. The experience of the Butchery Owner, whose business was forced to close for six months due to load shedding because backup power was unaffordably expensive,

powerfully illustrates that for some, non-adoption is a rational response to a non-viable operating context.

Across all archetypes, the Environmental context of the TOE framework emerged as the most powerful determinant of adoption pathways. While the Technological context presented tension between the “pull” of perceived usefulness and the “push-back” of complexity, and the Organisational context revealed a divide in internal capabilities, it was the overwhelming pressure of the environment that ultimately shaped the realm of possibility for these traders. Pervasive insecurity and chronic infrastructural deficiencies created a context where the risks, costs, and frustrations of going digital often outweighed the potential benefits, particularly for those with limited resources. This interpretation posits that in resource-constrained and high-risk environments, the environmental context is not just one of three equivalent factors but is the primary filter through which all adoption decisions are made.

7.7. THEORETICAL CONTRIBUTION

This study contributes to the literature on technology adoption by demonstrating the limitations of the standard TOE framework applied to the informal economy. The findings suggest that social barriers are not merely a component of the "Environment" but a cross-cutting dimension that shapes all three TOE contexts.

As a result, this research proposes a socially-embedded refinement of the TOE framework. In the refined model, factors like social trust, community norms and environmental security form a central, mediating layer through which technology is perceived, organisational capacities are developed, and the external environment is interpreted. This refinement responds to critiques that the TOE framework can be too static (Sadiq et al., 2022) by introducing a dynamic social layer that better captures the fluid realities of the settings where social ties and historical context are paramount.

7.8. MANAGERIAL AND POLICY IMPLICATIONS

The findings offer clear actionable insights for stakeholders:

7.8.1. For Policymakers: Interventions must go beyond providing infrastructure and move beyond simply providing connectuvuty. By addressing socio-infrastructure they will inherently integrate digital inclusion strategies with

community safety initiitives to tackle the pervasive insecurity that breed distrust. They must address the social realities that prevent its use. This means integrating digital inclusion strategies with community-based digital literacy programs that use trusted facilitators. Develop policies for subsided and reliable backup power stations (e.g. solar financing) targeted at micro-enterprises, acknowledging that infrastructural failure is a definitive blocker.

7.8.2. For technology developers: There is a clear market need for affordable, all-in-one business management tools co-designed with informal traders. Design for context by developing affordable, integrated, mobile first solutions that are specifically co-created with informal traders to ensure simplicity, usability (even with low literacy levels) and alignment with flexible workflows. Trust can be built through relational support channels (e.g WhatsApp) and transparent pricing directly addressing the institutional distrust identified in the findings. The systems mentioned are mostly for stock management, suitable in this environment for both off-the-shelf products and fast food restaurants. These technologies also need to include an ongoing tech support resource or contact. By prioritising trust and relational support they can also implement pay-as-you-go pricing models without complex contracts.

7.8.3. For informal Traders: Traders should leverage the power of their informal networks to share knowledge and collectively vet new technologies. Encourage traders to form local networks (like whatsapp groups) to share knowledge, collectively vet technologies and potentially pool resources for security or training. An incremental approach to adoption, starting with simple, high-impact tools, can build the confidence and skills necessary for deeper digital integration.

7.9. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study revealed several limitations as outlined in Chapter 4. The qualitative design and small context-specific sample mean the figures are not generalisable.

7.9.1. The researcher could have interviewed more owners than the managers to get full insight into business operations from a managerial perspective

7.9.2. The sample size was deemed applicable but the researcher could have added in three more respondents

7.9.3. Despite efforts to maintain reflexivity through memos, the researcher's own background , assumptions and interactions during the interview could have inadvertently shaped the data collection and interpretation process. An 'outsider' perspective might miss subtle cultural nuances or elicit socially desirable responses

7.9.4. The study provides a snapshot of digital adoption patterns and perceptions at a specific point in time (2025). Digital adoption is a dynamic process, influenced by rapidly changing technologies, market conditions and external shocks. This cross sectional approach cannot fully capture the evolution of adoption behaviour or the long-term impact of barriers.

7.9.5. The findings are based on participants' accounts of their experiences, perceptions and behaviours. Thes self-reported data may be subject to recall bias (difficulty remembering past events accurately) or social desireability boas (participants presenting themselves or their businesses in a more positive or tech-savvy light than reality). Direct observation of technology use was limited.

7.9.6. The sampling focused primarily on informal food and liquor traders. While this provided depth within a specific sub-sector, the findings may not fully represent the experiences of informal traders in other sectors (e.g, services, transport, small scale manufacturing), who might face different types of intensities of social barriers and have distinct digital needs.

7.9.7. Although conducted in 2025, the profound impact of the recent covid-19 pandemic might still be influencing traders' perspective on digitalisation (perhaps accelerating interest or deepening financial constraints). This potential lingering effect was not explicitly isolated in the analysis.

While this study provides valuable insights its limitations points towards important avenues for future research:

7.9.8. Generalisability and prevalence, as a qualitative study with a small sample focuses on Soweto, the findings lack statistical generalisability. Future research should employ quantitative surveys or mixed methods appraoch across a larger, more representative sample of informal traders in various South African townships to determine prevalance and relative importance of social barriers.

7.9.9. Comparative studies as the findings are context specific. Comparative case studies between different townships within South Africa (e.g., exploring

variations based on loacation) or between different countries (e.g., contrasting South Africa with Nigeria or India, drawing on literature) would illuminate how different socio-historical context shape social barriers.

7.9.10. Multi-stakeholder perspectives because this study focused on the trader's perspective. Future research should adopt a multi-stakeholder approach incorporating views of customers, technology developers, policymakers and community leaders to provide a more holistic understanding of the entire digital adoption ecosystem.

7.10. CONCLUDING REMARKS

Digital adoption holds immense promise for enhancing the livelihoods of millions engaged in South Africa's informal trade. However, this research demonstrated conclusively that the path to digital inclusion is heavily mediated by a complex web of deeply embedded social barriers. Factors such as pervasive insecurity, profound institutional distrust rooted in historical legacy, challenging community norms and significant gaps in digital literacy create a formidable ecosystem that often resists or fragments the adoption of digital tools, even when their benefits are clearly perceived. For digital transformation to be truly inclusive and equitable, interventions must move beyond purely technological or economic solutions. They must adopt a human-centred approach that acknoeldeges, respects amd directly addresses the social structures, cultural values and lived realities of informal traders within their specific contexts. Only by tackling these social barriers head on can the full potential of digitalisation be unlocked for this vital sector of the economy.

REFERENCES

Aissaoui, N. (2022, December 5). The digital divide: a literature review and some directions for future research in light of COVID-19. *Global Knowledge, Memory and Communication*, *71*(8/9), 686-708. https://doi.org/10.1108/GKMC-06-2020-0075

Arpaci, I., Yardimci, Y. C., Ozkan, S., & Turetken, O. (2012). Organisational adoption of information technologies: a literature review. *International journal of eBusiness and eGovernment studies*, *4*(2), 37-50. https://dergipark.org.tr/en/download/article-file/257046

Ashiru, F., Nakpodia, F., & You, J. J. (2022, November 23). Adapting emerging digital communication technologies for resilience: evidence from Nigerian SMEs. *Annals of Operations Research*, *327*(2), 795-823. https://doi.org/10.1007/s10479-022-05049-9

Bajwa, S. S. (2023, July 7). Challenges and Opportunities of Promoting Digital Media Literacy in Rural India. *International Journal of Science and Research*, *12*(7). 10.21275/SR23709181750

Balde, R. (2024, April 8). Trading permits and informal entrepreneurship: evidence from South Africa. *Oxford Economic Papers*, *76*(4), 1239-1264. https://doi.org/10.1093/oep/gpae013

Braun, V., & Clarke, V. (2006, January 1). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Buthelezi, M., Chatikobo, T., & Dalvit, L. (2020, November 27). United in diversity? Digital differences and inequalities within a South African rural community. *Information, Communication & Society*, *24*(3), 455-469. https://doi.org/10.1080/1369118X.2020.1864000

Bvuma, S., & Marnewick, C. (2020, April 14). Sustainable Livelihoods of Township Small, Medium and Micro Enterprises towards Growth and Development. *Sustainability*, *12*(8), 3149. https://doi.org/10.3390/su12083149

Bvuma, S., & Marnewick, C. (2020, August 20). An information and communication technology adoption framework for small, medium and micro-enterprises operating in townships South Africa. *The Southern African Journal of Entrepreneurship and Small Business Management*, *12*(1). https://doi.org/10.4102/sajesbm.v12i1.318

Charman, A., Petersen, L., & Govender, T. (2020). *Township Economy: People, Spaces and Practices* (45th ed., Vol. 2). HSRC Press. https://doi.org/10.1080/23323256.2022.2090975

Cottica, A., & Gustale, E. (2023, August 29). *Informal businesses and the shift to digital: What we learned from small enterprises joining the digital economy*. www.undp.org/. Retrieved April 30, 2025, from https://www.undp.org/acceleratorlabs/blog/informal-businesses-and-shift-digital-what-we-learned-small-enterprises-joining-digital-economy

Dell'Anno, R. (2021, December 7). Theories and definitions of the informal economy: A survey. *Journal of Economic Surveys*, *36*(5), 1610-1643. https://doi.org/10.1111/joes.12487

Dickerson, C. M. (2014). Bringing formal business laws to Cameroon's informal sector: lessons and cautions from the tax law example. In *Washington University Global Studies Law Review* (Vol. 13, p. 272). HeinOnline. https://heinonline.org/HOL/LandingPage?handle=hein.journals/wasglo13&div=13&id=&page=

Dutta, N., Kar, S., & Guha, S. (2023, November 21). Informal sector in India and adoption of digital technologies. *Indian Growth and Development Review*, *16*(3), 230-246. http://dx.doi.org/10.1108/IGDR-12-2022-0144

Ebrahim, A. Q., & Van den Berg, C. L. (2024, October 11). The barriers to technology adoption among businesses in the informal economy in Cape Town. *South African Journal of Information Management*, *26*(1), 1-13. https://doi.org/10.4102/sajim.v26i1.1872

Farrell, E., Howorth, C., & Wright, M. (2008, October 9). A review of sampling and definitional issues in informal venture capital research. *Venture Capital*, *10*(4), 331-353. https://doi.org/10.1080/13691060802151986

García-Avilés, J.-A. (2020, September 8). Diffusion of innovation. *The International Encyclopedia of Media Psychology*, *1*(8), 1-8.

Girollet, D. (2023, November 30). Digital divides among microenterprises: Evidence from sub-Saharan Africa. *Journal of International Development*, *36*(2), 1350 - 1380. https://doi.org/10.1002/jid.3860

GSMA. (2023). *State of the mobile money industry in sub-Saharan Africa 2023*. www.gsma. Retrieved May 25, 2025, from https://www.bing.com/ck/a?!&&p=2fd1f3879f3cfbdfa1c2584d8587a79763d85d1fd43cc5a2e719267c78879683JmltdHM9MTc0ODEzMTIwMA&ptn=3&ver=2&hsh=4

&fclid=13c0b438-a052-6324-123b-a1f2a19b62fa&psq=cashless+transactions+(GSMA%2c+2023).&u=a1aHR0cHM6Ly93d3cuZ3NtYS5jb20vc29

Gupta, B. B., Perez, G. M., Agrawal, D. P., & Gupta, D. (Eds.). (2020). *Handbook of Computer Networks and Cyber Security: Principles and Paradigms*. Springer International Publishing. https://doi.org/10.1007/978-3-030-22277-2_26

Harrison, P., & Harrison, K. (2014). Soweto: A study in socio-spatial differentiation. *Easten Enterprises*. https://www.jstor.org/stable/pdf/10.18772/22014107656.19.pdf

Hart, K. (1973, March). Informal Income Opportunities and Urban Employment in Ghana. *: The Journal of Modern African Studies*, *11*(1), 61-89. https://www.jstor.org/stable/pdf/159873.pdf?casa_token=-B7q-hVXgM8AAAAA:5c4EM9FA-Fi1eSvT9Vpwc3GHjSaUWSSLLSOqQ6zmyziGdAjz_hOnFpbq2f0eoekrp8ONfksBFJlFclMiKbzjjUBdbmMD8Ei1EdSt2XiDyO6EeGcdzAkH

International Labour Organisation. (2024, January 28). *Informal economy*. International Labour Organisation. Retrieved May 18, 2025, from https://www.ilo.org/international-labour-organization/topics/formalization

International Labour Organisation. (2025, January 31). *Africa informality - regional statistics*. International Labour Organisation. Retrieved May 18, 2025, from https://www.ilo.org/resource/other/africa-informality-regional-statistics

Karombe, S. G. (2025, February 19). *The Informal Sector, The SA economy's saviour? Can the use of AI increase its impact?* Discover Thought. Retrieved April 30, 2025, from https://www.discoverthought.org/post/the-informal-sector-the-sa-economy-s-saviour-can-the-use-of-ai-increase-its-impact

Kiaga, A., & Leung, V. (2020, November). *The Transition from the Informal to the Formal Economy in Africa* (4th ed.) [Global Employment Policy Review]. https://www.ilo.org. Retrieved May 30, 2025, from https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/documents/publication/wcms_792078.pdf

Kondo, K. (2023, June 25). A Place of Remembrance in South Africa’s Post-Memory Boom: Depicting the Hector Pieterson Memorial and Museum from Everyday. *Journal of African Cultural Heritage Studies*, *3*(1). https://doi.org/10.22599/jachs.121

Lim, W. M. (2025). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, *33*(2), 199-229.

Lin, N., Cook, K. S., & Burt, R. S. (2001). *Social Capital: Theory and Research* (N. Lin, K. S. Cook, & R. S. Burt, Eds.). Aldine Transaction. https://books.google.com/books?hl=en&lr=&id=yFUPEAAAQBAJ&oi=fnd&pg=PP1&dq=social+capital+theory&ots=au1JeQK9Wy&sig=X281d0lKC9lItKsq9FdqmNHFm4Y

Lobsy, J. L., Else, J. F., Kingslow, M. E., Edgcomb, E. L., & Malm, E. T. (2002, December). Informal Economy Literature Review. *ISED Consulting and Research*, *1*(55). https://www.aspeninstitute.org/wp-content/uploads/2017/04/InformalEconomyLiteratureReview.pdf

Lynge, H., Visagie, J., Scheba, A., Turok, I., Everatt, D., & Abrahams, C. (2022, September 13). Developing neighbourhood typologies and understanding urban inequality: a data-driven approach. *Regional Studies, Regional Science*, *9*(1), 618-640. https://doi.org/10.1080/21681376.2022.2132180

Maritz, J. (2025, July 21). Entrepreneur sees profits in South Africa's townships. *How we made it in Africa*. https://www.howwemadeitinafrica.com/entrepreneurs-sees-profits-in-south-africas-townships/182320/

Mathews, F., & Bhosale, A. (2021, September). Understanding the Factors Influencing Street Vendors towards Use of Digital Payment Systems in India. *In 2021 9th International Conference on Reliability, Infocom Technologies and Optimisation (Trends and Future)*, 1-7. 10.1109/ICRITO51393.2021.9596315

Mazibuko, N. (2023). Barriers to the use of digital marketing by Small and Medium Enterprises in Soweto. *(Master's thesis, University of the Witwatersrand, Johannesburg)*, *0*(0). https://wiredspace.wits.ac.za/server/api/core/bitstreams/3e70ca1e-25bc-45db-bd10-ac13f36ede72/content

Maziva, C. (2023, March 28). *Africa's informal economy: The role of digitalisation and fintech in promoting financial and economic inclusion*. https://www.inonafrica.com/. Retrieved April 30, 2025, from https://www.inonafrica.com/2023/03/28/africas-informal-economy-the-role-of-digitalisation-and-fintech-in-promoting-financial-and-economic-inclusion/

Mbuyi, T. (2017, February 20). Spatial Planning and Transportation in Soweto. Tracking Densification and Land-Use Changes Around Rea Vaya Phase 1A Stations. (Doctoral Dissertation). https://core.ac.uk/download/pdf/188775232.pdf

Metych, M. (2025, April 7). *Soweto | History, Map, & Facts*. Britannica. Retrieved May 18, 2025, from https://www.britannica.com/place/Soweto

Moagi, T. J., Ivanovic, M., & Adinolfi, M. C. (2021, February). Business Challenges of Arts and Crafts Street Vendors at Key Tourist Attractions in Soweto, South Africa. *African Journal of Hospitality, Tourism and Leisure*, *10*(1), 85-101. https://doi.org/10.46222/ajhtl.19770720-88

Moore, E. M., Dau, L. A., & Mingo, S. (2021, January 27). The effects of trade integration on formal and informal entrepreneurship: The moderating role of economic development. *Journal of International Business Studies*, *52*, 746–772. https://doi.org/10.1057/s41267-020-00386-y

Mpedi, L. G., & Marwala, T. (2025, March 14). *Artificial Intelligence, the Informal Economy and the Future of Social Security*. https://unu.edu/. Retrieved April 30, 2025, from https://unu.edu/article/artificial-intelligence-informal-economy-and-future-social-security

Mpedi, L. G., & Marwala, T. (2025, March 25). *Artificial Intelligence, the Informal Economy and the Future of Social Security: Pairing AI-driven solutions with inclusive social security policies could help the informal sector transform the global economy.* https://unu.edu/article. Retrieved April 30, 2025, from https://unu.edu/article/artificial-intelligence-informal-economy-and-future-social-security

Munyoka, W. (2022, April 29). Inclusive Digital Innovation in South Africa: Perspectives from Disadvantaged and Marginalised Communities. *Sustainability*, *14*(9), 5372. https://doi.org/10.3390/su14095372

Nassaji, H. (2020). Good qualitative research. *In Language Teaching Research*, *24*(4), 427-431. https://doi.org/10.1177/1362168820941288

Nkwana, S., & Roberson, J. R. (2025, April 1). Influence of second-tier retail expansion on micro-enterprise sustainability in Soweto. *Southern African Journal of Entrepreneurship and Small Business Management*, *17*(1), 1-13. https://doi.org/10.4102/sajesbm.v17i1.994

Nordhoff, S., Malmsten, V., van Arem, B., Liu, P., & Happee, R. (2021). A structural equation modelling approach for the acceptance of driverless automated shuttles based on constructs from the Unified Theory of Acceptance and Use of Technology and the Diffusion of Innovation Theory. https://doi.org/10.1016/j.trf.2021.01.001

Oliveira, T., & Martins, M. F. (2011, January 1). Literature Review of Information Technology Adoption Models at Firm Level. *Electronic journal of information systems evaluation*, *14*(1), 110-121. https://academic-publishing.org/index.php/ejise/article/view/389

Ololube, N. P., Ubogu, A. E., & Egbezor, D. E. (2007). ICT and Distance Education Programs in a Sub-Saharan African Country: A Theoretical Perspective. *Journal of Information Technology Impact*, *7*(3), 181-194. https://www.academia.edu/download/77232380/9ict-and-distance-education.pdf

Ong, M. H. A., Yusri, M. Y., & Ibrahim, N. S. (2023, June 27). Use and behavioural intention using digital payment systems among rural residents: Extending the UTAUT-2 model. *Technology in Society*. https://doi.org/10.1016/j.techsoc.2023.102305

Otokiti, B. O., Igwe, A. N., Ewim, C. P.-M., Ibeh, A. I., & Sikhakhane-Nwokediegwu, Z. -. (2022, February). A Framework for developing resilient business models for Nigerian SMES in response to economic disruptions. *International Journal of Multidisciplinary Research and Growth Evaluation*, *3*(1), 647-659. https://doi.org/10.54660/.IJMRGE.2022.3.1-647-659

Patil, P., Tamilmani, K., Rana, N. P., & Raghavan, V. (2020, October). Understanding consumer adoption of mobile payment in India: Extending Meta-UTAUT model with personal innovativeness, anxiety, trust, and grievance redressal. *International Journal of Information Management*, *55*. https://doi.org/10.1016/j.ijinfomgt.2020.102144

Roberts, R. E. (2020, September). Qualitative Interview Questions: Guidance for Novice Researchers. *The Qualitative Report*, *25*(9), 3185. http://dx.doi.org/10.46743/2160-3715/2020.4640

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. *In An integrated approach to communication theory and research*, 432-448.

Sadiq, O., Hack-Polay, D., Fuller, T., & Rahman, M. (2022, November 21). Barriers to the Effective Integration of Developed ICT for SMEs in Rural NIGERIA. *Businesses*, *2*(4), 501-562. https://doi.org/10.3390/businesses2040032

Saunders, M., & Lewis, P. (2017). *Doing Research in Business and Management* (2nd ed.). Pearson.

Scheba, A., & Turok, I. N. (2020, March). Strengthening Township Economies in South Africa: the Case for Better Regulation and Policy Innovation. *Urban Forum*, *31*(1), 77-94. https://doi.org/10.1007/s12132-019-09378-0

Scholtz, E., Cronje, L., & Cilliers, O. (2023, July 1). Quality service SMMEs in South African townships: A comparative study of the Soweto and Diepsloot townships. *Journal of Contemporary Management*, *20*(2), 199 - 235. https://doi.org/10.35683/jcman1037.220

Sgori, E. (2023, October 31). 5 Great Apps Created For The Township Market. *IT News Africa*. https://www.itnewsafrica.com/2023/10/5-great-apps-created-for-the-township-market/

Shahadat, M.M. H., Nekmahmud, M., Ebrahimi, P., & Fekete-Farkas, M. (2023, January 9). Digital Technology Adoption in SMEs: What Technological, Environmental and Organisational Factors Influence in Emerging Countries? *Global Business Review*, *0*(0). https://doi.org/10.1177/09721509221137199

Shap! (n.d.). *The conglomeration of townships known as Soweto has a history of more than a century, although its component parts have different historical timelines.* shap.org. Retrieved October 1, 2025, from https://shap.org.za/about/history/

Sibanda, R., & Tshehla, L. P. (2025, February 28). From mother tongue to English: A language policy shift at a multilingual township school in Gauteng. *South African Journal of Childhood Education*, *15*(1), 1598. https://doi.org/10.4102/sajce.v15i1.1598

South African History Online. (2011, March 16). *Soweto, Johannesburg*. South African History Online. Retrieved October 4, 2025, from https://sahistory.org.za/place/soweto-johannesburg

South African History Online. (2024, July 29). *Diepkloof, Soweto*. South African History Online. Retrieved October 1, 2025, from https://sahistory.org.za/place/diepkloof-soweto

StatsSA. (2025, March 26). *South Africa's Informal Economy: A Lifeline for Millions*. Statistics South Africa. Retrieved April 30, 2025, from https://www.statssa.gov.za/?p=18255

Tau, M., Tselepis, T., & Nieuwenhuizen, C. (2024, April 1). Digital literacy in townships: The problems and the promise for SMMEs. *Journal of Contemporary Management*, *21*(1), 279-297. https://doi.org/10.35683/jcm23.008.260

Todes, A., & Houghton, J. (2021, November 15). Economies and employment in growing and declining urban peripheries in South Africa. *Local Economy*, *36*(5), 391-410. https://doi.org/10.1177/02690942211055623

UNDP. (n.d.). *What does going digital mean for informal economies? Informality*. https://www.undp.org/. https://www.undp.org/acceleratorlabs/our-work/informality

van Ham, M., Tammaru, T., Ubarevičienė, R., & Janssen, H. (Eds.). (2021). *Urban Socio-Economic Segregation and Income Inequality: A Global Perspective*. Springer International Publishing.

Venkatesh, V. (2021, January 19). Adoption and use of AI tools: a research agenda grounded in UTAUT. *Annals of Operations Research*, *308*(1), 641-652. https://doi.org/10.1007/s10479-020-03918-9

Weryński, P., & Dolińska-Weryńska, D. (2023). Social capital and innovations in non-governmental organisations. Report on research of Silesian NGOS. *Scientific Papers of Silesian University of Technology.*, (183). http://dx.doi.org/10.29119/1641-3466.2023.183.38

Wutich, A., Beresford, M., & Bernard, H. R. (2024, October 25). Sample Sizes for 10 Types of Qualitative Data Analysis: An Integrative Review, Empirical Guidance, and Next Steps. *International Journal of Qualitative Methods*, *23*. http://dx.doi.org/10.1177/16094069241296206

APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDE

Study Title: **How do the key social barriers influence digital adoption in the informal trade?**

Interviewer Name: _____
Participant ID: _____
Date & Time: _____
Location: _____
Recording Consent: YES / NO
Verbal Consent Obtained: YES / NO
Recording Start Time: _____

Demographic Details (Optional) *(Collected at the interviewer's discretion or through observation)*

- Age: _____
- Gender: _____
- Primary Language Spoken: _____
- Type of Business: Food / Liquor / Both
- Years in Business: _____
- Business Structure: Fixed Stall / Mobile / Home-based / Other
- Number of Employees (if any): _____

Part 1: Introduction and Consent

Goal: To build rapport, explain the study's purpose, and ensure informed consent.

“Good morning/afternoon, and thank you so much for taking the time to speak with me today. My name is [Interviewer’s Name], and I’m part of a research project aimed at understanding how small businesses like yours use, or don’t use, digital tools and technologies. This includes things like smartphones, payment apps, or social media. We want to understand the benefits and the challenges. Our conversation will take about 30 to 45 minutes. It’s voluntary; if there’s anything you don’t want to answer, that’s completely fine. And you can stop at any time. Everything you say will be kept private, and we won’t use your name or any personal details.

To help me remember what you've shared, would it be alright if I record our conversation? This recording is only for research purposes and will be deleted after the project ends."

☐ *Verbal consent given — begin recording*

"Do you have any questions before we begin?"

Part 2: Background and Business Context

Goal: To understand the trader's business operations and motivations.

1) To start, could you tell me a little bit about your business?
    a) What kind of food (or liquor) do you sell?
    b) How long have you been running this business?
    c) What made you decide to start this type of business?
2) Can you describe a typical day for you?
    a) What are your busiest times?
    b) What are your main daily tasks (e.g., buying stock, serving customers)?
3) How has business been for you over the past year?
    a) Is it getting better, worse, or staying the same?
    b) What are your biggest successes and challenges?
4) Do you operate the business alone or do you have help?
    a) If others help, what do they do?

Part 3: Technology Context

Goal: To explore current tech usage and the perceived value of digital tools.

1) What kind of phone do you use personally? And for your business?
    a) Is it a smartphone?
    b) What do you mainly use it for (e.g., WhatsApp, Facebook, calls)?
2) How do you feel about technology in general?
    a) Are you confident using it or do you find it frustrating?
3) Have you ever used digital tools like payment apps, card machines, or social media for your business?
    a) Have you ever used digital tools like:
    b) Payment apps (e.g., SnapScan, Zapper, Yoco)?

c) Social media for selling (e.g., WhatsApp Business, Facebook Marketplace)?
d) Delivery services or platforms?
e) What was your experience like? Did you continue using them?
f) Have you seen other traders using them?

4) What do you think are the main benefits of using these tools? *(Relative Advantage)*
   a) Could they help you save time or attract customers?
   b) Do they make you look more professional or modern?
   c) Do they help build customer or supplier trust?
5) What are some of the challenges or concerns you have about using these tools? *(Complexity & Compatibility)*
   a) Do they seem complicated or expensive?
   b) Do they fit with the way you run your business now?
   c) Have you ever stopped using a digital tool or app? Why?
6) Do you think using technology would change how you interact with your customers or suppliers?
   a) Would that be a good or bad thing?

Part 4: Organisational Context

Goal: To understand internal capacity and decision-making structures.

1) How confident are you in learning new apps or digital tools? *(Digital Literacy)*
   a) Where would you go for help or advice?
   b) Have you ever received any training (even informal) on using technology?
2) In your business, who decides whether to try something new like a payment app or social media promotion?
   a) Do you talk to family, staff, or other traders before making a decision?
3) How does the cost of using digital tools affect your decision? *(Financial Resources)*
   a) Are data costs, transaction fees or device costs a concern for you?
   b) How do you compare these costs to your current way of doing things?
4) Do your staff or family help with digital tools?
   a) Are they comfortable with technology?
   b) Do they encourage or discourage using new tools?

Part 5: Environmental Context

Goal: To explore external influences on tech adoption (customers, suppliers, infrastructure).

1) What payment methods do your customers prefer?
    a) Mostly cash, or do some request card/phone payments?
    b) How do you respond to digital payment requests?
2) How do you communicate and pay your suppliers?
    a) Do they use digital tools like EFTs, WhatsApp orders, or apps?
    b) Does this influence how you operate?
3) Do you know other traders who use digital tools successfully?
    a) What made it work for them?
    b) Have you ever tried something because someone else recommended it?
4) Have you ever felt pressure (positive or negative) from others in your community to use digital tools?
    a) Do you think what others are doing influences your decision?
5) How does load-shedding or mobile signal affect your business and tech use?
    a) Does it stop your business from working?
6) How much do you trust companies that offer digital services (banks, mobile apps)?
    a) Are you worried about fraud, hidden fees, or privacy?
7) Do you feel it's safe to use smartphones or card machines in your area? *(Crime/Security)*
    a) Are you ever worried about theft?

Part 6: Closing and Final Thoughts

Goal: To reflect and give space for additional ideas.

1) If you could design the perfect digital tool to help your business, what would it do?
        a) What would be most useful: funding, training, faster internet?
2) Is there anything else you'd like to share or think I should know?
        a) Any final thoughts?

"Thank you again for your time and for sharing your experiences. What you've shared will help us better understand how to support businesses like yours in Soweto."

Interviewer Reflection (Post-Interview Notes):

Use this space to note non-verbal cues, tone, engagement, key quotes, environmental context, unexpected responses, and suggestions for future question refinement.