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**Perceptions of Value Consumption of Digital Business Platforms by
Informal Sector Traders in South Africa**

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by

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Perceptions of Value Consumption of Digital Business Platforms by Informal Sector Traders in South Africa

Abstract:

This research project is a quantitative enquiry focused specifically on the value consumption of digital business platforms (DBP's) in relation to how informal sector traders (IST's) are using them to buy, sell and market their product and services in their daily trade functions. This study has adopted the approach of classifying the social media platforms, internet banking platforms and mobile payments platforms, as a single collective and defined under the banner of Digital Business Platforms. The advantage to this approach, is that it provides a multi-dimensional view of the perceived value-axis based on positive and negative experiences of using a variety of digital platforms including messaging, payments, and banking applications on their mobile phones in their daily trading functions.

This study examines the positive experiences of perceived value (PV), collectively in the form of social value (SV), emotional value (EV) and functional value (FV). On the opposite end of the value spectrum, are the negative experiences of perceived risk in the form of price risk (PR) and technical barriers (TB) for the same group of informal sector traders. Understanding the relational impacts of these positive and negative experiences of value consumption, may lead to an understanding of their influence in the perceived usefulness (PU) and the perceived ease of use (PEoU) of DBP's. The results of these relationships will shed some light towards the behavioural intention (BI) to adopt DBP's and their actual usage in the long term.

The analysis yielded the following results: for positive experiences, emotional value had the least impact on both perceived ease of use and usefulness and functional value was higher than social value. This means that IST's place more value on the utility of DBP's, than the emotional and social values. Regarding the negative experiences, price risk had the most significant impact on the willingness to adopt DBP's by ISTs

Key words; *Digital Business Platforms; Digital Transformation, Informal Sector Traders, Digital Innovation, Perceived Value Consumption*

List of Abbreviated Terms

DBP's – Digital Business Platforms

DT- Digital Transformation

ISTs – Informal Sector Traders

PV – Perceived Value

EV – Emotional Value

FV- Functional Value

SV – Social Value

PR – Price Risk

PU – Perceived Usefulness

PEoU – Perceived Ease of Use

Perceived Risk – PeR

TB -Technical Barrier

VCM – Value Consumption Model

TAM – Technology Acceptance Model

UTAUT – Unified Theory of Acceptance and Use of Technology

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CHAPTER 1: INTRODUCTION

1.1 Background

In a modern business world, having a digital transformation strategy is of crucial importance and can make or break a company (Bharadwaj, Sawy, et al., 2013; de Reuver et al., 2017). Digital technologies are progressively critical in accomplishing business goals, and their effects have resulted in the rapid re-organization of entire industries (Vial, 2019). Researchers in the Information Systems space have studied the transformative role of digitalisation and digitisation on macro enterprises, and small and medium enterprises. This can be attested by the number of systematic literature reviews on the subject of digital transformation (Berman, 2012; Majchrzak et al., 2016; van Veldhoven and Vanthienen, 2020). In other words, the focus of most information systems research on the effects of digital transformation has been within the confines of the ‘Formal Sector Economy’ (Bi et al., 2017; Cenamor et al., 2019). However, there has been a steady growth of research focused on the ‘Informal Sector Economy’ and it is often referred to as the Information and Communication Technology for Development (ICT4D) movement. It is a multi-disciplinary research community that has contributed immensely towards integrating the study areas of information systems, computer science and development studies in relation to the often-neglected low-income members of society (Heeks and Alemayehu, 2009). A significant number of researchers within the African continent have tackled ICT for development research within the context of street traders, and those in informal trading, some are from Tanzania, Kenya, Rwanda as well as South Africa (Lwoga and Sangeda, 2019). This study, finds its context within the ICT4D movement with regards to South Africa informal traders.

Many ICT for Development research projects in Southern Africa have revolved around the adoption of mobile payments and internet banking applications by low-income communities (Eksteen and Humbani, 2021; Lawack-Davids, 2012b). However, there are few research projects that undertake the topic of digital transformation and its impact on South African informal sector traders through the lens of Digital Business Platforms as a collective concept that delivers value, rather than just apps for everyday use (Nteta, 2017).

1.2 Research Rational and Social Context

The introduction of the smartphone in the past decade has increased the proliferation of digital business platforms and the ‘apps’ or applications that come with it to all sectors of society

including the low-income informal sectors (Raut & Singh, 2019). This has necessitated a resurgence of knowledge accumulation in the area of ICT4D with special emphasis on digital business platforms as a value proposition. It is in this same spirit of ICT4D that this research project has taken the task of exploring the adoption of digital business platforms (DBP's) by the 'Informal Sector Economy' and by extension, the 'Informal Sector Traders' that are the actors within that economy (Rangaswamy et al., 2020a).

The Social perspective: South Africa has in recent years experienced the convergence of the triple-threat of a decline in the ethical discourse of its politics, a struggling economy (Van Heerden & Roos, 2021) and the shrinking middle-class due to the emergence of the 4th Industrial Revolution's automation technologies. The COVID-19 pandemic has further exacerbated the fragility of individuals and families in a manner that affects their resilience and ability to protect their income, health, and overall wellness (W. Cullen et al., 2020; C. Wang et al., 2020). The whole world has had to come to grips with the paradox of an abnormal normality by accepting that the old pre-COVID-19 world is now a distant memory. This has created a new reality that requires alternative solutions to tackle the emergent challenges of our time

1.3 Research Aim and Contribution

The aim of this study was to contribute towards the understanding of the adoption or lack thereof, of digital business platforms in the informal economy within the South African academic literature context. This was achieved by applying the 'value consumption' perspective of informal sector traders on these DBP's. The findings contribute towards future academic research on the relationship between socio-technical systems such as Digital business platforms (DBP's) and the societies at the bottom-of-the-pyramid. It may also assist enterprises that are DBP creators to come up with 'fit-for-purpose' E-commerce solutions that speak directly to the needs of the informal sector traders (IST's). The benefits of acquiring this understanding will yield positive results towards the betterment of the informal sector traders daily business transactions by enhancing their **Social Capital** which can be understood to be the networks of relationships between people who live and work in a particular society, thus empowering that society to function efficiently (Bhandari and Yasunobu, 2009; Onyx and Bullen, 2000). Also, from a Socio-Technical-Systems point of view this research will also expand our knowledge on the relationship between technology adoption and low-income communities.

1.4 Research Problem

This study is a quantitative enquiry focused specifically on digital business platforms as a unit of function in relation to how informal sector traders are using them to buy, sell and market their product and services in their daily trade functions. The advent of the smartphone and the availability of cheaper handsets has resulted in the rapid rise in adoption of mobile and digital technology amongst the masses at the bottom-of-the-pyramid (Houghton, 2016). This study has proposed the approach of classifying these social media, internet banking, and mobile payments platforms, as a single collective and defined under the banner of Digital Business Platforms. The advantage to this approach, is that it provides a three-dimensional view of the perceived value-axis based on the social value, functional value, and emotional value of using the DBP's through a variety of apps including messaging, payments, and banking in the South African informal trader's daily activities. This is especially true when considering the perspectives of informal sector traders who often buy and sell their products and services using these contemporary innovations. There appears to be a gap in the research about perceptions of adoption of these digital business platforms by the informal traders as suggested by Rangaswamy et al., (2020), and . Veldhoven and Vanthienen (2020).

1.5 Research Area and Scope

Digital business platforms span a wide variety of use cases, and as such, have many specialised and different functions. The first and most prevalent type of digital business platform (DBP) is the search kind; these include Google, Bing, and Yahoo. The second is the social media kind, which includes Facebook for social interactions, WhatsApp for instant messaging and Instagram for sharing of photos (Rangaswamy et al., 2020a). Much research in academic journals is dedicated to social media types of DBP's and their effects on society (Berthon et al., 2012; Sashi, 2012), politics (Calcagni et al., 2019), journalism (Foster and Heeks, 2010) and healthcare (Wu et al., 2007). The third most widely used DBP's are content/ad-based platforms such as YouTube and Spotify. The fourth type are the service platforms, sometimes referred to as the 'sharing economy platforms' they include Uber and Airbnb, which have become the standard benchmark for these types of DBP's (Schwanholz and Leipold, 2020). The fifth type of DBP's are the E-commerce platforms such as Amazon.com, Alibaba.com and locally Take-a-lot.com. The final type of DBP's are the financially oriented platforms which include internet banking, mobile payments, and e-wallet services, such as Pay-Pal, Snapscan and Zapper, that replace the use of cash as a medium for value exchange (Makholwa et al., 2020).

1.6 Research Objective

This study aims to better understand the perceived value (PV) that IST's experience when using DBP's by examining their social value (SV), emotional value (EV) and functional value (FV). These are considered to be positive experiences (Youn & Lee, 2019), while the perceived risk (PeR) in the form of price risk (PR) and technical barriers (TB) are considered to be negative experiences (Lee, 2009). These will then determine the DBP's perceived ease of use and usefulness by IST's, which may lead to behavioural intention to adopt them in their daily trade

1.7 Research Questions

The main research question that this study aimed to answer is stated as follows:

What are the perceptions of value consumption as experienced by Informal sector traders (IST's) when considering the adoption of digital business platforms (DBP), as mediums of trade to buy, market, and sell their products and services?

The research sub-questions include:

RQ1: What role does the positive experience of Perceived Value (social, emotional, and functional values) and negative experiences of Perceived Risk (price risk and technical barrier) play in the informal traders' decision to use a Digital Business Platform (DBP)?

RQ2: What is the Perceived Usefulness (PU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

RQ3: What is the Perceived Ease-of-Use (PEoU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

1.8 Conclusion

The background for this chapter introduced the topic of the research and placed it within the ICT4D context. The research rational and social context gave a contemporary perspective of the social settings of the study's environment. The research aim and contribution were also discussed both in terms of academic insights provided as well as the managerial implications from the view of commercial industry. Below is *illustration 1* which depicts a compressed Roadmap of the Research Overview for all the chapters, sections, and subsections in this dissertation in order to assist with readability and logical sequencing of this report.

Research Roadmap Diagram: Perceptions of Value Consumption for the Adoption of DBP's by Informal Sector Traders

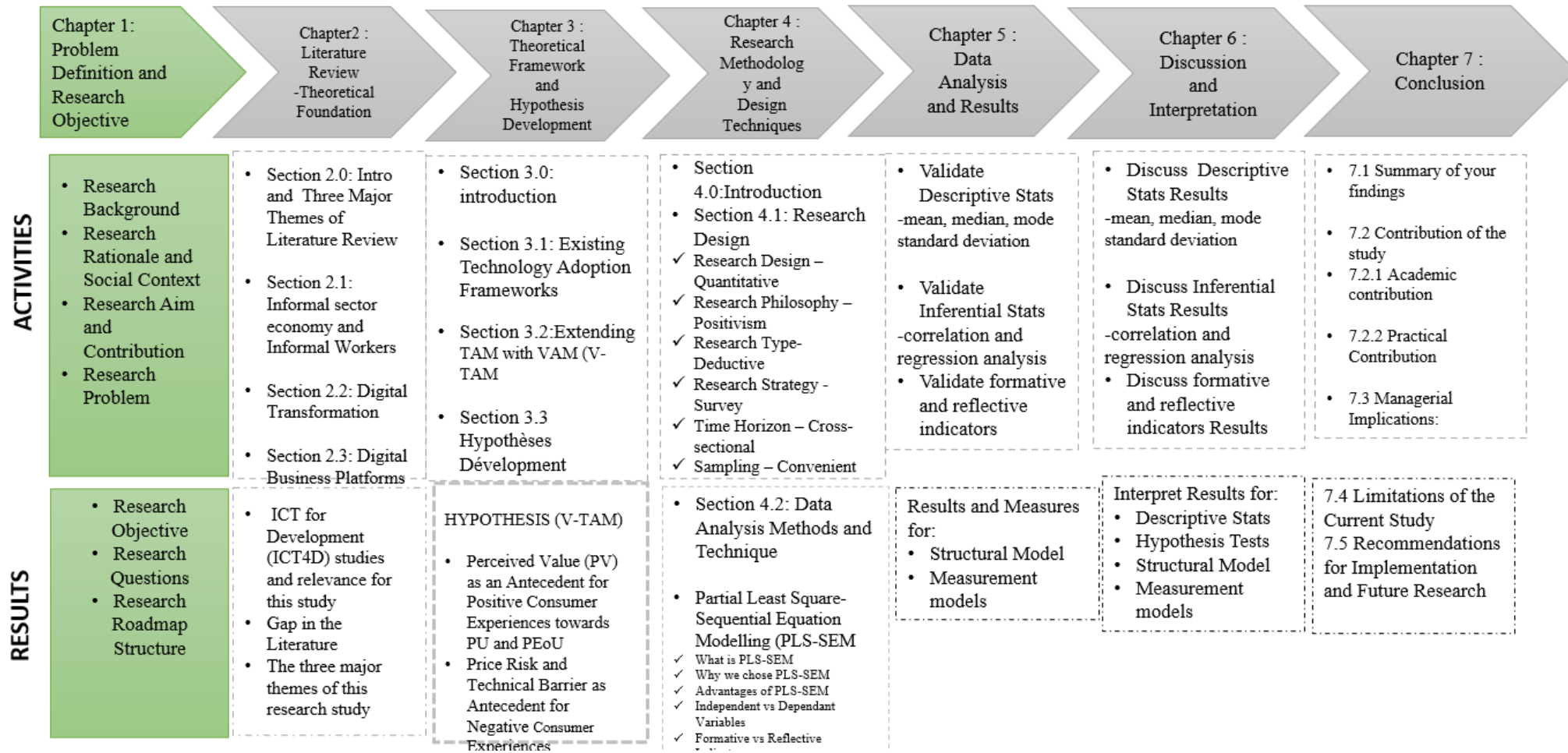


Illustration 1: Research Roadmap Diagram

CHAPTER 2: LITERATURE REVIEW – Theoretical Foundations

“The truth about the future of work in Africa isn’t in the growth of full-time formal sector jobs. The future of work will be people working multiple gigs with somewhat formal entities. Therefore, the question should not be whether jobs will be formal or informal, but how digital platforms and new technologies might make this type of work more productive and of a better quality for workers themselves.” Ng’weno and Porteous (2018, p1)

Perhaps this quotation by Ng’weno and Porteous (2018) best articulates the combination of the three major themes for the theoretical foundations of this dissertation, because one can pick on issues of the **informal sector economy**, the need for **digital transformation** and the future ubiquitous nature of **digital business platforms**; all contained in the statement above. Ng’weno and Porteous (2018) also articulate the true essence of what is at stake when they made this observation in relation to the importance of why researchers need to have a better understanding of the potential role of digital business platforms in the African Continent’s context.

The literature review has been dissected into two chapters for the sake of flow and readability. Chapter 2 of the literature review discusses the three main research themes namely, the informal sector economy, digital transformation, and digital business platforms. It begins with section 2.1 by discussing the current gap in ICT for Development (ICT4D) studies and to make a case for the importance of this study. Section 2.3 then discusses the different perspective of the Informal Sector Economy. Section 2.4 will discuss the topic of Digital Transformation. Lastly section 2.4 will discuss the topic of Digital Business Platforms. Chapter 3 is a continuation of the literature review and provides the research framework and hypothesis development that was adopted for this study. This part of the literature review will discuss the different adoption models at the disposal of this study but settles on the Technology Adoption Model (TAM). The Value Consumption Model (VCM) is also included as an extension to TAM and we will apply its precepts of Perceived Value (PV) and Perceived Risk (PeR) as influential factors towards the adoption of DBP’s by IST’s. This will then conclude both chapters of the literature review. This research project will draw on literature from multiple disciplines including Information Systems (IS), Development Studies and Marketing to create a narrative that is both current and relevant to the topics pertaining to the digital transformation of Informal Economy and its Informal Traders (see figure 1).

Towards a Digitally Transformed Informal Sector Economy-
The Three Themes of the Literature Review

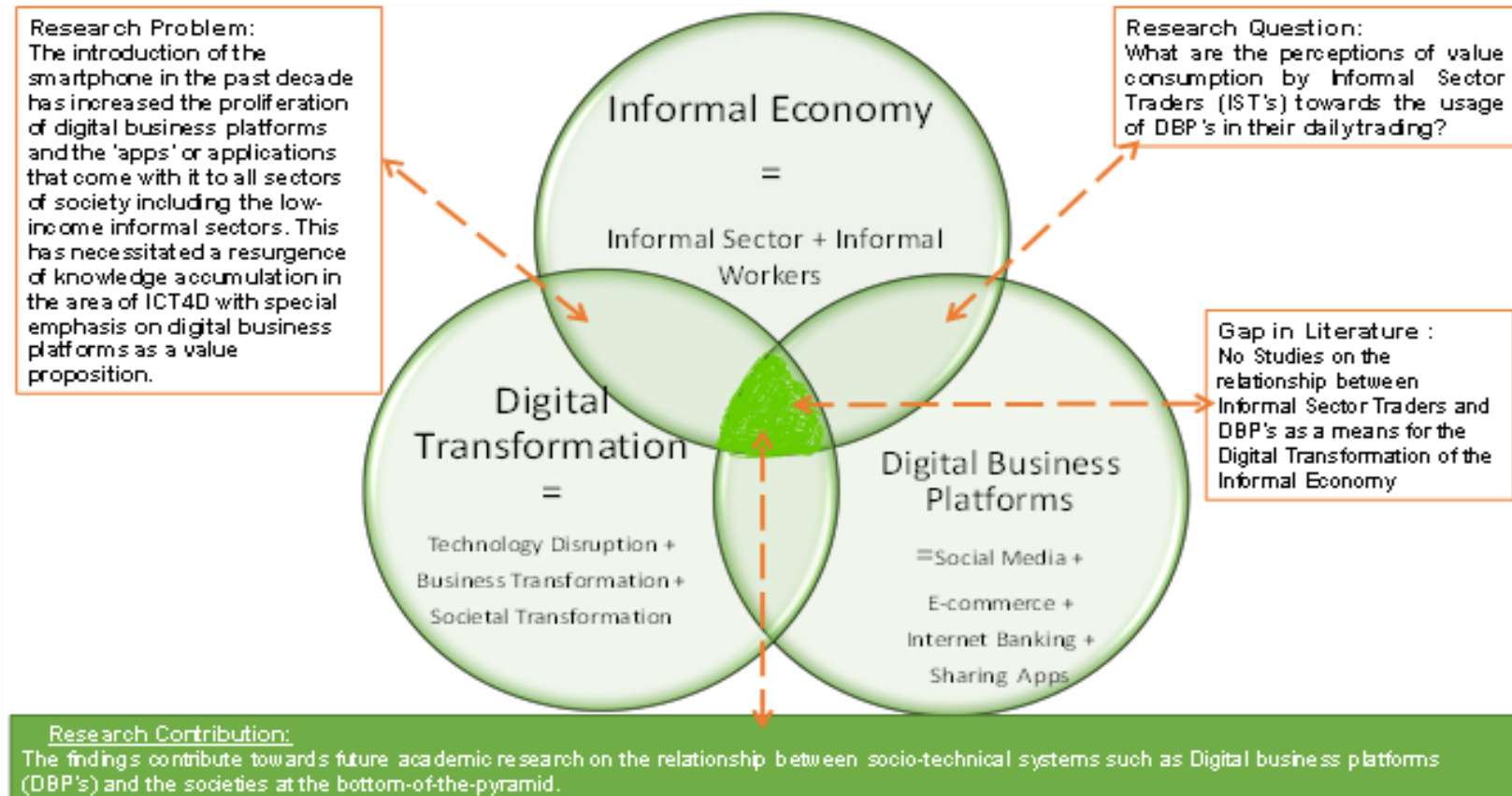


Figure 1: The three themes of the literature review for this quantitative study

2.1 ICT for Development (ICT4D) and the Gap in the Literature

It is important to first make the distinction of what sets this research apart from previous IS adoption research and the gap that it is attempting to address. Information Systems studies have dealt with the phenomenon of how technology, innovation and transformation have affected society by analysing the adoption patterns of mobile apps, socio-technical systems, hardware, and software applications as well as the digital channels of delivery to the end user (Foster and Heeks, 2010; Lwoga and Sangeda, 2019; Thapa and Sæbø, 2014). It can be attested by various systematic reviews on technology adoption studies that have a particular focus on the informal sector economy (Houghton, 2016), bottom-of-the-pyramid (Prahalad et al., 2012) or ICT for development (Chipidza and Leidner, 2019; Heeks, 2006; Walsham, 2017). This movement gained much prominence during the early 2000's up until the middle of the 2010's. Most ICT4D research projects focused on different subjects such as the diffusion of ICT innovations (Ng'weno and Porteous, 2018) Infrastructure building and the implementation of ICT services(Touray et al., 2013) impact evaluation of ICT interventions (Misra, 2012) , linking ICT and Development (Brown and Grant, 2010; Thanh, 2008), and the digital divide (Campbell, 2001; R. Cullen, 2001; Fuchs and Horak, 2008)

2.1.2 What Differentiates the Current Study from Recent ICT4D Research Projects

There are different approaches when one undertakes an ICT4D project and as such it is important to understand what the research question seeks to answer (Heeks and Alemayehu, 2009). Some researchers (Baliamoune-Lutz, 2003); Thapa and Sæbø, 2011) argue that ICT4D projects may not yield the desired effects if socioeconomic, financial, political, and cultural factors are ignored. Alternatively, diffusion of the ICT products and technologies from a singular study to a much broader context might be a hindrance through a focus being placed more on the technology perspective vision, while disregarding other socio-cultural, political, and economic factors (Brown and Grant, 2010; Touray et al., 2013). Of particular relevance to this study, is how previous research on mobile applications adoption by the informal sector is fragmented into social media apps research (Bharadwaj, el Sawy, et al., 2013), mobile banking apps research (Lawack-Davids, 2012a; Masinge, 2010; Zhou et al., 2010b), mobile payment apps research (Pankomera and van Greunen, 2018; Makholwa et al., 2020) and general smartphone adoption research (Mramba et al., 2017).

This fragmented view often obscures the true efficacy of these varied platforms because more often than not, they work collaboratively to accomplish a set of unified transactions, such as

buying marketing and selling through the use of a mobile smartphone device. This is particularly true for this study's unit of analysis, the Informal Sector Trader, when they use mobile phone technology innovations in their daily trading activities.

This study attempts to take a holistic view of these mobile applications and collectively groups them as digital business platforms. However, this not the first time that such a grouping has been done as exemplified by Rangaswamy et al., (2020) in a study titled "The Role of Digital business platforms in Marketing". It can be justified that applying this view, is more consistent with how the informal sector trader experiences and engages with these various apps, that have different use cases, as a collection of DBP's when conducting their daily trading affairs. For example, an informal sector trader may use a social media app (Facebook, Instagram) to market their goods, use a banking app to check bank balances (Capitec app) and use a mobile payments app to pay suppliers and accept payments (MTN Momo, uKheshi). Viewed from these trader's point of view, they have used a single device (smartphone) to accomplish various transactions that facilitate a way for them to make a living when they buy and sell their goods. .

2.2 Perspectives on the informal economy

"Africa's informal economy is one of the most innovative and inventive environments in the world. Yet it is an environment with little regulation in which workers are often exposed to hard conditions and live without a safety net." (Rogerson, 2016, p2)

The Informal Economy, as a concept that bears any meaning, came into prominence in the early 1970's (Hart, 1985) This economic sector is considered informal because these businesses are rarely registered at national or regional levels, are cash-based, and thus do not pay taxes and usually do not have formal arrangements with employees. This deficiency of formality also means that little is known of the 'shadow' economy and, as such, it is predisposed to being overlooked or ill-considered in the process of policy formulation by government (Yu, 2012). It is often omitted or under-valued in the business strategy formulation within the supply chain ecosystem and too easily associated with nefarious activities (Varley, 2013). Yet this 'formal invisibility' contradicts its true consequence, in other words, the structure and size of the formal sector influences employment incentives and openings in the informal sector (Davies & Thurlow, 2010). According to a 2018 International Labour Organisation (ILO) report titled 'Women and Men in the Informal Economy: A Statistical Picture, 3rd Edition (2018)', an estimated 2 billion of the world's employed population make their living in the informal economy, this number gives an indication of the urgent need to tackle informality on a global

scale. By having more people lifted out of the informal economy and through some form of formalisation, into the mainstream economy, the ever-elusive goal of financial inclusion for the masses living on the outer fringes of modern society, we will edge closer to the reality of an equitable society that provides access to opportunities for all (Mramba et al., 2017).

The following sub-sections will be a debate on the various, multi-perspective definitions that have been proffered by academics and policy-makers with the aim of creating a common understanding of what the informal economy is.

2.2.1 Defining the Informal Economy

Definitions on the Informal Economy differ, but fundamentally some academics tend to characterise the informal economy as any economic activity that takes place separate, or outside from formally regulated structures (Brundtland, 1987; Hart, 1985). Stereotypically, informal economic enterprises are small, often based around families, workers most likely do not pay income taxes, nor do they enjoy social securities (Chaudhuri and Mukhopadhyay, 2010). While their pursuits are not necessarily unlawful, they are not protected by the framework of national laws of any given country (Mbuyisa and Leonard, 2017). Notably, there is not always an obvious distinction between formal and informal economies; for instance, it is common for people to work cash in hand for formal, registered businesses, a characteristic which is mostly associated with informal businesses (Gray and Gills, 2016). So, defining informal economic activity can be complicated. Adding another layer of complexity is the difficulty in measuring the informal economy of any country, but the one certainty that most researchers agree on is that it is a very big sector especially in developing countries (Mramba et al., 2017)Mramba et al., 2017;London et al., 2014; *Tackling Vulnerability in the Informal Economy*, 2019)

The following sub-section will delve into a more nuanced definition of the informal economy and adopt some of the conceptual interpretations for this study to create a common understanding going forward.

2.2.2 Conceptual Framework for Defining the Informal Economy

The terms “informal sector”, “informal economy”, “employment in the informal sector” and “informal employment” might all seem to be interchangeable to the layperson and even to some researchers. For clarity, this study will adopt a definition that characterises the informal economy as according to the ICLS definitions set forth below. According to their website, “The

International Conference of Labour Statisticians (ICLS) meets every 5 years to establish international standards on labour statistics”:

(a) Informal economy (ICLS, 1993):

“All economic activities by workers or economic units that are – in law or practice – not covered or sufficiently covered by formal arrangements”

(b) Informal sector:

A grouping of production units that are unincorporated enterprises owned by households, including “informal own-account enterprises” and “enterprises of informal employers” (defined on 15th ICLS)

(c) Informal sector enterprise:

“Unregistered and/or small-scale private unincorporated enterprises engaged in non-agricultural activities with at least some of the goods or services produced for sale or barter” (defined on 15th ICLS)

(d) Employment in the informal sector:

“All jobs in informal sector enterprises (c), or all persons who were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job” (based on 15th ICLS)

Having adopted the ICLS definitions for the concepts and actors within the informal economy, the following sub-section discusses the various forms of activity that an informal sector trader (IST) or worker may find themselves occupied with, in the midst of their elemental environment.

2.2.3 The Informal Sector Workers- General Perspectives

According to the International Labour Organisations 2020-2022 report, there are two billion people that are in informal employment, this accounts for 61% of the world’s workers. The informal employment sector or “grey economy” is the portion of any economy that is neither taxed nor scrutinised by any form of government (Morgan-Thomas et al., 2020). Many informal sector workers and predominantly those in retail, pay VAT on their goods, however, contrasting their counterparts in the formal sector they are not able to claim these expenses back from the tax authorities (Charman et al., 2017; Rogerson, 2016). What follows is broad cross-section of the kinds of jobs or occupations that typically characterise workers in the informal sector:

On the Street: generally, the most visible informal workers are those who earn their income on the streets or in the open-air areas. These include street vendors, roadside barbers, and garbage collectors.

In buildings: these informal workers perform their duties in small shops and workshops that do reparation of bicycles and motorcycles; make furniture and metal parts; recycle scrap metal weave, dye, and print cloth; style and embroider garments; tan leather and stitch shoes; class and sell cloth, paper, and metal waste; polish diamonds and other gems and more.

Home-Based: these workers are found everywhere around the world. The least visible informal workers, most of them women, work from their homes. They include garment workers; embroiderers; shoemakers; and assemblers of electronic parts.

Having established the type of workers that are found in the informal economy, the following sub-section will zoom into the South African informal sector to provide context for this study.

2.2.4. The South African Informal Sector

“What is concerning is that work in the informal sector is characterised by vulnerability, low wages, and no rights. So, it is not the way that we lift people out of poverty in Africa.” Winnie Byanyima , Executive Director of UNAIDS and an Under-Secretary-General of the United Nations.

South Africa is said to have a dual economy, (Neves and du Toit, 2012; Oodith and Parumasur, 2017; L. Petersen and Charman, 2018; Rogerson, 2016). It estimated that approximately 30 per cent of total employment is informal, which accounts for just under 5 million workers. This is according to the WIEGO Statical Brief for South Africa released in February 2019 (Women in Informal Employment and Organising). The report was conducted using data from 8 major South African metropolitan areas and found that around 24 % of employment is in the informal economy. The 2017 Survey of Employers and Self-Employed (SESE) released by Stats SA every five years (see figure 2 for 2016 figures), made the finding that 63.5% of the people who start an informal business do so because they are unemployed or under-employed and have no alternative sources of income to sustain themselves. In the South African context, many informal workers (73%) make an income of well below the income tax threshold of R79 000 per annum as set by the South African Revenue Service (Rogerson, 2016)

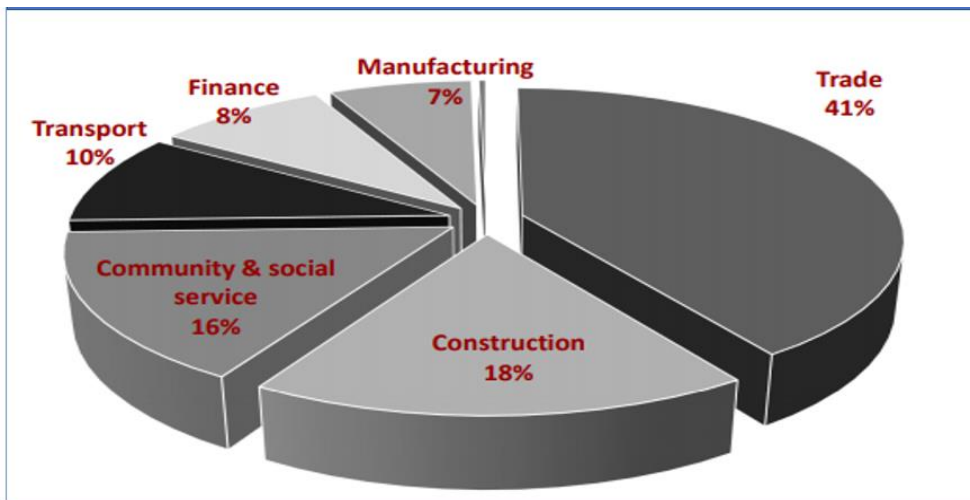


Figure 2: South African Informal Sector Economy Analysis (Source: QLFS Report 2017 Statistics South Africa)

According to Fourie (2018), author of the book “The South African Informal Sector: Creating jobs, reducing poverty”, the informal sector is often referred to as the ‘forgotten’ sector even though it is a major contributor to GDP. Statistics South Africa has recently released the Quarterly Labour Force Surveys (QLFS) and the latest report for 2019 found that about 3 million people were making their income in the informal sector. This contributes to about 20% of total employment in South Africa. By way of illustration, QLFS data provides the following estimations: 71 800 construction labourers, 92 600 mechanics, 35 700 electricians, 52 100 traditional medicine practitioners and plumbers and 26 000 tavern and shebeen operators, among countless other activities. Creating some measures of formalisation for these informal traders can go a long way towards securing some financial inclusion and opening up opportunities for them to compete in the formal economy (Ng’weno & Porteous, 2018)

2.2.4.1 Characteristics of the South African Informal Economy

It is generally understood that the informal sector and its informal owners and workers are ‘self-organising units’, and as such, some local scholars (Charman et al., 2017; Shabalala, 2014; Wentzel et al., 2016) have noted the following **advantages** of the South Africa informal:

- It contributes significantly to the economy and It has no tax contributing;
- Creates large number of jobs including manufacturing, carpentry, sewing, street vending, Reduces unemployment and poverty;
- Informal businesses are relatively easy to start up, with low costs requirements;
- Survivalist and subsistence entrepreneurs learn valuable skills in their trades;

Among some scholars (Plantinga & Adams, 2021; Van Heerden & Roos, 2021) the following disadvantages have been noted about the South Africa informal sector:

- Some of the businesses can engage in illegal trade activities;
- Informal businesses can cause clutter and pollution in formal areas of business;
- There is no government involvement, especially in the Taxi industry;;
- Government loses revenue as no tax is paid;

2.2.5 Relating the South African Informal Economy to the Current Study

The individuals and small businesses that make their living in this sector are not immune to technological advancement and as such have been affected by the gradual diffusion of smartphone technology and the DBP's that come with it. It is for this reason that this study is rooted in the ICT4D space because its intended purpose is to explore the relationship between the informal economy sector and the Information and Communication Technology space. In the next section, the Digital Transformation theme is discussed to further explore the relationship between IST's and DBP's and to present current theories on technology and societal transformation.

2.3 Digital Transformation

"Digital transformation is not about technology at all. It is about people." Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum

Disruption is imminent, and the buzzword is the fourth industrial revolution (4IR). In early 2016, World Economic Founder and current chairperson Professor Klaus Schwab, published his highly influential book titled *The Fourth Industrial Revolution*. The concept of 4IR declares that technological change is a driver of transformation that will revolutionise all aspects of society from food production, manufacturing, transportation, and electronic commerce, while also causing disruptive change to our political systems (Mcphee et al., 2017). The following sub-sections address the many varied definitions of digital transformation, and its role in the transformation of business and society as a socio-technical system (STS).

2.3.1 Defining Digital Transformation

The dawning of the new millennium and the internet age has seen a rapid rise in digital technology, which has led to the rise in both business and societal transformation (Met et al., 2020; van Veldhoven & Vanthienen, 2020; Zhong et al., 2021)

In the years between 2010 and 2021, there has been an expansion in the use of different vocabulary when defining digital transformation. It is not yet clear as to whether this is because of the rapid rise in various types of technological disruption or that the conceptual and theoretical frameworks are themselves expanding. Although agreement has not been reached regarding the definition of digital transformation, Vial (2019 p. 4) expresses similar sentiment by stating that ‘literature has increased our understanding of specific aspects of digital transformation, however we lack a comprehensive portrait of its nature and implications.’

One of the earliest definitions of digital transformation in Information Systems research is by Stolterman and Fors (2004 p.2) in which they define it as: ‘changes that the digital technology causes or influences in all aspects of human life’. The technological disruption brought about by the smartphones with a myriad of applications that offer a variety of functions and use cases, gave rise to the era of social media. This was a game-changer, and it became a factor in how digital transformation was defined. White (2012, p1) was one of the first to put a more ‘person oriented’ touch to his definition by stating that: ‘Digital transformation arises from the blending of personal and corporate IT environments’. By the 2013, a more nuanced version of a ‘personal interaction’ definition of DT was coined by Fitzgerald et al. (2013 p.2). In an MIT Sloan Report, they posed it as: ‘the use of new digital technologies (social media, mobile, analytics or embedded devices) to enable major business improvements (such as enhancing customer experience, streamlining operations, or creating new business models. This is study has adopted the Fitzgerald et al. (2013) definition of digital transformation because it includes all the elements that make up the social, business, and technological transformation.

2.3.2 Why Digital Transformation Literature is Important to the Current Study

Since 2010, digital transformation (DT) has developed into an unstoppable trendsetting force in strategic IS research, as well as for business and industry experts (Majchrzak et al., 2016; Verhoef et al., 2021). At a higher level, digital transformation incorporates the significant changes taking place in society and business by digital technologies (Frank et al., 2019; Mergel et al., 2019; Sebastian et al., 2017). At societal level, the ubiquity of mobile digital technology has surpassed the expectations of most experts when it comes to the rapid rise in adoption of these digital disruptions commonly abbreviated as SMACIT (Social Media, Artificial Intelligence, Cloud, Internet of Things) (Majchrzak et al., 2016).

This study seeks to understand the positive and negative experiences of Informal Sector Traders when interacting with digital business platforms in their daily trade functions. This is central

to the research objective. To be precise, digital transformation literature will help us understand the perceived value (PV) that IST's experiences when using DBP's by examining their social value (SV), emotional value (EV) and functional value (FV). Perceived risk (PeR) in the form of price risk (PR) and technical barriers (TB) also form part of the negative experiences. Understanding the relationships between these constructs may lead to an understanding of their perceived usefulness (PU) and their perceived ease of use (PEoU), which will then give an indication of the IST's behavioural intention (BI) to adopt the usage of DBP's.

2.3.3 Current Theoretical Frameworks for Digital Transformation

After performing a systematic review of 282 works, Vial (2019) inductively built a framework of digital transformation articulated across eight building blocks. Their framework (figure 3) proposes that digital transformation is a process where digital technologies create disruptions that trigger strategic responses from organizations that pursue to alter their value creation paths while handling the structural changes and organizational barriers that affect the positive and negative consequences of this process.

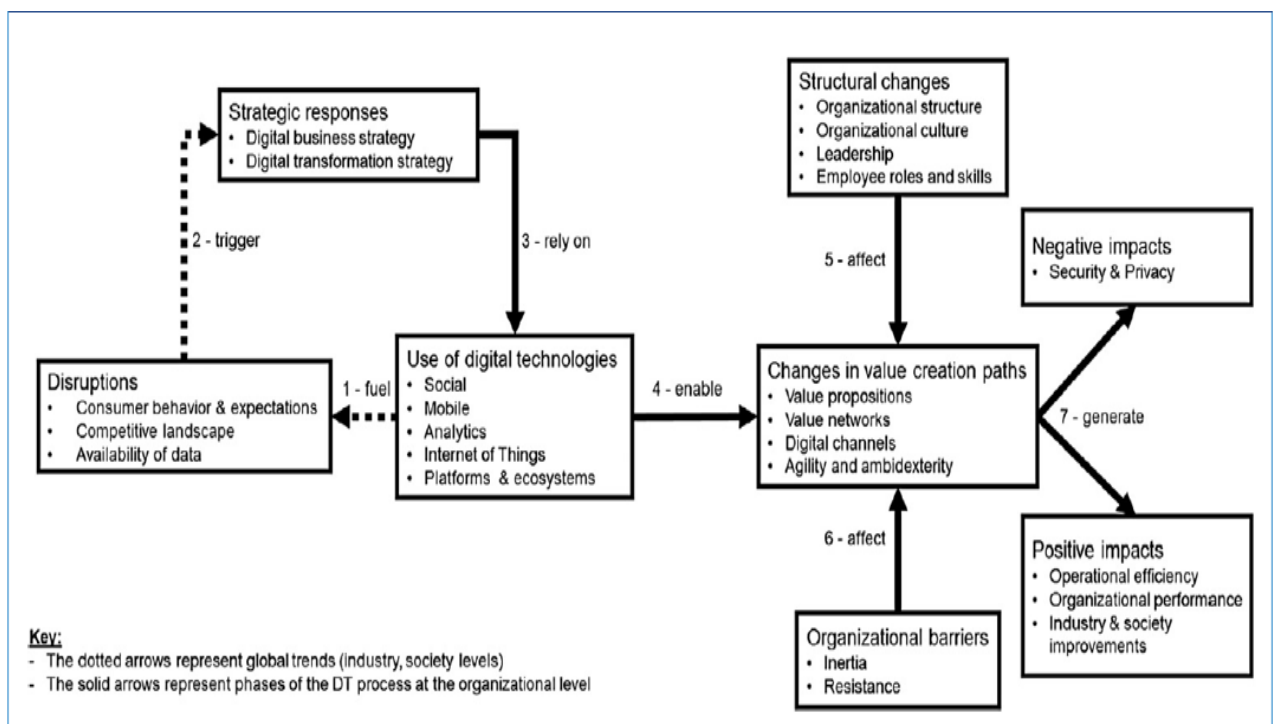


Figure 3: Building blocks of digital transformation process (Vial, 2019)

A year later van Veldhoven and Vanthienen, (2020) applied a similar approach to Vial (2019) by performing, an in-depth literature study to inductively synthesize a conceptual framework

(see figure 4) that merges the distinct definitions and aspects of digital transformation.

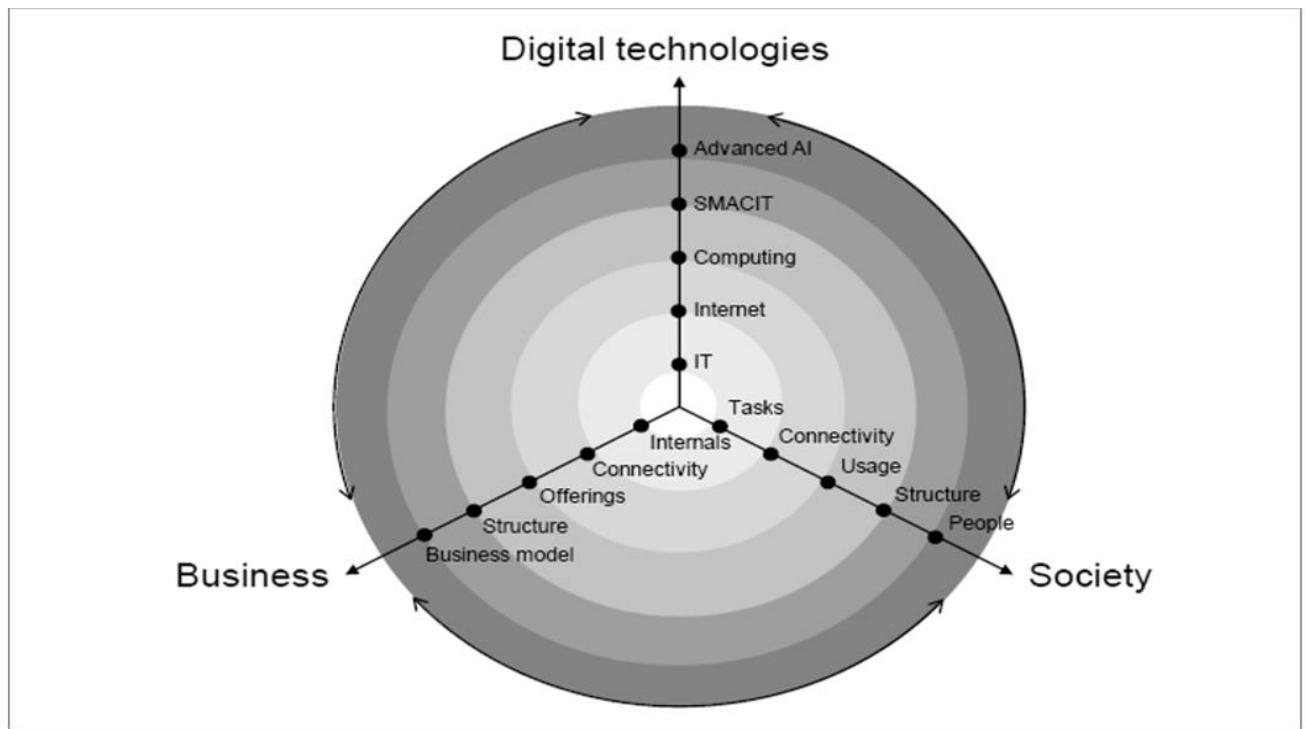


Figure 4: Van Veldhoven and Navthienen's framework for digital transformation (Source: Veldhoven and Vanthienen, 2020)

Their framework clearly describes why digital transformation is taking place and gaining momentum in all spheres of human-business interaction. Scholars and industry practitioners can use the framework to position their organisational transformation efforts and to gain a better awareness of its wide opportunities that are available for exploitation. The framework summarizes the key elements of DT literature in to three axes, their sectors, and the interactions between the axes. The axes characterise the three transformations that can occur, these are namely: business transformation, digital technologies transformation, and society transformation.

The current study will apply quantitative methods to acquire a better understanding of the perceptions of Informal sector traders towards digital business platforms, however, there is a requirement for a Praxis Model to accompany this study. Therefore, Vial's (2019) Building Blocks of the Digital Transformation will suffice due to the following reasons:

- Inclusion: it identifies key stakeholder groups and demonstrates inclusion
- Innovation: the model disrupts and reimagines the current socio-technical systems
- Practicability: it is practical as demonstrated by its evidence-based design

Vial's (2019) framework will be applied as a business case scenario for a fictitious enterprise that is embarking on a digital transformation roadmap that includes the informal sector traders as part of the concerned stakeholders. This framework is more favourable than the Digital Transformation Framework by Veldhoven and Vanthienen (2020) as a 'Praxis Model' for this study due to its applicability and simplicity. This is because it allows the digital transformation process to be applied at an organisation level, whereas Veldhoven and Vanthienen (2020) model is applicable to a wider scale which includes the society at large. See Appendix A for the Digital Transformation Business Case example.

2.3.4 The Role of Digital Transformation in Societal Transformation

Society Transformation can be referenced as the changes happening in people, customers, and societies over time (Fitzgerald et al., 2013). In the context of Digital Transformation, it is about the changes happening due to the increased use of digital technologies, by the SMACIT (Social Media, Artificial Intelligence, Cloud, Internet of Things) technologies (Mergel et al., 2019; Verhoef et al., 2021). Human beings are becoming progressively digitalized because they accept digital technologies in every aspect of their lives. This influences their approval of digital trends, their personality, their perception of privacy, their work, the way they connect, and the way they live (Majchrzak et al., 2016). The following sub-section addresses the digital and societal transformation of the informal economy sector and the ISTs as its participants.

2.3.5 Towards the Digital Transformation of the Informal Sector Economy

Digital technology is ubiquitously transforming all modern work sectors, connecting people in the informal sector to the formal opportunities and binding together all divides (Met et al., 2020; van Veldhoven & Vanthienen, 2020; Zhong et al., 2021). Information and communication technology (ICT) solutions have continuously transformed the way major enterprises do business for many decades since the discovery of the semi-conductor in the early 1950's (Deal and Early, 1979). However, it is digital and mobile technology, that are more likely to be effective in the coming decades to usher in an 'age of digital inclusivity' that will redefine and blur the lines between what is the formal or informal economy. Supplying the Bottom of the Pyramid customers necessitates that large corporations work collaboratively with civilian society and their small businesses, together with local governments (Prahalad et al., 2012). Table 1 is an illustration of the misconceptions that most big might have about the informal sector traders.

General Assumptions Made by Big Corporates About Bottom of the Pyramid	
1	The poor are not our target market as current cost structures do not allow companies to profitably compete for that market
2	The poor cannot afford and have no use for products and services sold in the developed markets
3	Only the developed markets appreciate and will pay for new technology. The poor can use the previous generation of technology
4	The Bottom-of-the-Pyramid is not important to the long-term viability of our business
5	Business Leaders are not excited by challenges that have a humanitarian dimension
6	Intellectual excitement is in the developed markets. It is hard to find talented managers who want to work at the Bottom-of-the-Pyramid

Table 1: Prahalad et al. (2012) Assumptions Big Corporates Make about Bottom of the Pyramid

2.3.5 Concluding Remarks on the Digital Transformation of the Informal Sector

This section discussed the various definitions of digital transformations and explored the reason why DT literature was central to the research objective for this study. It also studied the two contemporary frameworks by Vial (2019) and Veldhoven and Vanthienen (2020) that are more prominent as at the time of this study. The potential role of DT on the informal sector economy was also discussed. The next section will explore the Digital Business Platforms as a collection of applications that informal sector traders engage with in their daily trading and the value they extract from usage of such digital platforms.

2.6 Digital Business Platforms

“The reach of internet and digital technology is enormous, the new framework of doing business is the three I’s: interactive, integrated, and individualised. This means that business can be democratised, that is, the haves and the have-nots in the digital divide could be made into a common platform and the world can be made flat in the process” (Sheth, 2020, p6)

Impact of Covid-19 on consumer behaviour: Will the old habits return or die?

This section will discuss the wide spectrum of Digital business platforms (DBP’s). It begins by first defining the overall concept of DBP’s, then proceeds to discuss what sets these DBP’s apart from traditional pipelines that have run modern supply chains of the past few decades. Then a brief explanation on the categorisation DBP’s by type and utilisation is offered. This section concludes by focusing on DBP literature that is only specifically relevant to this project’s unit of analysis which is the Informal sector traders (IST’s) who make their living in the Informal Economy. Understanding the positive and negative experiences that Informal Sector Workers go through when interacting with digital business platforms is central to the research question. In other words, DBP literature will help to unveil the understanding of the

perceived value (PV) that IST's experiences when using DBP's by examining their social value (SV), emotional value (EV) and functional value (FV). Perceived risk (PeR) in the form of price risk (PR) and technical barriers (TB) also form part of the negative experiences.

2.6.1 Defining Digital Business Platforms; From Physical Space to Digital Space

There are various ways to define digital business platforms as evidenced by the multiple approaches adopted by different researchers (De Reuver et al., 2017; LeHong et al., 2016; Montealegre & Iyengar, 2021) within the past decade (2010-2021). Some make comparisons from the physical space to the cyber/digital space in deriving their definition (Herrera, 2016; Mini and Widjaja, 2020). Others take the approach of comparing the traditional network effects of long-standing industrial age business models to the multi-sided network effects of the many current digital business platforms and their business models (Montealegre and Iyengar, 2021; Pomykalski, 2019; Vakeel et al., 2020). Henfridsson and Bigoted (2013) observed that digital business platforms are created and owned by a single business or enterprise, that provide multi-faceted solutions that are placed in the digital space as opposed to traditional solutions in the physical space. Henfridsson and Bigoted (2013) defined DBP's as 'ecosystems that are comprised of people, data, processes, and things connected by the shared used of technologies that go beyond the scope of a single system' (Henfridsson and Bygstad, 2013 p.6.) Yoo; Henfridsson, and Lyytinen, (2010) looked at DBP's as providers of interfaces with multiple groups of actors, comprising providers of corresponding services and assets that allow collaboration and provide reciprocally beneficial results to all parties involved. DBP's platforms have been described as today's most significant 'game changers' for how companies connect and engage with customers and their suppliers to gain a competitive edge in the digital age (Montealegre and Iyengar, 2021; Rangaswamy et al., 2020).

2.6.2 Types of Digital business platforms Most Relevant to the Informal Economy

Digital business platforms span a wide variety of use cases, and as such, have many specialised and different functions. Social media platforms have had a profound impact in how BOP masses communicate and maintain a sense of community (Venkatraman, Sawy, Pavlou, & Bharadwaj, 2014). There has also been a lot of research on mobile banking (Shaikh & Karjaluoto, 2015) and mobile payments adoption (Dahlberg, Mallat, Ondrus, & Zmijewska, 2008) (Lu, 2019) amongst the BOP masses, both globally and within the South African context (Makholwa et al., 2020). According to the CIA World Fact Book, well over 60 percent of Internet traffic produced on the African continent originates from South Africa, with 29.3

million people (54% of the total population) being active Internet users as of July 2016. The most popular app in South Africa was WhatsApp Messenger, with 58 % of South African mobile phone owners utilizing the app as of February 2020. Taxicab-hailing app Uber was placed second with a 50 percent reach among mobile audiences. Table 2 is a summary of various types of digital business platforms as arranged by Rangaswamy et al (2020). The list is grouped according to 8 types of digital business platforms; however, it may be argued that there are only 6 DBP's that are most relevant to the South African Informal sector traders by excluding crowd-sourcing and match-making platforms. These may be justified as follows:

- Search/ad platform - Google to search for products and services for ISTs buying and selling.
- Content/ad platform – YouTube for ISTs marketing their goods online.
- Transaction Platform – Take-a-lot to source products for ISTs buying and selling.
- Social Media Platform –Facebook, and Whatsapp to connect with their customers.
- Payment Platform – Yoco, iKhoka, and uKheshi allow ISTs to make cashless payments.
- Two-sided Market Platforms – Google Play and App Store for downloading apps.

The following section will make comparison between traditional pipelines and digital platforms

Summary of various types of DBPs.				
Platform type	Examples	Suppliers (providers)	Customers	Key factors influencing success
Search/ad platform	Google, Bing, AppNexus	Content providers, publishers	Advertisers	Targetability of users, privacy
Content/ad platform (digital products, instant delivery)	YouTube, Spotify Technology (ad version), TripAdvisor, Kelley Blue Book	Content creators (e.g., writers, musicians, movie producers)	Advertisers, subscribers (visitors to the site are not customers because they do not directly generate revenue)	Curation or matching, monetization (e.g., ad targetability, subscription), privacy
Transaction platform	Amazon.com, Alibaba Group, Ping An Insurance, eBay, Craigslist, Etsy, Brasil Online (Bol)	Manufacturers, distributors, merchants (e.g., hotels, shipping companies), the platform itself	Consumers	Fulfillment logistics, good price, curation (assortment selection) or site navigation
Social media platform (facilitate connections and communications among users)	Facebook, Instagram, WhatsApp Messenger, Twitter, TikTok, Slack	Users (i.e., consumers and firms that generate content), app developers	Users (i.e., consumers and firms), advertisers	Monetization, ad targetability, direct network effects, privacy, creating a sense of community
Matchmaker only platform	Upwork (formerly eLance), LinkedIn Corporation, eHarmony, Monster.com	Users (i.e., consumers or firms)	Users (i.e., consumers or firms)	Content and curation, heterogeneity of supply and demand
Service platform, including social-sharing platform	Uber Technologies, Airbnb, OpenTable, Utelier.com, Expedia Group, SeatGeek, Upwork, Takl, Vertoe, Orbitz.com, DoorDash	Producers, distributors, the platform itself	Users (i.e., consumers)	Good price, heterogeneity of supply or demand. For social-sharing platforms, an additional issue could be a societal purpose.
Payment platform	Visa, Paypal Holdings, Alipay	Banks, Merchants	Merchants	Security (e.g., fraud detection), reliability (near 100%), convenience
Crowdsourcing/crowdfunding platform	Kaggle, Liveops, Indiegogo, LendingClub	Lenders (i.e., consumers and firms)	Users (i.e., consumers and firms), advertisers	Content, risk reduction, creating a sense of community
Two-sided technology platform	The App Store (Apple iPhone), Google Play, Ethereum	App developers, firms	Consumers, firms	Data, privacy, innovation

Table 2: The Types of Digital business platforms (Rangaswamy et al., 2020a)

2.6.3 Digital Platforms vs Traditional Pipeline Business Model

Traditional pipeline businesses have been foundationally designed to be very efficient and successful in an economic system that comprises of linear value chains. This observation was first popularised by Harvard Business School professor Porter (1985). These enterprises (including wholesalers such as Makro, Boxer and SABMiller- that supply much of the South African Informal Sector Economy) purchase inputs from others business entities, convert them into value-added solutions through manufacturing, fabrication, and branding (Porter, 2008). Within the last decade (2010-2021), some scholars (Crane et al., 2014; Porter & Kramer, 2014; Zamora, 2016) have started to question the relevance of Porter's Five Competitive Forces Model. They argue that due to an increasing significance of Digitalization, and Deregulation, the business structure of the 'Old Economy' has changed profoundly (Parker et al., 2016). Dr Shokeen (2017) published a critical examination of Porter's Model and concluded that the 'New Economy' is not equivalent with the 'Old Economy', which is the foundation of the Five Forces model. He argues that Porter's Five Forces model has been an influential management apparatus for analysing the traditional industry's prosperity and desirability by using the outside-in point of view. However, this has changed in the most recent decades, because of the expanding Internet economy and as such, a rise in disapproval of Porter's model. DBP's spawn services that are profoundly changing existing ways of working by disrupting internal ecosystems, and re-shaping company structures (Yoshida, 2017) .

The next section will discuss the use of DPS's as a pathway to start the formalisation of some of the informal sector businesses so that they may participate in the mainstream formal economy.

2.6.4 Digital Platforms Offer Informal Businesses a Progression

Towards Formalisation

Ng'weno and Porteous (2018) ask very difficult, yet very important questions regarding Africa's ability to withstand all these disruptive changes that the 4th Industrial Revolution is bringing forth. They ponder on what the implications are, for Africa's informal sector's ability to generate income for the livelihoods of its people as both goods and services become automated. Ng'weno and Porteous (2018), however, make the important observation that even it is not yet clear which way the market will swing, but they already notice that digital platforms are starting to change the very nature of what it means to be informal or formal. They argue that all along, there was to some extent, a clear distinction between enterprises that can be classified to be in the informal sector and those that were in the formal sector. Ng'weno and Porteous (2018, p 3) make the bold claim that 'the digital world allows a business to take on

formality in small, accessible, low-cost steps that match company needs—more of a ladder to climb than a cliff to scale’ Their assertion is illustrated Figure 5.

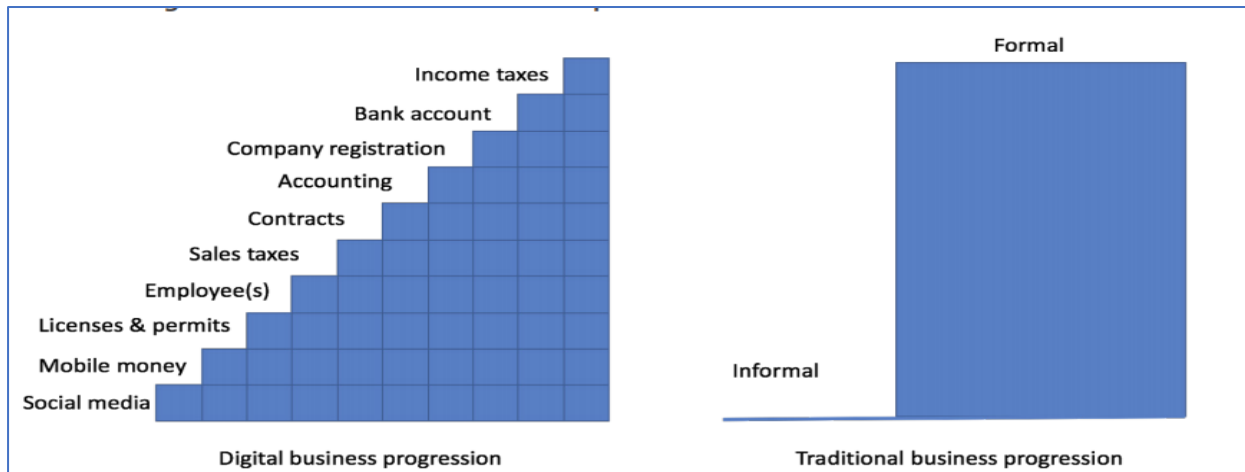


Figure 5: Digital vs. traditional formalization process Ng’weno and Porteous (2018)

Ng’weno and Porteous (2018) assume that this digital progression will empower a lot more businesses to successfully make the conversion from start-up to formal enterprise for the mere reason that each step is at less cost and less risk to the owners of the business. They further posit that even if a business does not make it all the way to the apex, there would still be value created at each step along the climb towards formality.

The implications of Ng’weno and Porteous (2018) assertions for the South African Informal Sector Trader, mean that if policymakers and big business in this country can be more intentional about the digital progression of the low-income informal traders, then much can be accomplished towards the goal of financial inclusion.

2.6.5.1 Social Networking DBP’s Adoption Literature in the Informal Economy

There has been research in academic journals that are dedicated to social media types of DBP’s and their effects on societies in the African continent (Marks and Stys, 2019; Mwaba et al., 2018). A qualitative study focusing on four Sub-Saharan countries by (Chikweche and Fletcher, 2014), was seeking to expand knowledge about how middle-class consumers in these markets behave, with regards to the potential role of social networks and the consequent interactions that take place between these consumers and commercial enterprises. The results included the detection of middle of the pyramid (MOP) social networks, their effect on consumer behaviour and the nature of consumer and commercial enterprises interactions that occur because of the impact of social networks (Chikweche and Fletcher, 2014).

In yet another South African study (Mwaba et al., 2018), the focus was on visual content, such as photos and videos, and how they have dramatically increased on social network sites (SNS). The purpose of this study was to investigate the relationship between the personality traits of an individual and their visual and verbal content preference on social networks in South Africa. Mwaba et al (2018) obtained data from 307 social network site users. The key findings exposed that personality does have an influence on social network users' inclination. Figure 6 is an illustration of the estimated number of social network from 2017 to 2025 in South Africa as projected by Statista

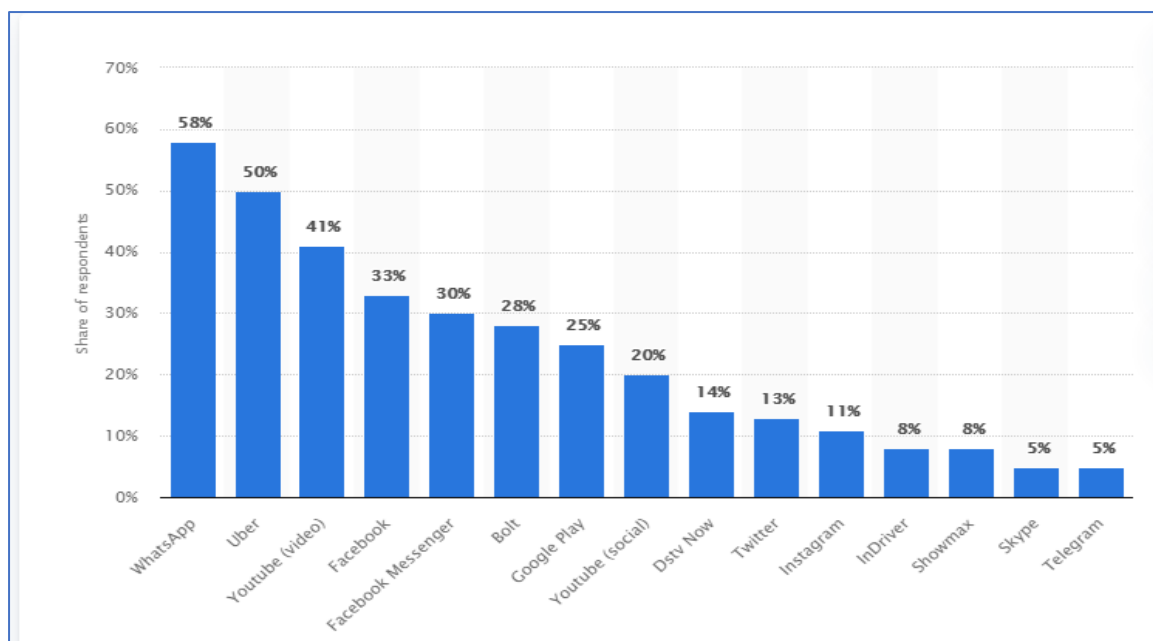


Figure 6: Most popular mobile apps use in South African as of February 2020 (Statista, 2020)

2.6.5.2 Mobile Payments and M-Banking DBP's Adoption Literature in the Informal Economy

Mobile payments are instruments that allow individuals to make financial transactions using cell phone technology. East African countries such Kenya and Tanzania have seen the most rapid rise of these technology adoptions in the African continent (Burns, 2015; Coffie, 2020; Jack and Suri, 2011). A study on Kenya (Jack and Suri, 2011), which is a country that has seen possibly the most rapid and well-known growth of a mobile money product, called M-PESA and evaluate its potential economic impacts (Jack and Suri, 2011). Included in the report findings, is an analysis from a survey of M-PESA agents, who offer cash-in and cash-out services, and emphasize the inventory management problems they face in their daily dealings with informal merchants and their customers. In a study to test the acceptance of mobile payments in in Germany and South Africa (Verkijika, 2020) the relationships between the

personality characteristic dimensions of the Technology Readiness Index 2.0 (TRI) and the system-specific constructs of the Technology Acceptance Model (TAM) were examined. The results showed that some, but not all, of the TRI 2.0 variables had a considerable influence on the dimensions of the Technology Acceptance Model and that Perceived Usefulness (PU) was the strongest predictor of the intention to adopt mobile payments (Verkijika, 2020).

South Africa is an emerging economy and has both a first and second economy. One of the difficulties that it confronts is that of the "unbanked", that is, a large sector of the population does not have bank accounts and as such "banking" happens through informal means (Lawack-Davids, 2012a). Some researchers have sought to examine the legal and regulatory framework relating to mobile banking, and specifically, mobile payments in South Africa (Lawack-Davids, 2012a). Regulatory disparities and areas for improvement are emphasized. Figure 7 is an illustration of payment methods accepted by digital platforms in South Africa as of 2018 published by Statista. In the figure below it is evident that the mobile payments is still at its infancy, and much can be done to improve the acceptance of this form of money exchange due to its ability to improve on financial inclusion for the informal sector traders.

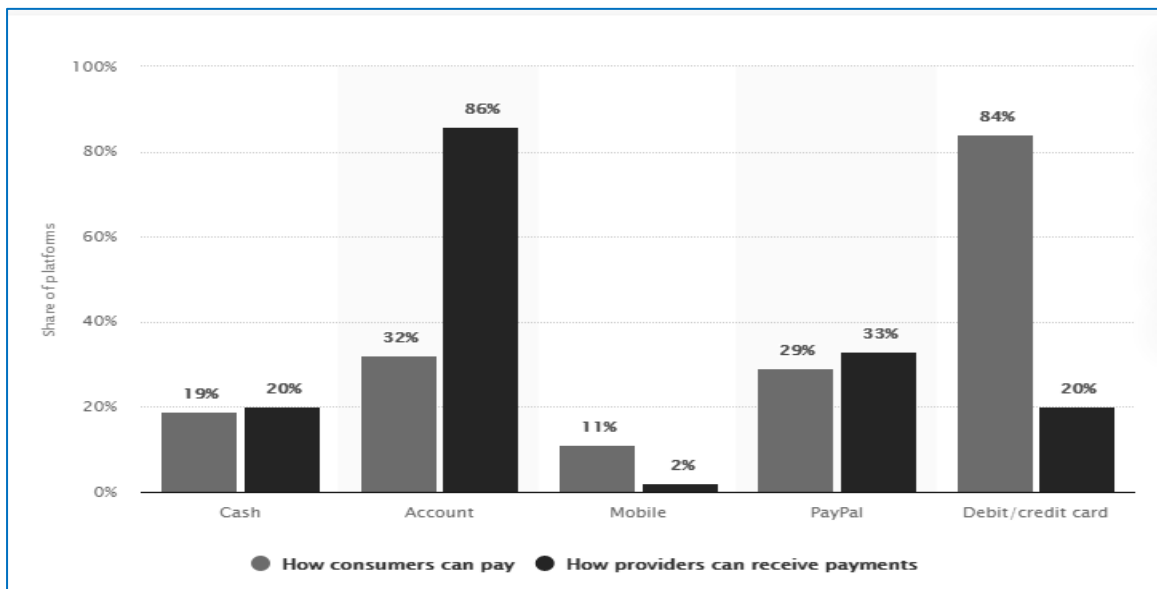


Figure 7: Payment methods accepted by digital platforms in South Africa as of 2018 Source: Statista (2020)

2.6.5.3 E-Commerce DBP's Adoption Literature in the Informal Economy

E-commerce offers a viable platform for bridging the gap in African economies and as such its adaptability and sustainability is of major importance and consequence (Ndonga, 2012). A study of a broader review of the problems that Small and Medium Enterprises (SMEs) face when trying to engage with electronic commerce (E-commerce) in Africa, was performed by

Elsmani et al., (2017). They found that the obstacles preventing African SMEs from successfully introducing, applying, and adopting the e-commerce concept are internal and external barriers that are policy driven. At country, level Ibam et al., (2018) analysed the degree of development of e-commerce and its impact on the Nigerian economy and concluded that e-commerce has made positive impact on the African economies, even though lack of trust on transactions is a major challenge. In a South African study, researcher, Ntozintle Jobodwana (2009) starts by defining e-commerce as all forms of commercial transactions that encompass activities between individuals and organizations that are created on the electronic processing of data. This includes mobile commerce (m-commerce) and is defined as the buying and selling of goods and services using mobile telephones. Ntozintle Jobodwana (2009) concludes the study by asserting that m-commerce is emerging in Africa and South Africa and makes the arguments that "m-commerce" will outstrip "e-commerce" as the system of choice for digital commerce transactions in Africa. This outcome would serve the informal sector traders very well due to low-cost implications of using mobile-commerce by applying the entry-level smartphones for their daily trading.

2.7 Conclusion

The literature review in this research project extended across multiple disciplines such information systems, social studies, and marketing in the quest to create a theoretical foundation for this study. The South African informal sector was also inspected from its basal characteristics to its statistical make-up in a way that provides context and lays the foundation for the quantitative analysis. Digital Transformation, the evolution of technology and its effects on business and society were also discussed in detail. This included the discussion on a Digital Transformation Framework that may be applied for the Praxis method as an example of a business case. It then followed with the different types of Digital business platforms and their use cases, especially the ones that are most relevant to the unit of analysis i.e., the informal sector trader. With this literary foundation, it is anticipated that the gap in the knowledge of how informal sector traders perceive the value of adopting Digital business platforms as a collective concept as opposed to previous studies which were mostly focused on individual types of applications and platforms, will yield new insights and directions for future research.

CHAPTER 3: LITERATURE REVIEW – Research Framework and Hypothesis

Development

3.1 Introduction: Conceptual Research Framework

The current study adopts the Technology Adoption Model (TAM) and extends it with Perceived Value (PV) and Perceived Risk (PeR) constructs, to investigate the user acceptance and adoption of by Digital business platforms by Informal sector traders in their daily activities when conducting their businesses. This section of the study will discuss the conceptual theoretical framework. It begins with a chronological discussion of the emergence and popular use of the TAM throughout the decades, from its inception to its evolutionary transition to UTAUT. It then investigates the application of the value constructs and the risk constructs on TAM in multiple studies from the past two decades. The section concludes by establishing and adopting a model that extends TAM with value consumption (VC).

3.2 Popular Theoretical Models Applied in Technology Adoption Research

Several approaches are often applied when studying adoption of technology. One approach, which can be useful when looking at the adoption of Digital business platforms by Informal Sector Traders, is to determine the correlation between the adoption of technology and influencing variables such as gender, age, voluntariness of use, and experience (Im, Hong, and Kang, 2011). Two models that adopt this approach are discussed in the sub-sections below.

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

The Unified Theory of Acceptance and Use of Technology (UTAUT) is an extension to TAM and TAM2 and was formulated by Venkatesh (2003) in a study titled "User acceptance of information technology: Toward a unified view". The UTAUT aims to explain user intentions to use an information system and subsequent usage behaviour (Venkatesh et al., 2012). The objective of developing UTAUT was to produce an integrated view given the broad and ambiguous use and extensions of previous models (Oshlyansky, Cairns, and Thimbleby, 2007). In articulating the constructs of UTAUT, (Venkatesh et al., 2003) considered eight prolific models including TRA, TAM, IDT and the social cognitive theory See figure 8.

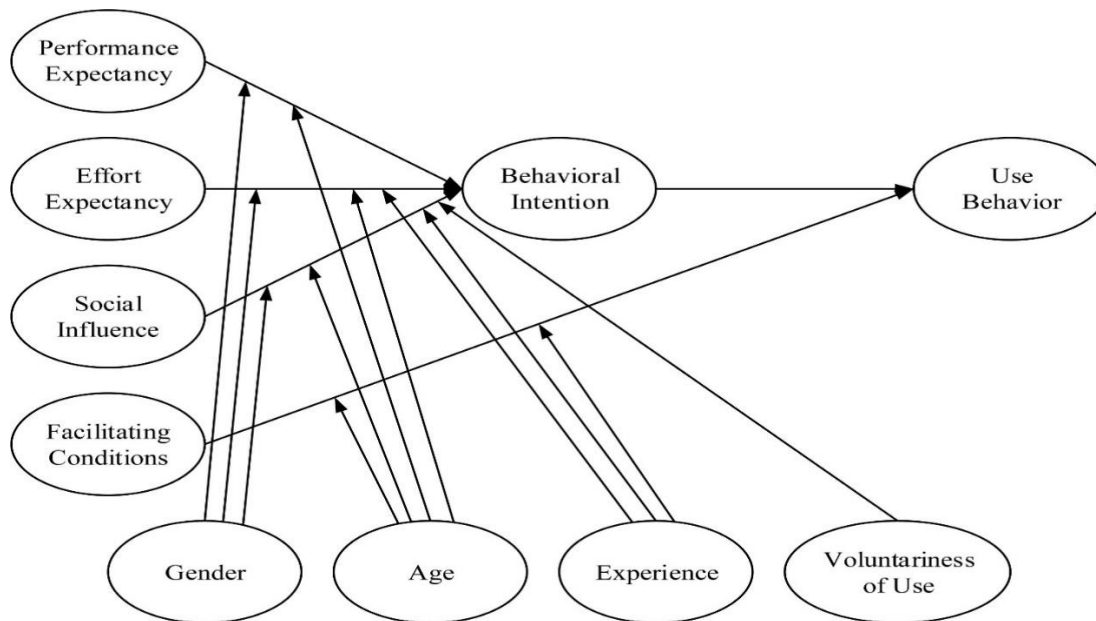


Figure 8: Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, and Davis, 2003)

The model arrived at four factors of usage intention and five moderators (Venkatesh et al., 2003). Moderators were gender, age, experience, and voluntariness of use. The four independent variables are

- Performance Expectancy (PE): Confidence in the technology’s capability to assist in task performance.
- Effort Expectancy (EE): The sum of effort perceived to be necessary to use the technology.
- Social Influence (SI): Social pressure to use a technology.
- Facilitating Conditions (FC): Observation of resource and support available for the usage of the technology.

The UTAUT model was not deemed fit for this study because it does not accommodate for the perceived value (PV) and perceived risk (PeR) constructs necessary for understanding the informal trader’s attitudes towards DBP’s. This concern is addressed well by applying the technology acceptance model (TAM) and extending it with the value consumption model (VCM) as explained in the next paragraphs.

3.3 Applying the Technology Acceptance Method (TAM) for the Current Study

One of the earliest research papers that applied the Technology acceptance model (TAM) was produced by the originator of the model, Fred Davis in 1993 (see figure 9). In his research project, Davis (1993) wanted to find the answer to the question of why users accept or reject

information systems. In so doing, he wanted to specify the causal relationship of how the systems' features were designed and consequently how the intended users of the system perceived its usefulness, its ease of use and, their attitude towards using it and its actual usage behaviour. This is very much in line with the enquiry of this study, because its intention is to understand the perceived ease of use and usefulness of digital business platforms by informal sector traders, to necessitate continuous adoption and future use of these platforms.

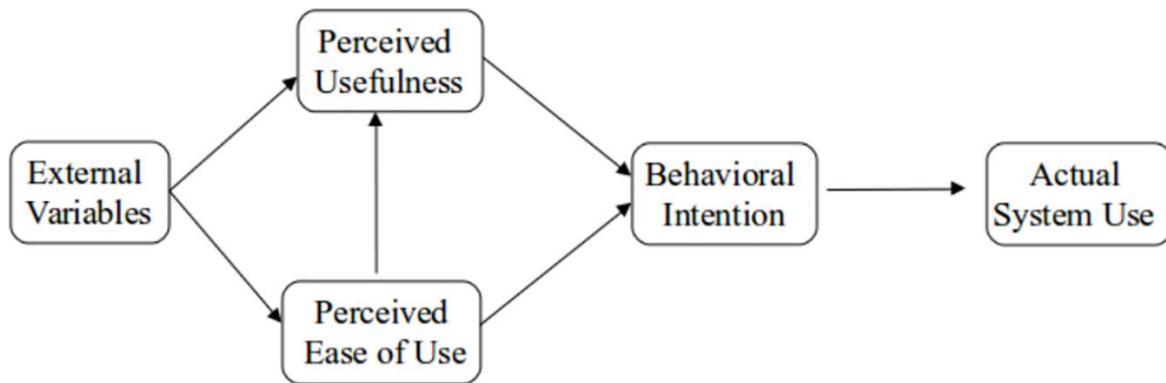


Figure 9: Technology Acceptance Model (Davis, 1989)

3.4 Justification for Applying TAM and not UTAUT to Current Study

Indeed, TAM is a respected theoretical model for aiding to understand and foretell adoption practices of information systems, even though, some scholars experienced limitations in its usage (Venkatesh et al., 2003). The observation is however that the technology acceptance model (TAM) is the most widely applied and validated model in various settings and across a variety of technology adoption studies (Chhonker et al., 2017). Figure 10 provides an illustration of this opinion from a systemic literature review of mobile commerce studies by Chhonker et al (2017), where an overwhelming number of studies adopted TAM as a preferred model of enquiry. With regard to the current study, UTAUT would be too inflexible for consideration because it does not adequately allow for the application of the value consumption perception of a technology adoption, which is what this study is precisely about. Therefore, this current study propositions TAM as the focal theoretical framework to describe the determining factor of Digital Business Platform adoption by ISTs because of its ability to be extended with the value consumption model (VCM).

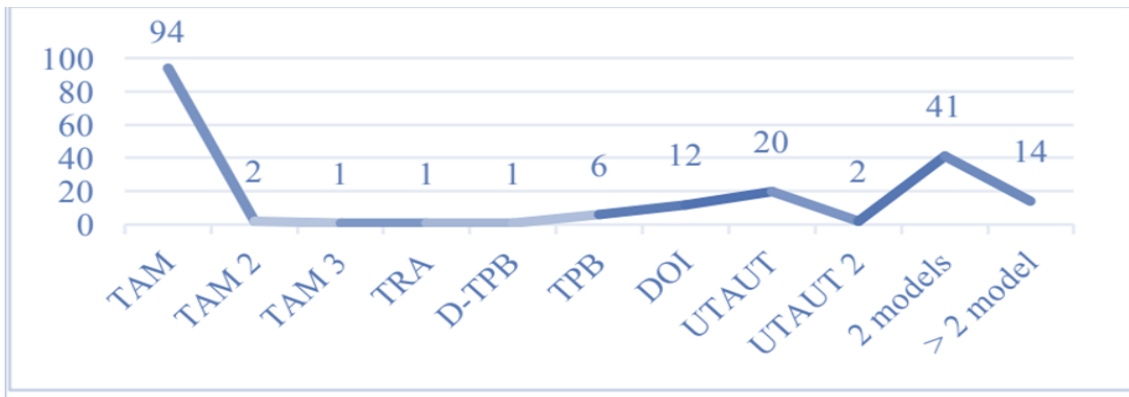


Figure 10: Frequency of technology adoption theories in M-Commerce studies (Chhonker et al., 2017)

3.5 Studies on Digital Business Platform Adoption by the Informal Economy Using Technology Acceptance Model (TAM)

A list of studies that investigated technology adoption were collected and curated for inclusion from the period 2010 to 2022. These studies would include literature focused on mobile banking, m-commerce, mobile payments, and social media for individuals at the ‘Bottom of the Pyramid’ as per Prahalad (2003) definition of low-income individuals in African and Asian countries. Table 4 is a list of studies that applied technology adoption frameworks and theories related to digital business platforms. The keywords that were used to identify these studies were: “social networks”, “e-commerce”, “mobile payments”, “branchless banking”, “cell phone banking”, “bottom of pyramid”, “BOP”, “base of pyramid”, “developing countries”, “emerging markets” “Africa”, “poor economies” and “m-banking”. These items identified were narrowed down to those that focused on the challenges and benefits of embracing digital business platforms in African such as Nigeria, Zimbabwe, Rwanda, South Africa, Ghana, Zambia as well Asian countries such as India and China.

Table 4: Studies of Technology Adoption Frameworks and Theories Related to Digital business platforms

Author(s) (year): Country, Region	Objective(s), Research question(s)	Digital Business Platform	Theories, Conceptual Models	Data collection
Chukwumah (2017): Nigeria	What factors influence adoption of mobile banking in rural Nigeria?	Mobile Banking	TAM	<ul style="list-style-type: none"> • 186 questionnaire respondents in four villages in Katsina • Respondents' gender: M (44%), F (56%) • Ages: 84% between 20 and 49, 37% between 30 and 39 • Education: 33% with only primary school • Occupations: retailers (52%), farmers (20%)
Ammar and Ahmed (2016)	To examine the factors that influence adoption of mobile banking in the microfinance sector in Sudan	Mobile Banking	UTAUT and technology organisation environment (TOE)	<ul style="list-style-type: none"> • 393 survey respondents • Respondents' gender: M (43%), F (57%) • Age: 35% aged 28-37 • Education: 91% literate • Mobile phone ownership: 99% • Frequency of mobile usage: 85% daily
Shrivastava (2010): South Africa	To test attitudes towards mobile financial services, including mobile banking	Financial Services Platform	TAM	<ul style="list-style-type: none"> • 400 questionnaire respondents • Respondents' ages: 42% aged 25-34
Bankole and Cloete (2011): South Africa, Nigeria	To examine differences and similarities between mobile banking usage in South Africa and Nigeria	Mobile Banking	UTAUT	<ul style="list-style-type: none"> • 451 questionnaire respondents: in South Africa (220) and Nigeria (231) • 10 face-to-face interviews each in South Africa and Nigeria respectively (6 males and 4 females interviewed from each country)
	Mobile money adoption and response to idiosyncratic shocks: Empirics from five selected	Secondary empirical Data	InterMedia Financial Inclusion Insights (FII)	<ul style="list-style-type: none"> • Study examines the link between mobile money adoption and response to idiosyncratic shocks from the perspectives of senders and receivers using comprehensive household data across five countries

	countries in sub-Saharan Africa			
Simplice and Asongu (2020) South Africa	Understanding the greater diffusion of mobile money innovations in Africa	Mobile Payments	DOI	<ul style="list-style-type: none"> • Financial Inclusion Indices (Findex) database • Global Financial Structure Database (GFSD) • World Development Indicators (WDI) of the World Bank and the Global System for Mobile Communications Association (GSMA)
(Makholwa et al., 2020a)	Mobile financial services for bottom of pyramid users: Reality or pipe dream?	Mobile Payments	UTAUT 2	<ul style="list-style-type: none"> • Sample of data of 300 respondents targeted at urban dwelling residents in South African townships • Johannesburg – Tembisa 150 survey respondents • Pretoria – Soshanguve, 150 survey
(Lee, 2009)	Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit	Internet Banking	TAM and TBP	<ul style="list-style-type: none"> • Online survey, which yielded 446 responses • Fifty-eight percent of the respondents were male and 42% were female. • The majority of respondents (61%) were over 30 years old. • About 69% of the respondents did not have experience using online banking.
(Kim et al., 2013)	A study of mobile user engagement (MoEN): Engagement motivations, perceived value, satisfaction, and continued engagement intention	Mobile App Platform	MoEN: utilitarian and perceived value	<ul style="list-style-type: none"> • 604 surveys from a variety of courses and class times. • 297 usable samples (49%). • 150 (50.3%) are males and 147 (49.3%) are females.
(Zhu et al., 2017)	Inside the sharing economy: Understanding consumer	Sharing Economy Platforms	Self-Efficacy TAM	<ul style="list-style-type: none"> • Quantitative methodology was adopted using a survey questionnaire that allows for the measurement of the nine constructs contained in the hypothesized theoretical model.

	motivations behind the adoption of mobile application			<ul style="list-style-type: none"> Data collected from a sample of 314 respondents in Beijing, China provided the foundation for the examination of the proposed relationships in the model.
(S. Y. Lee and Park, 2016)	A Study on the Intention of the Use of Mobile Payment Services: Application of the Technology Acceptance Mode	Mobile Payments	TAM	<ul style="list-style-type: none"> Online survey was administered, and 339 questionnaires were analysed. Structure Equation Model (SEM) Analysis revealed that TAM variables (perceived usefulness and perceived convenience) partially influenced the attitude
(Thakur, 2013)	Customer Adoption of Mobile Payment Services by Professionals across two Cities in India: An Empirical Study Using Modified Technology Acceptance Model	Mobile Payments	TAM	<ul style="list-style-type: none"> Technology Acceptance Model (TAM) using a sample of urban population from two metros in India
(Vahdat et al., 2020)	Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention	E-shopping	TAM	<ul style="list-style-type: none"> Study examines social influence and peer influence in the TAM and collects 777 questionnaires from Digikala app users Data were then analysed using structural equation modelling by AMOS

Table 1: Studies of Technology Adoption Frameworks and Theories Related to Digital business platforms

3.6 Customer Value Consumption Theory Studies

The previous sub-section discussed the most common and popularly applied technology adoption frameworks such TAM and UTAUT. A list of studies that applied these frameworks were also provided and it is important to note that many of these studies are rooted in the Information Systems research domain. However, this study takes a multi-disciplinary approach in acquiring an understanding of the ‘value’ perception, as an added driving force necessary for the adoption of DBP’s by South African informal sector traders. It is for this reason that a Marketing domain framework such as the ‘Customer Value Theory’ needed to be incorporated and applied to this study.

Modern research literature in marketing and e-commerce considers “customer value” to be an essential predictor of customer buying behaviour (H. W. Kim et al., 2011a; Luna-Cortés, 2017; Turel et al., 2010). A consumer’s preference on a product or service can manifest itself as a result of multiple value dimensions that make numerous contributions in different choice circumstances (Doyle, 2000). These dimensions are all-inclusive, encompass a diversity of fields, and form a robust foundation for the extension of existing value constructs (Y. K. Kim, 2002; Sánchez-Fernández and Iniesta-Bonillo, 2007; S. yi Youn and Lee, 2019) and therefore, they were applied as a basis in other studies. One of the pioneering works on customer value was by Sheth et al. (1991), in which he came up with the value framework in paper titled ‘Why we buy what we buy: A theory of consumption values. Figure 11 is a depiction of a modified version of the customer value framework, which has been adopted for this study.

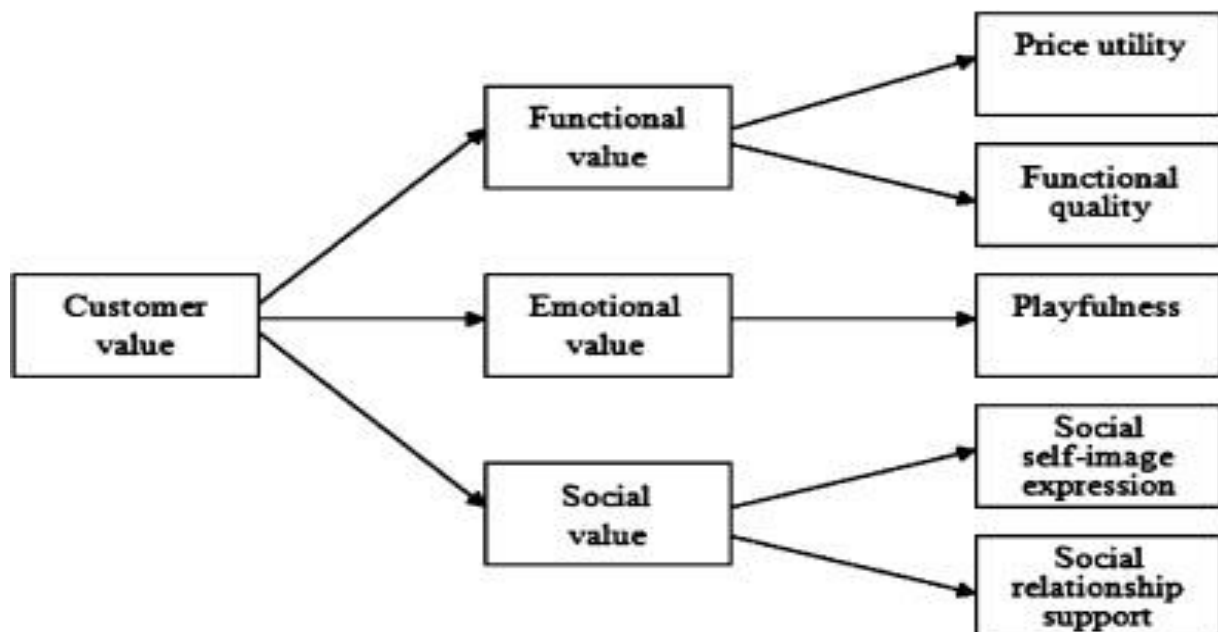


Figure 11: Sheth et al (1991). Value Framework, as adopted by H. W. Kim et al., (2011)

3.7 Previous Research of TAM extended with Value Consumption Model (VCM)

In a 2011 study that investigated the intention to buy digital items on social media platforms by (H. W. Kim et al., 2011), the authors defined functional value as the ‘perceived utility of a digital item based on the item’s capacity for functional, utilitarian, or physical performance’. They also defined emotional as ‘the perceived utility of a digital item based on the item’s capacity to arouse feelings or affective states’ (H. W. Kim et al., 2011), while social value was defined as ‘the perceived utility of a digital item based on the item’s ability to enhance one’s social well-being’. The basic and common hypothesis when examining consumer behaviour is value maximization (Dette and Studden, 2005; István, 2005; Steinberger-Wilckens, 2003). Earlier models such as, the Prospect Theory attempted to explain the choices made by individual customers (M. Levy et al., 2000), and in this model, the value function is adopted and specified over perceived gain or loss relative to a referenced scenario. It essentially proposes that people choose the behaviour that leads to the highest payoff, in other words they seek that which can provide higher value when faced with choice between two or more trade-offs. Consumer behaviour models such as the Prospect Theory do not however, suitably accommodate the ubiquitous usage of digital and mobile technology as applied in this study, while on the other hand, TAM alone does not adequately address the intrinsic need to extract value from the usage and adoption of a new technology. By applying the Sheth et al (1991) Value Framework, as adopted by H. W. Kim et al., (2011) and Kim et.,al (2007), the combined version of value constructs together with the TAM constructs result in the diagram depicted in figure 12, which was also adopted for this study.

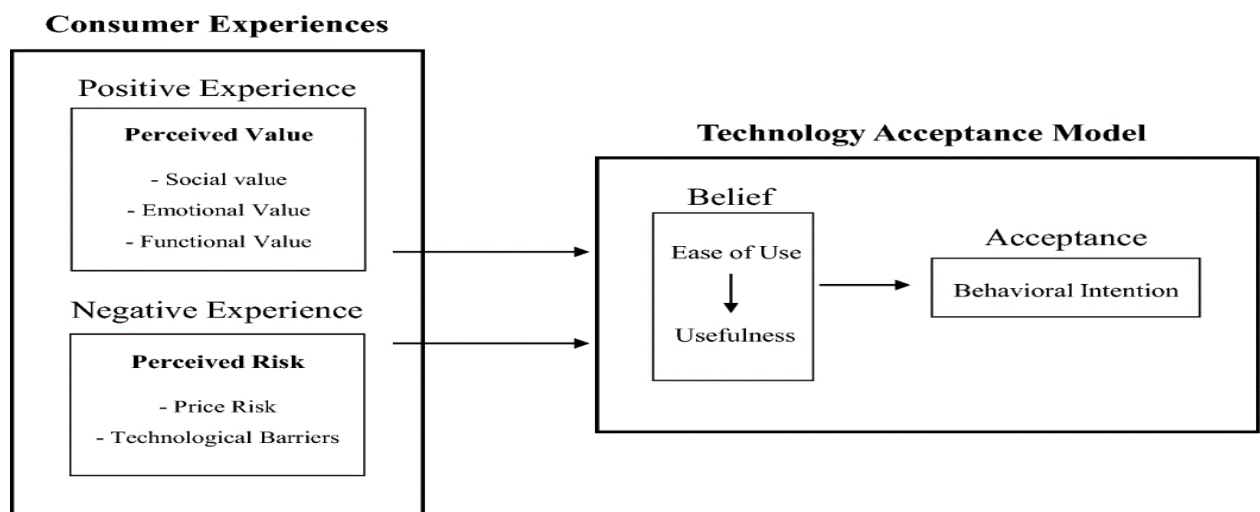


Figure 12: Consumer Experiences and TAM (J. Kim et al., 2007)

3.8 Perceived Value as an antecedent for Positive Consumer Experiences

The concept of ‘perceived value’ arose as the defining business topic of the early 2000s and has persisted to receive widespread research interest in the early years of the modern digital age as evidenced by its listing in The Marketing Science Institute research priorities for 2006–2008 (Sánchez-Fernández and Iniesta-Bonillo, 2007). These developments were predicated by pre-existing ideas around the concept of ‘value creation’ among marketing researchers in both academia and commercial industries (M. Levy et al., 2000).

From the mid 2000’s to present day, a number of IS, and Marketing (J. Kim et al., 2007; Vahdat et al., 2020) related research agendas have focused on the Perceived Value of the new technological innovations in e-commerce and online shopping by applying the Cost-Benefit Analysis concept. Often these studies break down perceived value into a combination sub-construct such as Social Value (SV), Emotional Value (EV) and Functional Value (FV) as positive experiences that would aid in the adoption of new technological innovations (Im et al., 2008; J. Kim et al., 2007; J. Lee et al., 2019).

This current study is also intent on operationalising these three sub-constructs as antecedents of perceived value, which when adequately combined, will describe positive customer experiences. These will then facilitate the perceived ease of use and usefulness of these platforms, thus resulting in the long-term behavioural usage of DBP’s by IST’s as per below illustration:

SV+EV+FV → PV → Positive Consumer Experiences → PU + PEoU → BI

The following subs-sections under section 3.8 will describe each construct of perceived value (PV) such social value (SV), emotional value (EV) and functional value (FV) and their respective relationships to digital technology and innovation adoption studies.

3.8.1 Social Value in Digital Technology and Innovation Adoption Studies

Positive experiences with social value have been identified as some of the benefits that consumers experienced while using a product or service (Holbrook, 2005). Social presence theory scrutinises the ability of communication platforms such as social media-based DBP’s to convey social cues and produce user-perceived platform intimacy and closeness, which change across platforms (Hollebeek et al., 2021). Consequently, different digital platforms differentially impact the user’s perceived value (Suseno et al., 2018). For example, an email might have lesser intimacy and immediacy levels when compared to a video-calling platform

that is able to transmit more extensive social cues such as the Zoom app, thus enriching the value creating capacity (Hollebeek et al., 2021). Previous studies have applied the UTAUT's value-based constructs specifying the three value motivations namely, utilitarian, hedonic, and social value as having a stimulating effect on consumers' positive experiences (Min et al., 2008; Rahman et al., 2017; Zhou et al., 2010). More specifically a study titled 'Social value creation through digital activism in an online health community' (Chamakiotis et al., 2021) in which a digital platform known as Medicine Africa was the topic of study for creating social value by delivering medical education in under-resourced regions. Another study titled "Demystifying consumer digital cocreated value: Social presence theory-informed framework and propositions" (Hollebeek et al., 2021) in which the researchers studied the consumer digital cocreated value (CDCV), which they argued, reflects the consumer-perceived value that result from interacting, working in partnership, or collaborating with or through digital platforms. They concluded that those digital platforms optimized user-perceived intimacy. Another quantitative study, titled 'User acceptance of hedonic digital artifacts: A theory of consumption values perspective' (Turel et al., 2010) had identified several value drivers of hedonistic digital artifacts and measured them within the context of mobile phone ringtones and applying the theory of consumption values. Hypothesis testing was performed using PLS-SEM on data collected from 422 ringtone users. A 2017 quantitative study on the influence of symbolic consumption value while using social networks (Luna-Cortés, 2017) found that higher social network usage can be directly and positively attributed to its perceived social value satisfaction. These studies provide evidence that multiple values can independently contribute to a consumer's beliefs with regards to the usefulness or ease of use of the product. It is for this reason that the Social Value (SV) construct is taken into consideration with regards to how the informal sector traders interpret the consumption of value, and thus determine the perceived ease-of-use (PEoU) and the perceived usefulness (PV) of DBP's in their daily lives when trading their goods and services.

For this study therefore, the following hypotheses (H1) are put forward:

Hypothesis for Social Value (SV) as an antecedent to Perceived Ease of Use (PEOU)

H1a: There is a positive relationship between the perceived social value (SV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

Hypothesis for Social Value (SV) as an antecedent to Perceived Usefulness (PU)

H1b: There is a positive relationship between the perceived social value (SV) and the perceived usefulness of digital business platform by informal sector traders in South Africa.

The second type of value consumption is in the form of emotional value (EV) as experienced by ISTs when using DBPs. The next sub-section discusses EV and digital innovations and puts forward a hypothesis, based on the relationship between these constructs.

3.8.2 Emotional Value in Digital Technology and Innovation Adoption Studies

Modern consumers demand not only services and products that are of the highest quality, but also positive, unforgettable experiences (J.-S. Lee et al., 2011). However, Havlena and Holbrook (1986) insist that consumers depend on emotional benefits in choosing alternative choices when functional attributes are the same. Babin, Darden, and Griffin (1994) advanced the idea of value scales for measuring hedonistic and utilitarian shopping value. They are of the view that the conventional utility-based approach cannot capture the unquantifiable and emotional benefits and costs that determine spending value because hedonistic responsibilities are deeply involved in shopping (Babin et al., 1994).

In a study titled 'Measuring Emotional Value in the Digital Brand' (Situmorang et al., n.d.) the authors measured 28 brands consisting of brand categories like e-commerce, laptops, camera, smartphones notebooks, online travel apps, e-hailing applications. They then performed a net emotional value measurement consisting of value driver and value destroyer. Another study titled 'Investigating the intention to purchase digital items in social networking communities: A customer value perspective' by Kim et al., (2011) included the dimension of emotional value as part of their investigation.

These studies have the same common themes of emotional value and digital items or digital brands which are also central to this current study, because the same sentiments may hold true for informal sector traders in the South African informal economy.

Therefore, when IST's are faced with the choices of using various digital business platforms the effects of emotional value (EV) may have an impact on the perceived ease of use (PEoU) and the perceived usefulness (PU).

Therefore, for this study, the following hypotheses (H2) is put forward:

Hypothesis for Emotional Value (EV) as an antecedent to Perceived Ease of Use (PEOU)

H2a: There is a positive relationship between the perceived emotional value (EV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

Hypothesis for Emotional Value (EV) as an antecedent to Perceived Usefulness (PU)

H2b: There is a positive relationship between the perceived emotional value (EV) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

The third type of value consumption is in the form of functional value (FV) as experienced by ISTs when using DBPs. The next sub-section discusses FV and digital innovations and puts forward a hypothesis, based on the relationship between these constructs.

3.8.3 Functional Value in Digital Technology and Innovation Adoption Studies

Business and marketing literature primarily paid attention to the emotional and functional aspects of value (Zeithaml, 1988). Hartman (1973) recommended an axiological template of the value domain based on three dimensions: intrinsic, extrinsic, and systemic. Extrinsic value describes the utilitarian use of a certain service as a tool toward a specific end, though intrinsic value reveals the emotional consumption. Systemic value embodies the rational aspect of the fundamental relationships, such as the connection between quality and costs. His model echoes the utilitarian and hedonic characteristics of value and has operated as a catalyst for subsequent studies (J.-S. Lee et al., 2011). A recent study (Kaur et al., n.d.) titled “The value proposition of food delivery apps from the perspective of theory of consumption value” tackled the functional value construct from the perspective of health consciousness and food safety concerns. In the same study, 423 food delivery application users completed responses and the data was analysed using structural equation modelling.

For this study, the following hypotheses are therefore put forward (H3):

Hypothesis for Functional Value (FV) as an antecedent to Perceived Ease of Use (PEOU)

H3a: There is a positive relationship between the perceived functional value (FV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

Hypothesis for Function Value (FV) as an antecedent to Perceived Usefulness (PU)

H2b: There is a positive relationship between the perceived functional value (FV) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

The next sub-section discusses the negative consumer experiences by ISTs when using DBPs, these can be broken down into price risk (PR) and technical barriers (TB).

3.9 Perceived Risk (PeR) as an antecedent for Negative Consumer Experiences

Previous studies on finance-oriented Digital Business Platforms, such as internet banking services (Giovanis et al., 2012; Kabanda et al., 2010; Y. S. Wang et al., 2003) and mobile payment applications (Giovanis et al., 2012; S. Y. Lee and Park, 2016; Thakur, 2013) concluded that both monetary risk and non-monetary risk are the two key factors for understanding consumers' acceptance behaviours, towards these kinds of DBP's. For example, to adopt new DBP's, consumers in the informal economy experience monetary expenses related to using the services which include equipment costs and economical values for utilizing the services (Y. S. Wang et al., 2003; Youn and Lee, n.d.-a). At the same time, users often bear non-monetary expenses, such as technical barriers related to using the services (Pousttchi and Wiedemann, n.d.). Technical barriers refer to the difficulties that may include service performance issues, operating system configurations, and installations of applications that the informal sector trader and consumers experience while using mobile services (Makholwa et al., 2020). Often these studies break down perceived risks into a combination of sub-constructs such as Price Risk (PR) and Technical Barrier (TB) as experiences that would negatively affect the adoption of these new technological innovations (Im et al., 2008; J. Kim et al., 2007; J. Lee et al., 2019).

The current study is also intent on operationalising these two sub-constructs (PR and TB) as antecedents of perceived risk (PeR), which when adequately combined, will yield negative customer experiences. These will adversely affect the perceived ease of use and usefulness of these platforms, thus resulting in lower levels of the long-term behavioural usage of DBP's by IST's as per below illustration:



The next sub-section discusses price risk (PR) and digital innovations and puts forward a hypothesis, based on the relationship between these constructs.

3.9.1 Price Risk (PR) in Digital Technology and Innovation Adoption Studies

Perceived price represents the programming of the objective selling price of a product or service. The fee structure of many digital business platforms consists of the pay-as-you-use arrangement and subscription-based pricing (De Reuver et al., 2017; LeHong et al., 2016; Montealegre & Iyengar, 2021). Without any prior experience with new digital platform innovations, customers cannot judge whether the cost quoted to them is high or low (Natarajan et al., 2017). There has been intense ongoing debate on bridging the digital divide (Howe, 2015; Kabir, 2019; Koomson et al., 2021), especially concerning the offering of different pricing plans, such as zero-rating certain applications, with the intent of slanting user behaviour toward specified content on the Internet. It has been proposed that perceived price risk fee directly influences perceived value (A. Chen et al., 2017; Moyo and Munoriyarwa, 2021). Studies in marketing show that perceived monetary price and perceived value are negatively related (Doyle, 2000; H. W. Kim et al., 2007). A study (Kaur et al., n.d.) titled “The value proposition of food delivery apps from the perspective of theory of consumption value” tackled the price risk construct from the food delivery app (FDA) users on how they perceive value for money when by ordering food through these digital platforms. In the same study, 423 food delivery application users completed responses and the data was analysed using structural equation modelling, which has also been applied to this study.

Applying Price Risk (PR) to the informal sector trader is the key to understanding the trade-off between using the age-old means of cash when trading with their customers versus using digital business platforms.

For this study, the following hypotheses (H4) are therefore put forward:

Hypothesis for Price Risk (PR) as an antecedent to Perceived Ease of Use (PEOU)

H4a: There is a negative relationship between the perceived price risk (PR) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

Hypothesis for Price Risk (PR) as an antecedent to Perceived Usefulness (PU)

H4b: There is a negative relationship between the perceived price risk (PR) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

The next sub-section discusses technical barrier (TB) and digital innovations and puts forward a hypothesis, based on the relationship between these constructs.

3.9.2 Technical Barrier (TB) in Digital Technology and Innovation Adoption Studies

Frequently, users of mobile phones, suffered potential financial risks and technological difficulties while using digital platform services on their personal devices (Abelson et al., 2017; A. Chen et al., 2017) It has been widely observed that when consumers experience functional benefits, such as successfully solving an individual task through digital business platforms, they are more prone to perceive functional values from using the services (S. H. Kim, 2008; Y. K. Kim, 2002; Yoshida, 2017). This result concurs with a previous study (Thelwall et al., 2012), demonstrating that information i.e., general knowledge, or personal beliefs accessed from using social networks such as Facebook or watching a YouTube video tutorial to solve a problem, offers functional value to audiences. By contrast, the experiences compared to the technological barriers of using digital platform services, negatively affected the perceived ease-of-use of the paid mobile service or applications (Thelwall et al., 2012).

For this study, the following hypotheses (H5) are therefore developed:

Hypothesis for Technical Barrier (TB) as an antecedent to Perceived Ease of Use (PEOU)

H5a: There is a negative relationship between the perceived technical barrier (BT) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

Hypothesis for Price Risk (PR) as an antecedent to Perceived Usefulness (PU)

H5b: There is a negative relationship between the perceived technical barrier (BT) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

Having discussed the negative and positive experiences as antecedents that predict the perceived ease-of-use and the perceived usefulness of digital business platforms in the previous sub-section, the next sub-section discusses the behavioural intention (BI) to adopt DBPs.

3.9 Factors Affecting Behavioural Intention to use DBP's

What are the major factors that lead to the adoption and usage of any technology? There are numerous variables including age, gender, and education levels but two of the biggest factors that emerged from earlier studies were the perception that the technology does something

useful and that it is easy to use (Davis, 1989). Perceived usefulness (PU) and perceived ease of use (PEoU) are utilised to determine the intention of usage of DBP's in this study. The following hypotheses for this study are therefore developed:

Perceived ease of use (PEoU) on Perceived Usefulness (PU)

Hypothesis for Perceived Ease of Use (PEOU) as an antecedent to Perceived Usefulness (PU)

H6: There is a positive relationship between the perceived ease of use (PEoU) and the perceived usefulness (PU) of digital business platforms by informal sector traders in South Africa.

Perceived ease of use (PEoU) on Behavioural Intention (BI)

Hypothesis for Perceived Ease of Use (PEoU) as an antecedent to Behavioural Intention (BI)

H7: There is a positive relationship between the perceived ease of use (PEoU) and the behavioural intention to adopt digital business platform by informal sector traders in South Africa.

Perceived usefulness (PU) on Behavioural Intention (BI)

Hypothesis for Perceived Usefulness (PU) as an antecedent to Behavioural Intention (BI)

H8: There is a positive relationship between the perceived usefulness (PU) and the behavioural intention to adopt digital business platform by informal sector traders in South Africa.

3.9 Model for Measuring Adoption of Digital business platforms Amongst ISTs

The proposed model (see figure 13) posits that the antecedents of perceived value, which when adequately combined, will yield positive customer experiences. These will then facilitate the perceived ease of use and usefulness of these platforms, thus resulting in the long-term behavioural usage of DBP's by IST's as per below illustration:



The proposed model (see figure 13) posits that the antecedents of perceived risk, which when adequately combined, will yield negative customer experiences, resulting in lower levels of the long-term behavioural usage of DBP's by IST's as per below illustration:



3.10 Interpreting the Value-Consumption Technology Acceptance Model (VC-TAM)

By interpreting the relationships between the various constructs and their dependant and independent variables, a fuller picture emerges. The antecedents that represent the expression of positive experiences towards informal sector traders when using digital business platforms, are listed as social value (SV), emotional value (EV) and functional value (FV). From these experiences, hypotheses H1, H2 and H3 are put forward to test the relationship between these positive experiences and the perceived ease of use and the usefulness of digital business platforms. The antecedents that represent the expression of negative experiences towards informal sector traders when using digital business platforms, are listed as price risk (PR), and technical barrier (TB). From these experiences, hypotheses H4 and H5 are put forward to test the relationship between these positive experiences and the perceived ease of use and the usefulness of digital business platforms

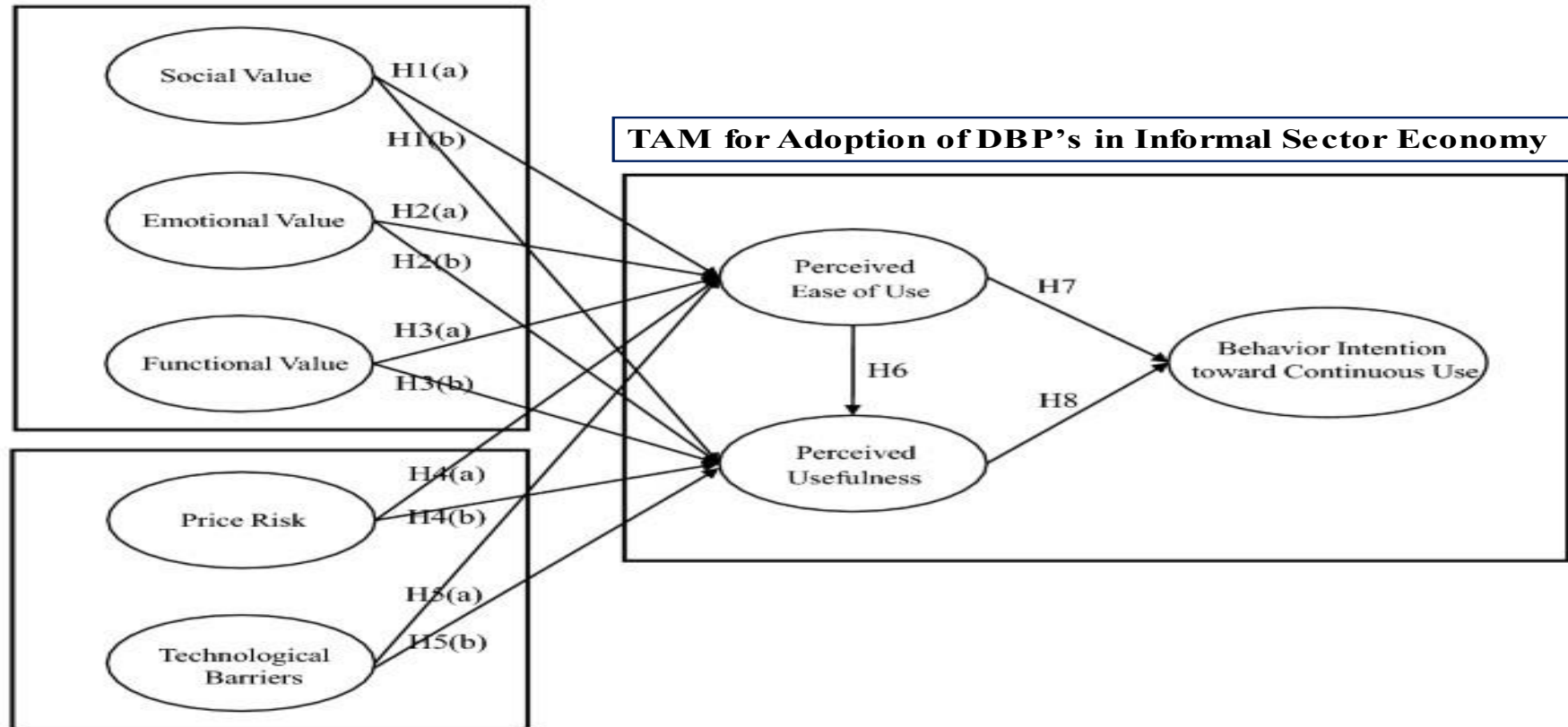
These antecedents of positive and negative experiences for the IST, become the independent variables that influence the perceived ease of use (PEoU) and usefulness (PU). These in turn, influence the behavioural intention for ISTs to adopt and continuously use DBPs in their daily trading activities. From these interactions between the constructs, hypotheses H6, H7 and H8 are put forward to predict the relationship between the perceived ease of use and the usefulness of digital business platforms, in determining the long-term use of these tools.

3.10 Conclusion

In this chapter the theoretical framework and hypothesis development was performed. The technology acceptance model (TAM) was extended with the value consumption method (VC). Eight hypotheses were development based on positive (social value, emotional value, and functional value) and negative experiences (price risk and technical barrier) as antecedent towards perceived ease of use and perceived usefulness of DBS' by IST's. A model was constructed to describe the relationships between the dependant variables and the independent variables as expressed in figure 13.

The next chapter will delve deeper into the methods that were applied when formulating the research methodology for this study. An explanation will be provided on how the research was designed, while also expounding on the research philosophy that was deemed suitable for this study. These and other topics related to the research methodology will be discussed.

Positive Experience of Value Perception



Negative Experience of Risk Perception

Figure 63: Proposed Model for Measuring Adoption of Digital business platforms Among Informal Traders

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The aim of this study is to uncover the perceptions of value consumption in the adoption of digital business platforms by informal sector traders within Southern Africa. This chapter will detail the research methodology and is divided into four main sections namely, section 4.1 as the introduction, followed by section 4.2 which will discuss the research design by including subsections on research philosophy, research type, the strategy, the time horizon, the sampling, and data analysis methods. Section 4.3 will be a discussion on the research limitations as it pertains to the subject matter. Finally, section 4.4 will be the summary conclusion on the research methodology chapter.

4.2 Research Design

The following subsections will be a discussion on the research design choices that were made and the justifications behind those choices in addressing the aims of the research in uncovering the perceptions of informal sector traders towards DBP's. These will be made up of seven main choices as expressed in the subsections below.

4.2.1 Research Philosophy – Positivism

Research philosophy refers to the underlying beliefs of a particular world view, regarding how data about a phenomenon of interest should be gathered, analysed, and consumed (Ponterotto, 2005). While numerous research philosophies exist, the two generally adopted ones are positivism and interpretivism. Positivism is commonly the fundamental research philosophy in quantitative studies as is the case with the current study, it states that an individual can perceive reality through empirical observation and that there is only one truth which exists regardless of who the observer is (Pather, 2005). It has also been expressed as follows: '...positivism is the view that serious scientific inquiry should not search for ultimate causes deriving from some outside source but must confine itself to the study of relations existing between facts which are directly accessible to observation' (Hugh-Jones, S. and Laidlaw, J: 2000: p.3).

In contrast to this philosophy is the *Interpretivism* approach, which is often the underlying research philosophy in qualitative studies. It assumes that the researcher performs a pivotal role in observing the world around them and thus shaping it according to their unique perception of reality, in other words, reality is observed subjectively (Clarke, 2009).

This study was steered through the philosophical stance of positivism. This was chosen due to its authenticity to the view that only “factual” knowledge gained through observation and measurement, is reliable (Pather, 2005). The positivistic paradigm has the characteristics of highlighting objective hypothesis; suggesting pragmatic sense perception; upholding the principle of value neutrality; and reassuring monism of method (Mingers, 2004). The benefits to the positivism examination paradigm include stated objectives, operatives, verified and predictive models (Kankam, 2019). Perhaps the greatest weakness and henceforth disadvantage of positivism has commonly been its persistence upon methodological absoluteness (Clarke, 2009) this study does acknowledge and accept this limitation. This study was focused on data collection and its interpretation in an objective way in line with the hypothesis as stipulated in the adopted frameworks of Technology Acceptance Model (TAM) and the Value Consumption Model (VCM). In these types of studies research, where established frameworks such as TAM are applied, the findings are usually observable and quantifiable. In conclusion, the intention to adopt and use DBP’s for IST’s and their customers will be better explained using the positivist philosophy of research.

4.2.2 Research Type – Deductive and Quantitative

Generally, in research, there are two long-established research project types, namely the deductive and inductive types, these approaches can be traced back to sources as early as 1880 in a book by Alexander Bain titled ‘Logic: deductive and inductive’. With inductive research projects, the theory is produced from the ground up, in other words, the collected data generates the theory, and therefore these studies tend to be exploratory in their manner of approach (Ali and Birley, 1999) . Deductive research, instead, starts with well-known theory and builds onto it with collected data, therefore these studies tend to be confirmatory in approach, because they seek to support observable phenomenon through hypothesis testing (Carnap, 1947). This current study adopts the deductive approach, because it applies and tests the well-established research framework of TAM to methodically sample, collect and analyse data on the perceptions of informal sector traders on DBP’s. Another consideration when applying the correct choice for a research type, is the dilemma-inducing prospect of whether the researcher opts for the qualitative, quantitative, or mixed method approach of research (BW. Chen and Hirschheim, 2004; Kaplan and Maxwell, 2005). Quantitative research applies the usage of data that can be coded into numbers to test hypotheses and make predictions by the measured amounts, and ultimately describe a phenomenon by using numerical figures and inferring statistical relationships (Mingers, 2001; Williams, 2007). Qualitative research describes the

type and quality of a subject of interest, while interpreting and trying to understand a phenomenon (W. Chen and Hirsch Heim, 2004). Due to the nature of qualitative research, it is problematic to use statistical procedures to measure types and qualities, and this research in general focuses on a few persons or just a single individual (Kaplan and Maxwell, 2005). Mixed methods research serves a third alternative that combines elements of quantitative research and qualitative research in order to answer a research question (Williams, 2007). The advantage of a mixed method research approach is that it can help a researcher to gain a more wide-ranging picture than a separate quantitative or qualitative study, as it incorporates benefits of both methods (Y. Levy and Ellis, 2006; Mingers, 2001; Williams, 2007) This current study has opted for the positivist, deductive and quantitative approach because it is an exercise in hypothesis testing, that applies the sampling, collection and analysis of quantifiable empirical data, on which statistical inferences can be made for a larger population.

4.2.3 Research Strategy – Application of Quantitative Methodologies

The research strategy, sometimes referred to as the research methodology can be stated as systematic process of how research is conducted to solve an observable problem (Manasseh and Daniel, 2018). Research methodologies can be categorised into a variety of practices. The phrase ‘research methodology’ may describe a research paradigm, research approach, research type or even a research framework (Pather, 2005). The main strategies or methodologies of inquiry that are associated with quantitative research are as follows:

A true experiment is a type of experimental design that is often considered to be the most accurate type of experimental research, this is due to the fact that it is supposed to support or refute a hypothesis by applying statistical analysis, as well as establish a cause-and-effect relationships between variables (Easterbrook et al., 2008b, 2008a; Shull et al., n.d.).

There are three measures that must be met in a true experiment:

- Control group and experimental group
- Researcher-engineered variable
- Random task

Non-experimental research describes a study wherein a researcher cannot control, influence or modify the predictor variable or subjects, but instead, depends on analysis, observation or relationships to come to a conclusion (Bleske-Rechek et al., 2014). Characteristically, this means that the non-experimental researcher must rely on surveys, case studies or correlations and cannot reveal a true cause-and-effect relationship (Blundell and Costa Dias, 2000). The

main advantage for Non-experimental research is that it usually has a high level of external validity, resulting in its usage for inferences to generally larger populations (Bleske-Rechek et al., 2014; Blundell and Costa Dias, 2000).

During the field work of gathering the data, a 5-point Likert scale was applied, meaning that a survey questionnaire form was filled in by the informal sector traders at their place of business. This falls under the non-experimental research methodology and statistical inferences can be made based on the skewness and standard deviations of the descriptive statistics in the data collected.

4.2.4 Time Horizon – Cross-Sectional

The time horizon of a research project refers to the length of time through which the research project will be conducted. Two options are available – cross-sectional and longitudinal. In other words, a determination needs to be made as to whether the data for the study were all collected at one point in time, that is cross-sectional or at multiple points in time that is. Longitudinal (Bernard et al., 2014; Y. Levy and Ellis, 2006; Williams, 2007). This research project was cross-sectional in nature, due to the constraints in time, funding, and course scope.

4.2.5 Target Population

The survey was conducted in 3 Gauteng townships, namely Diepsloot, Riverside and Cosmo City. These townships are representative of the 3 types of living standards within the low-income brackets. Type 1 is the shack-dwelling settlements such Diepsloot, type 2 is Cosmo City which is composed of low-cost, bank-financed, brick-and-mortar housing and type 3 is a new type of mixed-housing that consists of bank-financed housing but also includes rows of 3-storey buildings of RDP housing, all within the same vicinity as is the case with Riverside View. Within all these types of housing arrangements, one can find all kinds of informal sector traders making their living in these settlements.

The following sub-sections provide a brief contextual background of each of the townships and the reason why they were identified as being ideal for the study.

4.2.5.1 Diepsloot-established 1995

This township has an interesting history, after 1994 there were sporadic instances of people putting up so-called ‘informal settlements’ throughout the economic hub of Gauteng. These mushrooming shack-dwellings were a pressing problem for home-owners in the more affluent suburban areas of the province. And so as a solution, the government decided to allocate an

area north of Johannesburg as a settlement for the homeless people, immigrants, and those who were chased away from established townships, and thus began the story of Diepsloot. According the statsa.gov.za there are estimated to be around 450,000 people as at 2011 (it is unclear what the number as at 2022) in an area of 12.00 km², with up to 150,000 households (see figure 14). This is a disparate grouping of people from different nationalities, tribal backgrounds, cultures and norms and value, all united in urban poverty (*Pfigu, Tinashe ,2014*). Journalist and author Anton Harber (2011), in his book titled Diepsloot, aptly describes the area as a place mirroring South Africa’s political and social dynamic, most especially regarding the ever-present issues around service delivery to the poor. Harber (2011; p19) makes the observation that when it comes to development planning ‘Diepsloot has lagged about 5 years behind reality and the numbers have shot well beyond what authorities can deal with’



Figure 14: Aerial view of Diepsloot township (source: alamy.com)

4.2.5.1 What makes Diepsloot ideal for the study?

From the previous paragraph, it is telling why this area was chosen as a representative demographic for this study, in that it captures the essence of what life is like for most of the

shack-dwelling people in the informal settlements of South Africa and what can be characterised as the bare-bone South African informal economy. The challenges and aspirations of these informal traders were captured during the survey and are indicative of the gargantuan task of creating digital business platforms that are tailor-made to meet the daily trading needs of these marginalised communities, in a world that is becoming increasingly digital.

4.2.5.2 Cosmo City- established 2005

A brief history of Cosmo City reveals that in late 2005, on a plain plot of land 25km northwest of Johannesburg, the R3.5 billion residential project of a thriving multiclass and multiracial city was born (www.housingsa.co.za). The streets were laid out in distinct sections referred to as extensions (see figure 15). Individual streets are named from different countries of the world, from America to Asia. Most of the houses are government subsidised and the first recipients were people from the neighbouring informal settlements of Zevenfontein and River Bend who were living in improvised shelters with no running water, electricity, or sanitation for more than 12 years. As opposed to Dieploot, much progress has been made since inception of the development, as it is now (2021) home to 12 schools, a clinic, a public library, a police station, several church buildings, a sports field, a public swimming pool, taxi ranks, markets, and a major shopping centre called Cosmo Mall. Inhabitants also have full access to running water, prepaid electricity devices and solar geysers that are fitted in each home.



Figure 15: Cosmo City: A beacon of urbanisation (source: <https://www.news24.com/>)

4.2.5.2.1 What makes Cosmo City ideal for the study?

The reason for including Cosmo City as part of the survey field work, is that it is representative of the evolution of the low-to-middle black class within the context of socio-economic dynamic of South Africa, since the birth of democracy since 1994. This therefore gives us a picture of the informal sector economy within the context of a gradation in levels from the Diepsloot scenario.

4.2.5.3 Riverside View- established 2018

Riverside View is a Mega Housing Project, located in Fourways along William Nicol Drive. It is nestled between Gauteng's most expensive residential area, Steyn City which boasts multi-million-rand residential listings, and on the other side, one of the most impoverished and violent areas in South Africa, Diepsloot. The development consists of a total of 11 406 residential units as at 2022. This is a mix of three types of dwellings, see figure 16:

- bank bonded houses ranging from R650,000 to R1,2 million.
- rental flats ranging from 1 bedroom to 2 bedroom from R4,500 per month.
- 3-storey, free RDP government subsidised housing for the impoverished.

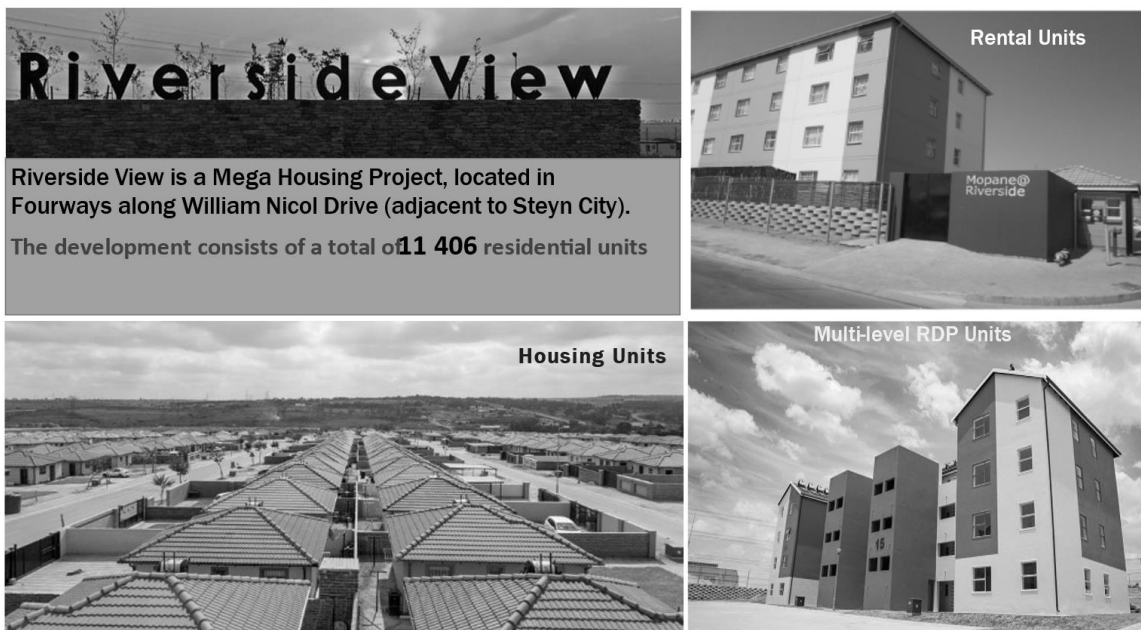


Figure 16: Riverside Mega Project (source: valuemax.co.za)

4.2.5.3.1 What makes Riverside ideal for the study?

The Riverside Mega Housing project is unique in South African context because it is composed of three housing segments in one area. From free government RDP housing to entry-level low-

income housing to middle-income housing, all of them in one big residential vicinity. From this perspective, the survey was able to capture the aspirations and challenges of informal sector traders in all three dwelling types in Riverside with regards to how they perceive value from digital business platforms.

4.3 Data Collection Method

Field agents conducted face-to-face interactions with the respondents in a language most suited to the respondent. The field agents were paid an agreed upon rate, per respondent and the principal researcher paid for their services.

During the field work of collecting the data, the principal researcher employed 2 experienced field workers who have done this type of data collection before and are both familiar with the areas identified for the study. The principal researcher accompanied the agents on the first four interactions with respondents so as to observe how the respondents were reacting to the questions and the manner of approach of the agents. Based on the responses in the field, he then examined if there were any changes were required to the questionnaire for better clarity. Once such judgement was applied and satisfactory results were attained, then only did the field agents continue independently with seeking respondents that fit the criteria of the informal sector traders as defined for the purposes of this study. The respondents were approached at their place of business. The main criteria for inclusion to the study was to verify if they were indeed engaged in some form of trade and that they had a smartphone device. The field agent would then explain to the potential respondent what the study was about. No incentive was promised to the respondent, however the importance of participation was explained as having an impact on the future of township e-commerce platforms and the price-point of such offerings. Once respondents had agreed to participate and had signed the consent form, the agents then proceeded to explain the 5-point Likert scale and guide the respondents throughout the process of responding accordingly to the design of the questionnaire.

4.4 Research Instrument

Research Instruments are measurement tools designed to obtain data on a topic of interest from research subjects, these may include questionnaires as is case for this project. Questionnaires are compiled in many ways, to be used in many different circumstances and with many different data-gathering media (Burney, 2008). Self-administered questionnaires which are paper based were distributed to respondents in face-to-face engagements at three South African townships at areas of high economic activities.

The data was collected, captured, and prepared with Microsoft Excel tools and the spreadsheet was imported to SmartPLS 3.0 for further analysis. The data was analysed using the Partial Least Squares Structural Equation Model, as an instrument for quantitative analysis.

The first question on the questionnaire tests whether the participant has access to a smartphone device. This, however, does not mean exclusion of the participants without smartphones. Out of the 300 respondents, 73 did not have smartphones, but a majority of 227 had smartphones. This approach was deliberately taken, to get the views of those who cannot at present have access to the usage of digital business platforms and their services. The respondents were shown various popular digital business platforms after which they were asked to respond to a questionnaire. During the field work interactions with the respondents, there were 3 sections for each session with those who consented to partake in the study. These sections are arranged as follows:

- First part: consent form
- Second part: demographic questions
- Third part: Likert Scale questions

The questionnaire was constructed in accordance with the hypothesised constructs from the literature review that were chosen for the proposed model for measuring adoption of digital business platforms amongst Informal Sector Traders. These questions have been extracted for application in this study based on previous studies that have been tested for reliability and validity. These main items are arranged as follows as per table 5:

H1: Questions on the Experience of Social Value when using social media based DBP's as relating to IST's	
• DBP's enhanced my effectiveness in my daily trade transactions when dealing with customers and suppliers	(Kim et al., 2014)
• DBP's made it easier to develop social relationship with my customers and suppliers	
• DBP's helped me to build relationship more quickly with my customers and suppliers	
• DBP's were useful in my social relationship with my customers and suppliers	
H2: Questions on the Experience of Emotional Value when using DBP's as relating to IST's	
• DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers	(H. W. Kim et al., 2007)
• DBP's gave me pleasure in my daily trade transactions when dealing with customers and suppliers	
• DBP's made me feel relaxed in my daily trade transactions when dealing with customers and suppliers	
H3: Questions on the Experience of Functional Value when using DBP's as relating to IST's	

• DBP's supported the operation of all tasks in my daily trade transactions when dealing with customers and suppliers	
• DBP's allowed me to do my tasks effectively in my daily trade transactions when dealing with customers and suppliers	(Seddon, 1997)
• DBP's operated consistently overall in my daily trade transactions when dealing with customers and suppliers	(Davis, 1989)
H4: Questions on the Experience of Price Risk when using DBP's as relating to IST's	
• My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers	
• My MNO's airtime and data are not reasonably priced when using the service in my daily trade transactions when dealing with customers and suppliers	
• My MNO's airtime and data are not economical when using the service in my daily trade transactions when dealing with customers and suppliers	(Voss et al., 1998)
H5: Experience of Technical Barrier when using Financial Services DBP's by IST's	
• Difficult configuration of the DBP's had a negative impact on my usage when dealing with customers and suppliers	
• Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers	(DeLone and McLean, 1992)
• Poor performance of the application for the DBP's had a negative impact on my usage when dealing with customers and suppliers	
H6: Perceived Ease of Use when using Financial Services DBP's by IST's	
• It is easy for me to become skilful at using Internet Banking and Mobile Payment DBP's	
• I find it easy to get the Internet Banking and Mobile Payment DBP's to do what I want it to when transacting with my customers and suppliers	
• My interaction with Internet Banking and Mobile Payment DBP's is clear and understandable	
• I found Internet Banking and Mobile Payment DBP's easy to use	(Davis, 1989)
• Learning to use the smartphone for Internet Banking and Mobile Payment DBP's is easy for me	
H7: Perceived Usefulness when using Financial Services DBP's by IST's	
• Using Internet Banking and Mobile Payment DBP's would enhance my effectiveness when transacting with my customers and suppliers	
• Using Internet Banking and Mobile Payment DBP's would increase my productivity when transacting with my customers and suppliers	
• Using Internet Banking and Mobile Payment DBP's would make it easier to do my tasks when transacting with my customers and suppliers	
• Using Internet Banking and Mobile Payment DBP's would improve my performance when transacting with my customers and suppliers	
• I would find the Internet Banking and Mobile Payment DBP's useful when transacting with my customers and suppliers	(Davis, 1989)
• Using Internet Banking and Mobile Payment DBP's would enable me to accomplish tasks quickly when transacting with my customers and suppliers	
H8: Behavioural Intention Towards Continuous Use of Financial Services DBP's by IST's	
• I will continuously use Internet Banking and Mobile Payment DBP's in the future when transacting with my customers and suppliers	
• I have a plan to use Internet Banking and Mobile Payment DBP's in the future when transacting with my customers and suppliers	
• I expect my use of Internet Banking and Mobile Payment DBP's to continue when transacting with my customers	(Davis, 1989)

Table 2: Questions for hypothesis testing on Questionnaire and Sources

4.5 Data Analysis Methods and Techniques

The Partial least squares structural equation modelling (PLS-SEM) technique was employed to analyse the data for this study on the adoption of digital business platforms by informal sector traders. PLS-SEM is an emerging data analysis tool in business, management, and social sciences research and is used to adequately handle small sample size and non-normal data (Hair et al., 2014).

4.5.1 Partial Least Squares Structural Equation Modelling

Structural equation modelling (SEM) is a statistical method that is able to perform an examination of relationships amongst a collected set of variables in a simultaneous way. It is not a single procedure like correlation analysis or an ANOVA test, but rather a family of related statistical techniques (Hair et al., 2011). This analysis technique examines the measurement properties (outer model) of a variable as well as the interrelationships (inner model) between the latent variables thus combining the regression and factor analysis testing for the variables (Hooper et al., 2008).

4.5.1.1 Model Fit Assessment Test- minimum sample size required for PLS-SEM

There is a lot of debates amongst scholars in literature as to the question of how many respondents should be attained to validly apply PLS-SEM (Hair et al., 2011; Hooper et al., 2008; Ringle et al., 2020). However, there is no clear-cut answer to this question, because every research is unique in characteristics such as populations demographics, as well as the number of constructs that are applied in the model. Hair et al. (2011) suggests the following to be considered when determining the sample size depending on the model complexity and measurement model characteristics as illustrated in table 6 below.

Model Characteristics – (Number of Latent Constructs and Items)	Minimum Sample Required
1. Five or less latent constructs-each latent construct has more than 3 measuring items	100 (Sample)
2. Seven or less latent constructs- each latent construct has more than 3 measuring items	150 (Sample)
3. Seven or less latent constructs- some latent constructs have less than 3 measuring items	300 (Sample)
4. More than seven latent constructs- some latent constructs have less than 3 measuring items	500 (Sample)

Table 3: Reasoning for Model Fit (Hair et al., 2011)

4.5.1.2 The reason for applying PLS-SEM to this study

The PLS-SEM technique is an appropriate approach when a research study aims at testing existing theories, that involves complex model structures (Ringle et al., 2018; Fernandes, 2012). This study is building upon existing theories of the technology acceptance model (TAM) and the value consumption model (VCM). The sample size of 300 respondents is well within range that was suggested by Hair et al. (2011). It is also quicker to conduct, and other researchers can apply the results as a springboard for future research in socio-technical systems such as digital business platforms. PLS-SEM involves two stages of examination: measurement model specification and structural model evaluation (Ringle et al., 2018; Wong, 2013). Measurement model specification assures that only the constructs having good indicator loading, convergent validity, composite reliability (CR) and discriminant validity will be used in the structural model. Structural model evaluation is meant for assessing path coefficients and testing their significance through bootstrapping technique.

4.5.1.3 Applying SmartPLS 3.0 Software as an Analysis Tool for the Current Study

There exist several popular statistical software tools that are commonly used for data analysis based on what the objective of the research question is. Among these is SPSS, AMOS and SmartPLS3(Hair, 2017). Out these shortlisted software's, SPSS is quite different from the other two, due to its ability to perform a wide range of functions as well as its ability to support many tests and statistical models(Hair et al., 2011). However, it does not support structural equation modelling which is the method adopted by this study. This inability to support SEM, was neatly addressed by the introduction of AMOS which can be regarded as an extension of SPSS(Leguina, 2015). The emergence of AMOS and SmartPLS present a more interesting difference between each other, they are both developed to build Structural Equation Models; however, they use different approaches. In reference to AMOS, the models are referred to as Covariance-Based Structural Equation Modelling (CB-SEM), which is the original form of SEM that mainly aims to reproduce the covariance matrix without focusing on the existing variance of the latent variables(Leguina, 2015). SmartPLS models are a variance-based structural equation modelling that aims to maximize the existing variance of the latent variables (Hair et al., 2014). For this study, it was important to understand the level of variance amongst the latent variables, due to the multivariate nature of the indicators in the study. SmartPLS also does a good job of observing the outer model or measurement model, by analysing the reliability and validity of the variables when examining the factor loadings off each indicator in an easy to comprehend graphical format. Another advantage of SmartPLS, is its ability to

display the structural model, as the inner model relationship between the independent and dependent variables and the impact of the weights of the path coefficients in those relationships(Hair et al., 2014).

4.5.2 Model Construction

In PLS-SEM, a structural equation model consists of two models, the first is the structural inner model which contains the relationship between the latent variables and has to be derived from theoretical considerations. The second type of model is called the measurement model or outer model. This model is an expression of how you measure your latent variables. See figure 17.

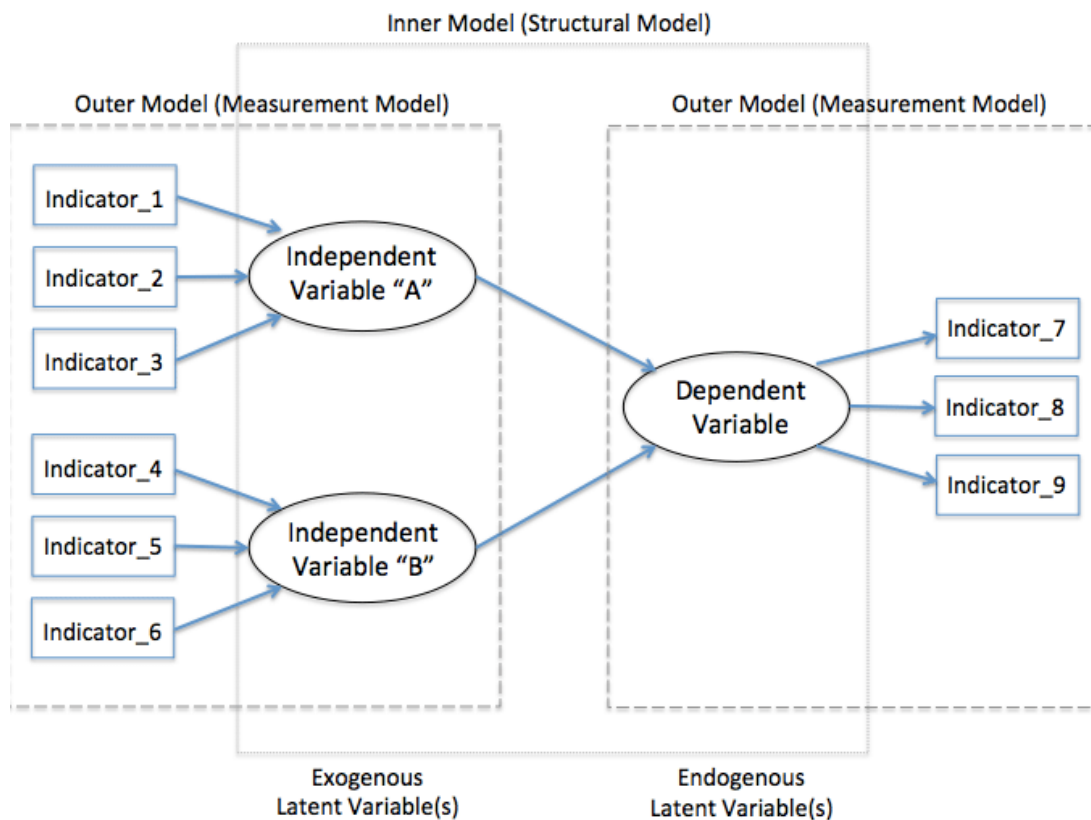


Figure 17: Model Construction for the Inner and Outer Model

Construction of the model in SmartPLS software involved numerous steps . Amongst the vital steps are constructing the model according to the hypothetical model, assigned name of constructs, joining the independent variables/groups with the dependent variable and assigning the manifests to the respective independent variables (Hair et al., 2014). Once all the manifests are assigned to the respective constructs then the colour of the constructs will change from red to blue and the manifest displayed in yellow colour.

The following sub-section will explain the measurement model as applied in PLS-SEM.

4.5.2.2 Measurement Model: Formative vs Reflective Indicators

The measurement model or outer model depicts the relationship between constructs or latent variables and their measures or factor loadings (Hair, 2017). Latent variable measurement is the process of ensuring that local independence is achieved for a selected set of observed indicators. There are two types of measurement models: reflective and formative (Hair et al., 2014).

Formative indicators have the following characteristics (Leguina, 2015):

- Direction of causality is from item to construct or latent variable;
- Indicators are defining characteristics of the construct;
- Changes in the indicators should cause changes the construct or latent variable, but changes in the construct do not cause changes in the indicators;

Reflective indicators have the following characteristics(Leguina, 2015):

- Direction of causality is from construct or latent variable to item;
- Indicators are manifestations of the construct or latent variable;
- Changes in the indicators should not cause changes the construct or latent variable, but changes in the construct do cause changes in the indicators;

In this current study all the latent variables have reflective indicators because all the indicators do not have a causal relationship with the constructs as observed in figure 18.

4.5.2.3 Structural Model: Dependant and Independent Variables

The structural model, also known as the inner model (see figure 18) has also two types of latent variables: Exogenous and Endogenous, also known as dependant and independent variables. A latent variable is exogenous (independent) if it does not have an effect from any other latent variable in the model in other words, there are no-incoming arrows from other latent variables (Hair et al., 2014).Endogenous (dependant) latent variables have an effect from at least one other latent variable, in other words, there is at least one incoming arrow from another latent variable (Hair et al., 2014). The inner model can also have additional variables such as moderating, mediating and controlling variables.

4.5.2.4 Constructing the Model for the Current Study

Construction of the model for the current study was performed using the latest version of the SmartPLS 3.0 software. This process involved several steps and amongst the important steps

was constructing the model according to the hypothetical model which was foundationally based on the technology acceptance model (TAM) extended by the value consumption model (VCM). The positive experiences that are lived by informal sector traders (IST's) in their daily businesses, were grouped into exogenous (independent) variables which are represented as: social value (SV) with 5 reflective indicators, emotional value (EV) with 3 reflective indicators and functional value (FV) with three reflective indicators. The negative experiences that are lived by informal sector traders (IST's) in their daily businesses, were also grouped into exogenous (independent) variables which are represented as: price risk (PR) with 3 reflective indicators technical barrier (TB) with three reflective indicators. These positive and negative experiences then became influential towards the endogenous or dependant variables of Perceived_Ease_of_Use (PEoU) with 6 reflective indicators and perceived usefulness (PU) also with 6 reflective indicators, which intern create a dependency relationship towards the behavioural intention (BI) with 3 reflective indicators towards the adaption of DBP's by IST's. Once all the indicators of factor loadings were assigned to the respective constructs then the colour of the constructs changed from red to blue and the reflective indicators become in yellow colour. For a comprehensive analysis of the structural model for this study see figure 18.

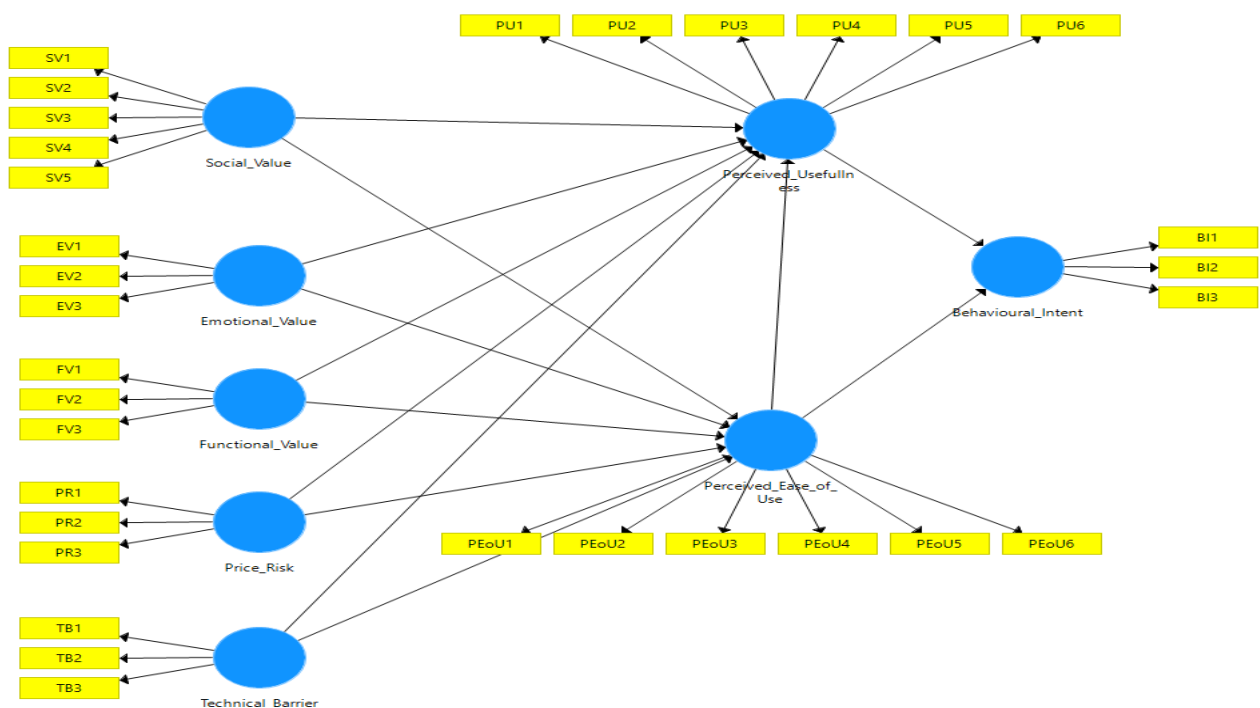


Figure 18: SEM-PLS Constructed Model with Indicator Measures and Latent Variables

4.6 Methodological Limitations

The research field work was conducted over a period of 3 months from 01August to 30th October 2021, by two field workers who had previous experience with this kind of field work.

There were strict budgetary constraints and the principal researcher paid field workers from his own pocket. Both young men were unemployed Marketing Studies graduates who were familiar with the task of carrying out a field work survey in areas that are generally considered to have high-crime incidents. It is also worth mentioning that this survey was conducted under the conditions of the third wave of the Covid-19 and as such strict measures were applied by the team to ensure to safety of the field workers and respondents.

4.7 Ethical Considerations

The respondents were informed prior to beginning with data collection that their participation is voluntary, and they can at any point may decide to withdraw their participation for this research. Ethical Permission to conduct this study was requested and granted from the UCT GSB Ethical Committee. The objectives, purpose and motivation for this research were explained to all participants. The clearance and access to participants for this study were required from the University of Cape Town ethics committee. Questionnaire respondents were made to have a full idea of the objectives of this study, as it was indicated on the cover letter and any questions that they may have regarding confidentiality will be addressed. The voluntary nature of the study was also be explained to the participants. Respondents commenced with the questionnaire and were not obliged to complete the entire process if any level of uneasiness may arise. Respondents' identities were strictly confidential. The data gathered from the study was be stored safely and treated with confidentiality. Respondents were to remain anonymous throughout the study, their names and personal information was not published in the final report of the study.

4.8 Conclusion

In this chapter, the research methodology and techniques were discussed. The sections began with a discussion on the research design, then the research philosophy, type, strategy, time horizon and sampling strategy. The data collection methods were discussed, and an explanation was provided on how the field agents had approached the respondents in their places of business. The last section concluded with the construction of the model for the research as well as ethical and limitations on the research. The next chapter will begin by reviewing the research objectives and the problem statement and then proceed with the data analysis and results.

CHAPTER 5: DATA ANALYSIS AND RESULTS

This chapter is a discussion on the results of the study regarding factors that influence the value consumption in the adoption of digital business platforms by informal sector traders when performing their daily business transactions within the context of a typical South African township, in this case Diepsloot, Riverside and Cosmo City. This chapter is divided into four sections including the introduction. At this point, it would be beneficial to remind the reader what the research question is as is done in paragraph (5.1). The first section (5.2) presents the results of the descriptive statistics in terms of age, gender, and usage of a smartphone. These outcomes are presented in the form of frequency distributions in graph and table layout. Here, frequencies and percentages are used for all categorical variables. The second section (5.3) is a description of the results of the measurement model by performing the validation and reliability testing for the conceptual model constructs. Sub-sections of this discussion will address the relationships between the latent variables and their measures or relationship between the construct and its indicator variables. The third section (5.4) will test the structural model by examining the relationship between the latent variables utilised to assess the significance of the relationship between those applied latent variables

5.1 Revisiting the research aims and questions:

This study aims to understand the perceived value (PV) that IST's experience when using DBP's by examining their social value (SV), emotional value (EV) and functional value (FV). Also, perceived risk (PeR) in the form of price risk (PR) and technical barriers (TB) forms part of the negative experiences. Understanding the relationships between these constructs may lead to a better understanding of their perceived usefulness (PU) and their perceived ease of use (PEoU), which will then give an indication of the IST's behavioural intention (BI) to adopt DBP's and their actual usage in the long term.

The main research question is stated as follows:

What are the perceptions of value as experienced by Informal sector traders (IST's) when considering the adoption of Digital business platforms (DBP), as mediums of trade to buy, market, and sell their products and services?

The sub-research questions for this study include:

RQ1: What role does the positive experience of Perceived Value (social, emotional and functional values) and negative experiences of Perceived Risk (price risk and technical barrier) play in the informal traders' decision to use a Digital Business Platform (DBP)

RQ2: What is the Perceived Usefulness (PU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

RQ3: What is the Perceived Ease-of-Use (PEoU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

5.2 Descriptive Statistics

The following paragraphs contain geographic information of the respondents, their gender and age as well as verification of ownership of a smartphone. Information pertaining to race was deemed unnecessary because the study was conducted in township areas that were predominantly occupied by those of African descent. The level of education of the respondents was also considered to be of little relevance to the study, in fact it was deemed to be a hinderance in the questionnaire as it might create discomfort for some respondents by evoking feelings of inadequacy, and thus derail from the intended focus of the research.

5.2.1 Data Preparation and Coding

The field work was officially completed on the 30th of October 2021, and all the paper-based responses were captured on an excel spreadsheet over a period of two weeks. There were 360 responses to the survey, however only 300 were deemed to be accurately captured by the field agents. Likert scales are usually used to measure attitude, by providing an array of responses to a given question or statement, there are five categories of response, from 1=strongly agree to 5 =strongly disagree (Norman, 2010). The questionnaire was based on Likert-type rating scales to measure informal sector trader views on their attitudes towards the adoption of digital business platforms, in their daily activities when transacting with their clients and suppliers. In this study, the coding of the Likert scale had to correspond to the perceived positive and negative sentiment of the of informal sector traders towards the value of adoption of DBP's. For positive factors, the coding was from "1 = strongly agree to 5 = strongly disagree", while for the negative factors the scale was reversed as "1 = strongly disagree to strongly agree".

5.2.2 Respondents' Gender Distribution

South Africa is a male dominated country when it comes to the expectation of who the bread-winner is in a family setting, therefore it would be expected that the respondents will be skewed towards males between the ages of 20 to 45 at 65% against 35% for females, however most people in the informal sector that were respondents in this study are women as per illustration

in figure 19. However, gender and age effects are not central to answering the research questions

Gender	Count of Gender
Female	162
Male	138
Total	300

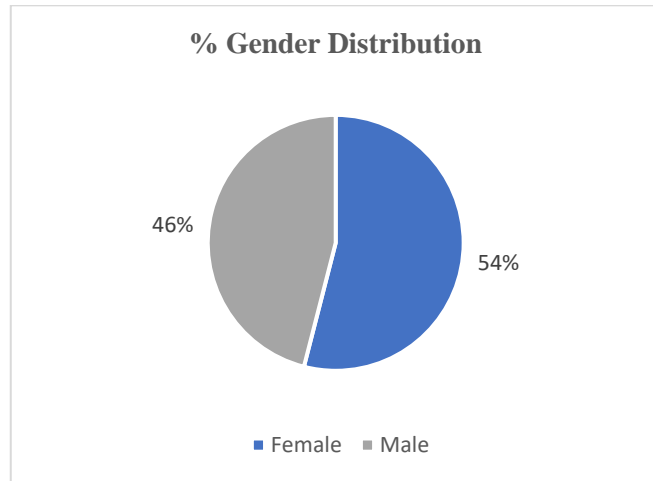


Figure 19: Respondent gender distribution

5.2.3 Respondents' Age Distribution

Six age brackets were used: 18 -24; 25-34; 35-44;45-54;55-64; and lastly 65 and over in categorising the sample's age distribution. The age bracket was not central to the research question, however from a statistical point of view, it provided managerial insights into the generational perceptions of the DBP's within the different age groups. See figure 20.

Age Distribution	Count of Age
18-24	43
25-34	48
35-44	94
45-54	68
55-64	32
65 or above	15
Total	300

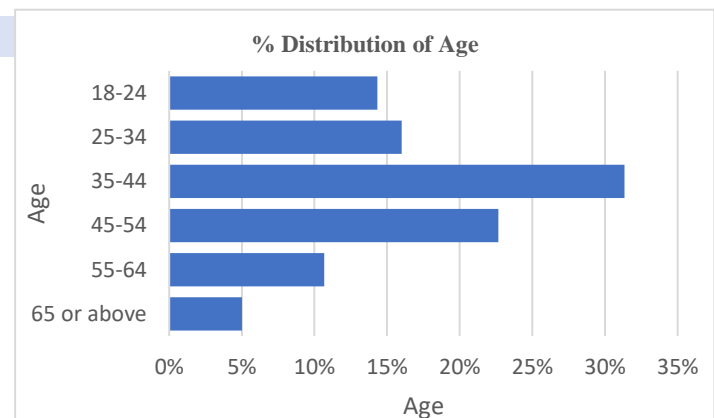


Figure 20: Respondent Age distribution

5.2.4 Respondents' Smartphone Ownership

One of the first questions asked to all respondents who participated in the survey was whether they owned a smartphone or not. Those who responded 'No', were never discarded, but rather included. This was a deliberate decision in order to gauge the responses of those who do not as yet possess smartphones against those who have. Out of the 300 respondents, 227 (76%) responded "Yes" to the question of having a smartphone, while 73 (24%) responded with a "No". The insights from those without smartphones were necessary, because they exposed the level of information they may or may not have regarding these smartphone devices and the DBP's that are packaged within the devices. See figure 21 below.

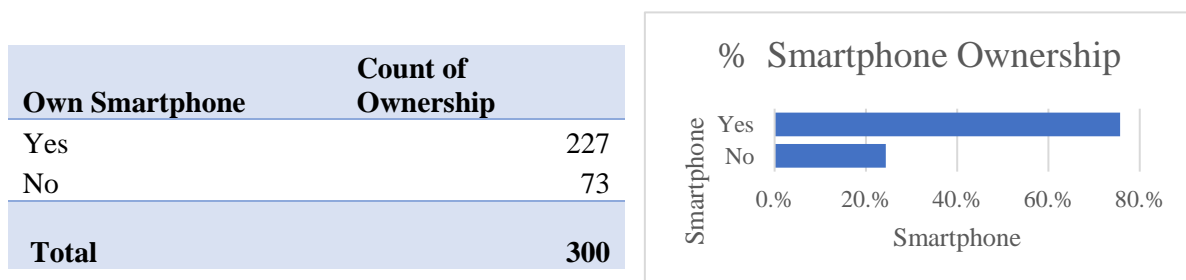


Figure 21: Respondent Smartphone Ownership

This section was brief description of the results for descriptive statistics of the study. The next sub-section of this chapter, will discuss measurement model assessment by delving deep into internal consistency and validity of the chosen constructs and their dimensions.

5.3 Measurement Model Assessment- Reflective outer model fit evaluation

An evaluation of the measurement model was made in accordance with the suggestions of Hair et al. (2006) to confirm reliability and validity of the constructs and their dimensions. Originally, 35 indicators were included in the model. While examining the measurement model, the indicators having low factor loadings were removed and the model was re-run until all the factor loading were above or closed to the suggested value of 0.60. However, in line with the guidelines of Hair et al. (2013), care was taken not to remove the items that were theoretically important, and their removal had no increased effect on average variance.

5.3.1 Internal Consistency and validity analysis

First, the research instruments were tested for reliability and validity. Second, SEM analysis was performed to test the proposed hypotheses. PLS path modelling represents a well-validated method for estimating complex cause-effect relationship models in organisation research (Gudergan et al., 2008). PLS-SEM analysis can easily obtain answers to highly complex

models, that is, models with a big number of constructs, indicators, and structural relationships (Hair, Hult, Ringle, and Sarstedt, 2016). PLS-SEM is principally suitable for early-stage theory development and testing (Hair et al., 2016) and facilitates the examination of constructs and relationships in complex structural models. This is entirely true for the relationship between positive and negative experiences of IST's when exploring DBP's. PLS-SEM does not need a large sample size and works capably with complex models and has no assumptions about the data distributions (Hair et al., 2016). In PLS-SEM, the recommendation is that the sample size should be 10 times the number of arrows pointing at a construct (Hair et al., 2016). This makes PLS-SEM particularly appropriate for the present research (see table 7). The number of arrows pointing at the constructs in the present study is 32, whereas the sample size in the present study is 300, which is well above the required size.

Variable	Dimensions	No. of Factor Loadings	Measurement Instrument Source
Positive Experience of Value Perception	Social Value (SV)	4	Kim et al., 2014
	Emotional Value (EV)	3	(H. W. Kim et al., 2007)
	Functional Value (FV)	4	Kim et al., 2014
Negative Experience of Value Perception	Price Risk (PR)	3	Voss et al., 1998
	Technical Barrier (TB)	3	(Seddon, 1997);(Davis, 1989)
Technology Acceptance Model	Perceived ease of use (PEoU)	6	(Davis, 1989)
	Perceived Usefulness (PU)	6	(Davis, 1989)
	Behavioural Intent (BI)	3	(Davis, 1989)

Table 4: Sources of Measurement Instrument

5.3.2 Indicator Reliability – Outer Loadings

Since reliability is a condition for validity, indicator reliability is the first step performed to check and ensure the associated indicators have much in common with the represented latent construct. The measurement model was assessed to establish the reliability and validity of the constructs (table 8). Although factor loading over 0.7 are desirable as mentioned in the “Handbook of Partial Least Squares,” researchers frequently obtain weaker outer loadings (<0.70) in social science studies (Vinzi et al., 2010). Rather than automatically eliminating indicators, the effects of the removal of the item on composite reliability, content, and

convergent validity shall be examined (Leguina, 2015). First, the factor loadings of all the items in the model must have a value greater than the minimum acceptable value of 0.50 (Hair, 2017; Hair et al., 2011) In the current study there were only two indicators with a lower factor loading than the recommended value of 0.50 , the SV1 (0.492) loading for social value and FV2 (0.440) for functional value. SV1 was removed to improve the significance of the average variance accepted (AVE) of social value from 0.492 to 0.555, but FV2 was retained because it did not affect the AVE value for functional value which was already above the recommended 0.5. All the outer loadings were retained except for SV1, as per illustration in table 8.

Indicator Variable	Factor Loading	Cronbach Alpha	Composite Reliability	Average Variance Accepted
Social Value		0,737	0,823	0,555
SV1	0.492	Eliminated due to low loading		
SV2	0.840			
SV3	0.707			
SV4	0.665			
SV5	0.754			
Emotional Value		0,465	0,715	0,463
EV1	0.588			
EV2	0.834			
EV3	0.588			
Functional Value		0,638	0,743	0,515
FV1	0.969			
FV2	0.440			
FV3	0.642			
Price Risk		0,816	0,885	0,721
PR1	0.928			
PR2	0.758			
PR3	0.854			
Technical Barrier		0,655	0,809	0,588
TB1	0.748			
TB2	0.685			
TB3	0.858			
Perceived Ease of Use		0,825	0,872	0,532
PEoU1	0.723			
PEoU2	0.699			
PEoU3	0.783			
PEoU4	0.772			
PEoU5	0.736			
PEoU6	0.655			
Perceived Use		0,717	0,809	0,416
PU1	0.615			
PU2	0.551			
PU3	0.710			
PU4	0.642			
PU5	0.712			

PU6	0.624			
Behavioural Intent		0,681	0,824	0,610
BI1	0.745			
BI2	0.779			
BI3	0.818			

Table 5: Factor Loadings per Indicator

5.3.3 Convergent Validity – Average Variance Extracted

The first characteristic that was observed for analysis of the measuring models was the Convergent Validities obtained by the observations of the Average Variance Extracted - (AVEs). The standard that was devised by Fornell-Larcker (1981) has been regularly used to assess the degree of shared variation between the latent variables of the model. According to this measure, the convergent validity of the measurement model can be assessed by the Average Variance Extracted (AVE) and Composite Reliability (CR). Average Variance Extracted should be higher than 0.5 as recommended by Fornell and David (1981). Social value (SV) and perceived usefulness (PU), both have an AVE that is less than 0.5. However, according to Fornell and David (1981) an exception can be made because the value of 0.4 is acceptable due to the condition that if the AVE value is less than 0.5, but the composite reliability (CR) is higher than 0.6, then the convergent validity of the construct is acceptable. Generally, items with outer loadings from 0.40 to 0.70 shall be considered for removal only if deletion results in an increase of composite reliability or average variance extracted (AVE) over the recommended value (Hair et al., 2016). See table 9 below

	Cronbach's Alpha (≥0.7)	Composite Reliability (≥0.7)	Average Variance Extracted (AVE) (≥0.5)
Social Value	0,756	0,825	0,555
Emotional Value	0,465	0,715	0,463
Functional Value	0,638	0,743	0,515
Price Risk	0,816	0,885	0,721
Technical Barrier	0,655	0,809	0,588
Perceived_Ease_of_Use	0,825	0,872	0,532
Perceived_Usefulness	0,717	0,809	0,416
Behavioural Intent	0,681	0,824	0,61

Table 6: Average Variance Extracted with EV and PU below 0.5

The AVE for this current study ranged from 0.463 as the lowest to 0.610 as the highest value. Two of latent variables were below the recommended AVE threshold; emotional value = 0.463

and perceived usefulness = 0.416. Removal of the indicator measure SV1 which had a low factor loading of 0.492 did not have a significant increase in the composite reliability because the values for the construct were already above the recommended threshold, however it did affect the value of AVE from 0.491 to the more acceptable value of 0,555. Although emotional value had a lower than acceptable AVE value of 0.463, all its factor loading were greater than 0.5; EV1=0.587, EV2=0.835, EV3=0.587, therefore there was no room for manipulation because its composite reliability was adequately standing at 0,715. The same applies to all outer loadings for perceived usefulness because all of them are above 0.5 even though it AVE is a low 0.416, it is well above the recommended composite reliability value of 0.7, therefore it was considered to be reliable. The only other outer loading indicator with a lower than the recommended 0.5 value was FV2=0.440 for functional value, however both the AVE (0.515) and CR (0.743) were quite significant. Convergent validity is achieved for every construct because all the composite reliability (CR) values for all 8 latent variables were above 0.7. See figure 22.

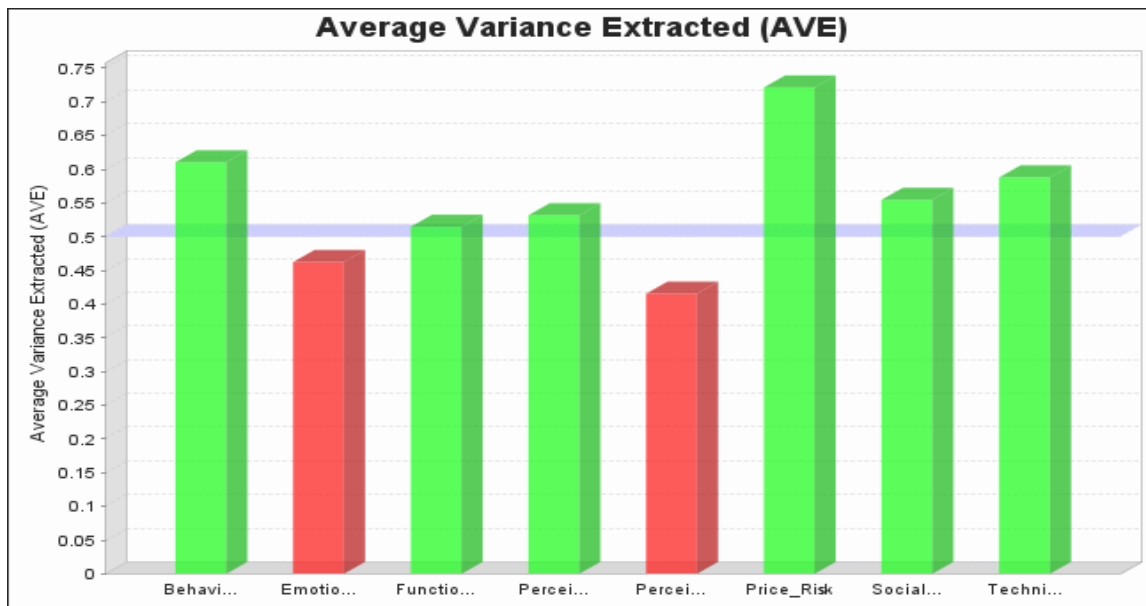


Figure 22: Average Variance Extracted with EV and PU below 0.5 threshold

5.3.4 Internal Consistency- Cronbach's alpha and Composite Reliability

After ensuring that the Convergent Validity is satisfactory, the next step is to observe the internal consistency values and the Composite Reliability (Maciej Serda, 2013). The internal consistency and reliability was assessed using Cronbach's alpha, and composite reliability and the value for both must be greater than the recommended value of 0.7 (Shin et al., 2019). The traditional gauge for Cronbach's Alpha (CA) is focused on the variables inter-correlations.

Composite reliability is the most fitting to PLS-SEM, as it prioritizes the variables according to their reliabilities (Shin et al., 2019), while the Cronbach's Alpha is very sensitive to the number of variables in each construct (Bland and Altman, 1997).

5.3.4.1 Cronbach's Alpha

Values between 0.60 and 0.70 are considered fitting in exploratory studies as is the case with this study (Bland and Altman, 1997) except for emotional value (EV) which was below acceptable standard with CA= 0.465. The CA ranged from the lowest value at 0.465 for emotional value (EV) to highest value for PEOU at 0.825 and price risk (PR) at 0.816. See table 11.

Construct Variable	Cronbach's Alpha (≥ 0.7)	Composite Reliability (≥ 0.7)	Average Variance Extracted (AVE) (≥ 0.5)
Social Value	0,756	0,825	0,555
Emotional Value	0,465	0,715	0,463
Functional Value	0,638	0,743	0,515
Price Risk	0,816	0,885	0,721
Technical Barrier	0,655	0,809	0,588
Perceived_Ease_of_Use	0,825	0,872	0,532
Perceived_Usefulness	0,717	0,809	0,416
Behavioural Intent	0,681	0,824	0,61

Table 7: Cronbach's Alpha values between 0.60 and 0.70 are considered fitting

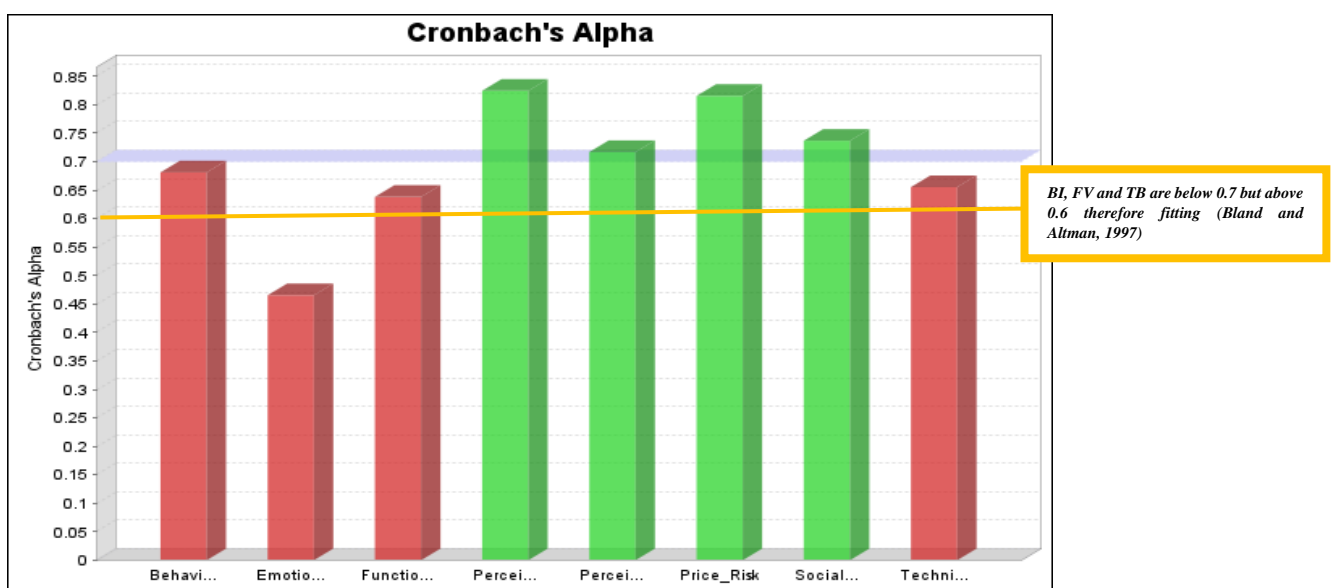


Figure 7: Cronbach's Alpha values above 0.60 are considered fitting, even though CA ≥ 7 is threshold

The CA values for behavioural intention (BI), functional value (FV) and technical barrier (TB) are below the 0.7 threshold, but are above 0.6 level, therefore according to Bland and Altman (1997) these can be accepted.

5.3.4.2 Composite reliability

Values that are between 0.7 and 0.9 are considered satisfactory, figure 23 below demonstrates that the Composite Reliability values are adequately met.

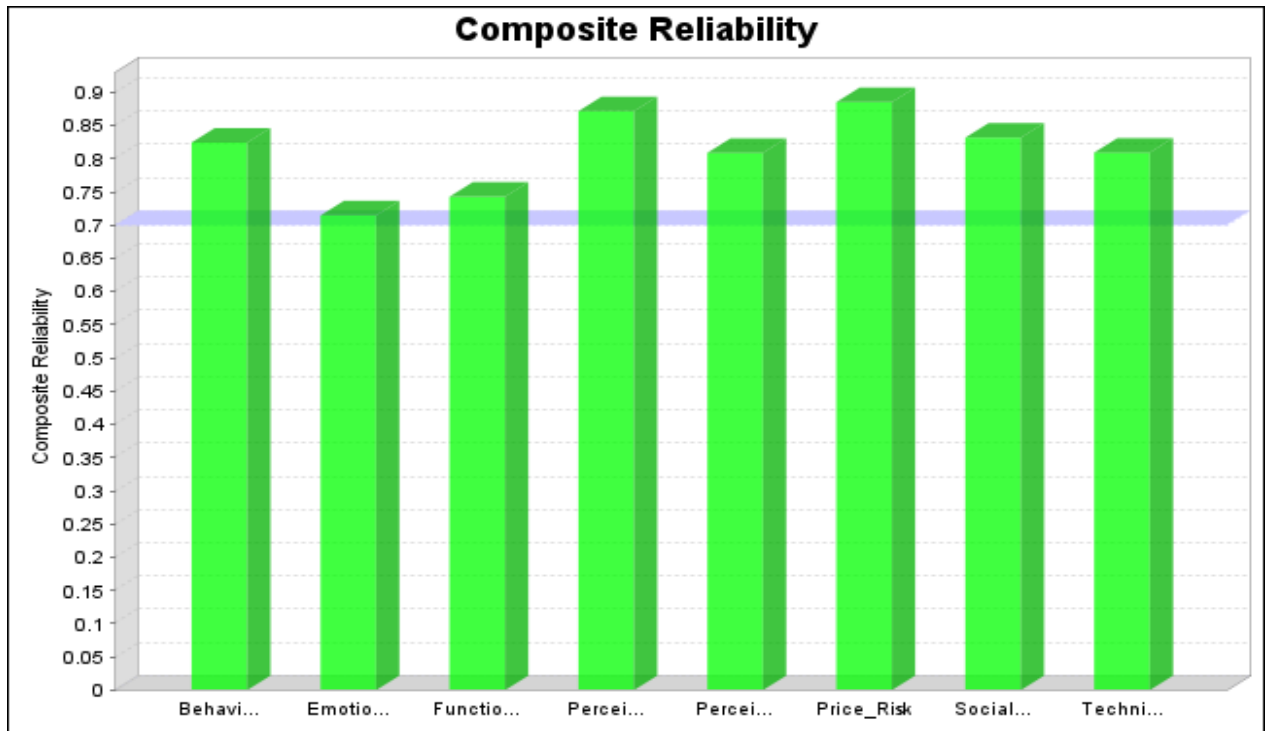


Figure 8: Composite reliability values that are between 0.7 and 0.9 are considered satisfactory

5.3.5 Discriminant Validity - Fornell-Larcker Criterion, HTMT and Cross-Loadings

Discriminant validity comprises the degree to which the measures of different constructs vary from one another. With regard to the convergent validity test, a particular indicator item measures the latent variable it is supposed to measure, while the discriminant validity tests whether the indicator items do not measure something else by mistake (Urbach and Ahlemann, 2010). In SEM-PLS, two measures of discriminant validity are commonly used: the Cross-loading criterion (see table 13) and Fornell–Larcker (Urbach and Ahlemann, 2010) as illustrated in table 11.

5.3.5.1 Fornell-Larcker Criterion

This requires a latent variable to share more variance with its assigned indicators than with any other latent variable. Accordingly, the AVE of each LV should be greater than the LV’s highest squared correlation with any other LV (Hair, 2017; Hair et al., 2014; Vinzi et al., 2010)

	Behavioural Intent	Emotional Value	Functional Value	Perceived Ease of Use	Perceived Usefulness	Price Risk	Social Value	Technical Barrier
Behavioural Intent	0,781							
Emotional Value	0,118	0,680						
Functional Value	0,121	0,371	0,718					
Perceived Ease of Use	0,204	0,092	0,036	0,729				
Perceived Usefulness	0,580	0,152	0,160	0,263	0,645			
Price Risk	0,000	-0,142	-0,121	0,083	0,111	0,849		
Social Value	0,195	0,427	0,242	0,170	0,145	-0,176	0,745	
Technical Barrier	-0,146	-0,140	-0,123	-0,306	-0,235	0,083	-0,247	0,767

Table 8: Fornell-Larcker Criterion requires a latent variable to share more variance with its assigned indicators

5.3.5.2 Heterotrait-Monotrait Ratio (HTMT)

A practical approach for analysing discriminant validity was introduced by Henseler, Ringle and Sarstedt (2015), and they called it the heterotrait-monotrait ratio of correlations (HTMT). The HTMT is a measure of how similar the latent variables are to one another. This ratio is the symmetrical mean of the heterotrait-heteromethod correlations (i.e., the correlations of indicators across constructs measuring different phenomena) divided by the average of the monotrait-heteromethod correlations (i.e., the correlations of indicators within the same construct) (Leguina, 2015). During some simulation studies (Hair et al., 2014), it was demonstrated that the lack of discriminant validity is better detected by the heterotrait-monotrait. HTMT values close to 1 indicates a lack of discriminant validity, some authors suggest a threshold of 0.85 (Cenamor et al., 2019; Sánchez-Prieto et al., 2017) as an upper limit. In this study, the results are valid for the HTMT test as seen below in table 12 because all the limits are within the upper-limit.

	Behavioural Intent	Emotional Value	Functional Value	Perceived Ease of Use	Perceived Usefulness	Price Risk	Social Value	Technical Barrier
Behavioural Intent								
Emotional Value	0,198							
Functional Value	0,177	0,684						
Perceived Ease of Use	0,262	0,168	0,082					
Perceived Usefulness	0,812	0,250	0,201	0,333				
Price Risk	0,085	0,249	0,242	0,105	0,146			
Social Value	0,286	0,721	0,417	0,217	0,199	0,250		
Technical Barrier	0,207	0,256	0,189	0,392	0,341	0,140	0,339	

Table 9: (HTMT): ratio of symmetrical mean of the heterotrait-heteromethod correlations

5.3.5.2 Cross-Loadings

The cross-loading test requires that the loadings of each indicator on its construct are higher than the cross loadings on other constructs (Gefen et al., 2000; Urbach and Ahlemann, 2010; Wang et al., 2013). Table 13 demonstrates that the cross-loading test was successful, because each loading is higher for itself than for other constructs respectively.

		Indicator Measure Question	BI	EV	FV	PEoU	PU	PR	SV	TB
Behavioural Intention	BI1	• I will continuously use DBP's in the future when transacting with my customers and suppliers	0,745	0,109	0,06	0,194	0,401	0,035	0,16	-0,089
	BI2	• I have a plan to use DBP's in the future when transacting with my customers and suppliers	0,779	0,097	0,098	0,121	0,483	0,005	0,123	-0,15
	BI3	• I expect my use of DBP's to continue when transacting with my customers	0,818	0,074	0,121	0,169	0,47	-0,026	0,138	-0,1
Emotional Value	EV1	• DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers	0,082	0,588	0,153	0,071	0,068	-0,075	0,151	-0,017
	EV2	• DBP's gave me pleasure in my daily trade transactions when dealing with customers and suppliers	0,102	0,834	0,343	0,059	0,16	-0,106	0,391	-0,129
	EV3	• DBP's made me feel relaxed in my daily trade transactions when dealing with customers and suppliers	0,045	0,588	0,226	0,073	0,04	-0,122	0,311	-0,139
Functional Value	FV1	• DBP's supported the operation of all tasks in my daily trade transactions when dealing with customers and suppliers	0,115	0,339	0,969	0,047	0,175	-0,084	0,198	-0,112
	FV2	• DBP's allowed me to do my tasks effectively in my daily trade transactions when dealing with customers and suppliers	0,054	0,286	0,44	0,015	0,029	-0,162	0,196	-0,106
	FV3	• DBP's operated consistently overall in my daily trade transactions when dealing with customers and suppliers	0,086	0,231	0,642	-0,03	0,048	-0,145	0,242	-0,069
Perceived Ease of Use	PEoU1	• It is easy for me to become skilful at using Financial DBP's such Internet Banking	0,219	0,058	0,008	0,723	0,144	0,012	0,112	-0,147

		and Mobile Payment								
	PEoU2	• I find it easy to get the Financial DBP's such Internet Banking and Mobile Payment to do what I want it to when transacting with my customers and suppliers	0,034	0,053	0,073	0,699	0,138	0,031	0,117	-0,247
	PEoU3	• My interaction with Internet Banking and Mobile Payment DBP's is clear and understandable	0,091	0,059	0,02	0,783	0,203	0,058	0,143	-0,142
	PEoU4	• I found using Financial DBP's such Internet Banking and Mobile Payment easy to use	0,124	0,093	-0,015	0,772	0,126	0,093	0,171	-0,302
	PEoU5	• Learning to use the smartphone for Internet Banking and Mobile Payment DBP's is easy for me	0,24	0,046	0,053	0,736	0,298	0,046	0,127	-0,219
	PEoU6	• I find using Financial DBP's such Internet Banking and Mobile Payment to be flexible to interact with	0,137	0,089	0,021	0,655	0,197	0,104	0,085	-0,25
Perceived Usefulness	PU1	• Using Financial DBP's such Internet Banking and Mobile Payment would enhance my effectiveness when transacting with my customers and suppliers	0,322	0,04	0,047	0,135	0,615	0,027	0,037	-0,167
	PU2	• Using Financial DBP's such Internet Banking and Mobile Payment would increase my productivity when transacting with my customers and suppliers	0,257	0,075	0,163	0,207	0,551	0,137	0,073	-0,157
	PU3	• Using Financial DBP's such Internet Banking and Mobile Payment would make it easier to do my tasks when transacting with my customers and suppliers	0,381	0,1	0,033	0,152	0,71	0,033	0,17	-0,144
	PU4	• Using Financial DBP's such Internet Banking and Mobile Payments would improve my performance when transacting with my customers and suppliers	0,348	0,097	0,088	0,215	0,642	0,09	0,044	-0,211

	PU5	• I would find Financial DBP's such Internet Banking and Mobile Payment useful when transacting with my customers and suppliers	0,474	0,151	0,116	0,17	0,712	0,064	0,112	-0,146
	PU6	• Using Financial DBP's such Internet Banking and Mobile Payment would enable me to accomplish tasks quickly when transacting with my customers and suppliers	0,42	0,101	0,164	0,141	0,624	0,08	0,069	-0,093
Price Risk	PR1	• My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers	0,024	-0,102	-0,087	0,092	0,126	0,928	-0,153	0,046
	PR2	• My MNO's airtime and data are not reasonably priced when using the service in my daily trade transactions when dealing with customers and suppliers	-0,059	-0,167	-0,146	0,035	0,061	0,758	-0,182	0,094
	PR3	• My MNO's airtime and data are not economical when using the service in my daily trade transactions when dealing with customers and suppliers	0,003	-0,124	-0,106	0,066	0,075	0,854	-0,144	0,099
Social Value	SV1	• DBP's enhanced my effectiveness in my daily trade transactions when dealing with customers and suppliers	-0,193	0,248	0,084	0,132	-0,124	-0,153	0,492	-0,126
	SV2	• DBP's made it easier to develop social relationship with my customers and suppliers	0,156	0,314	0,207	0,164	0,147	-0,109	0,84	-0,226
	SV3	• DBP's helped me to build relationship more quickly with my customers and suppliers	0,108	0,305	0,176	0,125	0,041	-0,183	0,707	-0,189
	SV4	• DBP's were useful in my social relationship with my customers and suppliers	0,207	0,366	0,169	0,076	0,079	-0,153	0,665	-0,157
	SV5	• DBP's improved my social relationship with my customers and suppliers	0,129	0,325	0,172	0,123	0,13	-0,119	0,754	-0,159
Technical Barrier	TB1	• Difficult configuration of the DBP's had a negative impact on my usage	-0,081	-0,065	-0,088	-0,176	-0,171	0,005	-0,159	0,748

	when dealing with customers and suppliers									
TB2	• Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers	-0,083	-0,082	-0,03	-0,208	-0,12	0,107	-0,154	0,685	
TB3	• Poor performance of the application for the DBP's had a negative impact on my usage when dealing with customers and suppliers	-0,154	-0,154	-0,142	-0,297	-0,23	0,078	-0,239	0,858	

Table 10: Cross-loadings across all variables

The entire section of 5.3 dealt with the measurement model and discussed the various tests for consistency, convergence, reliability, and validity by applying various test methods. These included the Cronbach's Alpha, the composite reliability, and the AVE. The next section discusses the structural model assessment and performs the inner model fit evaluation.

5.4 Structural Model Assessment - Inner model fit evaluation

Upon confirmation of the assessment results of the measurement model, the succeeding step was to assess the structural model. In this stage, the model's predictive capabilities and the relationships among the constructs were examined. According to Hair et al., (2014) the main conditions for assessing the structural model in PLS-SEM involve the significance of the path coefficients, the levels of the R2 values, and the predictive relevance of Q2.

5.4.1 The path coefficients

The path coefficients in a statistical study refer to the hypothesized relationships between the constructs. Values of path coefficients range between -1 and $+1$, where values close to $+1$ indicate strong positive relationships. Perceived ease of use seems to indicate a very strong relationship with behavioural intent at 0.565 . Typically, most scholars (Ashraf et al., 2021; Wong et al., 2021) use p values to assess the significance level. The p-values should be greater than 0.05 to indicate that the exogenous constructs have predictive relevance for the endogenous construct under consideration as can be demonstrated in table 14

	Behavioural Intent	Perceived Ease of Use	Perceived Usefulness
Behavioural Intent			
Emotional Value		0,029	0,073
Functional Value		-0,022	0,114
Perceived Ease of Use	0,055		0,186
Perceived Usefulness	0,565		
Price Risk		0,128	0,140
Social Value		0,115	0,041
Technical Barrier		-0,287	-0,155

Table 11: Path Coefficients on BI, PEOU and PU as dependent variables

5.4.2 Pearson's coefficients (R^2) and Predictive Relevance (Q^2)

The first analysis at this second moment is the evaluation of Pearson's coefficients (R^2): The R^2 evaluates the portion of the variance of the endogenous variables, which is explained by the structural model. The value for R^2 should be equal to or greater than 0.1 (Cenamor et al., 2019; Sánchez-Prieto et al., 2017) The values in table 15 indicates R^2 for BI = 0.399 , PEOU= 0.120 and PU= 0.136 , these figures all above the required 0.1 threshold. The Q^2 test establishes the predictive capability of the endogenous or dependant variables. A Q^2 value that is above zero (0) proves that the constructed model has predictive relevance. The values in table 15 below indicates Q^2 for BI = 0.193 , PEOU= 0.052 and PU= 0.046 , these figures all above the required 0.1 threshold, hence predictive relevance is established. The model fit was also assessed using the SRMR test.

	R Square	Q Square
Behavioural Intent	0,339	0,193
Perceived Ease of Use	0,120	0,052
Perceived Usefulness	0,136	0,046

Table 12: Path Coefficients on BI, PEOU and PU as dependent variables

5.4.3 Hypothesis Testing for Significance

The third and final test for the structural model's validity is the actual significance of the hypothesis testing based on the whether the p-values are greater than 0.05. Some of the values were considerably close to the required p-value, as is the case for the relationship between Social Value (SV) and PEOU which was 0.085. Out of the 13 hypotheses constructed for this study, 8 were found to be insignificant and 5 were significant as illustrated in table 16 below. It is important to note that the Price Risk (PR) and Technical Barrier (TB) were phrased with some negative connotation, i.e. the questions in the questionnaire for example were put forward in the following way; My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers. This was deliberately done gauge the price sensitivity. This was also taken into consideration when coding the questionnaire by reversing the scales in the opposite direction for these two constructs. This means that for these two constructs 'strongly agree = 1' instead of a scoring of 5 and 'strongly disagree = 5' instead of a scoring of 1. Therefore the scoring becomes related to the statistical significance.

Hypothesis	Construct Relationship	Path Coefficient	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Significance
H1(a)	Social_Value -> Perceived_Ease_of_Use	0,115	0,067	1,716	0,085	Insignificant
H1(b)	Social_Value -> Perceived_Usefulness	0,041	0,072	0,561	0,575	Insignificant
H2(a)	Emotional_Value_ -> Perceived_Ease_of_Use	0,029	0,078	0,373	0,709	Insignificant
H2(b)	Emotional_Value_ -> Perceived_Usefulness	0,073	0,079	0,925	0,355	Insignificant
H3(a)	Functional_Value -> Perceived_Ease_of_Use	-0,022	0,077	0,290	0,772	Insignificant
H3(b)	Functional_Value -> Perceived_Usefulness	0,114	0,081	1,416	0,157	Insignificant
H4(a)	Price_Risk -> Perceived_Ease_of_Use	0,128	0,066	1,952	0,140	Insignificant
H4(b)	Price_Risk -> Perceived_Usefulness	0,140	0,084	1,661	0,020	Significant
H5(a)	Technical_Barrier -> Perceived_Ease_of_Use	-0,287	0,073	3,902	0,000	Significant
H5(b)	Technical_Barrier -> Perceived_Usefulness	-0,155	0,064	2,406	0,016	Significant
H6	Perceived_Usefulness -> Behavioural_Intent	0,565	0,051	11,087	0,000	Significant
H7	Perceived_Ease_of_Use -> Behavioural_Intent	0,055	0,048	1,154	0,249	Insignificant
H8	Perceived_Ease_of_Use -> Perceived_Usefulness	0,186	0,084	2,208	0,027	Significant

Table 13: Hypothesis significance testing for the relationships established

For this study therefore, the following hypotheses (H1) are put forward:

Hypothesis for Social Value (SV) as an antecedent to Perceived Ease of Use (PEOU)

H1a: There is a positive relationship between the perceived social value (SV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

The results reveal that SV has an insignificant impact on PEoU ($\beta = 0.115$, $t=1.716$, $p=0.085$).

H1a is *not* supported

Hypothesis for Social Value (SV) as an antecedent to Perceived Usefulness (PU)

H1b: There is a positive relationship between the perceived social value (SV) and the perceived usefulness of digital business platform by informal sector traders in South Africa.

The results reveal that SV has an insignificant impact on PU ($\beta = 0,041$, $t=0.561$, $p=0.575$).

H1b is *not* supported.

Hypothesis for Emotional Value (EV) as an antecedent to Perceived Ease of Use (PEOU)

H2a: There is a positive relationship between the perceived emotional value (EV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

The results reveal that EV has an insignificant impact on PEoU ($\beta = 0,029$, $t=0.373$, $p=0.709$).

H2a is *not* supported

Hypothesis for Emotional Value (EV) as an antecedent to Perceived Usefulness (PU)

H2b: There is a positive relationship between the perceived emotional value (EV) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

The results reveal that EV has an insignificant impact on PU ($\beta = 0,073$, $t=0.925$, $p=0.355$).

H2b is *not* supported

Hypothesis for Functional Value (FV) as an antecedent to Perceived Ease of Use (PEOU)

H3a: There is a positive relationship between the perceived functional value (FV) and the perceived ease of use (PEoU) of digital business platform by informal sector traders in South Africa.

The results reveal that FV has an insignificant impact on PEoU ($\beta = -0.022$, $t=0.290$, $p=0.772$). H3a is *not* supported

Hypothesis for Function Value (FV) as an antecedent to Perceived Usefulness (PU)

H3b: There is a positive relationship between the perceived functional value (FV) and the perceived usefulness (PU) of digital business platform by informal sector traders in South Africa.

The results reveal that FV has an insignificant impact on PU ($\beta = 0,114$, $t=1,416$, $p=0.157$). H3b is *not* supported.

Hypothesis for price risk (PR) as an antecedent to perceived ease of use (PEOU)

H4a: price risk (PR) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions.

The results reveal that PR has an insignificant impact on PEoU ($\beta = 0,128$, $t=1,952$, $p=0.140$). H4a is *not* supported.

Hypothesis for price risk (PR) as an antecedent to perceived usefulness (PU)

H4b: price risk (PR) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions.

The results reveal that PR has a significant impact on PU ($\beta = 0,140$, $t=1,661$, $p=0.020$). H4b is supported

Hypothesis for technical barrier (TB) an antecedent to perceived ease of use (PEOU)

H5a: technical barrier (TB) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions.

The results reveal that TB has a significant impact on PEoU ($\beta = -0,287$, $t=3.902$, $p=0.00$). H5a is supported.

Hypothesis for price risk (TB) as an antecedent to perceived usefulness (PU)

H5b: technical barrier (TB) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions.

The results reveal that TB has a significant impact on PU ($\beta = -0,155$, $t=2,406$, $p=0.016$). H5b is supported.

Hypothesis for Perceived ease of use (PEoU) on perceived usefulness (PU)

H6: The perceived ease of use (PEoU) of Digital business platforms would have a positive effect on their perceived usefulness (PU) to Informal sector traders in their daily trade interactions.

The results reveal that PEoU has a significant impact on PU ($\beta = -0,186$, $t=2,208$, $p=0.027$). H6 is supported.

Hypothesis for Perceived ease of use (PEoU) on Behavioural Intention (BI)

H7: The perceived ease of use (PEoU) of Digital business platforms would have positive effects on the behavioural intention (BI) towards use by Informal sector traders in their daily trade interactions.

The results reveal that PEoU has a significant impact on BI ($\beta = -0,566$, $t=11,087$, $p=0.00$). H7 is supported.

Hypothesis for Perceived usefulness (PU) on Behavioural Intention (BI))

H8: The perceived usefulness (PU) of Digital business platforms would have positive effects on the behavioural intention towards continual use by Informal sector traders in their daily trade interactions.

The results reveal that PU has an insignificant impact on PU ($\beta = -0,055$, $t=1154$, $p=0.249$). H8 is *not* supported.

5.4.5 Conclusion on Structural Model Results

The results of the statistical significance of each relationship can be observed on figure 24, with the diagram showing both the results from the measurement model's factor loadings and the structural model's coefficients path's weights. After performing all the necessary test for the structural model, the results from the SmartPLS 3.0 software were gathered and can be observed, with the diagram showing both the results from the measurement model's factor loadings and the structural model's coefficients path's weights.

The next section will discuss the descriptive results of the consumer experiences based on the responses to the questions in the questionnaire.

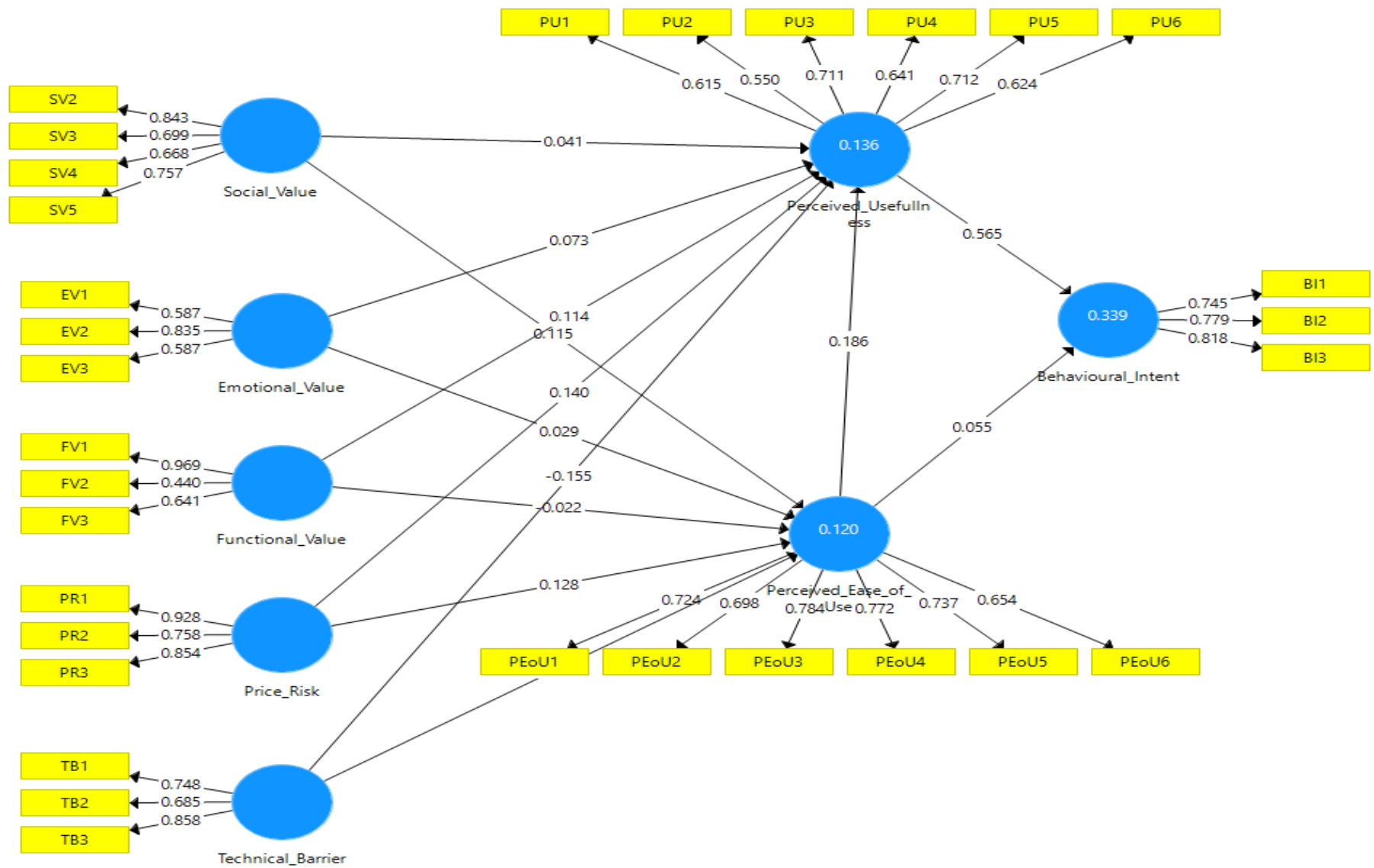


Figure 9: Structure and Results of Model Construction

5.5 Descriptive Results of Consumer Experiences: Value Consumption Model (VCM)

In chapter 3, section 3.6 of the literature review, an explanation of the reasoning for extending the technology adoption model (TAM) with the value consumption model (VCM) was discussed. The subsequent section 3.7, then offered a model based on consumer experiences as general independent variables and antecedents, that affect ease of use and usefulness of DBP's which may then determine behavioural intent for adoption by informal sector traders (see figure *Figure 11: Consumer Experiences and TAM* (J. Kim et al., 2007)). The following subsections, will examine the results of these consumer experiences as positive experiences that result in a perceived value of DBP's, as well as negative experiences as a result of perceived risks associated with DBP's

5.5.1 Descriptive Results of Positive Experiences – Perceived Value

The 'Perceived Value' of the adoption new technological innovations in e-commerce and online shopping has often been measured by applying the 'Cost-Benefit Analysis' concept (J. Kim et al., 2007; Vahdat et al., 2020). Often these studies breakdown perceived value into a combination of sub-constructs such as Social Value (SV), Emotional Value (EV) and Functional Value (FV) as positive experiences that could aid in the adoption of new technological innovations (Im et al., 2008; J. Kim et al., 2007; J. Lee et al., 2019).

This current study has operationalised these three sub-constructs as antecedents of perceived value, which when adequately combined, should yield positive customer experiences. These will then facilitate the perceived ease of use and usefulness of these platforms, thus resulting in the long-term behavioural usage of DBP's by IST's as per below illustration:

SV+EV+FV → PV → Positive Consumer Experiences → PU + PEoU → BI

5.5.1.1 Results for Perceived Value – Social Value

Multiple values can independently contribute to a consumer's beliefs with regards to the usefulness or ease of use of a product, and as such social value has been cited as having a stimulating effect on consumers' positive experiences (Min et al., 2008; Rahman et al., 2017; Zhou et al., 2010). It is for this reason that the Social Value (SV) construct is considered with regard to how the Informal sector traders perceive value which should determine their perception of ease-of-use (PEoU) and usefulness (PV) of DBP's in their daily lives when making a living. Table 17 is a matrix of the questions on the survey regarding the positive experiences of Social Value indicators when using DBPs

Positive Experience of Social Value When Using DBP's				
Survey Questions	SV1 • DBP's enhanced my effectiveness in my daily trade transactions when dealing with customers and suppliers	SV2 • DBP's made it easier to develop social relationship with my customers and suppliers	SV3 • DBP's helped me to build relationship more quickly with my customers and suppliers	SV4 • DBP's were useful in my social relationship with my customers and suppliers
strongly agree	162	94	140	117
agree	97	159	109	141
neutral	37	40	41	28
disagree	3	4	5	11
strongly disagree	1	3	5	3

Table 14: Positive Experience of Social Value Indicators When Using DBP's

Result analysis of Social Value indicator SV1

DBP's enhanced my effectiveness in my daily trade transactions when dealing with customers and suppliers.

This is the opening question (SV1) of the survey, and most of the respondents had a positive outlook to the effectiveness of digital business platforms in their daily business transactions with customers and suppliers. 88 females strongly agreed with the statement and 82 males also strongly agreed, resulting in a combined overall ratio of 54%. None of the 138 males disagreed, however 3 females disagreed, with one having a strong disagreement with the statement out of the 162 surveyed. With regards to smartphone ownership, 199 of the respondents positively agreed with the statement, while 60 of those without smartphone also agreed. Interestingly, only one person disagreed of those without a smartphone, while 12 remained neutral. Overall, there appears to be an 88 percent approval towards the efficacy of digital business platforms for informal sector traders when performing their daily transactions as illustrated in the figure 25.

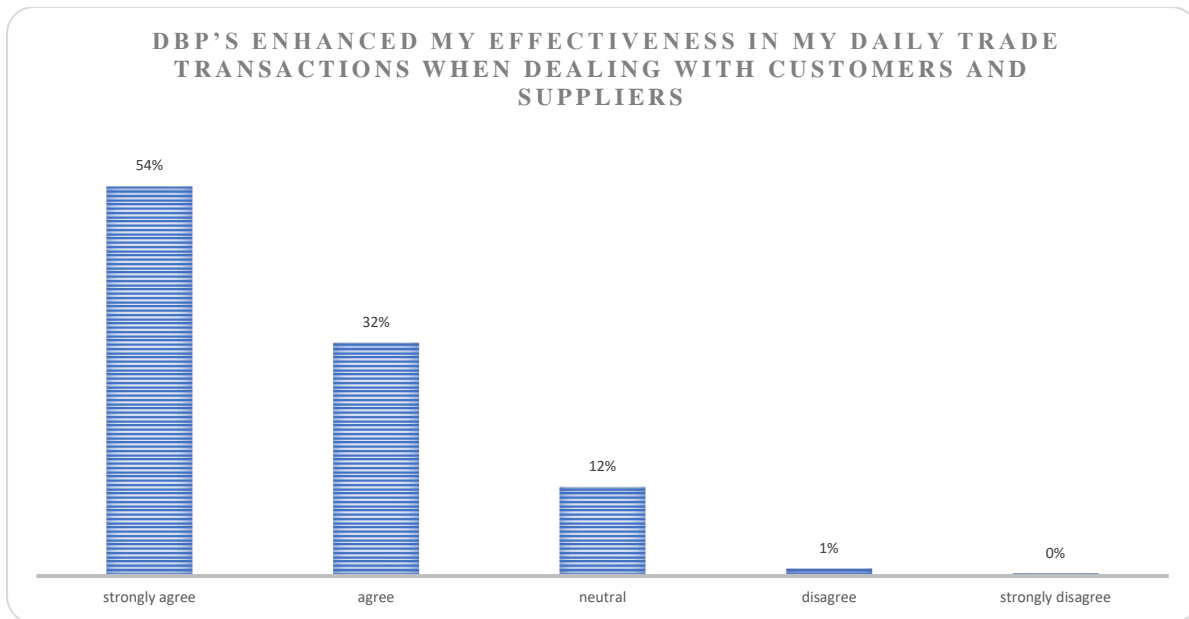


Figure 10: DBP's enhanced my effectiveness in my daily trade transactions

SV1 Indicator Descriptive Statistics

The descriptive statistics for SV1 as an indicator for the social value construct as shown in the matrix below, reveal an overall mean score of 4.837, with standard deviation of 0.764. This reflects a positive perception of Social Value amongst informal sector traders. SV1 as an indicator of social value, also had the highest mean value of the four accepted indicators, leading to the conclusion that DBP's enhanced the effectiveness of informal traders in their daily trade transactions when dealing with customers and suppliers

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
SV1	4.387	5.000	1.000	5.000	0.764

Result analysis of Social Value indicator SV2

DBP's made it easier to develop social relationship with my customers and suppliers

This question deals directly with the aspect of social attachments that may develop as a result of using digital business platforms such as Facebook, Whatsapp, Twitter and Instagram. 86 females and 73 males just 'agree', while 47 for both genders 'strongly agree'. The age analysis on this question reveals that the youngest age bracket of 18-24 has no disagreement at all with this statement, while those in the upper brackets may have some reservation with 4 disagreeing and 35 neutral responses. When observing smartphone ownership, it becomes apparent that 3

respondents who did not own a smartphone, did not see the value of social media in their daily trading, while only one owner was of the same view.

SV2 Indicator Descriptive Statistics

The descriptive statistics results for SV2 as an indicator for the social value construct, reveal an overall mean score of 4.123, with standard deviation of 0.758. This reflects an overall positive perception of Social Value with regards to the ease of developing social relationships amongst informal sector traders and their customers and suppliers. The SV2 indicator had the lowest mean out of the four social value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
SV2	4.123	4.000	1.000	5.000	0.758

Result analysis of Social Value indicator SV3

DBP’s helped me to build relationships more quickly with my customers and suppliers

This question gives a rare perspective of how informal sector traders tend to view ‘customer relationship management’. From the figure 26, one can see that the ‘strongly agree’ and ‘agree’ appear most often. This is a strong indicator that the informal sector traders value these relationships and the ability to build them more quickly is an advantage for them. Only 4 out of the 73 respondents without smartphones disagreed with the relationship-forming capabilities of digital business platforms, while only 6 of the 123 smartphone owners disagreed. Those who responded as ‘strongly agree’ were 140 and those responded with ‘agree’ were 109, out of this agreeable group, 56 did not own a smartphone and 196 owned one.

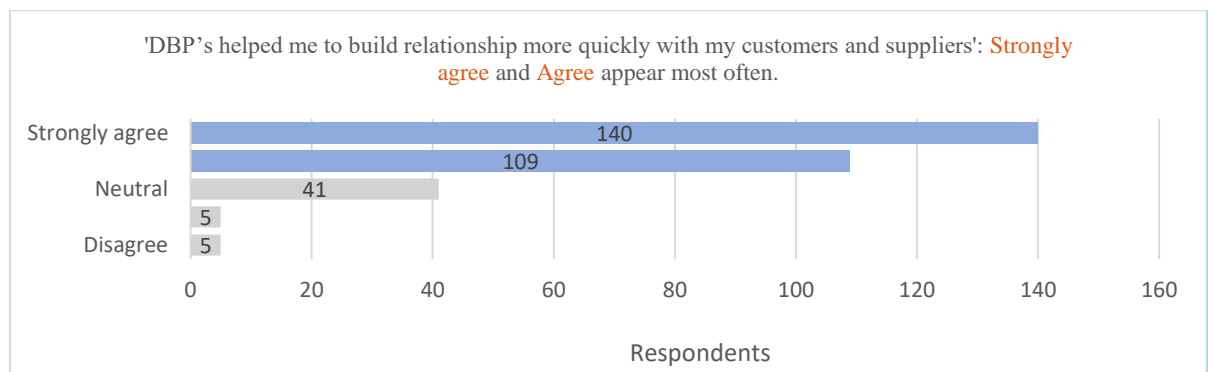


Figure 11: DBP’s enhance customer relationship management for IST’s

SV3 Indicator Descriptive Statistics

The descriptive statistics results for SV3 as an indicator for the social value construct, reveal an overall mean score of 4.193, with standard deviation of 0.826. This reflects an overall positive perception of Social Value as an enabler for to the betterment of social relationships amongst informal sector traders and their customers and suppliers. The SV3 indicator had the second highest mean out of the four social value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
SV3	4.193	4.000	1.000	5.000	0.826

Result analysis of Social Value indicator SV4

DBP's were useful in my social relationship with my customers and suppliers

The results for this question are very much consistent with the results of question 3 above and thus the same analysis of the results applies.

SV4 Indicator Descriptive Statistics

The descriptive statistics results for SV as an indicator for the social value construct, reveal an overall mean score of 4.247, with standard deviation of 0.871. This reflects an overall positive perception of Social Value as being useful in forming social relationships amongst informal sector traders and their customers and suppliers. The SV3 indicator had the third highest mean out of the four social value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
SV4	4.247	4.000	1.000	5.000	0.871

5.5.1.2 Results for Perceived Value – Emotional Value

Babi et al., (1994) are of the view that the conventional utility-based approach cannot capture the unquantifiable and emotional benefits and costs that determine spending value because hedonistic responsibilities are deeply involved in shopping. This sentiment may hold true for Informal sector traders in the informal economy when faced with choices of using Digital business platforms and as such, this study will determine the effects of emotional value (EV) in such choices and how they affect perceived ease of use (PEoU) and usefulness (PU).

Table 18 below is a matrix of the questions on the survey regarding the positive experiences of Emotional Value indicators when using DBPs

Positive Experience of Emotional Value When Using DBP's			
Survey Question	EV1 • DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers	EV2 • DBP's gave me pleasure in my daily trade transactions when dealing with customers and suppliers	EV3 • DBP's made me feel relaxed in my daily trade transactions when dealing with customers and suppliers
strongly agree	134	105	98
agree	107	137	139
neutral	45	44	55
disagree	8	10	7
strongly disagree	6	4	1

Table 15: DBP's gave me pleasure in my daily trade

Result analysis of Emotional Value indicator EV1

DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand if there is a general good feeling on the part of the informal sector traders whenever they are interacting with their customer and suppliers using digital business platforms. The majority of responses were positive towards this statement with an overwhelming 81 percent: 35 percent 'strongly agree' and 46 percent 'agree' see figure 27 below. This means that most respondents find themselves to be in an enhanced mood when using digital business platforms. With regards to the age analysis of this question it appears that the age group of 35-44 are most comfortable and relaxed when using digital business platforms in their daily trade. This could also be because they are more heavily represented in the study. The sample also showed that more females felt relaxed than males. Out of the 73 respondents who had no smartphone, 31 responded with an 'agree' and 28 responded with a 'strongly agree', 10 were 'neutral' and those who disagreed were 4 in total.

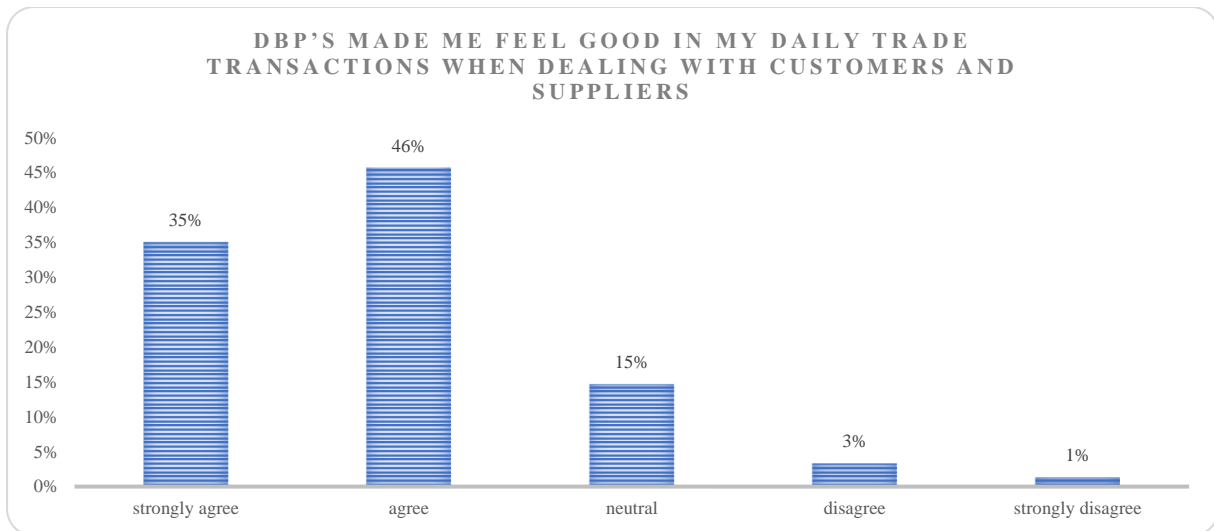


Figure 12: DBP's made me feel good in my daily trade

EV1 Indicator Descriptive Statistics

The descriptive statistics results for EV3 as an indicator for the emotional value construct, reveal an overall mean score of 4.097, with standard deviation of 0.861. This reflects an overall positive perception of emotional value as having a feel-good effect amongst informal sector traders when transacting with customers and suppliers in their business dealings. The EV1 indicator had the second highest mean out of the three emotional value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>EV1</i>	4.097	4.000	1.000	5.000	0.861

Result analysis of Emotional Value indicator EV2

DBP's gave me pleasure in my daily trade transactions when dealing with customers and suppliers

This question was designed to understand the hedonistic feelings of pleasure that informal sector traders have when interacting with their customer and suppliers using digital business platforms. The majority of responses were positive towards this statement with 79 percent: 33 percent 'strongly agree' and 46 percent 'agree' see. This means that most of the respondents found the usage of digital business platforms to be pleasurable. With regards to the age analysis of this question it appears that the age group of 35-44 are most comfortable and relaxed when using digital business platforms in their daily trade. This could also be because they are more

heavily represented in the study. The sample also showed that more females felt relaxed than males. Out of the 73 respondents who had no smartphone, 35 responded with an ‘agree’ and 21 responded with a ‘strongly agree’, 14 were ‘neutral’ and those who disagreed were 3 in total. See figure 28.

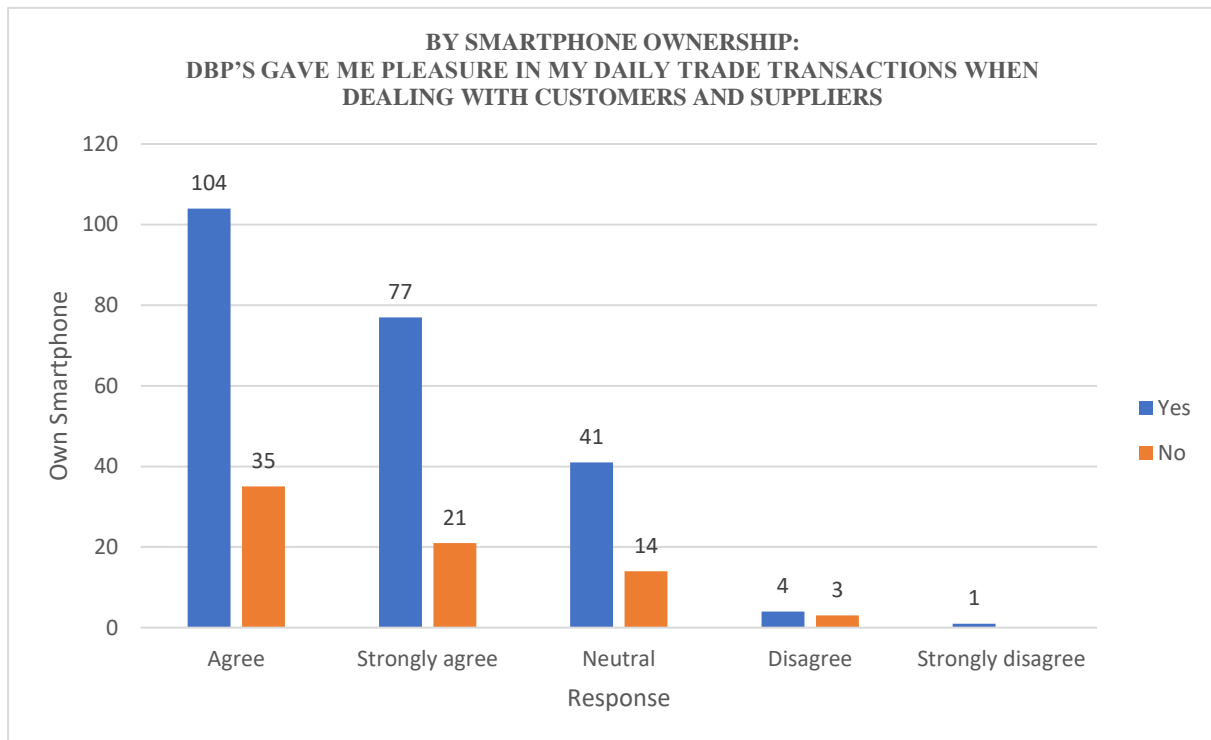


Figure 13: DBP's gave me pleasure in my daily trade

EV2 Indicator Descriptive Statistics

The descriptive statistics results for EV3 as an indicator for the emotional value construct, reveal an overall mean score of 4.097, with standard deviation of 0.861. This reflects an overall positive perception of emotional value as having a pleasure inducing effect amongst informal sector traders when transacting with customers and suppliers in their business dealings. The EV2 indicator had the lowest mean out of the three emotional value indicators

	Mean	Median	Min	Max	Standard Deviation
EV1	4.097	4.000	1.000	5.000	0.861

Result analysis of Emotional Value indicator EV3

DBP's made me feel relaxed in my daily trade transactions when dealing with customers and suppliers

This question was designed to understand the kind of emotional mood that informal sector traders have when interacting with their customer and suppliers using digital business platforms. The majority of responses were positive towards this statement with 80 percent: 37 percent 'strongly agree' and 43 percent 'agree' see figure 29 . This means that most were not tense at all when using digital business platforms. With regards to the age analysis of this question it appears that the age group of 35-44 are most comfortable and relaxed when using digital business platforms in their daily trade. This could also be because they are more heavily represented in the study. The sample also showed that more females felt relaxed than males. Out of the 73 respondents who had no smartphone, 31 responded with an 'agree' and 28 responded with a 'strongly agree', 10 were 'neutral' and those who disagreed were 4 in total.

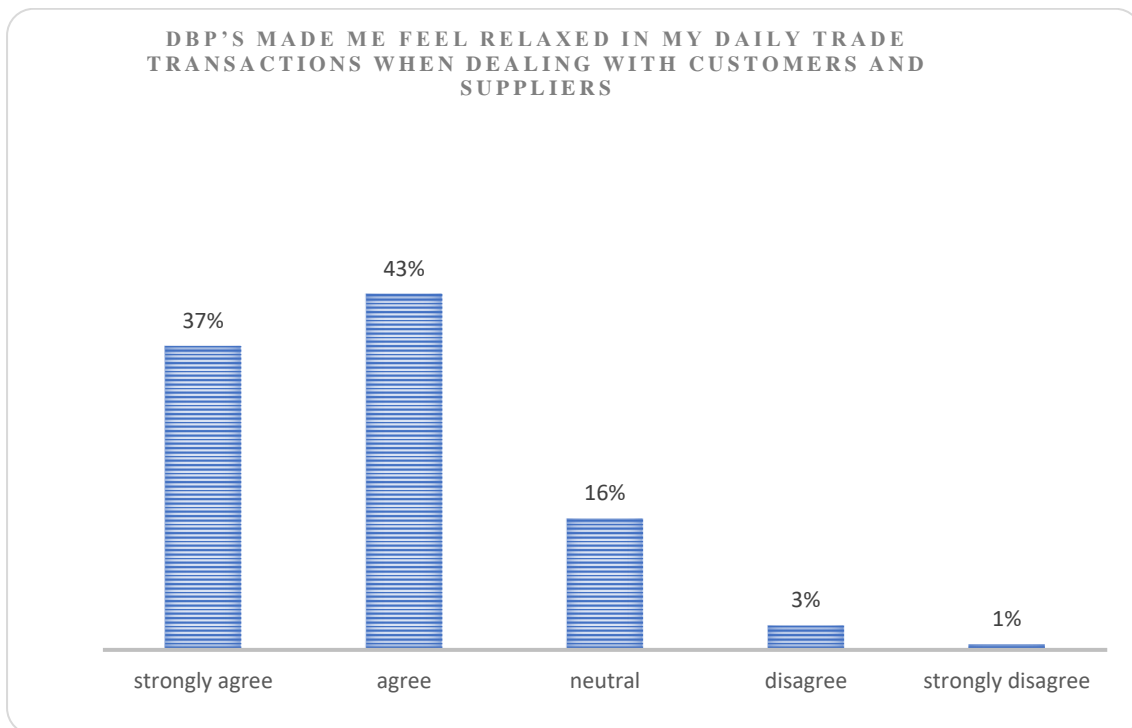


Figure 14: *DBP's made me feel relaxed in my daily trade*

EV3 Indicator Descriptive Statistics

The descriptive statistics results for EV3 as an indicator for the emotional value construct, reveal an overall mean score of 4.130, with standard deviation of 0.833. This reflects an overall positive perception of emotional value as having a relaxing effect amongst informal sector traders when transacting with customers and suppliers in their business dealings. The EV3 indicator had the highest mean out of the three emotional value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>EV3</i>	4.130	4.000	1.000	5.000	0.833

5.5.1.3 Results for Perceived Value – Functional Value

Extrinsic value describes the utilitarian use of a certain service as a tool toward a specific end, though intrinsic value reveals the emotional consumption. The functional value of digital business platforms to informal sector traders can be understood to be the fundamental relationship that exists between quality and costs, as perceived by them. Table 19 below is a matrix of the questions on the survey regarding the positive experiences of Social Value indicators when using DBPs

Positive Experience of Functional Value When Using DBP's			
Survey Question	FV1• DBP's supported the operation of all tasks in my daily trade transactions when dealing with customers and suppliers	FV2• DBP's allowed me to do my tasks effectively in my daily trade transactions when dealing with customers and suppliers	FV3• DBP's operated consistently overall in my daily trade transactions when dealing with customers and suppliers
strongly agree	119	102	113
agree	105	122	104
neutral	54	57	60
disagree	10	12	15
strongly disagree	12	7	8

Table 16: Positive Experience of Functional Value When Using DBP's

Result analysis of Functional Value indicator FV1

DBP's supported the operation of all tasks in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand the utilitarian nature of digital business platform as perceived by informal sector traders in their daily transactions. Out of the 300 respondents 199 'strongly agreed' 105 'agreed', 54 were 'neutral', 10 'disagree' and 12 'strongly disagree'. Overall 75 percent had a positive response to this statement, meaning that the majority of respondents found digital business platforms to be of great operational value. Out of the 73 respondents without smartphones 24 'strongly agreed' 29 'agreed', 14 were 'neutral', 3 'disagree' and 3 'strongly disagree'. This means that even though they had little to no experience of utilising digital business platforms in performing their tasks, 49 percent 'strongly agreed' 31 percent 'agreed' as opposed to 8 percent who disagreed.

FV1 Indicator Descriptive Statistics

The descriptive statistics results for FV1 as an indicator for the functional value construct, reveal an overall mean score of 4.030, with standard deviation of 1.034. This reflects an overall positive perception of functional value of digital business platforms and their abilities to be supportive of operational tasks amongst informal sector traders when transacting with customers and suppliers in their business dealings. The FV1 indicator had the highest mean out of the three functional value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>FV1</i>	4.030	4.000	1.000	5.000	1.034

Result analysis of Functional Value indicator FV2

DBP's allowed me to do my tasks effectively in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand the effectiveness of digital business platform when it comes to task-performance by informal sector traders in their daily transactions. This could include tasks such as buying, selling and marketing. Out of the 300 respondents 102 'strongly agreed' 122 'agreed', 57 were 'neutral', 12 'disagree' and 7 'strongly disagree'. Overall 75 percent had a positive response to this statement, meaning that the majority of respondents found digital business platforms to effectively improved their ability to perform their daily trade transactions. Out of the 73 respondents without smartphones 27 'strongly agreed' 27 'agreed', 16 were

‘neutral’, 3 ‘disagree’ and none ‘strongly disagree’. This means that even though they had little to no experience of utilising digital business platforms in performing their tasks, the majority of those without smartphones had a 59 percent ‘strongly agreed’ 29 percent ‘agreed’ as opposed to only 4 percent who disagreed.

FV2 Indicator Descriptive Statistics

The descriptive statistics results for FV2 as an indicator for the functional value construct, reveal an overall mean score of 4.000, with standard deviation of 0.949. This reflects an overall positive perception of functional value of digital business platforms and their effectiveness in operational tasks amongst informal sector traders when transacting with customers and suppliers in their business dealings. The FV2 indicator had the second highest mean out of the three functional value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>FV2</i>	4.000	4.000	1.000	5.000	0.949

Result analysis of Functional Value indicator FV3

DBP’s operated consistently overall in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand the operational consistency of digital business platform when applied by informal sector traders in their daily transactions. This question assumes that they already have the necessary data bundles and there are no network issues from the mobile network operator, during their transactions of buying, selling, and marketing. Only the respondents who had owned a smartphone could give accurate answers to this question. Out of the 277 respondents who had smartphones 82 ‘strongly agreed’ 80 ‘agreed’, 45 were ‘neutral’, 12 ‘disagree’ and 5 ‘strongly disagree’. Overall 75 percent had a positive response to this statement, meaning that the majority of respondents found digital business platforms to be operationally consistent in delivering the ability for them to perform their daily trade transactions.

FV3 Indicator Descriptive Statistics

The descriptive statistics results for FV2 as an indicator for the functional value construct, reveal an overall mean score of 4.097, with standard deviation of 0.861. This reflects an overall positive perception of functional value of digital business platforms and their abilities to be consistently operational when performing tasks amongst informal sector traders when transacting with customers and suppliers in their business dealings. The FV3 indicator had the second highest mean out of the three functional value indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>FV3</i>	3.997	4.000	1.000	5.000	1.008

5.5.2 Descriptive Results of the Negative Consumer Experiences – Perceived Risk

Monetary risk and non-monetary risk are the two key factors for understanding consumers' acceptance behaviours, towards different kinds of digital business platforms. For example, to effectively adopt and use new digital business platforms and the apps that represent them, consumers in the informal economy experience monetary expenses related to using these services which include equipment costs, data cost and economical values for utilizing the services, which ,may include subscription and transaction fees (Y. S. Wang et al., 2003; Youn and Lee, n.d.-a). It has been proposed that perceived price risk fee directly influences perceived value(A. Chen et al., 2017; Moyo and Munoriyarwa, 2021). At the same time, users often bear non-monetary expenses, such as technical barriers related to using the services(Pousttchi and Wiedemann, n.d.)

These will adversely affect the perceived ease of use and usefulness of these platforms, thus resulting in lower levels of the long-term behavioural usage of DBP's by IST's as per below illustration:

PR +TB →RP →Negative Consumer Experiences →PU + PEoU →BI

5.5.2.1 Results for Perceived Risk – Price Risk

Applying Price Risk (PR) to the informal sector trader is the key to understanding the trade-off between using the long-standing means of using cash when trading with their customers versus using digital business platforms, and its effect on perceived ease-of-use (PEoU) and usefulness (PU). Table 20 below is a matrix of the questions on the survey regarding the negative experiences of Price Risk indicators when using DBPs

Negative Experience of Price Risk When Using DBP's			
Survey Questions	PR1 • My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers	PR2 • My MNO's airtime and data are not reasonably priced when using the service in my daily trade transactions when dealing with customers and suppliers	PR3 • My MNO's airtime and data are not economical when using the service in my daily trade transactions when dealing with customers and suppliers
strongly agree	105	90	101
agree	91	96	91
neutral	40	57	49
disagree	11	14	14
strongly disagree	45	40	41

Table 17: Negative Experience of Price Risk When Using DBP's

Result analysis of Price Risk indicator PR1

My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers

This question was designed to assess the price sensitivity of the airtime and data fees as prerequisites for the minimum usage of digital business platforms services that are charged by mobile network operators (MNO's) from the perspective of the informal sector trader. Out of the 300 respondents 105 'strongly agreed' 91 'agreed', 40 were 'neutral', 11 'disagree' and 45 'strongly disagree'. This question in the survey has one of the most widely distributed spreads in the study, because of the strong sentiments displayed by the high number of respondents who 'strongly disagree' and 'disagree' which account for almost 20 percent of the response, see figure 30. In other words, those who disagree are of the opinion that airtime and data at a reasonably good price when using the service in their daily trade transactions when dealing with customers and suppliers. However, 67 percent tend to believe that these services are not offered at a reasonable and affordable price as charged by mobile network operators. Only 14 percent were neutral to this sentiment. With such a high majority agreeing that airtime and data

are not at a good price, it can be interpreted that this will negatively affect the uptake towards adoption of digital business applications.

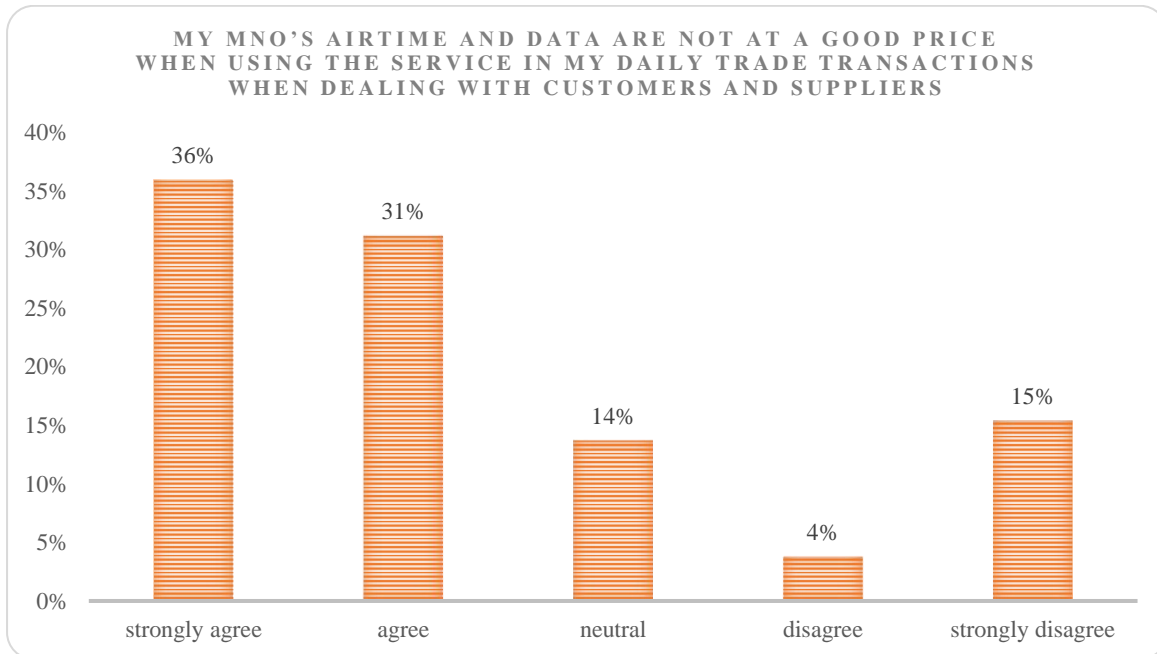


Figure 15: My MNO's airtime and data are not at a good price when using the service in my daily trade

PR1 Indicator Descriptive Statistics

The descriptive statistics results for PR1 as an indicator for the price risk construct, reveal an overall mean score of 2.283, with standard deviation of 1.387. This reflects a negative perception of price risk for digital business platform services as not being at a good price for the average informal sector trader when transacting with customers and suppliers in their business dealings. The PR1 indicator had the lowest mean out of the three price risk indicators, which means that the IST's felt very strongly about the pricing of DBP's.

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PR1</i>	2.283	2.000	1.000	5.000	1.387

Result analysis of Price Risk indicator PR2

My MNO's airtime and data are not reasonably priced when using the service in my daily trade transactions when dealing with customers and suppliers

This question was designed to assess how the informal sector trader analyses the cost versus the benefit of the airtime and data fees as prerequisites for the minimum usage of digital business platforms services that are charged by mobile network operators (MNO's). Out of the 300 respondents 90 'strongly agreed' 96 'agreed', that airtime and data are not reasonably priced, 57 were 'neutral', 14 'disagree' and 40 'strongly disagree'. Overall, a majority of 67 percent agree with this negative sentiment. For the 73 that did not have a smartphone, price risk might actually be a deterrent, 28 'strongly agree', 23 'agree' 15 were 'neutral' 6 in all disagree. These results may be interpreted to mean that informal sector traders, especially those that do not have a smartphone (at 70 percent) are very sensitive to the price of data and airtime as offered by mobile network operators. See figure 31 below for breakdown.

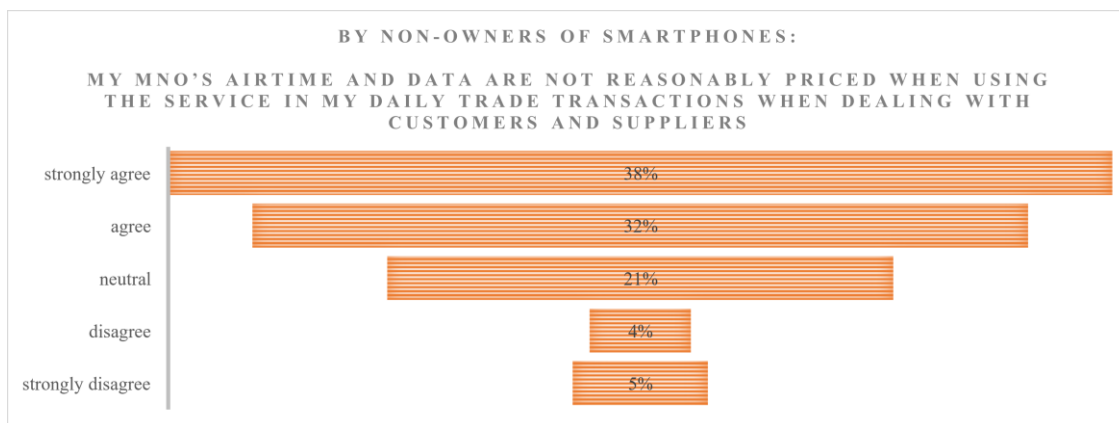


Figure 16: My MNO's airtime and data are not reasonably priced when using the service in my daily trade

PR2 Indicator Descriptive Statistics

The descriptive statistics results for PR2 as an indicator for the price risk construct, reveal an overall mean score of 2.373, with standard deviation of 1.322. This reflects a negative perception of price risk for digital business platform services as not being reasonably priced for the average informal sector trader when transacting with customers and suppliers in their business dealings. The PR2 indicator had the highest mean out of the three price risk indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PR2</i>	2.373	2.000	1.000	5.000	1.322

Result analysis of Price Risk indicator PR3

My MNO's airtime and data are not economical when using the service in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand the economic value derived from purchasing the airtime and data as offered by mobile network operators from the perspective of informal sector traders when using digital business platforms. Out of the 300 respondents 101 'strongly agreed' 91 'agreed', that airtime and data are not economical, 49 were 'neutral', 41 'disagree' and 14 'strongly disagree'. Overall, 63 percent agree with this negative view. These results may lead to the interpretation that informal sector traders do not perceive the price of airtime and data as being economically viable for their daily trading transactions.

PR3 Indicator Descriptive Statistics

The descriptive statistics results for PR3 as an indicator for the price risk construct, reveal an overall mean score of 2.330, with standard deviation of 1.359. This reflects a negative perception of price risk for digital business platform services because they are conceived to be as not economical for the average informal sector trader when transacting with customers and suppliers in their business dealings. The PR3 indicator had the second highest mean out of the three price risk indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PR3</i>	2.330	2.000	1.000	5.000	1.359

5.5.2.2 Results for Perceived Risk – Technical Barrier

Technical barriers refer to difficulties that may include service performance issues, operating system configurations, and installations of applications that the informal sector trader and consumers experience while using mobile. It has been widely observed that when consumers experience functional benefits, such as successfully solving an individual task through digital business platforms, they are more prone to perceive functional values from using the services(S. H. Kim, 2008; Y. K. Kim, 2002; Yoshida, 2017). By contrast, the experiences compared to the technological barriers of using digital platform services negatively affected perceived ease of using the paid mobile service applications while the barriers did not impact perceived usefulness of using the service(Thelwall et al., 2012). Table 21 below is a matrix of the questions on the survey regarding the negative experiences of Technical Barrier indicators when using DBPs

Negative Experiences of Technical Barrier When Using DBP's			
Survey Questions	TB1 • Difficult configuration of the DBP's had a negative impact on my usage when dealing with customers and suppliers	TB2 • Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers	TB3 • Poor performance of the application for the DBP's had a negative impact on my usage when dealing with customers and suppliers
strongly agree	110	104	108
agree	84	104	94
neutral	59	58	70
disagree	23	16	17
strongly disagree	21	10	9

Table 18: Negative Experiences of Technical Barrier When Using DBP's

Result analysis of Technical Barrier indicator TB1

Difficult configuration of the DBP's had a negative impact on my usage when dealing with customers and suppliers

This question seeks to understand the technical difficulties that informal sector traders experience in relation to how some digital business platforms are configured. Out of the 300 respondents 108 'strongly agreed' and 94 'agreed', that the difficult configuration of digital business platforms had a negative impact on usage, 70 were 'neutral', 17 'disagree' and 9 'strongly disagree'. The majority who agreed with this negative impact made-up 65 percent of the responses, these results may lead to the interpretation that informal sector traders become discouraged to continuously use DBP's that are difficult to navigate and thus prefer to go back to a manual way of conducting their affairs as they always have been doing.

TB1 Indicator Descriptive Statistics

The descriptive statistics results for TB1 as an indicator for the technical barrier construct, reveal an overall mean score of 2.183, with standard deviation of 1.215. This reflects a negative

perception of the technical barrier for usage of digital business platform services because they are conceived to be restrictive and not user-friendly enough to the average informal sector trader when transacting with customers and suppliers in their business dealings. The TB1 indicator had the highest mean out of the three technical barrier indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>TBI</i>	2.183	2.000	1.000	5.000	1.215

Result analysis of Technical Barrier indicator TB2

Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers

This question seeks to understand the difficulties that informal sector traders experience in finding and installing applications for digital business platforms for correct usage when dealing with customers and suppliers. Out of the 300 respondents 104 'strongly agreed' and 104 'agreed', that the difficulty in finding and installing applications of digital business platforms had a negative impact on usage, 59 were 'neutral', 23 'disagree' and 21 'strongly disagree'. The majority who agreed with the negative impact of this difficulty, made-up 72 percent of the responses (see figure 32). These results may lead to the interpretation that informal sector traders are not well-informed or efficiently marketed to, when it comes to finding and installing the applications that work with digital business platforms, and so they are not aware of the advantages of such applications towards their daily trading

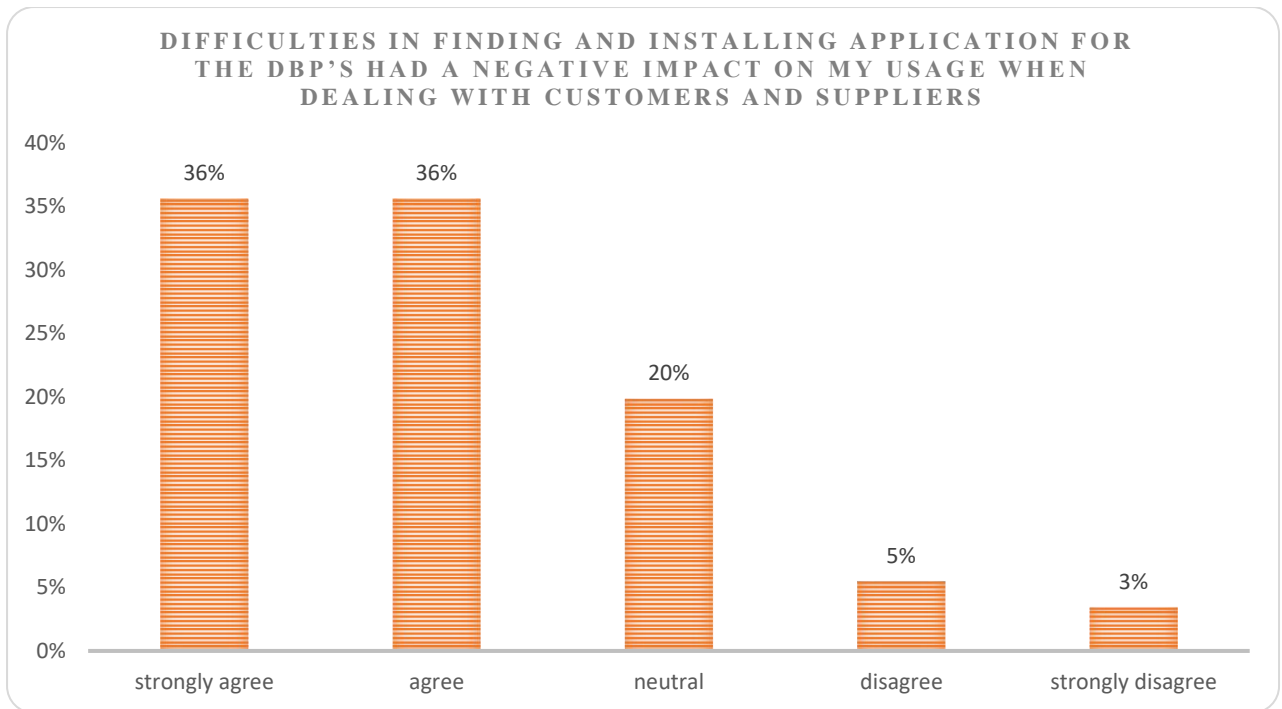


Figure 17: Difficulties in finding and installing application for the DBP's had a negative impact

TB2 Indicator Descriptive Statistics

The descriptive statistics results for TB2 as an indicator for the technical barrier construct, reveal an overall mean score of 2.027, with standard deviation of 1.039. This reflects a negative perception of the technical barrier for usage of digital business platform services because they are conceived to be difficult to find and install, for the average informal sector trader when transacting with customers and suppliers in their business dealings. The TB2 indicator had the lowest mean out of the three technical barrier indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>TB2</i>	2.027	2.000	1.000	5.000	1.039

Result analysis of Technical Barrier indicator TB3

Poor performance of the application for the DBP's had a negative impact on my usage when dealing with customers and suppliers

This question seeks to understand the difficulties with poor performance that informal sector traders may experience while using digital business platforms when dealing with their

customers and suppliers. Out of the 300 respondents 104 ‘strongly agreed’ and 104 ‘agreed’, that the difficulties due to poor performance of digital business platforms had a negative impact on usage, 59 were ‘neutral’, 23 ‘disagree’ and 21 ‘strongly disagree’. The majority who agreed with the negative impact of this poor performance difficulty, made-up 68 percent of the responses. These results may lead to the interpretation that informal sector traders may lose patience with digital business platforms, thus resulting in less and less usage eventually leading to less behavioural intention for adoption.

TB3 Indicator Descriptive Statistics

The descriptive statistics results for TB3 as an indicator for the technical barrier construct, reveal an overall mean score of 2.027, with standard deviation of 1.039. This reflects a negative perception of the technical barrier for usage of digital business platform services because they are conceived to be of poor performance quality, for the average informal sector trader when transacting with customers and suppliers in their business dealings. The TB3 indicator had the second highest mean out of the three technical barrier indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>TB3</i>	2.063	2.000	1.000	5.000	1.029

5.5.3 Descriptive Results of the Technology Acceptance Model

What are the major factors that lead to adoption and usage of any technology? There are many variables but two of the biggest factors that emerged from earlier studies were the perception that the technology does something useful and that it is easy to use (Davis, 1989). Perceived usefulness (PU) and perceived ease of use (PEoU) are utilised to determine the behavioural intention (BI) of usage of DBP’s in this study.

PEoU + PU → BI

5.5.3.1 Descriptive Results of Perceived ease of use towards adoption

The following hypotheses for this study are therefore developed:

Perceived ease of use (PEoU)

H6: The perceived ease of use (PEoU) of Digital business platforms would have a positive effect on their perceived usefulness (PU) to Informal sector traders in their daily trade interactions

The following set of questions in table 22 below, were intentionally made to be specific to financially oriented types of digital business platforms. The reason is that social media DBP's such as Facebook, Whatsapp and Instagram are so well entrenched into society, that even informal sector traders are familiar with their usage. Internet banking apps, mobile payment apps, e-commerce apps and budgeting apps are not so widespread among informal sector traders. It is therefore for this reason that the perceived ease of use of this particular kind of DBP's is of interest to the study. Table 22 below is a matrix of the questions on the survey regarding the perceived ease of use (PEoU) indicators when using DBPs

Perceived Ease of Use of Digital business platforms by IST's						
Survey Questions	PEoU1 • It is easy for me to become skilful at using Internet Banking and Mobile Payment DBP's	PEoU 2 • I find it easy to get the Internet Banking and Mobile Payment DBP's to do what I want it to when transacting with my customers and suppliers	PEoU 3 • My interaction with Internet Banking and Mobile Payment DBP's is clear and understandable	PEoU 3 • I found Internet Banking and Mobile Payment DBP's easy to use	PEoU 4 • Learning to use the smartphone for Internet Banking and Mobile Payment DBP's is easy for me	PEoU 5 • I find Internet Banking and Mobile Payment DBP's to be flexible to interact with
strongly agree	135	135	122	130	126	129
agree	94	95	96	101	93	105
neutral	47	42	51	35	57	48
disagree	8	14	12	17	20	12
strongly disagree	12	13	13	12	3	4

Table 19 Table 22: Perceived Ease of Use of Digital business platforms by IST's

Result analysis of Perceived Ease of Use indicator PEoU1

It is easy for me to become skilful at using Internet Banking, E-commerce, and Mobile Payment DBP's

This question was designed to be a self-assessment of the skilful km ability of informal sector traders to easily navigate the usage of internet banking, mobile payments and e-commerce type of digital business platforms services. Out of the 300 respondents 135 'strongly agreed' 93 'agreed', 47 were 'neutral', 8 'disagree' and 12 'strongly disagree'. Overall, a majority of 78 percent had a positive bias towards their own abilities to skilfully use the financially oriented

digital business platforms. Those without smartphones also had a strong belief in their abilities to easily navigate these DBP's, of the 73 respondents, 56 had agreed with the statement, while only 6 had negative sentiment towards their skill levels, eleven were neutral. The results seem to suggest that informal sector traders are willing to learn and use the internet banking, mobile payments, and e-commerce type of digital business platforms service, even amongst those without smartphones.

PEoUI Indicator Descriptive Statistics

The descriptive statistics results for PEOU1 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.133, with standard deviation of 1.034. This reflects a positive perception of the perceived ease of use with regards to being skilful at using Internet Banking, E-commerce, and Mobile Payment types of digital business platform services by the average informal sector trader, when transacting with customers and suppliers in their business dealings. The PEOU1 indicator had the second highest mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoUI</i>	4.133	4.000	1.000	5.000	1.034

Result analysis of Perceived Ease of Use indicator PEOU2

I find it easy to get the Internet Banking, E-commerce, and Mobile Payment DBP's to do what I want it to when transacting with my customers and suppliers

This question was designed to assess whether informal sector traders, get the desired effect, when using internet banking, mobile payments and e-commerce types of digital business platforms services. Out of the 300 respondents 135 'strongly agreed' 95 'agreed', 42 were 'neutral', 13 'disagree' and 14 'strongly disagree'. See figure 33. Overall, a majority of 77 percent had a positive experience in getting the financially oriented digital business platforms to perform according to their expectations. The results seem to suggest that informal sector traders are mostly satisfied with the performance expectancy of the internet banking, mobile payments, and e-commerce type of digital business platforms service, that they may use in their daily trade transactions.

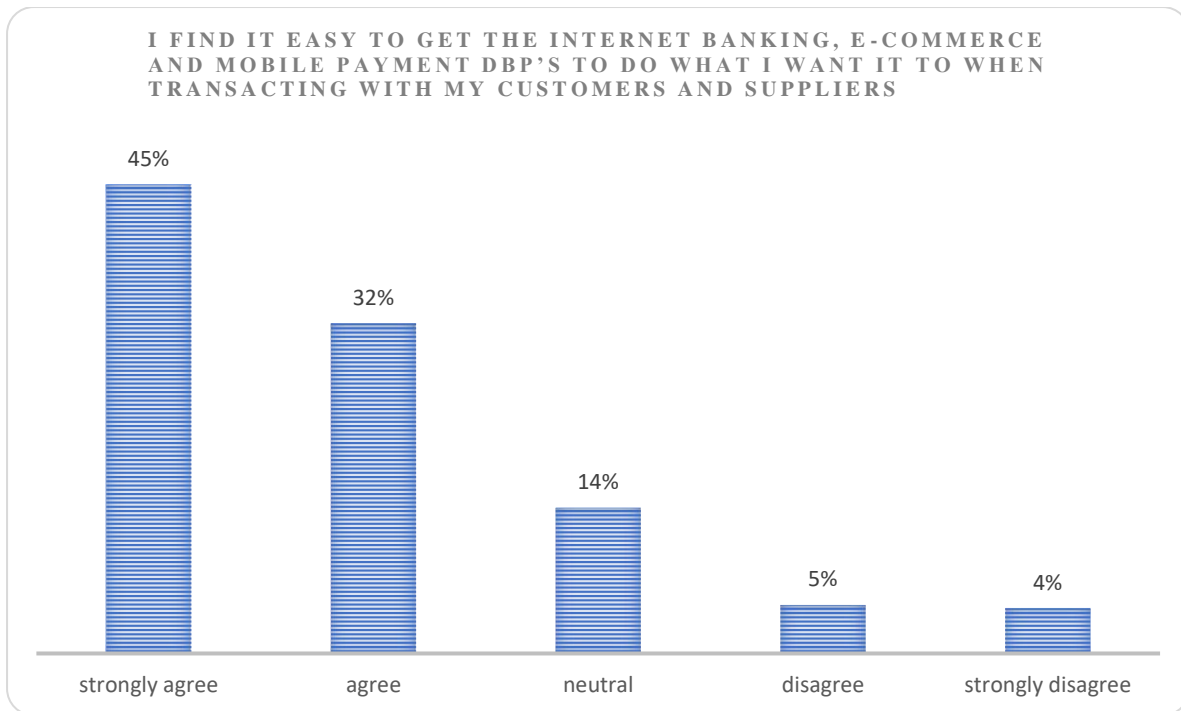


Figure 18: I find it easy to get the Internet Banking, E-commerce and Mobile Payment DBP's to do what I want

PEoU2 Indicator Descriptive Statistics

The descriptive statistics results for PEOU1 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.090, with standard deviation of 1.078. This reflects a positive perception of the perceived ease of use with regards to how informal sector trader find it easy to get Internet Banking, E-commerce, and Mobile Payment types of digital business platform services to do what they want it to do, when transacting with customers and suppliers in their business dealings. The PEOU2 indicator had the fourth highest mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoU2</i>	4.090	4.000	1.000	5.000	1.078

Result analysis of Perceived Ease of Use indicator PEOU3

My interaction with Internet Banking, E-commerce, and Mobile Payment DBP's is clear and understandable

This question was designed to assess how clear and understandable were internet banking, e-commerce and mobile payment digital business platforms were to informal sector traders. Out of the 300 respondents 122 'strongly agreed' 96 'agreed', 57 were 'neutral', 20 'disagree' and

3 ‘strongly disagree’. Overall, a majority of 74 percent had positively understood the purpose of these financially oriented digital business platforms and the services they offered. The results seem to suggest that informal sector traders are mostly clear on the intended purpose of the of the internet banking, mobile payments and e-commerce type of digital business platforms and their services, in their daily trade transactions.

PEoU3 Indicator Descriptive Statistics

The descriptive statistics results for PEOU3 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.043, with standard deviation of 1.068. This reflects a positive perception of the perceived ease of use with regards to the clarity and the understanding of how to use Internet Banking, E-commerce, and Mobile Payment types of digital business platform services by the average informal sector trader, when transacting with customers and suppliers in their business dealings. The PEOU3 indicator had the lowest mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoU3</i>	4.043	4.000	1.000	5.000	1.068

Result analysis of Perceived Ease of Use indicator PEOU4

I found Internet Banking, E-commerce and Mobile Payment DBP’s easy to use

This question was designed to assess how ‘easy to use’ were internet banking, e-commerce and mobile payment digital business platforms to informal sector traders. Out of the 300 respondents 130 ‘strongly agreed’ 101 ‘agreed’, 35 were ‘neutral’, 17 ‘disagree’ and 12 ‘strongly disagree’. Overall, a majority of 79 percent had positively found these financially-oriented digital business platforms and the services to be easy to use, only 10 percent disagreed with this sentiment. The results seem to suggest that informal sector traders are comfortable with the technical ease of use of the internet banking, mobile payments and e-commerce type of digital business platforms and their services, in their daily trade transactions.

PEoU4 Indicator Descriptive Statistics

The descriptive statistics results for PEOU3 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.100, with standard deviation of 1.069. This reflects a positive perception of the perceived ease of use of Internet Banking, E-commerce,

and Mobile Payment types of digital business platform services by the average informal sector trader, when transacting with customers and suppliers in their business dealings. The PEOU4 indicator had the third mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoU4</i>	4.100	4.000	1.000	5.000	1.069

Result analysis of Perceived Ease of Use indicator PEOU5

Learning to use the smartphone for Internet Banking, E-commerce and Mobile Payment DBP's is easy for me

This question was designed to assess the perception of the learning curve for understanding internet banking, e-commerce and mobile payment digital business platforms for informal sector traders. Out of the 300 respondents 126 'strongly agreed' 93 'agreed', 57 were 'neutral', 20 'disagree' and 3 'strongly disagree'. Overall, a majority of 73 percent had positively found these financially oriented digital business platforms and their services to be easy to learn, only 8 percent disagreed with this sentiment (see figure 34). The results seem to suggest that informal sector traders are comfortable with learning to use internet banking, mobile payments and e-commerce type of digital business platforms and their services, in their daily trade transactions.

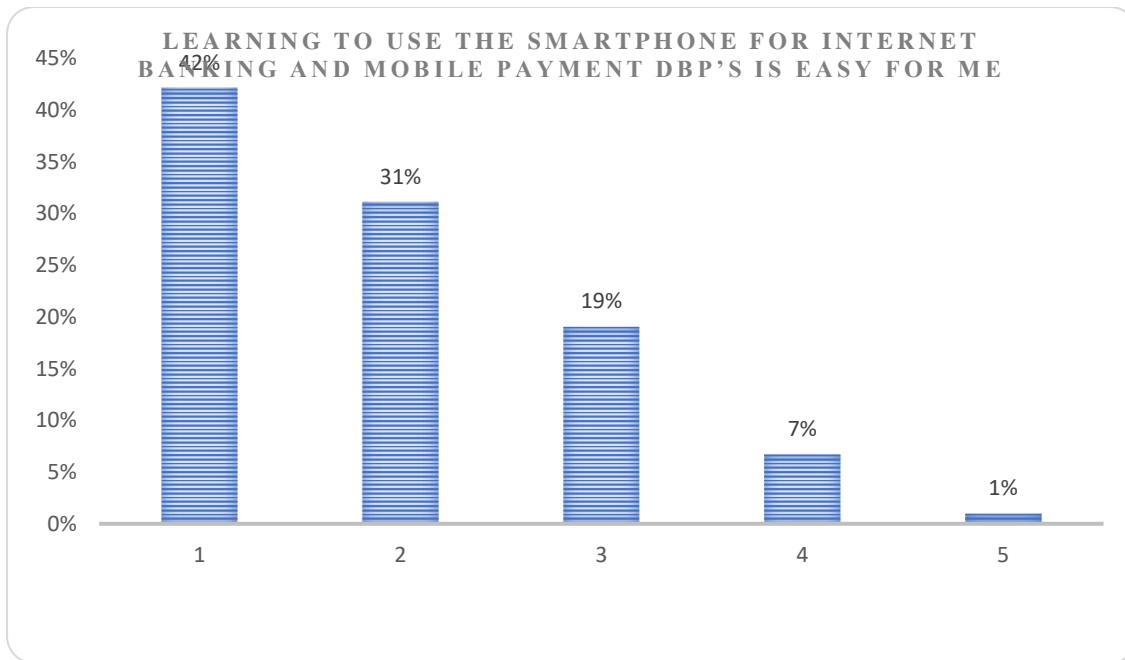


Figure 19: Learning to use the smartphone for Internet Banking, E-commerce and Mobile Payments is easy for me

PEoU5 Indicator Descriptive Statistics

The descriptive statistics results for PEOU5 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.070, with standard deviation of 0.982. This reflects a positive perception of the perceived ease of use with regards to the ability to learn to use Internet Banking, E-commerce and Mobile Payment types of digital business platform services by the average informal sector trader, when transacting with customers and suppliers in their business dealings. The PEOU5 indicator had the lowest mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoU5</i>	4.070	4.000	1.000	5.000	0.982

Result analysis of Perceived Ease of Use indicator PEOU6

I find Internet Banking, E-commerce, and Mobile Payment DBP's to be flexible to interact with

This question was designed to assess the level of flexibility of internet banking, e-commerce and mobile payment digital business platforms for informal sector traders, when used in their daily transactions. Out of the 300 respondents 126 ‘strongly agreed’ 93 ‘agreed’, 57 were ‘neutral’, 20 ‘disagree’ and 3 ‘strongly disagree’. Overall, a majority of 73 percent had positively found these financially oriented digital business platforms and their services to be easy to learn, only 8 percent disagreed with this sentiment. The results seem to suggest that informal sector traders are comfortable with the flexibility of internet banking, mobile payments and e-commerce type of digital business platforms and their services, in their daily trade transactions.

PEoU6 Indicator Descriptive Statistics

The descriptive statistics results for PEOU6 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.157, with standard deviation of 0.923. This reflects a positive perception of the perceived ease of use with regards to the flexibility of Internet Banking, E-commerce and Mobile Payment types of digital business platform services by the average informal sector trader, when transacting with customers and suppliers in their business dealings. The PEOU6 indicator had the lowest mean out of the six perceived ease of use indicators

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PEoU6</i>	4.157	4.000	1.000	5.000	0.923

Results for Perceived usefulness (PU) on Behavioural Intention (BI))

H7: The perceived usefulness (PU) of Digital business platforms would have positive effects on the behavioural intention towards continual use by Informal sector traders in their daily trade interactions. Table 23 below is a matrix of the questions on the survey regarding the perceived usefulness (PU) indicators when using DBPs

Perceived Usefulness of Digital business platforms by IST's						
Survey Questions	PU1 • Using Internet Banking and Mobile Payment DBP's would enhance my effectiveness when transacting with my customers and suppliers	PU2 • Using Internet Banking and Mobile Payment DBP's would increase my productivity when transacting with my customers and suppliers	PU3 • Using Internet Banking and Mobile Payment DBP's would make it easier to do my tasks when transacting with my customers and suppliers	PU4 • Using Internet Banking and Mobile Payment DBP's would improve my performance when transacting with my customers and suppliers	PU5 • I would find the Internet Banking and Mobile Payment DBP's useful when transacting with my customers and suppliers	PU6 • Using Internet Banking and Mobile Payment DBP's would enable me to accomplish tasks quickly when transacting with my customers and suppliers
strongly agree	148	131	143	148	137	152
agree	95	110	101	96	111	97
neutral	43	44	40	38	46	31
disagree	10	5	6	11	5	8
strongly disagree	0	4	6	3	1	4

Table 10: Perceived Usefulness of Digital business platforms by IST's

Result analysis of Perceived Usefulness indicator PU1

Using Internet Banking, E-commerce and Mobile Payment DBP's would enhance my effectiveness when transacting with my customers and suppliers

This question was designed to assess the perception of the level of efficacy of internet banking, e-commerce and mobile payment digital business platforms for informal sector traders, applied in their daily transactions, with their customers and suppliers. Out of the 300 respondents 148 'strongly agreed' 95 'agreed', 43 were 'neutral', 10 'disagree' and 0 'strongly disagree'. Overall, a majority of 82 percent had positively found these financially oriented digital business platforms and their services to be very effective, only 3 percent disagreed with this sentiment. The results seem to suggest that informal sector traders find using this technology of internet

banking, mobile payments and e-commerce type of digital business platforms and their services to be very effective in their daily trade transactions.

PU1 Indicator Descriptive Statistics

The descriptive statistics results for PU1 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.133, with standard deviation of 1.034. This reflects a positive perception of the perceived usefulness with regards to enhancing the effectiveness of the average informal sector trader when using Internet Banking, E-commerce and Mobile Payment types of digital business platform services during business transactions with customers and suppliers in their daily dealings. The PU1 indicator had the fourth highest mean out of the six perceived ease of use indicators

<i>O</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PU1</i>	4.133	4.000	1.000	5.000	1.034

Result analysis of Perceived Usefulness indicator PU2

Using Internet Banking, E-commerce, and Mobile Payment DBP’s would increase my productivity when transacting with my customers and suppliers

This question was designed to assess whether informal sector traders experienced any increase in productivity when using internet banking, e-commerce, and mobile payment digital business in their daily transactions, with their customers and suppliers. Out of the 300 respondents 131 ‘strongly agreed’ 110 ‘agreed’, 44 were ‘neutral’, 5 ‘disagree’ and 4 ‘strongly disagree’. Overall, a majority of 82 percent had positively found these financially oriented digital business platforms and their services to be effective in increasing their productivity, only 3 percent disagreed with this sentiment. The results seem to suggest that informal sector traders can be aided in their productivity by using this technology of internet banking, mobile payments and e-commerce type of digital business platforms in their daily trade transactions.

PU2 Indicator Descriptive Statistics

The descriptive statistics results for PU2 as an indicator for the perceived ease of use construct, reveals an overall mean score of 4.133, with standard deviation of 1.034. This reflects a positive perception of the perceived usefulness with regards to enhancing the effectiveness of the average informal sector trader when using Internet Banking, E-commerce, and Mobile Payment

types of digital business platform services during business transactions with customers and suppliers in their daily dealings. The PU2 indicator had the fourth highest mean out of the six perceived ease of use indicators

<i>O</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Standard Deviation</i>
<i>PU1</i>	4.133	4.000	1.000	5.000	1.034

Result analysis of Perceived Usefulness indicator PU3

Using Internet Banking, E-commerce and Mobile Payment DBP's would make it easier to do my tasks when transacting with my customers and suppliers

This question was designed to assess the perception of the level of ease during task performance when applying the use of internet banking, e-commerce and mobile payment digital business platforms for informal sector traders in their daily transactions, with their customers and suppliers. Out of the 300 respondents 143 'strongly agreed' 101 'agreed', 44 were 'neutral', 5 'disagree' and 4 'strongly disagree'. Overall, a majority of 82 percent had positively found these financially oriented digital business platforms and their services to be effective in easing task performance, only 2 percent disagreed with this sentiment. The results seem to suggest that informal sector traders find using this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services to be additive in the ease of performance of tasks in their daily trade transactions.

Result analysis of Perceived Usefulness indicator PU4

Using Internet Banking, E-commerce and Mobile Payment DBP's would improve my performance when transacting with my customers and suppliers

This question was designed to assess the perception of the level of efficacy of internet banking, e-commerce and mobile payment digital business platforms for informal sector traders, applied in their daily transactions, with their customers and suppliers. Out of the 300 respondents 148 'strongly agreed' 95 'agreed', 43 were 'neutral', 10 'disagree' and 0 'strongly disagree'. Overall, a majority of 82 percent had positively found these financially oriented digital business platforms and their services to be very effective, only 3 percent disagreed with this sentiment.

The results seem to suggest that informal sector traders find using this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services to be effective in improving their performance in their daily trade transactions.

Result analysis of Perceived Usefulness indicator PU5

I would find the Internet Banking, E-commerce and Mobile Payment DBP's useful when transacting with my customers and suppliers

This question was designed to assess the perception of usefulness that informal sector traders have at the moment when they are performing a transaction with a customer or supplier while using internet banking, e-commerce and mobile payment digital business platforms. Out of the 300 respondents 137 'strongly agreed' 111 'agreed', 46 were 'neutral', 5 'disagree' and 1 'strongly disagree'. Overall, a majority of 83 percent had positively found these financially-oriented digital business platforms and their services to be useful, only 3 percent disagreed with this sentiment. The results seem to suggest that informal sector traders find using this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services to be useful in their daily trade transactions.

Result analysis of Perceived Usefulness indicator PU6

Using Internet Banking, E-commerce, and Mobile Payment DBP's would enable me to accomplish tasks quickly when transacting with my customers and suppliers

This question was designed to assess the time taken to accomplish transactional tasks when using banking, e-commerce and mobile payment digital business platforms for informal sector traders with their customers and suppliers. Out of the 300 respondents 152 'strongly agreed' 97 'agreed', 31 were 'neutral', 8 'disagree' and 4 'strongly disagree'. Overall, a majority of 85 percent had positively found these financially oriented digital business platforms and their services to be effective at accomplishing tasks quickly when transacting with their customers and suppliers, only 3 percent disagreed with this sentiment. The results seem to suggest that informal sector traders find using this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services to be effective at quickly accomplishing tasks in their daily trade transactions.

Results Perceived ease of use (PEoU) and Perceived Usefulness on Behavioural Intention (BI)

H8: The perceived ease of use (PEoU) of Digital business platforms would have positive effects on the behavioural intention towards their use by Informal sector traders in their daily trade interactions

Table 24 below is a matrix of the questions on the survey regarding the behavioural intention to use DBPs.

Behavioural Intention to Use Digital business platforms by IST's			
Survey Questions	• I will continuously use Internet Banking and Mobile Payment DBP's in the future when transacting with my customers and suppliers	• I have a plan to use Internet Banking and Mobile Payment DBP's in the future when transacting with my customers and suppliers	• I expect my use of Internet Banking and Mobile Payment DBP's to continue when transacting with my customers
strongly agree	187	183	198
agree	69	74	73
neutral	30	29	19
disagree	8	8	4
strongly disagree	0	4	3

Table 24: Behavioural Intention to Use Digital business platforms by IST's

Result analysis of Behavioural Intention indicator BI1

I will continuously use Internet Banking, E-commerce and Mobile Payment DBP's in the future when transacting with my customers and suppliers

This question was designed to assess the willingness to continuously use banking, e-commerce and mobile payment digital business platforms by informal sector traders when transacting with their customers and suppliers, in the future. Out of the 300 respondents 187 ‘strongly agreed’ 69 ‘agreed’, 30 were ‘neutral’, 8 ‘disagree’ and 0 ‘strongly disagree’. Overall, a majority of 85 percent had a positively perception and were willing to continuously use these financially

oriented digital business platforms and services they provide when transacting with their customers and suppliers (see figure 35). Only 3 percent disagreed with this sentiment, while 14 percent were neutral. The results seem to suggest that informal sector traders will continuously use this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services in the future.

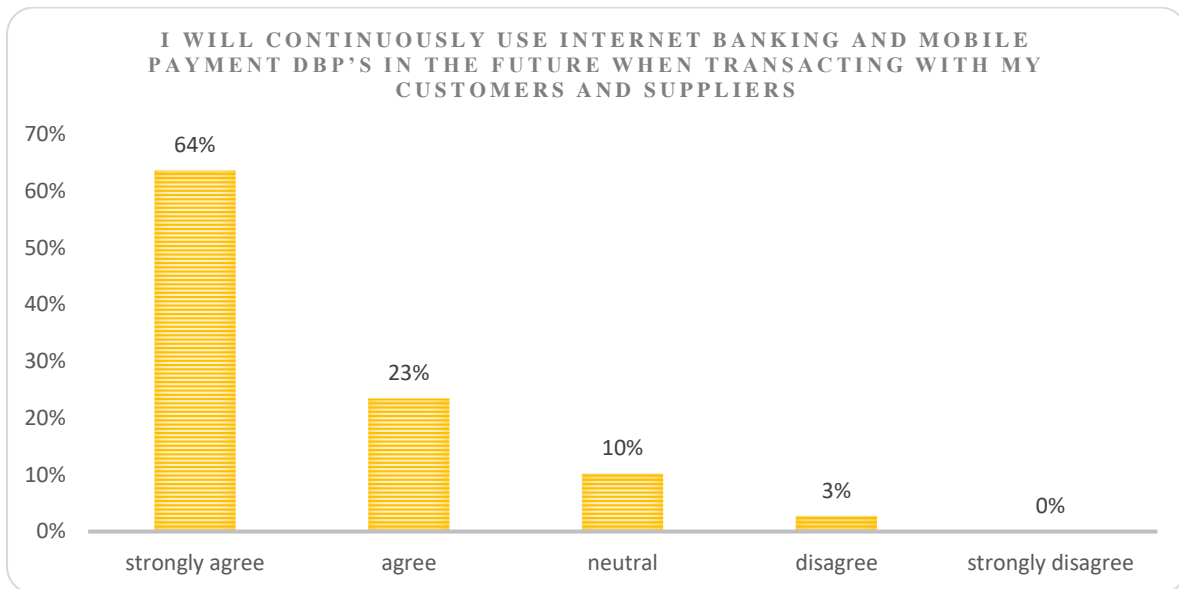


Figure 20: I will continuously use Internet Banking, E-commerce and Mobile Payment DBP's

Result analysis of Behavioural Intention indicator BI2

I have a plan to use Internet Banking, E-commerce and Mobile Payment DBP's in the future when transacting with my customers and suppliers

This question was designed to ascertain whether informal sector traders had any plans start using digital business platforms as tool to assist in their daily business affairs when transacting with their customers and suppliers, in the future. Out of the 300 respondents 183 'strongly agreed' 74 'agreed', 29 were 'neutral', 8 'disagree' and 4 'strongly disagree'. Overall, a majority of 76 percent had a positive perception towards planning to use these financially oriented digital business platforms and services they provide when transacting with their customers and suppliers. Only 4 percent disagreed with this sentiment, while 10 percent were neutral. The results seem to suggest that some informal sector traders are planning to use the technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services in the future. Out of the 73 respondents who were non-owners of smartphones, 50 'strongly agreed' 15 'agreed', 5 were 'neutral', 1 'disagree' and 2 'strongly disagree' see. Therefore, amongst those who did not have a smartphone 75 percent had a

positive perception towards planning to use these financially oriented digital business platforms and services they provide when transacting with their customers and suppliers. Only 4 percent disagreed with this sentiment, while 10 percent were neutral. The results seem to suggest that some of the informal sector traders who do not possess a smartphone are planning to use the technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services in the future.

Result analysis of Behavioural Intention indicator BI3

I expect my use of Internet Banking, E-commerce, and Mobile Payment DBP's to continue when transacting with my customers

This question was designed to assess the expectancy to continuously use banking, e-commerce and mobile payment digital business platforms by informal sector traders when transacting with their customers and suppliers, in the future. Out of the 300 respondents 198 'strongly agreed' 73 'agreed', 30 were 19'neutral', 4 'disagree' and 3 'strongly disagree'. Overall, a majority of 82 percent had a positively perception and were expecting to continuously use these financially oriented digital business platforms and services they provide when transacting with their customers and suppliers. Only 2 percent disagreed with this sentiment, while 6 percent were neutral. The results seem to suggest that informal sector traders expect to continuously use this technology of internet banking, mobile payments, and e- commerce type of digital business platforms and their services in the future.

5.2.3 Conclusion on Descriptive Statistical Analysis

The entire previous sub-section dealt with the study's descriptive statistical analysis and included discussion on demographic data, the areas where the research was conducted as well as graphic and tabular data based on responses from the survey questionnaire. The following sections delve deeper into the measurement and structural models applied in the research, and the results they yielded.

CHAPTER 6: SUMMARY, CONCLUSIONS AND MANAGEMENT IMPLICATIONS

This research project is a quantitative enquiry focused specifically on the value consumption of digital business platforms (DBP's) and their adoption in relation to how informal sector traders (IST's) are using them to buy, sell and market their product and services in their daily trade functions. This study has adopted the approach of classifying the social media platforms, internet banking platforms and mobile payments platforms, as a single functional collective and defined under the banner of Digital Business Platforms. The advantage to this approach, is that it provides a multi-dimensional view of the perceived value-axis based on positive and negative experiences of using a variety of digital platforms including messaging, payments and banking applications on their mobile phones in their daily trading functions.

This chapter of the study is a discussion on the interpretation of the results on the factors that influence the value of adoption of digital business platforms by informal sector traders, when performing their daily business transactions. The scope of this study was limited to be within the context of 3 typical South African township, in this *case* Diepsloot, Riverside and Cosmo City. This chapter is divided into four sections including the introduction. This study aims to examine the perceived value (PV) in the form of *of; social* value (SV), emotional value (EV) and functional value (FV). These will be collectively viewed as positive experiences. On the opposite end, this study also examines the negative experiences of perceived risk in the form of price risk (PR) and technical barriers (TB) for the same group of informal sector traders. Understanding the relational impacts of these positive and negative experiences of value consumption, may lead to an understanding of their influence in the perceived usefulness (PU) and the perceived ease of use (PEoU) of DBP's. The results of these relationships will shed some light towards the behavioural intention (BI) to adopt DBP's and their actual usage in the long term.

6.1.1 Revisiting the research aims and questions:

The main research question was stated as follows:

What are the perceptions of value consumption as experienced by Informal sector traders (IST's) when considering the adoption of Digital business platforms (DBP), as mediums of trade to buy, market, and sell their products and services?

The sub-research questions for this study include:

RQ1: What role does the positive experience of Perceived Value (social, emotional and functional values) and negative experiences of Perceived Risk (price risk and technical barrier) play in the informal traders' decision to use a Digital Business Platform (DBP)

RQ2: What is the Perceived Usefulness (PU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

RQ3: What is the Perceived Ease-of-Use (PEoU) of Digital business platforms (DBP's) to informal traders in their daily trade interactions with customers and suppliers?

6.2 Summary of Findings: Differences and Similarities in Results from Previous Studies

The analyses yielded the following results: for positive experiences, emotional value had the least impact on both perceived ease of use and usefulness and functional value was higher than social value. This mean that IST's place more value on the utility of DBP's, than the emotional and social values. Regarding the negative experiences, price risk had the most significant impact on the willingness to adopt DBP's by ISTs. See figure 36 for a summary of the structural model results for each hypothesis.

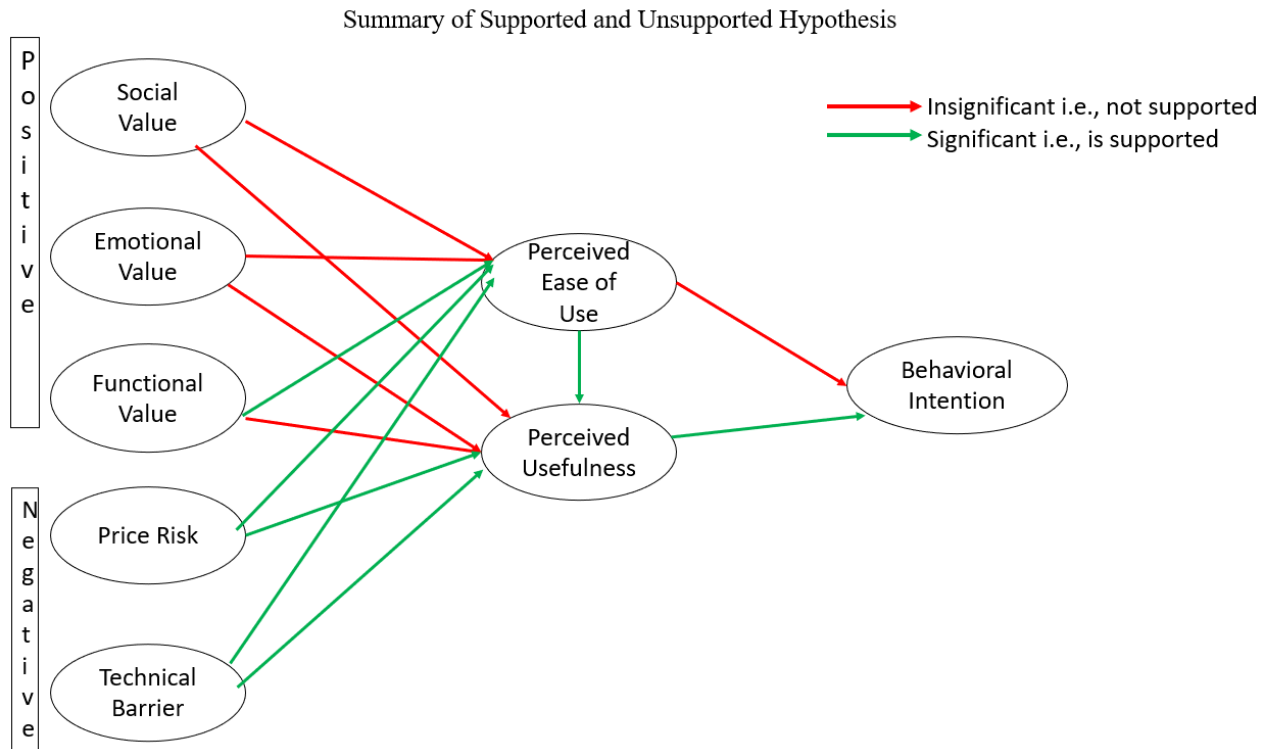


Figure 21: Hypothesis Results for Positive and negative experiences of Value Consumption on TAM

The main difference in the results from previous studies, is based on the formulation of the hypothesis for the latent variables constructed for this enquiry. This study took the approach of investigating the positive and negative experiences of value consumption (VC) in the form of social value, emotional value, functional value, price risk and technical barrier, as antecedent to perceived ease of use and perceived usefulness of DBP's. In contrast, most of the previous studies on value consumption in the digital business platforms space (H. W. Kim et al., 2011b; Luna-Cortés, 2017; Situmorang et al., n.d.), were purely applying the 5 constructs of value determination without examining their impact on the TAM constructs of PEOU and PU as determinants of behavioural intention to adopt.

6.3 The Role of Social Value on the Perceived Usefulness and Usage of DBP's

In this study, the hypothesis and results were stated as follows:

Hypothesis for social value (SV) as an antecedent to perceived ease of use (PEOU)

H1a: social value (SV) when using Digital business platforms has a positive effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions. The results reveal that SV has an insignificant impact on PEoU ($\beta = 0.115$, $t=1.716$, $p=0.085$). H1a ***is not*** supported

Hypothesis for social value (SV) as an antecedent to perceived usefulness (PU)

H1b: social value (SV) when using Digital business platforms has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions. The results reveal that SV has an insignificant impact on PU ($\beta = 0,041$, $t=0.561$, $p=0.575$). H1b *is not* supported.

6.3.1 Comparing the Social Value Hypothesis Results from Previous Studies

In support of the current study's results, Kim et al, (2011) conducted a study to investigate the intention to purchase digital products within social network communities and they applied the value consumption framework (Sheth et al., 1991). Their hypothesis for social value (SV) was based on the positive effects of social-image expression and social relationship support. They found similar results to this study in that the relationship between social relationship support and purchase intention was not significant. A similar insignificant result came from another quantitative study, titled 'User acceptance of hedonic digital artifacts: A theory of consumption values perspective'(Turel et al., 2010) which also applied the PLS-SEM as this current study. They had identified a number of value drivers including social value on digital artifacts and measured them within the context of mobile phone ringtones and applying the theory of consumption values. Hypothesis testing was performed using PLS-SEM on data collected from 422 ringtone users. Previous studies have applied the UTAUT's value-based constructs specifying the three value motivations namely, utilitarian, hedonic, and social value as having a stimulating effect on consumers' positive experiences (Min et al., 2008; Rahman et al., 2017; Zhou et al., 2010). A 2017 quantitative study on the influence of symbolic consumption value while using social networks(Luna-Cortés, 2017) found that higher social network usage can be directly and positively attributed to its perceived social value satisfaction.

The results from the descriptive statistics on social value for this study tell a different story from the hypothesis results. In contrast to the hypothesised outcome for the current study, the result for a study titled "Social value creation through digital activism in an online health community'(Chamakiotis et al., 2021) were deemed to be qualitatively significant. This is a research project in which a digital platform known as MedicineAfrica was the topic of study for creating social value by delivering medical education in under-resourced regions. Chamakiotis et al., (2021) stated the following results "Due to the reciprocal nature of social value, we found that it was not only the tutees and their local communities that benefitted from social value, but also the individual tutors involved as well as the wider medical field"

(Chamakiotis et al., 2021, p 15).The study came to the conclusion that it is through a unique form of digital health social activism that social value is created in this perspective.

With regards to the current study, one of the questions on the questionnaire, was stated in such a way as to uncover the kind of sentiment that IST’s may have with regard to the social value derived from using DBP’s in their daily trade and the question was posed as follows:

DBP’s made it easier to develop social relationship with my customers and suppliers.

This question dealt directly with the aspect of social attachments that may develop because of using digital business platforms such as Facebook, Whatsapp, Twitter and Instagram. 86 females and 73 males just ‘agree’, while 47 for both genders ‘strongly agree’. See figure 37. The age analysis on this question reveals that the youngest age bracket of 18-24 has no disagreement at all with this statement, while those in the upper brackets may have some reservation with 4 disagreeing and 35 neutral responses. When observing smartphone ownership, it becomes apparent that the 3 respondents who did not own a smartphone, did not see the value of social media in their daily trading, while only one owner was of the same view as them.

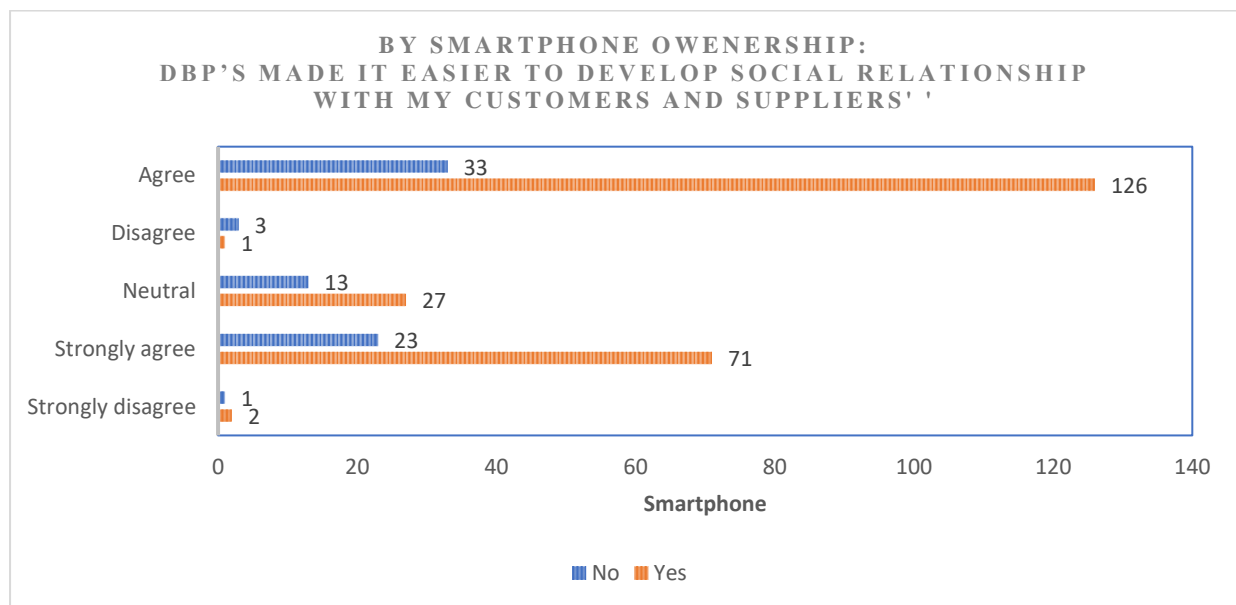


Figure 22: Social value of DBP’s by smartphone ownership

Another revealing question was stated as follows:

DBP’s helped me to build relationships more quickly with my customers and suppliers

This question gives a rare perspective of how informal sector traders tend to view ‘customer relationship management’. From the figure 38, one can see that the ‘strongly agree’ and ‘agree’ appear most often. This is a strong indicator that the informal sector traders value these relationships and the ability to build them more quickly is an advantage for them. Only 4 out of the 73 respondents without smartphones disagreed with the relationship-forming capabilities of digital business platforms, while only 6 of the 123 smartphone owners disagreed. Those who responded as ‘strongly agree’ were 140 and those responded with ‘agree’ were 109, out of this agreeable group, 56 did not own a smartphone and 196 owned one.

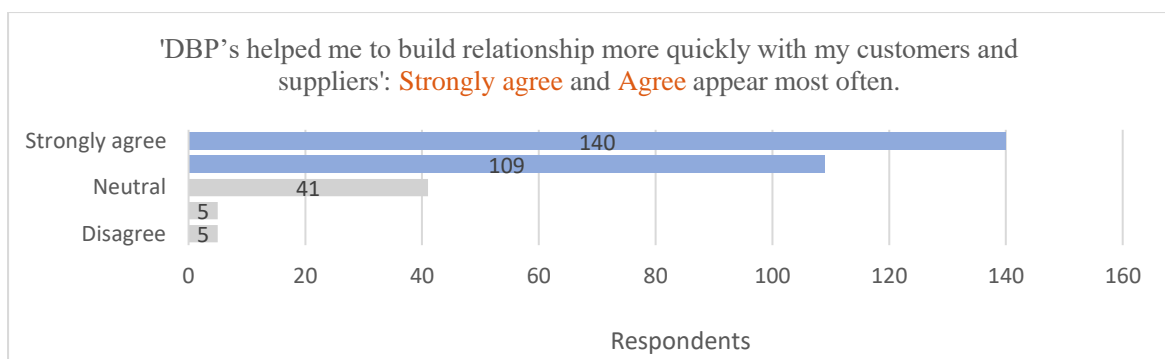


Figure 23: DBP's enhance customer relationship management for IST's

6.4 The Role of Emotional Value on the Perceived Usefulness and Usage of DBP's

In this current study, the hypothesis and results were stated as follows:

Hypothesis for emotional value (EV) as an antecedent to perceived ease of use (PEOU) and perceived usefulness (PU). H2a: emotional value (EV) when using Digital business platform has a positive effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions. The results reveal that EV has an insignificant impact on PEoU ($\beta = 0,029$, $t=0.373$, $p=0.709$). H2a ***is not*** supported

H2b: emotional value (EV) when using Digital business platforms has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions. The results reveal that EV has an insignificant impact on PU ($\beta = 0,073$, $t=0.925$, $p=0.355$). H2b ***is not*** supported.

6.4.1 Comparing the Emotional Value Hypothesis Results from Previous Studies

In contrast to the current study's findings, Kim et al,(2011) did a study to investigate the intention to purchase digital products within social network communities and they applied the value consumption framework (Sheth et al., 1991). Their hypothesis for emotional value (EV) was based on the positive effects of aesthetic qualities and playfulness of the digital items being tested. Their results for emotional value were significant. A similar significant result came from another quantitative study, titled 'User acceptance of hedonic digital artifacts: A theory of consumption values perspective'(Turel et al., 2010) which also applied the PLS-SEM as this current study. They had identified a number of value drivers including emotional value on digital artifacts and measured them within the context of mobile phone ringtones and applying the theory of consumption values.

A recent study titled 'Measuring Emotional Value in the Digital Brand' (Situmorang et al., n.d.) the authors measured 28 brands consisting of brand categories like e-commerce, laptops, camera, smartphones notebooks, online travel apps, e-haling applications. They then performed a net emotional value (NEV) measurement consisting of value driver and value destroyer. Their results confirmed a **significance** towards the observation that "customers who have a high NEV will spend money to order products/services in the abbreviated term, recommend the brand to their friends and will defend the brand." (Situmorang et al., n.d.).

With regards to the current study, one of the questions on the questionnaire, was stated in such a way as to uncover the kind of emotional sentiment that IST's may have with regard to the emotional value derived from using DBP's in their daily trade and the question was posed as follows:

DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers

This question seeks to understand if there is a general good feeling on the part of the informal sector traders whenever they are interacting with their customer and suppliers using digital business platforms. The majority of responses were positive towards this statement with an overwhelming 81 percent: 35 percent 'strongly agree' and 46 percent 'agree' see figure 39 below. This means that most respondents find themselves to be in an enhanced mood when using digital business platforms. With regards to the age analysis of this question it appears that the age group of 35-44 are most comfortable and relaxed when using digital business platforms in their daily trade. This could also be because they are more heavily represented in

the study. The sample also showed that more females felt relaxed than males. Out of the 73 respondents who had no smartphone, 31 responded with an ‘agree’ and 28 responded with a ‘strongly agree’, 10 were ‘neutral’ and those who disagreed were 4 in total.

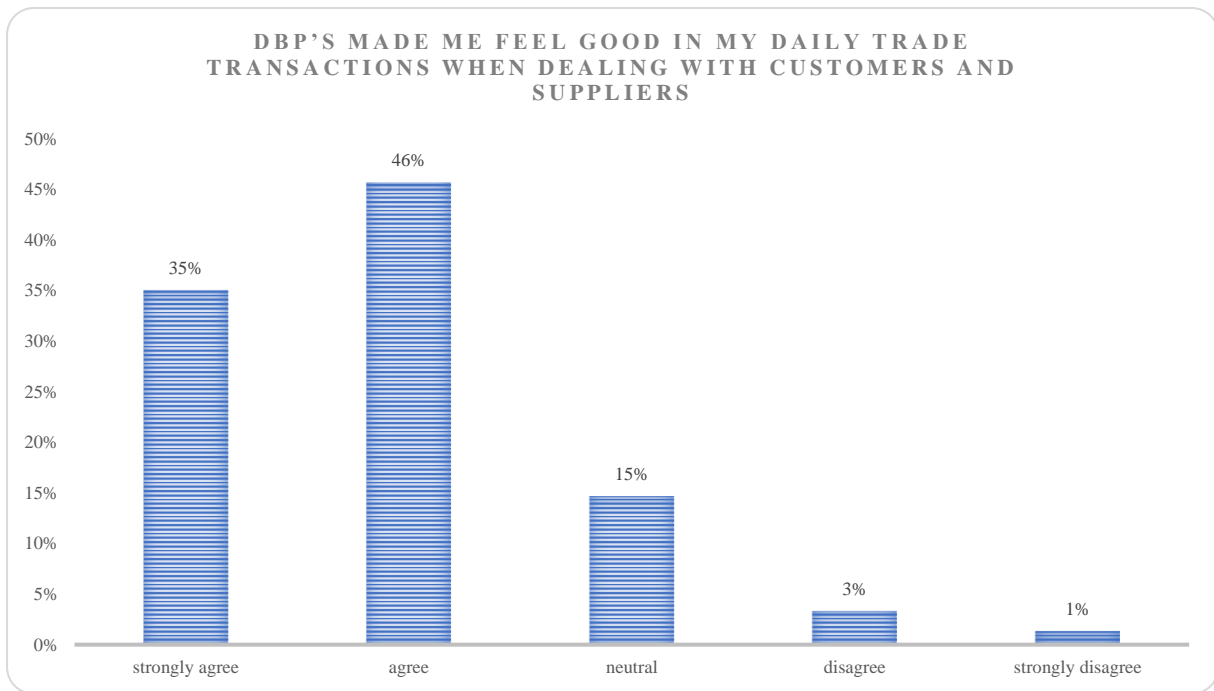


Figure 24: DBP’s made me feel good in my daily trade

6.5 The Role of Functional Value on the Perceived Usefulness and Usage of DBP’s

It is important to note that the Price Risk (PR) and Technical Barrier (TB) were phrased with some negative connotation, i.e. the questions in the questionnaire for example were put forward in the following way; My MNO’s airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers. This was deliberately done gauge the price sensitivity. This was also taken into consideration when coding the questionnaire by reversing the scales in the opposite direction for these two constructs. This means that for these two constructs ‘strongly agree = 1’ instead of a scoring of 5 and ‘strongly disagree = 5’ instead of a scoring of 1. Therefore the scoring becomes related to the statistical significance.

In this current study, the hypothesis and results were stated as follows:

Hypothesis for functional value (FV) as an antecedent to perceived usefulness (PU)

H1b: functional value (FV) when using Digital business platforms has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions. The results reveal that FV has an insignificant impact on PU ($\beta = 0,114$, $t=1,416$, $p=0.157$). H3b is **not supported**.

Hypothesis for price risk (PR) as an antecedent to perceived ease of use (PEOU)

H4a: price risk (PR) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions. The results reveal that PR has an insignificant impact on PEoU ($\beta = 0,128$, $t=1,952$, $p=0.140$). H4a **is not supported**.

6.5.1 Comparing the Functional Value Hypothesis Results from Previous Studies

The current study's findings on functional value did not support the hypothesis and the same results were found by Kim et al., (2011) where they stated that were unable to establish a significant association between functional value and purchase intention, and therefore concluded that digital items are somewhat hedonic than utilitarian. A recent study (Kaur et al., n.d.) titled "The value proposition of food delivery apps from the perspective of theory of consumption value" tackled the functional value construct from the perspective of health consciousness and food safety concerns. In the same study, 423 users of food delivery applications (FDA) completed the responses, and the data was analysed using structural equation modelling as is the case with the current study. Kaur et al., (2020) found that food-safety concerns and health consciousness which were proposed as part of functional value, had not shown any statistically significant trend towards purchase intentions for FDAs. This is in line with the current study's findings.

6.6 The Role of Price Risk on the Perceived Usefulness and Usage of DBP's

In this current study, the hypothesis and results were stated as follows:

Hypothesis for price risk (PR) as an antecedent to perceived ease of use (PEOU)

H4a: price risk (PR) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions. The results reveal that PR has an insignificant impact on PEoU ($\beta = 0,128$, $t=1,952$, $p=0.140$). H4a **is not supported**.

Hypothesis for price risk (PR) as an antecedent to perceived usefulness (PU)

H4b: price risk (PR) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions. The results reveal that PR has a negative impact on PU ($\beta = 0,140$, $t=1,661$, $p=0.020$). H4b **is supported**

6.6.1 Comparing the Price Risk Hypothesis Results from Previous Studies

A recent study (Kaur et al., n.d.) titled “The value proposition of food delivery apps from the perspective of theory of consumption value” tackled the price risk construct from the food delivery app (FDA) users on how they perceive value for money when by ordering food through these digital platforms. In the same study, 423 food delivery application users completed responses and the data was analysed using structural equation modelling. The results of the study were in support of the price risk (PR) hypothesis and revealed that the price values have significant negative relations with purchase intents towards food delivery apps. These results are similar to the current study’s results on perceived usefulness (PU), but not perceived ease of use (PEoU). However Kim et al., (2011) did not find any significant correlation between the purchase intention and the usage of social network community for the purchase of digital artifacts. With regards to the current study, one of the questions on the questionnaire, was stated in such a way as to uncover the kind of price risk sentiment that IST’s may have with regard to the monetary value derived from using DBP’s in their daily trade and the question was posed as follows:

My MNO’s airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers

This question was designed to assess the price sensitivity of the airtime and data fees as prerequisites for the minimum usage of digital business platforms services that are charged by mobile network operators (MNO’s) from the perspective of the informal sector trader. Out of the 300 respondents 105 ‘strongly agreed’ 91 ‘agreed’, 40 were ‘neutral’, 11 ‘disagree’ and 45 ‘strongly disagree’. This question in the survey has one of the most widely distributed spreads in the study, because of the strong sentiments displayed by the high number of respondents who ‘strongly disagree’ and ‘disagree’ which account for almost 20 percent of the response, see figure 40 below. In other words, those who disagree are of the opinion that airtime and data at a reasonably good price when using the service in their daily trade transactions when dealing with customers and suppliers. However, 67 percent tend to believe that these services are not offered at a reasonable and affordable price as charged by mobile network operators. Only 14 percent were neutral to this sentiment. With such a high majority agreeing that airtime and data

are not at a good price, it can be interpreted that this will negatively affect the uptake towards adoption of digital business applications.

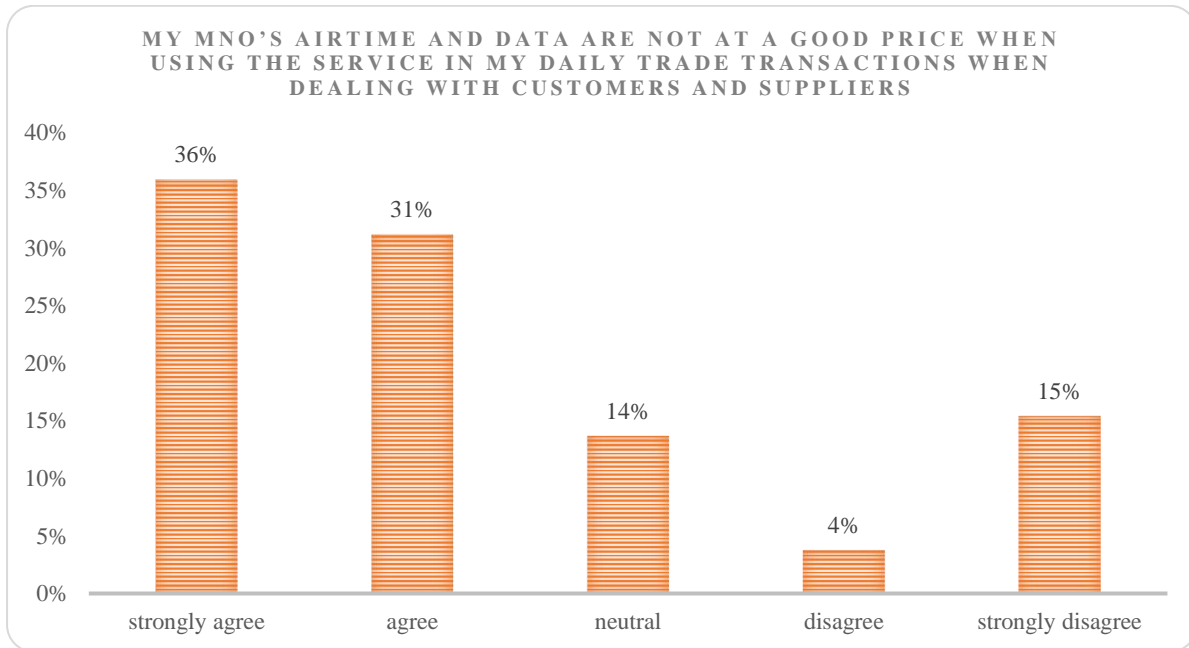


Figure 25: My MNO's airtime and data are not at a good price when using the service in my daily trade

6.7 The Role of Technical Barrier on Perceived Usefulness and Usage of DBP's

Hypothesis for technical barrier (TB) an antecedent to perceived ease of use (PEOU)

H5a: technical barrier (TB) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions. The results reveal that TB has a significant impact on PEoU ($\beta = -0,287$, $t=3.902$, $p=0.00$). H5a **is supported.**

Hypothesis for price risk (TB) as an antecedent to perceived usefulness (PU)

H5b: technical barrier (TB) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions. The results reveal that TB has a significant impact on PU ($\beta = -0,155$, $t=2,406$, $p=0.016$). H5b **is supported.**

6.7.1 Comparing the Technical Barrier Hypothesis Results from Previous Studies

It has been widely observed that when consumers experience functional benefits, such as successfully solving an individual task through digital business platforms, they are more prone to perceive functional values from using the services (S. H. Kim, 2008; Y. K. Kim, 2002; Yoshida, 2017). The result for the current study seems to agree with such observations, even though the hypothesis was stated from the negative perspective of the technical construct being a barrier instead of an enabler. Both for perceived usage (PU) and perceived ease of use (PEoU) the results were significant. Kim et al., (2011) did not find any significance between the functional value and intent to purchase digital artifacts on social network communities.

With regards to the current study, one of the questions on the questionnaire, was stated in such a way as to uncover the kind of technical difficulties that IST's may encounter when searching for and using DBP's in their daily trade and the question was posed as follows:

Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers

This question seeks to understand the difficulties that informal sector traders experience in finding and installing applications for digital business platforms for correct usage when dealing with customers and suppliers. Out of the 300 respondents 104 'strongly agreed' and 104 'agreed', that the difficulty in finding and installing applications of digital business platforms had a negative impact on usage, 59 were 'neutral', 23 'disagree' and 21 'strongly disagree'. The majority who agreed with the negative impact of this difficulty, made-up 72 percent of the responses (see figure 41). These results may lead to the interpretation that informal sector traders are not well-informed or efficiently marketed to, when it comes to finding and installing the applications that work with digital business platforms, and so they are not aware of the advantages of such applications towards their daily trading

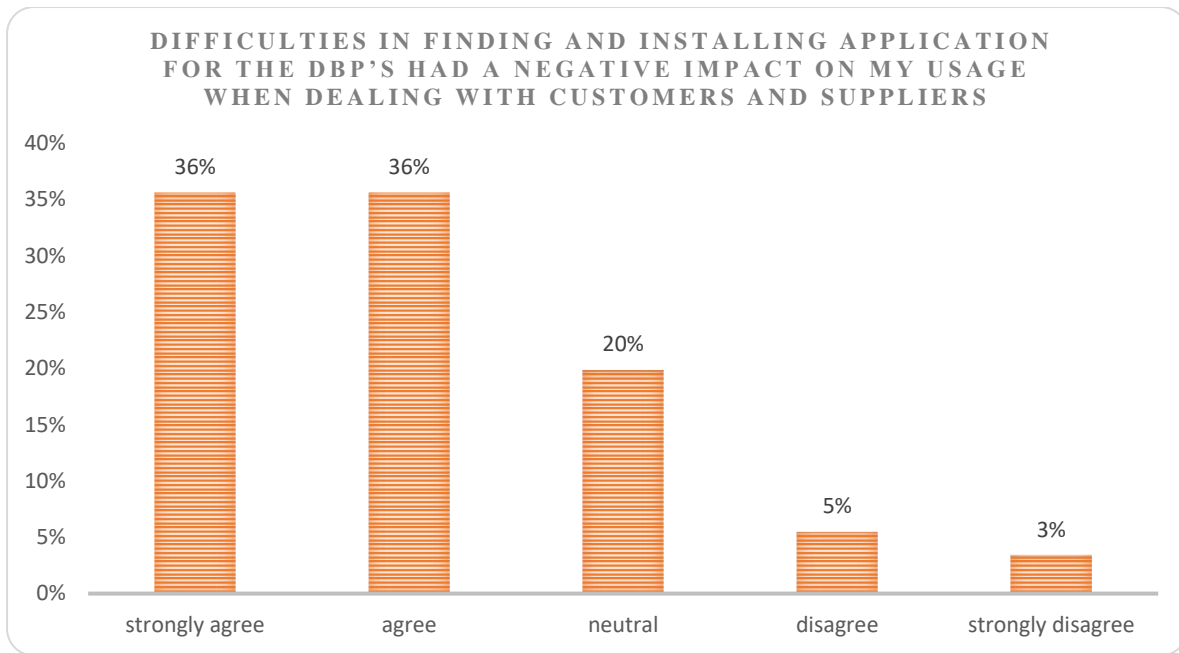


Figure 26: Difficulties in finding and installing application for the DBP's had a negative impact

6.8 The Role of PEOU and PU Towards the Behavioural Intention to Use DBP's

In this current study, the hypothesis and results were stated as follows:

Hypothesis for Perceived ease of use (PEoU) on Behavioural Intention (BI)

H7: The perceived ease of use (PEoU) of Digital business platforms would have positive effects on the behavioural intention (BI) towards use by Informal sector traders in their daily trade interactions. The results reveal that PEoU has a significant impact on BI ($\beta = -0,566$, $t=11,087$, $p=0.00$). H7 is supported.

Hypothesis for Perceived usefulness (PU) on Behavioural Intention (BI)

H8: The perceived usefulness (PU) of Digital business platforms would have positive effects on the behavioural intention towards continual use by Informal sector traders in their daily trade interactions. The results reveal that PU has an insignificant impact on PU ($\beta = -0,055$, $t=1154$, $p=0.249$). H8 is *not* supported.

The results for this study are very much in line with other studies, (Humbani and Wiese, n.d.; H. W. Kim et al., 2011b; Martens et al., 2017), whereby the perceived ease of use towards behavioural use was not supported, but the perceived usage was supported.

One of the questions in the questionnaire was stated as follows to understand the relationship between PEOU, PU and BI:

I will continuously use Internet Banking, E-commerce and Mobile Payment DBP's in the future when transacting with my customers and suppliers

This question was designed to assess the willingness to continuously use banking, e-commerce and mobile payment digital business platforms by informal sector traders when transacting with their customers and suppliers, in the future. Out of the 300 respondents 187 'strongly agreed' 69 'agreed', 30 were 'neutral', 8 'disagree' and 0 'strongly disagree'. Overall, a majority of 85 percent had a positively perception and were willing to continuously use these financially oriented digital business platforms and services they provide when transacting with their customers and suppliers (see figure 42 below). Only 3 percent disagreed with this sentiment, while 14 percent were neutral. The results seem to suggest that informal sector traders will continuously use this technology of internet banking, mobile payments and e-commerce type of digital business platforms and their services in the future.

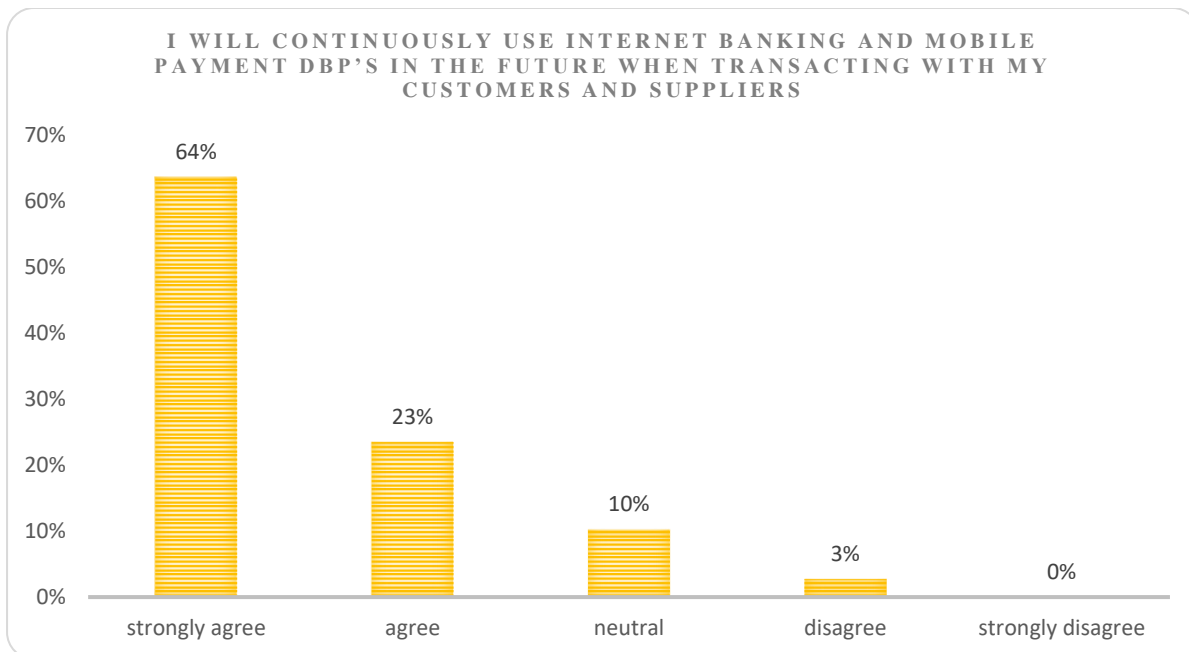


Figure 27: I will continuously use Internet Banking, E-commerce and Mobile Payment DBP's

6.9 Conclusion on Findings

This research project was a quantitative enquiry focused specifically on the value consumption of digital business platforms (DBP's) and their adoption in relation to how informal sector traders (IST's) are using them to buy, sell and market their product and services in their daily trade functions. This study adopted the approach of classifying the social media platforms, internet banking platforms and mobile payments platforms, as a single collective and defined under the banner of Digital Business Platforms. The advantage to this approach, is that it provided a multi-dimensional view of the perceived value-axis based on positive and negative experiences of using a variety of digital platforms including messaging, payments and banking applications on their mobile phones in their daily trading functions.

This study examined the positive experiences of perceived value (PV), collectively in the form of social value (SV), emotional value (EV) and functional value (FV). On the opposite end of the value spectrum, are the negative experiences of perceived risk in the form of price risk (PR) and technical barriers (TB) for the same group of informal sector traders. Understanding the relational impacts of these positive and negative experiences of value consumption, may lead to an understanding of their influence in the perceived usefulness (PU) and the perceived ease of use (PEoU) of DBP's. The results of these relationships have shed some light towards the behavioural intention (BI) to adopt DBP's and their actual usage in the long term.

The analysis yielded the following results: for positive experiences, emotional value had the least impact on both perceived ease of use and usefulness and functional value was higher than social value. This means that IST's place more value on the utility of DBP's, than the emotional and social values. Regarding the negative experiences, price risk had the most significant impact on the willingness to adopt DBP's by ISTs

CHAPTER 7: CONCLUSION

7.1 Summary of Findings

The analysis yielded the following results: for positive experiences, emotional value had the least impact on both perceived ease of use and usefulness and functional value was higher than social value. This means that IST's place more value on the utility of DBP's, than the emotional and social values. Regarding the negative experiences, price risk had the most significant impact on the willingness to adopt DBP's by ISTs.

7.2 Contributions of the study

The aim of this thesis was to contribute towards the understanding of the adoption or lack thereof, of digital business platforms in the informal economy within the South African academic literature context.

7.2.1 Academic contribution

The findings contribute towards future academic research on the relationship between socio-technical systems such as Digital business platforms (DBP's) and the societies at the bottom-of-the-pyramid. From an ICT for Development point of view this research will also expand our knowledge on the relationship between technology adoption and low-income communities, thus contributing to the ICT4D research community.

7.2.2 Practical Contribution

The benefits of acquiring this understanding will yield positive results towards the betterment of the informal sector trader's daily business transactions by enhancing their Social Capital which can be understood to be the networks of relationships between people who live and work in a particular society, thus empowering that society to function efficiently (Bhandari and Yasunobu, 2009; Onyx and Bullen, 2000). See section 7.5 a praxis model in the form of a business case, that applies the Vial's Digital Transformation Framework

7.3 Managerial Implications:

The finding of this current study may assist enterprises that are Digital Business Platform creators to come up with 'fit-for-purpose' E-commerce solutions that speak directly to the needs of the Informal sector traders (ISTs.). From these results and findings, it became very clear that pricing of these DBP's in the form of data is a real pain-point for these traders. This is expanded upon in the praxis model below.

7.4 Limitations of the Current Study

The scope was limited to the Informal Sector Economy and studied the value of DBP's as perceived by the individuals and unregistered small businesses that trade within it, who were referred to as Informal sector traders (IST's) and were the unit of analysis for this study.

7.5 Future Research

It is recommended that future research work may take from these learnings and pursue further qualitative enquiry into the digital transformation of the informal sector and its traders by observing the various frameworks and their practical application in the industry. Also, it would be beneficial to assess the pricing of these digital businesses to bring them closer to the affordability of the masses as the bottom-of-the-pyramid.

7.5 Praxis Model: Recommendations for Implementation

Appendix A is a practical example of a high-level business case document that may be applied in a digital transformation project. In the example, a fictional company named NewCoPraxis, is about to embark on an e-commerce project that seeks to take advantage of digitally transforming the informal trading sector through mobile commerce digital business platform for the low-income masses.

7.6 Concluding Remarks

The aim of this thesis was to contribute towards the understanding of the adoption or lack thereof, of digital business platforms in the informal economy within the South African academic literature context. **In this regard, it is the hope of the researcher that this aim was adequately acquired, and the results of this research will help shape future research both in academia and in management science in a world filled with disruption.**

Appendix A: PRAXIS Model

Business Case: **E-commerce Solution to Digitally Transform the Informal Sector Economy**

Project Name: E-commerce Solution to Digital Transform Informal Sector Economy

Project Manager: Clement Makholwa

The purpose of this section is to provide a brief overview of the entire business case.

Background

This project is intended to explore an e-commerce solution by NewCoPraxis that will bring about a disruption in the Informal Sector Economy by exploiting the SMACIT technologies (social media, mobile, artificial intelligence, cloud and IOT). NewCoPraxis will design, build, and implement a fit-for-purpose e-commerce, digital business platform, that will be safe, affordable, and easy to use.

- Start date: 01 July 2022 – 31 March 2025
- Approval: The Board of Directors at NewCoPraxis

Current Business Overview

The Social perspective: South Africa has in recent years experienced the convergence of the triple-threat of a decline in the ethical discourse of its politics, a struggling economy and the shrinking middle-class due to the emergence of the 4th Industrial Revolution's automation technologies. The COVID-19 pandemic has further exacerbated the fragility of individuals and families in a manner that affects their resilience and ability to protect their income, health, and overall wellness. The whole world has had to come to grips with the paradox of an abnormal normality by accepting that the old pre-COVID-19 world is now a distant memory.

The Business perspective: There is a need to address the 'Digital Logistics' gap that exists when it comes to the last node of the supply value-chain; the Informal Sector Economy and the informal traders that buy, market, and sell their goods in that sector.

Strategy

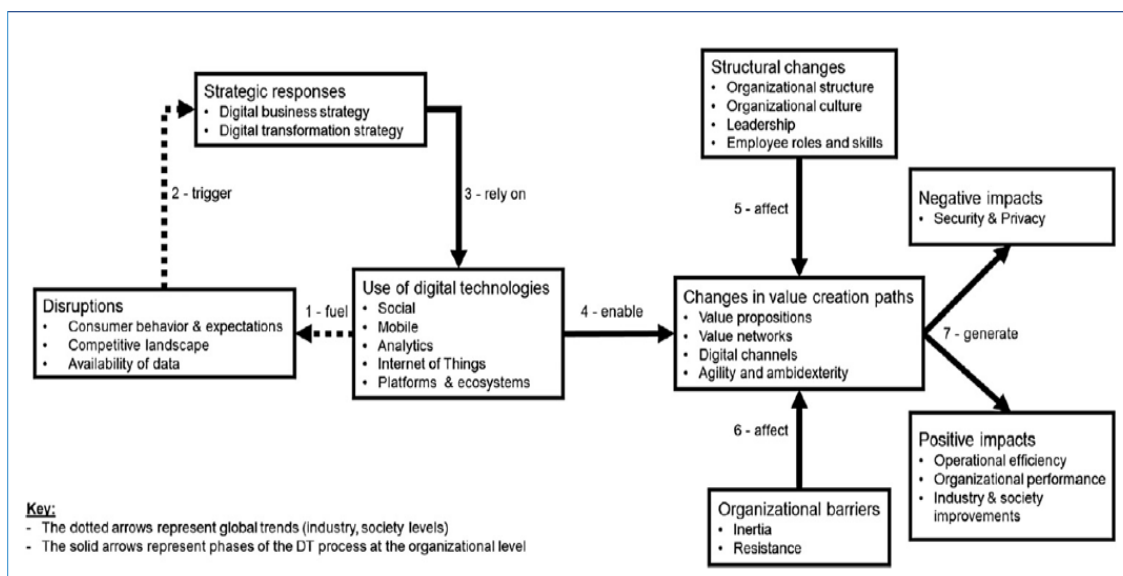
Plan, explore, design and develop a digital business platform in the form of a mobile e-commerce application that will be light on data, easy to use and safe.

Recommendations

- Adopt a digital transformation framework such as Vial's Digital Transformation Framework as demonstrated by below.

We recommend that the following options be approved immediately:

- That the timescales for implementation are approved immediately
- That the 'next steps' (as defined below) are approved immediately for execution
- That the required budget is allocated immediately in order to undertake an initial scope
- That the project manager is allocated immediately in order to undertake the next stage
- That the required resources are allocated immediately in order to undertake the next stage



Next Steps

Once the way ahead is agreed and established based on the information contained in this document, a Project Manager must be appointed (if not already in place) and a Project Scope is required to be created.

Document Control

Version #	Change Description	Date	Author
			C MAKHOLWA

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Appendix B: Chapter Breakdown

Chapter 1:	Introduction
Problem Definition and Research Objective	<p>The aim of this dissertation is to contribute towards the understanding of the value consumption and adoption of digital business platforms in the informal economy within the South African academic research context. The findings contribute towards the domain of ICT for Development (ICT4D), specifically with regards to the relationship between socio-technical systems such as Digital business platforms (DBP's) and the societies at the bottom-of-the-pyramid. It may also assist enterprises that are DBP creators to come up with 'fit-for-purpose' E-commerce solutions that speak directly to the needs of the Informal sector traders (IST's),</p> <p>Research Objective: This study aims to understand the perceived value (PV) that IST's experience when using DBP's by examining their social value (SV), emotional value (EV) and functional value (FV). Also, perceived risk (PR) in the form of price risk (PR) and technical barriers (TB) forms part of the negative experiences. Understanding the relationships between these constructs may lead to an understanding of their perceived usefulness (PU) and their perceived ease of use (PEoU), which will then give an indication of the IST's behavioural intention (BI) to adopt DBP's and their actual usage in the long term.</p> <p>Research questions: What are the perceptions of value as experienced by Informal sector traders (IST's) when considering the adoption of Digital business platforms(DBP), as mediums of trade to buy, market, and sell their products and services?</p>

	<p>RQ1: What role does the positive experience of Perceived Value (social, emotional and functional values) and negative experiences of Perceived Risk (price risk and technical barrier) play in the informal traders' decision to use a Digital Business Platform (DBP)</p> <p>RQ2: What is the Perceived Usefulness (PU) of Digital business platforms(DBP's) to informal traders in their daily trade interactions with customers and suppliers?</p> <p>RQ3: What is the Perceived Ease-of-Use (PEoU) of Digital business platforms(DBP's) to informal traders in their daily trade interactions with customers and suppliers?</p>
Chapter 2:	Literature review: Theoretical Foundation
Section 2.0: Intro and Three Major Themes of Literature Review	<p>-Introduction: ICT for Development (ICT4D) studies and relevance for this study</p> <p>- Gap in the Literature</p> <p>-The three major themes of this research study</p>
Section 2.1: Informal sector economy and Informal Workers	<p>Theme 1: Informal Economy Sector Traders (IST's)</p> <ul style="list-style-type: none"> • Perspectives on the informal economy • The Informal Sector Workers- General Perspectives • The South African Informal Sector
Section 2.2: Digital Transformation	<p>Theme2: Digital Transformation (DT)</p> <ul style="list-style-type: none"> • Why Digital Transformation Literature is Important to the Current Study • Defining Digital Transformation • The Role of Digital Transformation in Societal Transformation • Towards the Digital Transformation of the Informal Sector Economy
Section 2.3: Digital Business Platforms	<p>Theme 3: Digital Business Platforms (DBP's)</p> <ul style="list-style-type: none"> • Defining Digital Business Platforms; From Physical Space to Digital Space • Digital Platforms vs Traditional Pipelines • Digital Platforms Offer Informal Businesses a Progression Towards Formalisation
Section 2.4: Conclusion of Literature Review	<ul style="list-style-type: none"> • Types of Digital business platforms Most Relevant to the Informal Economy Sector <p>Closing Section of Chapter on Literature Review</p>
Chapter 3:	Literature Review: Research Framework and Hypothesis Development

<p>Section 3.0</p>	<ul style="list-style-type: none"> - Introduction to chapter - Review of the research aim and objectives - Breakdown of the subsequent sections
<p>Section 3.1</p>	<p>Existing Technology Adoption Frameworks:</p> <ul style="list-style-type: none"> • TAM (Technology Acceptance Model) • UTAUT (Universal Technology • DOA (Diffusion of Innovation) • Why TAM is suitable for this research project
<p>Section 3.2</p>	<p>Extending TAM with Value Consumption (VC-TAM) Introduce the Value-Added Model Why adopt VCM for this study Development of theoretical framework of DBP adoption as perceived by Informal sector traders using TAM and VCM</p> <ul style="list-style-type: none"> • Positive Experiences ; social value, emotional value and functional value • Negative Experiences; price risk and technical barrier
<p>Section 3.3</p>	<p>Hypothesis Development: Perceived Value (PV) as an antecedent for Positive Consumer Experiences towards PU and PEOU $PV = SV+EV+FV \Rightarrow PU + PEOU \Rightarrow BI$ <i>H1a: Social value (SV) when using Digital business platform has a positive effect on perceived ease of use (PEOU) to Informal sector traders in their daily trade interactions</i> <i>H1b: Social value (SV) when using Digital business platforms has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i> <i>H2a: Emotional value (EV) when using Digital business platforms has a positive effect on perceived ease of use (PEOU) to Informal sector traders in their daily trade interactions</i> <i>H2b: Emotional value (EV) when using Digital business platform has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i> <i>H3a: Functional value (FV) when using Digital business platforms has a positive effect on perceived ease of use (PEOU) to Informal sector traders in their daily trade interactions</i> <i>H3b: Functional value (FV) when using Digital business platforms has a positive effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i></p> <p>Price Risk and Technical Barrier as antecedent for Negative Consumer Experiences $PR + TB \Rightarrow PU + PEOU \Rightarrow BI$</p>

	<p><i>H4a: Price risk (PR) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions</i></p> <p><i>H4b: Price risk (PR) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i></p> <p><i>H5a: Technical Barrier (TB) when using Digital business platforms has a negative effect on perceived ease of use (PEoU) to Informal sector traders in their daily trade interactions</i></p> <p><i>H5b: Technical Barrier (TB) when using Digital business platforms has a negative effect on perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i></p> <p>PU + PEoU → BI</p> <p><i>H6: The perceived ease of use (PEoU) of Digital business platforms would have a positive effect on their perceived usefulness (PU) to Informal sector traders in their daily trade interactions</i></p> <p><i>H7: The perceived ease of use (PEoU) of Digital business platforms would have positive effects on the behavioural intention towards use by Informal sector traders in their daily trade interactions</i></p> <p><i>H8: The perceived usefulness (PU) of Digital business platforms would have positive effects on the behavioural intention towards continual use by Informal sector traders in their daily trade interactions</i></p>
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<p>Chapter 4:</p> <p>Section 4.0: Introduction</p> <p>Section 4.1: Research Design</p> <p>Section 4.2: Data Analysis Methods and Technique</p>	<p>Research Methodology</p> <p>Introduction</p> <p>Revisit Research Aim and Questions</p> <p>Research Design – Quantitative</p> <p>Research Philosophy – Positivism</p> <p>Research Type- Deductive</p> <p>Research Strategy – Survey</p> <p>Time Horizon – Cross-sectional</p> <p>Sampling – Convenient sampling</p> <p>Data Collection Methods - Survey Questionnaire in Likert Scale</p> <ul style="list-style-type: none"> • Target – 360 • Return – 300 <p>Data Analysis Methods</p> <p>Descriptive Stats:</p> <ul style="list-style-type: none"> - mean, median, mode standard deviation - data types: nominal, ordinal, ratio, <p>Inferential Stats :</p> <ul style="list-style-type: none"> - correlation and regression analysis <p>Data Analysis Technique: Partial Least Square-Sequential Equation Modelling (PLS-SEM):</p> <ul style="list-style-type: none"> - What is PLS-SEM
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	<ul style="list-style-type: none"> - How does it compare with other techniques like: CB-SEM, ANOVA and 1st gen tools - Why we chose PLS-SEM - Advantages of PLS-SEM - Independent vs Dependant Variables - Formative vs Reflective Indicators Structural Model • Deduction of antecedents of Perceived Value on PEOU and PU for BI • Deduction of antecedents of Perceived Risk and Technical Barrier on PEOU and PU for BI • Combination of determinants and hypothesized relationships to causal mode Measurement models • Development of new measurement items and adaption of items from previous studies • Operationalization of variables in reflective mode
Chapter 5:	Data Analysis and Results
Section 5.0:	Introduction
Section 5.1	C5.1.1 Revisiting the research aims and questions:
Section 5.2	5.2 Sample Demographic Result Analysis 5.2.1 Data Preparation and Coding 5.2.2 Respondents' Gender Distribution Data Analysis Methods 5.2.3 Respondents' Age Distribution 5.2.4 Respondents' Smartphone Ownership
Section 5.3	5.3 Measurement Model Assessment- Reflective outer model fit evaluation 5.3.1 Reliability and validity analysis 5.3.2 Indicator Reliability – Outer Loadings 5.3.3 Convergent Validity – Average Variance Extracted 5.3.4 Internal Consistency- Cronbach's alpha and Composite Reliability 5.3.4.1 Cronbach's Alpha 5.3.4.2 Composite reliability 5.3.5 Discriminant Validity - Fornell-Larcker Criterion, HTMT and Cross-Loadings 5.3.5.1 Fornell-Larcker Criterion 5.3.5.2 HeterotraitMenotrait Ration (HTMT) 5.3.5.2 Cross-Loadings 5.4 Structural Model Assessment - Inner model fit evaluation 5.4.1 The path coefficients 5.4.2 Pearson's coefficients (R2) and Predictive Relevance (Q2) 5.4.3 Hypothesis Testing for Significance
Chapter 6:	Data Analysis and Result
Section 6.1	6.1 Introduction

Section 6.2	6.2 Summary of Findings: Differences and Similarities in Results from Previous Studies
Section 6.3	6.3 The Role of Social Value on the Perceived Usefulness and Usage of DBP's 6.3.1 Comparing the Social Value Hypothesis Results from Previous Studies 6.3.2 Comparing Social Value Descriptive Results from Previous Studies
Section 6.4	6.4 The Role of Emotional Value on the Perceived Usefulness and Usage of DBP's 6.4.1 Comparing the Emotional Value Hypothesis Results from Previous Studies 6.4.2 Comparing Emotional Value Descriptive Results from Previous Studies
Section 6.5	6.5 The Role of Functional Value on the Perceived Usefulness and Usage of DBP's 6.5.1 Comparing the Functional Value Hypothesis Results from Previous Studies 6.5.2 Comparing Functional Value Descriptive Results from Previous Studies
Section 6.6	6.6 The Role of Price Risk on the Perceived Usefulness and Usage of DBP's 6.6.1 Comparing the Price Risk Hypothesis Results from Previous Studies 6.6.2 Comparing Price Risk Descriptive Results from Previous Studies
Section 6.7	6.6 The Role of Technical Barrier on the Perceived Usefulness and Usage of DBP's 6.6.1 Comparing the Technical Barrier Hypothesis Results from Previous Studies 6.6.2 Comparing Technical Barrier Results from Previous Studies
Section 6.8	
Section 6.9	
Section 6.10	6.8 Limitations of the Current Study 6.9 Recommendations for Implementation and Future Research 6.10 Concluding Remarks

Appendix C: Research Plan


Activity/Deliverable	Required Date	Status	Completed On
Get a Supervisor - Sign and Submit MOU to Department.	30 July 2020	Done	03 rd July 2020
Submit Research Proposal	30 th Sept 2020	Done	07 Sept 2020
Supervisor Guidance on the Research Question	30 Dec 2020	Done	12 Dec 2020
Discuss Structure of Literature Review with Supervisor	30 Dec 2020	Done	12 Dec 2020
Discuss Structure of the Research Methodology with Supervisor	28 Feb 2021	Done	24 th Feb 2021
Meeting with supervisor to discuss questionnaire	28 Feb 2021	Done	24 th Feb 2021
Refine questionnaire with Supervisor	10 March 2021	Done	01 March 2021
Ethics Application Final Submission with Department	30 March 2021	Done	1 April 2021
Pilot questionnaire on the Field by Student	05 April 2021	Done	May 2021
Data collection by Student	15 April to 30 June	Done	31 Aug 2021
Writing up the ER and Presentation Requirements seminar	30 April 2021	Done	20 Oct 2021
Discussion/support Data analysis with Supervisor	15 May 2021	Done	12 Feb 2022
Data analysis by Student	1 July 30	Done	30 March 2022
Write up of finding and Discussion by Student	30 Aug 2021	Done	30 May 2022
Conclusion of Write up with Supervisor	16 June 2022	Done	20 June 2022
Compile final report	20 June 2022	Done	26 June 2022
Final empirical research document submission	30 June 2022	GOAL Reached	26 June 2022



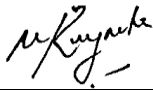
Ethics Approval Request for the Study entitled:

“Perceptions on the Value of Adoption of Digital business platforms by Informal sector traders in South Africa”

Signed by:

	Full name and signature	Date
Principal Researcher/Student: Clement Mkhululi Makholwa	Clement Makholwa 	01 July 2021

This application is approved by:

Supervisor Mignon Reyneke	Assoc. Prof. Mignon Reyneke 	1 July 2021
Co- Supervisor		

Appendix D: Consent Form



Graduate School
of **BUSINESS**
UNIVERSITY OF CAPE TOWN

MPhil

MASTER OF PHILOSOPHY IN INCLUSIVE INNOVATION

INTERVIEW CONSENT FORM:

Participant

name:

.....
.....

I volunteer to participate in a research project conducted by **Clement Makholwa** as partial fulfilment of the requirements for the MPhil Degree at the Graduate School of Business. I understand that the research is designed to gather information about “Perceptions on the Value of Adoption of Digital business platforms by Informal sector traders in South Africa”

and that I will be one of approximately 300 of people being interviewed for this research.

Background and purpose of the research

This research project is a qualitative enquiry that aims to explore and expand on this area of knowledge by applying a multi-disciplinary approach that will draw from Information System (IS) and Marketing academic research literature. The scope shall be limited to the Informal Sector Economy and will study of value of DBP’s as perceived by the individuals and unregistered small businesses that trade within it, henceforth referred to as Informal sector traders (IST’s) and shall be the unit of analysis for this study.

Ethics approval

Ethical consent for the study has been approved by the *UCT Commerce Faculty Ethics in Research Committee* (**you will only be able to use this consent form once you have received this approval.**)

Participation and confidentiality

I understand that my participation in this research is voluntary, that I will not be compensated and that I may withdraw at any time.

The interaction with the respondent will take approximately 15-25 minutes to complete.

I understand that I will not be identified by name in any reports using information obtained from this interview and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

Consent

I consent to participate in this interview, based on the terms outlined above and subject to the following additional condition of my own (if any).

Signed by interviewee

Date

.....
.....

Signed by Student

Date

Thank you for your assistance!

Sincerely,

Clement Mkhululi Makholwa

Student No: MKHCLE003



Appendix E: Research Questionnaire

Responded Demographic Survey

- Do you have access to a smart phone?

- Please indicate your gender identity.

Male Female Nonbinary Other

- Please indicate your race identity.

Black White Coloured Indian Prefer not to answer





- Please select the category that includes your age.

Under 18 18-24 25-34 35-44 45-54 55-64 65 or Above

- What best describes your level of education?

Some high school High school graduate or equivalent Trade or Vocational degree Some college Associate degree Bachelor's degree Graduate or professional degree Prefer not to answer

5 Questionnaire

<table border="1"> <tr> <td>Student number</td> <td>MKHCLE003</td> </tr> <tr> <td>Student name</td> <td>Clement Makholwa</td> </tr> <tr> <td>Signature of Student</td> <td></td> </tr> <tr> <td>Field Agent Name</td> <td></td> </tr> <tr> <td>Location</td> <td></td> </tr> <tr> <td>Date:</td> <td></td> </tr> </table>		Student number	MKHCLE003	Student name	Clement Makholwa	Signature of Student		Field Agent Name		Location		Date:		 Graduate School of BUSINESS UNIVERSITY OF CAPE TOWN		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Student number	MKHCLE003																			
Student name	Clement Makholwa																			
Signature of Student																				
Field Agent Name																				
Location																				
Date:																				
H1: Questions on the Experience of <i>Social Value</i> when using social media based DBP's as relating to IST's																				
• DBP's enhanced my effectiveness in my daily trade transactions when dealing with customers and suppliers																				
• DBP's made it easier to develop social relationship with my customers and suppliers																				
• DBP's helped me to build relationship more quickly with my customers and suppliers																				
• DBP's were useful in my social relationship with my customers and suppliers																				
• DBP's improved my social relationship with my customers and suppliers																				
H2: Questions on the Experience of <i>Emotional Value</i> when using DBP's as relating to IST's																				
• DBP's made me feel good in my daily trade transactions when dealing with customers and suppliers																				
• DBP's gave me pleasure in my daily trade transactions when dealing with customers and suppliers																				
• DBP's made me feel relaxed in my daily trade transactions when dealing with customers and suppliers																				
H3: Questions on the Experience of <i>Functional Value</i> when using DBP's as relating to IST's																				
• DBP's supported the operation of all tasks in my daily trade transactions when dealing with customers and suppliers																				
• DBP's allowed me to do my tasks effectively in my daily trade transactions when dealing with customers and suppliers																				
• DBP's operated consistently overall in my daily trade transactions when dealing with customers and suppliers																				

H4: Questions on the Experience of <i>Price Risk</i> when using DBP's as relating to IST's					
• My MNO's airtime and data are not at a good price when using the service in my daily trade transactions when dealing with customers and suppliers					
• My MNO's airtime and data are not reasonably priced when using the service in my daily trade transactions when dealing with customers and suppliers					
• My MNO's airtime and data are not economical when using the service in my daily trade transactions when dealing with customers and suppliers					
H5: Experience of <i>Technical Barrier</i> when using Financial Services DBP's by IST's					
• Difficult configuration of the DBP's had a negative impact on my usage when dealing with customers and suppliers					
• Difficulties in finding and installing application for the DBP's had a negative impact on my usage when dealing with customers and suppliers					
• Poor performance of the application for the DBP's had a negative impact on my usage when dealing with customers and suppliers					
H6: <i>Perceived Ease of Use</i> when using DBP's by IST's					
• It is easy for me to become skilful at using DBP's					
• I find it easy to get DBP's to do what I want it to when transacting with my customers and suppliers					
• My interaction with DBP's is clear and understandable					
• I found DBP's easy to use					
• Learning to use the smartphone for DBP's is easy for me					
• I find DBP's to be flexible to interact with					
H7: <i>Perceived Usefulness</i> when using Financial Services DBP's by IST's					
• Using DBP's would enhance my effectiveness when transacting with my customers and suppliers					
• Using DBP's would increase my productivity when transacting with my customers and suppliers					
• Using DBP's would make it easier to do my tasks when transacting with my customers and suppliers					
• Using DBP's would improve my performance when transacting with my customers and suppliers					
• I would find DBP's useful when transacting with my customers and suppliers					
• Using DBP's would enable me to accomplish tasks quickly when transacting with my customers and suppliers					

H8: Behavioural Intention Towards Continuous Use of Financial Services DBP's by IST's					
• I will continuously use DBP's in the future when transacting with my customers and suppliers					
• I have a plan to use DBP's in the future when transacting with my customers and suppliers					
• I expect my use of DBP's to continue when transacting with my customers					