Government regulated collection systems and the financial corporate user in South Africa

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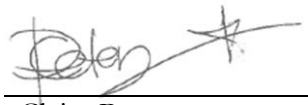
DECLARATION

I, Claire Peters declare that this research report entitled "Government regulated collection systems and the financial corporate user in South Africa" is my own unaided work. I have acknowledged, attributed, and referenced all ideas sourced elsewhere. I am hereby submitting it in partial fulfilment of the requirements of the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. I have not submitted this report before for any other degree or examination to any other institution.



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Signed at Johannesburg on 28th February 2021

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ABSTRACT

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For years, South Africa has aimed to build a fit for purpose National Payment System that protects as well as serves various stakeholders. Collection systems hope to ensure that consumers are in control of and aware of debit orders being processed to their own bank accounts. It provides companies with the comfort of knowing that customers have acknowledged and are aware of debits orders and also allows consumers' banks to record the debit order information and check the information before they process the debit order to their accounts. The study hopes to evaluate the level of efficacy of implementation from a technological point of view against the background of the South African technological landscape.

The purpose of the study to investigate the relationship between technological advancements and corporate user capabilities in developing countries that forge ahead with technological advancements in banking payment collection systems (Bell, Pavitt, 1992). The study will attempt to evaluate the current technological interventions and the impact they have on business and consumer buy-in in the insurance industry with specific focus on payment collection systems.

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I would like to first acknowledge the Almighty Creator for Whom which none of this would have been possible. My mommy Ursula for her unwavering support, my aunty Maureen as well as; Jenna-Lee, Matthew, Sastri, Adrian, Tammy, Melody, Kim, Michelle Govender, Prinola Govender, Mellissa, Seshnie, Clientele my Supervisor Rukudzo and all my lecturers in the various different fields of study.

Finally, this dissertation and the journey leading to the completion of my MBA, is dedicated to my Heart Smile, Ewan and my Guide, Mason.
It serves as proof for you both, that there are no limitations in this life and that we shape our own destiny.

DEFINITION OF KEY TERMS AND CONCEPTS

Abbreviation	Definition
DOA	Debit Order Abuse
FIC	Financial Intelligence Centre
FSCA	Financial Sector Conduct Authority
NPS	National Payment System
PA	Prudential Authority
PASA	Payments Association of South Africa
POC	Proof of Concept
SABRIC	South African Banking Risk Information Centre
SARB	South African Reserve Bank
SARS	South African Revenue Service
ITU	International Telecommunication Union
UTAUT	Unified theory of acceptance and use of technology
DC	DebiCheck
IS	Information System

1 INTRODUCTION TO THE RESEARCH

1.1 Background and context

More generally, this research 'A Government regulated collection systems and the financial corporate user in South Africa.' However, before getting to the research conceptualisation (Section 1.2), we briefly introduce the terms and concepts that we have used in conceptualising this research in Section 1.1 generally and broadly—while Chapter 2 has a more specific and detailed discussion on the research context.. The research conceptualisation section provides for the research problem statement (Section 1.2.1) and consequently the purpose of this research (Section 1.2.2) as well as the research questions (Section 1.2.3). The delimitations and assumptions of the research study are in Section 1.3 while we discuss the significance of the research study in Section 1.4 and provide a preface to the research report in Section 1.5.

In South Africa there has been great progress in the legal and financial systems, however, disparities still exist from a power and socio-economic perspective and there remains inequality in both these areas which is seen in the corporate world. The aim of this study is to understand how access to technology influences the payment collection systems process in financial service companies in South Africa and if infact it is a defining factor when implementing ICT technology to accommodate the process. In Section 1.1.1, we will introduce the terms and concepts for collection systems and the different methodologies available. Section 1.2 addresses the research conceptualisation of the report. More specifically, first the research problem statement (Section 1.2.1) is described, and then the purpose and research design of the research (Section 1.2.2 and 1.2.3) as well as the research questions posed (Section 1.2.4). The delimitations of the research study are discussed in Section 1.3 while we discuss the significance of the research study in Section 1.4 and, finally, provide a preface to the research report in Section 1.5.

1.1.1 What is a debit order payment collection system

According to J. Singh (2008), he breaks down the terminology by first expressing what the term "payment" means according to the South African court system, which is "any act offered and accepted in performance of a monetary obligation". The terms

"payment system" refers to a set or arrangement designated for the transfer of value, the ultimate goal of all payment systems is to effect payment in a legally effective manner. To serve as a medium of exchange for value, a company or entity must be one that is generally accepted when offered in payment for goods or services.
In South Africa payments systems fall under the supervisory control of the South African Reserve Bank. The national payment system is the collective of all payment systems that operate in the country including all the systems

1.1.2 What is the purpose of a debit order payment collection system

Debit order payment collection systems were created and have evolved over time in order to prevent debit order abuse. It is "a system and method for insurance premium payment is provided that automatically charges recurring insurance premiums to a credit or debit card chosen by the consumer." (Winchester & Thompson, 2006).
The need for an efficient debit order payment collection system is due to the fact that rogue entities fraudulently conduct debit order transactions as well as to minimise problematic consumer behaviour (PASA, n/d)

1.1.3 An introduction to formative evaluation

The evolution of the debit order payment collection systems has seen South Africa being the only country that has implemented the Early Debit Order collection system (de Jager, 2018) which has been in use since 2006. The various systems include AEDO (Authenticated Early Debit Order) system which is a dispute free electronic mandate that uses pin and card technology. Then there is the NAEDO system (Non-Authenticated Early Debit Order) system which has increased the instances of debit order abuse and a rise in debit order disputes. Currently there is a newly implemented system called DebiCheck which aims to address the debit order abuse of the past.
There are various stakeholders namely banks, consumers and the regulatory body called PASA which is the Payments Association of South Africa (PASA) which is a self-regulatory body and its governance structure is managed by PASA Council, and they take further instruction from the South African Reserve Bank.

1.2 Research conceptualisation

1.2.1 The research problem statement

General Statement:

Financial service organisations that collect premiums do so via a debit order collection system called NAEDO (Non- Authenticated Early Debit Order system) or AEDO (Authenticated Early Debit Order). In 2019, new collections system called DebiCheck was implemented to prevent debit orders from being processed without consumers consent and to prevent consumers from disputing debit orders unnecessarily. (Naidoo 2018). In financial service organisations that offer their services for a premium, this ensures quality business and prevents a decrease in the Value of New Business. There are various operating systems employed by corporate users that provide premium collections solutions to improve collection rates for third party benefits providers specialising in insurance companies in South Africa. (Q-link, 1998). Most financial service organisations that offer a premium for services or products rendered use these operation solutions to merge the gap between the regulatory powers, banking systems and the corporate user. Financial corporate users have created platform technology in order to align the selling process with the regulatory process. (Techopedia, 2017). This process benefits the corporate user three-fold. It increases organisational digital footprint, increases selling capabilities and decreases the reliance on physical structures to promote the entrepreneurial opportunity. Internal systems development allows for real time reporting that informs business decisions.

Thesis Statement:

However, these technological interventions do not necessarily align with the gap in technological availability and accessibility to the consumer (Lehohla, 2013).

It is purported that the challenge herein lies is in the dissemination of information that flows from the regulatory council down to the end user.

End user challenges such as connectivity issues, data pricing and user capabilities all play a role in the adoption of a newly revised system that could either limit organisational expansion and sustainability or grow the organisation exponentially. (Gillwald, Moyo and Stork, 2012).

From a corporate user perspective, it is acknowledged that any change in regulation from the NPS impacts financial institutions and organisations. The impact is not fully

known in terms of reach however, it does exist in that it creates an increased workload for the corporate user as well as increases costs for these organisations. (Silver, 2019). PASA (Payments Association of South Africa) is cognisant of both the challenges and benefits of implementing the newest payment collection system called DebiCheck and this was initiated due to an increase in debit order abuse. However, the onus is on the corporate users to develop systems and procedures to comply with this regulation within specific deadlines (PASA, 2019).

1.2.2 The research purpose (aim and objectives) statement

Aim:

From a broad perspective, the study seeks to analyse the relationship between technological advancements and corporate user capabilities in developing countries that forge ahead with technological advancements in banking and more specifically in debit order payment collection systems (Bell, Pavitt, 1992)

Objectives:

To further understand the impact and consequences on third party organisations, consumers and banks if the current type of debit order collections process, which is DebiCheck, does not progress along an adoptive trajectory.

To identify if there is a gap in the implementation process on the side of governmental organisations like PASA when rolling out technological advancements to banking and corporate users and consumers.

To add to the research that has been done in the past as the literature and research on this topic has not been fully explored.

In order to conduct this research a quantitative approach will be used in order to determine the relationship between concepts of performance expectancy, effort expectancy, social influence and facilitating conditions for behavioural intention and use behaviour (Puspitasari, Bambang, Firdaus, Haris et al, 2019) based on the Unified theory of acceptance and use of technology framework. (Venkatesh,, Thong, & Xu, 2016)

In order to get a more accurate perspective from the corporate user on an operational level an online questionnaire survey will be employed to extract more feedback that is specific.

This data will be interpreted under a theory based design method which is descriptive research design through the collection, analysis and presentation of data that has been presented.

1.2.3 The research questions as well as where applicable accompanying research hypotheses

1.2.3.1 Question 1:

Are banking institutions and PASA well equipped regarding technological advancements, when assessing the impact with respect to business processes?

Null hypothesis:

Guidance and knowledge sharing does not imply that technological advancements will be positively impactful

Research hypothesis (directional or non-directional):

Technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing

1.2.3.2 Question 2:

Does Debicheck Payments collection systems and KPIs harbour more trust amongst stakeholders?

Null hypothesis:

The newly implemented debit order collection system will not create trust in the stakeholders.

Research hypothesis (directional or non-directional)

The newly implemented debit order collection system will create trust in the stakeholders.

1.2.3.3 Question 3:

What are the possible effects that technological ability has on implementing a national debit order collection system?

Null hypothesis

The technological ability of a user does not impact the progress of implementing a national debit order collection system.

Research hypothesis (directional or non-directional)

Technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing

1.3 Delimitations and assumptions of the research study

One of the root problems is that of debit order abuse. The NPS Act (National Payment System) has implemented numerous payment collection systems to prevent this abuse. However, over the years the moral authority of role players in the NPS has been brought into question due to a lack of trust in the role players whose aim is to cater for the well-being of all stakeholders in the payment collection system. The struggles involved in preventing unauthorised debit orders has led to the rise of an opportunistic criminal element. Secondly, the lack of education and information with regard to the reason for debit order authentication has allowed for an increase in debit order disputes on the side of the consumer who may not fully understand their rights and responsibilities in this regard and are misguided and act in non-accordance with the regulations for fund management purposes. The report itself focuses on payment collection systems in South Africa. It does not include research from other countries. The report focuses on the financial industry in South Africa.

1.4 Significance of the research study

According to a PASA article (2019), the greatest challenge in not attending to the issue of debit order abuse is the increase in fraudulent activities and a growing mistrust in the ability of the various key players in the NPS to protect and enforce regulations in the best interest of the various stakeholders involved in debit order payment collection systems. The newly implemented DebiCheck Authenticated Collections system aims to reduce and in time eliminate the ambiguity surrounding the roles and responsibilities of all stakeholders in the process. The challenge facing the implementation and progress of this process is a technological one for the third party role players such as the insurance industry who collect premiums via a debit order system. First, the user capabilities for implemented platform technology to cater to the DebiCheck process is a challenge from an LSM perspective. Second, an awareness and education of the consumer of the existence of the technology and third the ability and willingness of the consumer to adopt the technology and actually use it. The consequences of the DebiCheck payment system not being completely adopted affects the banks, the corporate users (e.g. Insurance industry) and the consumers in that the challenges of debit order abuse on the

part of the criminal element as well as the misguided and uninformed actions of the payers will result in a less efficient and untrustworthy National Payment System.

1.5 Preface to the research report

To this end, the report has six chapters. Following this introductory chapter, Chapter 2 provides a literature review covering the problem, the past studies, the explanatory framework and the conceptual framework. Chapter 3 discusses the research strategy, design, procedures, reliability and validity measures as well as limitations. Chapter 4 and Chapter presents and discusses the findings, respectively, to interrogating our research questions while Chapter 6 summarises and concludes the research.

2 LITERATURE REVIEW

This chapter has three broad objectives; namely to understand the research problem, to identify the knowledge gap, and to develop a framework for interpreting the research findings. Specifically, in Section 2.1, we detail the research problem. In Section 2.2, we review literature on studies that have attempted a similar study or research. With information arising from Section 2.2, we identify and detail qualitative attributes or quantitative variables that are key to this research in Section 2.3 as well as a framework that we will use to interpret our research findings in Section 2.4.

2.1 Research problem analysis

The digital divide is defined as "the gap that exists between individuals who have access to modern information and communication technology and those who lack access." ICT technology in developing countries like South Africa have experienced this in various ways specific to the disparate elements of the divide itself. There are various elements, which influence this divide, and according to Steele (2019), it includes the fact that the digital divide is dynamic and it evolves from one time period to the next.

The challenges experienced in South Africa is not that there is a lack of technological advancement, but more that there is a lack of understanding and knowledge in the user capability as well as the access to the existing technology. According to Bell and Pravitt (1992), it is believed that the accumulation of technology is not necessarily, what brings a comparative advantage to corporates; rather, it is the technological knowledge and understanding which is a "source of comparative advantage". It is also evidenced in the studies of Bell and Pravitt (1992) that organisations in developing countries tend to have a misguided assumption that production capacity lends to technological capacity. This thinking was challenged in that organisations in developing countries do not tend to use technology as a secondary measure to improve production once production levels have already increased, making it a reactive afterthought.

The diffusion of older technologies has a more even spread than that of newer technologies. The existence of multiple divides within the digital divide is what is the most challenging to the adoption of new technologies and they include the disparities within a country, or between that of men and women, young and elderly, regional

divides. It has been evidenced by the (ITU) International Telecommunication Union (2001) that the factor that is the main cause of disparity in technological uptake and adoption is one of wealth between countries and individuals. They argue that if these disparities to continue to exist, then so will that of the digital divide.
Contrary to the belief that access and quantity to ICT technologies was a problem, the article by the ITU argues that now it has been evidenced that the problem is actually one of the disparities in the quality of the user experience and the capacity therewith.
The increase in mobile phone technology has increased the accessibility to ICT technologies and disparities such as income, the age gap and user capabilities have come to the fore.
According to the table in figure 1, the increase in just one year when comparing the Internet User penetration of the top ten economies versus ten specifically selected developing economies is quite substantial in that the percentage growths in the developing countries exceed that of the top ten economies by almost twenty per cent with the growth of the graph of the left being seven per cent and the developing countries graph representing a growth of twenty-seven per cent.

According to this graph, it can be seen that in 2005, South Africa also experienced a growth in internet user penetration which implies again, that the challenge is not that users have no access or have a lack in advanced technology.
This eliminates the probability that access and lack of technology are the main challenges in South Africa and brings into the question the very real element of user capability and capacity such as connectivity costs and supporting infrastructure within which these technologies are used.
According to an analysis done in respect of the price of broadband to the consumer, it has been noted there is a staggering gap between the high and low income economies with the low income economies spending almost nine hundred times more on broadband costs in relation to their monthly income (ITU, 2001). The reason for this are the economic and structural inconsistencies in these low income economies. It is further argued that there is less competition in the broadband markets, which allows for a monopolistic hold on the broadband market and in this way, the prices are almost twelve times higher in low-income economies than in those of high-income economies where competition is rife and varied.

This is clearly seen in the graph below, which shows the scarcity of bandwidth and the consequences of it in Africa. According to the ITU (2001), the graph depicts that although Africa has made vast progress in other ICTs such as in its growth of mobile users where Africa accounts for 6.2 per cent of the world's mobile phones and 3.4 per cent of the internet user global total, users in Africa are "starved of bandwidth" which inevitably translates to slower speeds with higher prices.

Accordingly, the question of affordability of ICT services is brought forth.

The high price of internet services in low-income economies puts the access of these technologies out of reach for those in the low income economies.

From a historical standpoint, the disparities the provision of these services also affect the urban and rural areas in low-income economies, show that operators use this as justification to resist sectorial reforms due to the fact that the rural areas do not bring in as much profits as those in the urban areas. In South Africa, specifically the use of VOIP (Voice over Internet Protocol) was used in order to address this digital divide. According Mutula (2008), it was found that there is infact a link that exists between bridging the digital divide and economic development. It was also found that although great strides are being made in infrastructural development in order to bridge this gap, it is unclear as to whether these efforts are increasing or decreasing the digital divide in sub-Saharan Africa.

It is evidenced in an article by Niehaves and Plattfaut (2014) that internet users from the ages of sixty-five years and above tend to be less technologically savvy when it comes to the use of ICT platforms. It is further emphasised that although ICT technology allows for more independence of the elderly, they are less likely to use the internet or have a general understanding of how to use it and they use four models in order to analyse the intention and willingness of the elderly to adopt new technologies. Niehaves and Plattfaut (2014), argue that as organisations use the advance in technology to cut costs in service offerings to the consumer, the elderly may very well be "left behind" in this exodus from face to face offerings versus online offerings. They further argue that "IT offers the potential to raise economic performance, quality of life, and encourage full participation in society." (Niehaves & Plattfaut, 2014)

With these disparities provided, we see that there is most definitely a gap that exists in user capacity and capabilities that organisations should be cognisant of when implementing ICT advancements, even when it is thought to bring about a progressive step toward efficiencies.

From a digital divide perspective, it is noted that the impact has a reach that is multifaceted in that it touches not only the economies of countries but also those of society specifically with regard to creating segregation between races, genders and ages and stunts the growth and development of those that lack resources and access to ICT technologies. (Steele, 2019).

In South Africa, it is evidenced that those who harness the power of regulatory change in the financial service industry are well aware of the challenges that South Africa faces from a disparity point of view (PASA, 2019), however, the need to combat debit order abuse still needs to be addressed in a technologically efficient way. The implementation of more efficient payment collection payment systems in South Africa is due to the fact that debit order abuse became rife and uncontrollable and the need to control these incorrect practices called for a different approach to payment collections. Debit order abuse itself was not only on the side of rogue entities but also on the consumers who disputed authentic debit orders in order to better management their own cash reserves. The consequences of not addressing this issue in South Africa would lead to increased fraud and reduced trust in the NPS (National Payment System) and other financial role players in South African financial services industry.

The aim of this study is to address the impact on the corporate user and the consequences of the lack of education, information sharing and user capacity and capability when corporate users implement the new regulations rolled out by PASA (Payments Association of South Africa) in light of its newly implemented payments collection system called DebiCheck.

Regulations rolled out by government affect financial services in that it increases the workload for those in the financial industry in order to adapt business processes to comply with these regulations. (Silver, 2019). In the short term, government regulation roll outs may be damaging to financial service industries, however, they may also be beneficial in the long term (if implemented correctly) to prevent financial inconsistencies and fraud. Another noteworthy problem experienced by corporates according to Silver (2019), is that of over-regulation. If there is too much regulation it could inhibit innovation and increase costs, and if there is under-regulation, it could open the door for mismanagement and corruption. Herein lies the challenge of being able to fully quantify the impact regulation may have on the financial sector, but it is believed that the impact is indeed long lasting and widespread.

2.2 Research knowledge gap analysis

Although there are numerous studies done on the methodologies and findings around that of the digital divide in the various countries, the research and theoretical articles on payment collection systems in South Africa is minimal, however those that do exist paint a picture of South Africa being quite progressive from a financial services perspective with "South Africa having one of the most efficient banking systems in the world" in terms of quality according to Michael Lafferty, the founder of the Lafferty Group (Ismail, 2017). Be that as it may, there is minimal literature to support the thinking that regulatory bodies should implement a more rigorous educational and possibly a more collaborative process with corporate users to assist with implementing these rollouts to comply with government regulations.

In 2017, PASA introduced a four-pronged model approach to understand and possibly eliminate debit order abuse in South Africa's banking systems. The model consisted of pre-onboarding, on-boarding, monitoring and exit functionalities. These four prongs were introduced as levers of change in order to mitigate debit order abuse in the NPS. In order to analyse the magnitude of the problem PASA employed a quantitative research strategy and based their design on information gathered from statistical findings attained from their own information gathering data systems through the banking systems that reported on disputes and fraud. The focus of the study was to understand on what scale fraud was taking place in the payment collection system and the findings were unique in that the debit order abuse took place on both the side of the consumer, who PASA found to be uneducated in their rights and responsibilities when it comes to honouring payment agreements as well as on the side of rogue entities that debited consumer accounts without the proper regulatory authorisations (PASA, 2017).

Nyantakyi and Sy (2015) put forward a comparative review of the regulations as well as the banking systems in Africa. The research was qualitative and the design used was that of literature reviews that spanned 20 years. The researchers also extracted information from the Trade Finance Survey AFDB database as well as from the Global Development bank database. The study compared banking environment indicators viz. efficiency, depth, penetration, innovation and competition, and used the data to suggest that Africa has a highly competitive banking system even though it is much less penetrated than those of developed countries. The research also suggests through the

use of this data, that mobile banking is the dominant form of banking and that Africa's banking systems are well regulated and on par with other regions in the world. The findings were that because of these efficient and strong regulations banking remained relatively safe and overall governance was improved in Africa.

A noteworthy finding of the study showed that the expansion of mobile communication networks and access to mobile phones in rural areas "have created banking innovation technology that challenge conventional ATM machines and electronic payments." (Nyantakyi & Sy 2015, 5)
This finding reflects the fact that banks and regulatory powers now work hand in hand with telecommunication organisations in order to create mobile banking systems and processes in order to make banking more accessible to all consumers. In figure 3, it can be seen that Southern Africa has the highest number of ATMs in Africa of which 5.6 per cent use mobile money and 8 per cent use electronic payments.

Camarate & Brinkmann (2017), used a Fit for Growth which is an analytical database trademarked by PwC Strategy & LLC in their qualitative study to show the increase in many banking institutions IT investment. The rate at which new digital players launch and adapt to the dynamic environment in terms of product offerings, creates a more urgent need for banks to remain not only competitive but compliant with a strict focus on being aligned with the regulatory standards of the country. In figure 4, the cost of IT investment amongst the four main banking institutions is indicative of the increase in investment in just one year. This research sought to answer the question of what established banks should do in order to remain competitive against the rapidly growing host of new digital role players in the financial industry. It is noteworthy to mention that the first port of call was advancement to their ICT solutions, which in turn speaks to the growing number of mobile banking users in South Africa (Camarate & Brinkmann, 2017).
In the framework provided it is noted that due to the fact that technology is constantly evolving the UTAUT framework should be expanded on and updated in order to accommodate for technological advancement (Venkatesh et al, 2003, p.461)

2.3 Qualitative attributes or quantitative variables key to the research

The key attributes that exist in the research is guided by the discussion of the problem analysis literature.

According to the ITU (2001), the greatest challenge with regard to technological adoption and use is that of **access to technology**. It is stated that this is largely related to the wealth between countries of high and low-income economies. From a digital divide perspective, it is noted that the impact has a reach that is multifaceted in that it touches not only the economies of countries but also those of society specifically with regard to creating segregation between races, genders and ages and stunts the growth and development of those that lack resources and access to ICT technologies. (Steele, 2019).

Demographics of the consumer in terms of gender, age, and geographical location play a pivotal role when analysing the rate at which technology is adopted and accessed. Broadband service providers tend to focus their marketing strategies toward those in the urban areas and less on those in the rural areas which creates a gap and further widens the digital divide in relation to those who are able to access ICT technologies easily and those who are not able to.

Contrary to the belief that access and quantity to ICT technologies was a problem, the article by the ITU (2001) argues that now it has been evidenced that the problem is actually one of the disparities in the ability and quality of the user and their experience and the capacity therewith.

According to Bell and Pravitt (1992), it is believed that the accumulation of technology is not necessarily, what brings a comparative advantage to corporates; rather, it is the technological knowledge and understanding which is a "source of comparative advantage".

The age of users is also a determinant toward technology adoption as is evidenced in an article by Niehaves and Plattfaut (2014) that internet users from the ages of sixty-five years and above tend to be less technologically savvy when it comes to the use of ICT platforms.

The need for regulatory powers to be cognisant of timelines for implementation is imperative to the quality of process implemented by the corporate users. In the short term, government regulation roll outs may be damaging to financial service industries, however, they may also be beneficial in the long term (if implemented correctly) to prevent financial inconsistencies and fraud. Another noteworthy problem experienced

by corporates according to Silver (2019), is that of over-regulation. If there is too much regulation it could inhibit innovation and increase costs, and if there is under-regulation, it could open the door for mismanagement and corruption. Herein lies the challenge of being able to fully quantify the impact regulation may have on the financial sector, but it is believed that the impact is indeed long lasting and widespread.

Regulations rolled out by government affect financial services in that it **increases the workload and affects productivity levels** for those in the financial industry in order to adapt business processes to comply with these regulations. (Silver, 2019).
The consequences of not addressing this issue in South Africa would lead to increased fraud and **reduced trust** in the processes of the NPS (National Payment System) and other financial role players in South African financial services industry.
Affordability broadband services comes into question when analysing the literature in regard to the disparities that exist between high income and low income economies. According to an analysis done in respect of the price of broadband to the consumer, it has been noted there is a staggering gap between the high and low income economies with the low income economies spending almost nine hundred times more on broadband costs in relation to their monthly income (ITU, 2001).
Corporate users' task to implement the regulations set out by PASA also is inclusive of tackling the problem of **inequality in terms of digital literacy**. According to Weale (2020), almost 80% of South Africans are not digitally literate. Digital literacy is broadly defined as digital resources that are used as a tool to unlocking economic potential for users. (Weale, 2020)
According to Leahy & Dolan (2010), some people are excluded from the "knowledge society" that now exists when referencing the digital world. The researchers further argue that even though there are external elements that exclude this group of people, like social and economic factors or accessibility to technology, there is a greater more concerning element of **exclusion** that exists. This exclusion is that of digital literacy in that a person will be excluded if they are not able to use the technology that currently exists in an efficient and safe way.
In the same vein, Sefton-Green, Nixon and Erstad (2009) believe that digital literacy is a means of empowerment for individuals but exposes the inconsistencies in the socio-economics of a country as well as the issues of accessibility.

2.4 Framework for interpreting research findings

In South Africa the advancement of technology far outweighs the accessibility and user ability of its public and the inequality that exists in Africa as compared to the rest of the developed world is massive from a resources perspective as well as from a cost of service perspective (Tchamyou, Erreygers, & Cassimon, 2019). Due to infrastructural inconsistencies and the lack of telecommunications competition in South Africa, the cost of accessing ICT technologies is almost twelve times higher than that of developed countries. This poses a challenge for corporate South Africa in that they are required to not only meet the needs of the end user using this technology, but are also required to abide by regulatory standards of the country. One of those regulatory standards are that of the payment collection system which manages the way in which money is collected between banks, corporate users and the end user (consumer). Mobile technology is one of the fastest growing technologies especially in Africa and this is what consumers and corporates use to enable business growth and regulatory requirements (Aker & Mbiti, 2010).

The theoretical model used in this article is the Unified Theory of Acceptance and Use of Technology (UTAUT) of Venkatesh, Morris, Davis and Davis (2003). This model has used eight other models related to the acceptance of newly introduced technologies.

In this framework, there are four determinants that include performance expectancy, which is defined as "the degree to which the user expects that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p. 447). According to the research, this has been identified as one of the most influential determinants in terms of a participant's intentional use of technology.

This theoretical framework also identifies four specific moderators (figure 9) which account for the influences that lend to individual user acceptance of technology which include an organisational context, the user experience as well as demographical elements like age, location and gender. (Venkatesh, Morris, Davis & Davis, 2003, p. 471).
The relationship between these moderators and performance expectancy was quite relevant in the study in that that age is a determinant in most of the key relationships within the UTAUT model, and as participants mature in age, the difference in gender in relation to the use of ICT systems, seems to become more transitory as participants

relate differently to younger participants who have been "educated in the Digital Age" (Venkatesh, Morris, Davis & Davis, 2003, p. 469).

The second determinant is effort expectancy and is explained as the "anticipated complexity of the technology and the degree of energy needed to use it." (Vermaut, 2017, p. 5). This determinant was moderated by gender, age and experience, which showed more prominent effects in women, older generations and those participants who had less technological experience (Venkatesh et al., 2003).

The third determinant is Social influence (SI) which refers to the participants accepting a new technology or system because someone of higher influence or status has instructed them to do so and again it is seem to be more impactful amongst women, the older generations and those participants who had less technological experience (Venkatesh et al., 2003).

The fourth determinant is facilitating conditions, which refers to the extent to which the participants believe that the new technology can be implemented or applied much more easily through the use of infrastructure. This determinant was moderated by age and experience where the older and more experienced individuals had a much stronger ability to use the technology.

In South Africa, the payment collection system has been revamped to accommodate for a new technology namely, DebiCheck. This technology allows for increased protection for all stakeholders in the payment collection process. Corporate users have been instructed to implement this system in order to accommodate for the regulatory requirement and to protect the corporate interest as well as the end user.

This study focuses on analysing the impact that the implementation of this new technology has on the corporate user in the financial industry in South Africa in respect of performance expectancy, effort expectancy, social influence and behavioural intention.

2.5 Summary and conclusion

2.5.1 Summary of literature reviewed

From the literature reviewed, it is evident that the digital divide and the adoption of users to the new technology plays a vital role in the effective implementation of the newly regulated payment collection systems in South Africa. It affects not only the end users but also the corporate user from a time and work productivity perspective. The implementation of payment collection systems are done so with the greater aim of reducing fraud within the payment system in the country, however, the time in which the systems are implemented as well as the way in which it is rolled out in various financial organisations varies and there is no structural support given to corporate users. It is also clear that although government is aware of the technological limitations within the country they are not completely cognisant of the way in which the regulatory implementations impact the corporate users who are saddled with trying to solve the problem of disseminating the information and implementing the regulation within the constructs of their product offering to the end user.

The literature also points to the ways in which the NPS have evolved over the years to take into account the technological developments in the country as well as in other parts of the world and the need to keep up with these technologies increases the need for tighter more controlled regulation which also affects the ease of doing business with South Africa as a country.

The corporate user may be negatively impacted from a creativity perspective as they are bound by the regulations of PASA. It is noteworthy to add that based on the level of structure of regulatory requirements passed down the South African economy may either benefit from the regulations or it may be detrimental to the economy.

2.5.2 Proposed research strategy, design, procedure and methods arising from the literature reviewed

The proposed research strategy based on the literature review sees many researchers taking on the quantitative method in their studies with a review of literature and questionnaires. The research that will be conducted is quantitative in that an online questionnaire survey will be posed to the participants. The way data is be analysed using correlation and regression analysis.

3 RESEARCH STRATEGY, DESIGN, PROCEDURE AND METHODS

In Section 1.2.3, we have posed four questions that this research report intends to answer—that is, 'What steps do PASA and Banking institutions need to take to ensure that insurance corporate users are well equipped to deal with the technological advancements that affect business processes, will the newly implemented debit order payment collection system create more trust amongst the stakeholders, will the technological challenges in South Africa inhibit the timelines within which the newly implemented debit order collection system is to be completely adopted, and
does the technological ability of a user impact the progress of implementing a national debit order collection system?

We have since reviewed literature and developed an interpretative as well as conceptual framework that will guide the choices of techniques we will use. This chapter identifies and describes research approach, design as well as procedure and methods that we employ in this research to collect, process, and analyse empirical evidence. Broadly, it has three objectives; namely, to identify and describe the research strategy (Section 3.1), the research design (Section 3.2), as well as the procedure and methods (Section 3.3). The chapter also describes the reliability and validity measures (Section 3.4) that this research applies to make it credible as well as the technical and administrative limitations of the choices we make (Section 3.5).

3.1 Research strategy

According to Corner (1996), a research paradigm is defined as "scientific practice which includes law, theory, application and instrumentation; together, these provide models from which spring particular coherent traditions in scientific research." (Corner, 1996. 201-2018)

In broad terms, a research strategy is the steps of an action plan that shows the direction of one's thoughts with regard to the research one is conducting. This allows for increased focus, enhances the quality of one's research and allows the researcher to be more cognisant of time frames and resources. It explains and describes the reasoning behind one's research as well as the empirical efforts one seeks to accomplish in accordance with the objectives and aims of the research.

It comprises mainly of three types of strategies that can be employed in order to conduct the research namely, quantitative, qualitative and mixed methodologies.

Quantitative research refers to when a researcher decides on what to study and relies on quantifiable data collected from participants in a study, these numbers are analysed via statistical means and then an inquiry is conducted without bias.
In Qualitative research, the researcher is reliant on the views of the participants and asks questions that are broad while collecting data which consist mainly of words. The researcher then analyses these words seeking out themes while conducting the inquiry in a subjective and biased way.
Mixed method design involves both quantitative and qualitative data in "either single study or in multiple studies in a sustained program of inquiry" (Creswell, 2003). According to Teddlie & Tashakkor (2003), the mixed method design tend to run parallel to each other without any real mixing and the resultant questions or assumptions that come from this method is seen to be either qualitative or quantitative in nature as opposed to merged.
This research study will employ the quantitative design and positivist strategy and a survey will be used to gather data and quantitative design methods will be employed in order to analyse the data received.

3.2 Research design

Essentially, research design is a framework of methods and techniques used by a researcher, which allows the researcher to choose research methods applicable for the type of study that is chosen. According to Bryman (2012), there are five types of research namely cross-sectional, longitudinal, case study, comparative, and experimental. There are three types of research design, which is measurement, analysis and data collection.
For the purpose of this study, a cross-sectional study will be conducted as it involves the collection of data that is quantifiable which will allow for patterns of association between variables to appear. It also includes surveys with non-manipulative variables. In a cross sectional study done in India, the methods used were data collection, surveys and interviews done with around 1200 participants. (Skordis-Worrall, Pace, Bapat, et al. 2011)

3.3 Research procedure and methods

This section documents the actual procedure and the methods employed in this research to collect, collate, process, and analyse empirical evidence. Broadly, we detail the data and information collection instruments (Section 3.3.1), the target population and sampling of respondents (Section 3.3.2), the ethical considerations during the research process (Section 3.3.3), data and information collection process and storage (Section 3.3.4), data and information processing and analysis (Section 3.3.5) as well as the background description of the respondents who provided empirical evidence for this research study (Section 3.3.6).

3.3.1 Research data and information collection instrument(s)

A data collection instrument is used for data collection in the search for sourcing fact. The instrument chosen must be appropriate in that it must be valid and show reliability. Any research projects validity is based on the type or appropriateness of the instrument used. The instrument also needs to be assessed or examined in order to identify if it will render the expected results.

There are two types of data collection instruments, namely, observation schedule and interview schedule. For the purpose of this research, the instrument used will be that of the interview schedule. It is used based on the fact that this study has a time restraint, however, it will allow for a maximum amount of data to be collected in a shorter period of time. The research data collection instrument structure is the way in which a collection instrument is organised in order to gain the most effective and accurate result from a participant. It guides the type of questioning that will be used in terms of the type of data that is being collected and also guides the quantity of numerical data received versus a wide range of information that has a subjective purpose. The structure also determines the time period within which the data collection will occur. It includes unstructured, semi-structured, and fully structured data collection instruments.

Based on the research that will be conducted, the structure will be that of a structured online survey. This research tool structure will allow for maximum data that can be received from a stipulated number of participants over a specific period of time. The content within the data collection instrument will be fully structured in that the questions posed will be guided by the researcher alone and not by the participation or views of the participants. An online survey allows for "ease and speed of survey administration" (Gill, Leslie, Grech et al, 2013).

3.3.2 Research target population and selection of respondents

3.3.2.1 Research target population

The target population is an epidemiological term that describes a total group of elements from which one wants to draw information or a sample. The sample is the group of elements chosen within the study. (Rothmans, 2008)

The target population in this study will be corporate users in the financial sector from various operational departments between the ages of 25 – 65 with a mixed group of male and female participants.

The benefit of this target population is that it is a representative group of the participants that are involved in the internal (organisational staff) and external (to end users) implementation of DebiCheck which is a regulatory requirement from PASA.

3.3.2.2 Sampling or selecting respondents from the target population

Sampling, which is the process of selecting "a portion, piece, or segment that is representative of a whole" (The American Heritage College Dictionary, 1993, p. 1206), is an important step in the research process because it helps to inform the quality of inferences made by the researcher that stem from the underlying findings. (Onwuegbuzie & Collins, 2007)

In sampling for both quantitative and qualitative research, the researcher has to decide on the sample size as well as the selection of the sample. Of late, the benefits of mixed methodology and sampling thereof is becoming more popular but the sampling strategies are more complex.

In qualitative research, the different types of sampling are purposive sampling, quota sampling, and snowball sampling. (Mack, 2005). In quantitative research, the types of sampling methods include probability and non-probability sampling. For the purpose of this research, probability sampling will be used, as the sample of the users is known as they are identified as corporate users within the financial industry. The sample group represents participants in the finance industry therefore, they are a representative sample. An estimate of around a minimum of 100 participants is expected.

3.3.3 Ethical considerations when collecting research data

Ethics in research oversee the standards of conduct for researchers. It is very important to adhere to these ethical principles in order to protect the participants and their dignity, rights and welfare. The important central principles for discussion around ethics reviews is that of be "beneficence, justice and autonomy" (WHO, 2001).

As the researcher in this study, I am an operations manager in an insurance organisation that is responsible for implementing and transforming the process of DebiCheck in the sales environment.

My interest lies in analysing the impact that the implementation of DebiCheck regulation within the financial industry as it is imperative that we get the regulation enforced before May 2021, which is when DebiCheck will be fully enforced by PASA.

There are no sponsors in this research.

The questions posed are based on a five point likert scale as well as a few close-ended questions and the question structure is not intended to deceive the participants but merely to gain perspective on the sample chosen.

The results will be confidential and the aim of the research will be disclosed in order to increase transparency and anonymity.

The questionnaire is voluntarily and participants will have to voluntarily agree to complete the survey, which will be seen as consent.

The details of participants will not be shared or disclosed and is stored on a password protected computer. This proposal and questionnaire has to be approved by an ethics committee by Wits Business School before data collection begins.

3.3.4 Research data and information collection process

The aim of data collection is to gather and measure information that has been collected based on variables that are pertinent to the study itself. It is done in a systematic way established by theory and it enable one to answer research questions, hypotheses as well as to evaluate outcomes. The modes in data collection are participant observation, interviews (face-to-face, telephone, or internet-based), focus group discussion and documents. According to Albine Moser & Irene Korstjens (2018), data collection in qualitative research is "unstructured and flexible" (Moser and Korstjens, 2018) which means that researchers are able to make decisions on collection while doing research in the field and have questions that are guided by whom, what, when, where and how.

For the purpose of this research, the self-administered online survey will be used in that online surveys will be conducted to gather and collect information. It will be conducted as a structured data collection method.
The data will be stored on a password protected computer for security and confidentiality.

3.3.5 Research data and information processing and analysis

3.3.5.1 Research data and information processing

Data processing is a "set of methods used to input, retrieve, verify, store, organise, analyse or interpret" (NatureResearch, 2020), a data set.
In this way, the processing of data, allows information to be extracted automatically and can be used to compute this information through computational biology and bioinformatics. For the purpose of this study, either qualtrics or survey monkey will be used to process the data that will be gathered from participants. Analysis procedure will be used in order to test the hypotheses (T-Statistic or P Value to test if hypotheses is acceptable or not acceptable.)
Data coding is the process of taking collected information or observations and transforming them into meaningful categories. It summarizes and better represents data collected in order to present a systematic reflection of the recorded or observed data (Allen, 2017). For the purpose of this study, this information will be the coding will be based on the different aspects that are to be measured. The variables represented and drawn from performance expectancy, effort expectancy, social influence and behavioural intention.
When data has been collected and checked, the process of entry starts. During this process, the verbal or numeric data collected through the various collection methods are input into a computer as numeric data "codes). This is known as data entry onto a computer. (Bourque & Clark, 1992). For the purpose of this study, a password-protected computer will be used to input data and the system SPSS 26 will be used to interpret data.
"Data cleaning, also called data cleansing or scrubbing, deals with detecting and removing errors and inconsistencies from data in order to improve the quality of data." (Rahm & Do, 2000. 3). Data cleaning has two types of cleaning – possible code cleaning which is the process of eliminating data inputs that are wrong (don't fall part of the input set) and contingency cleaning which is checking that only those cases that should

have data on a particular variable do in fact data as the structure of the questionnaire places certain limitations on the data in a specific variables. For the purpose of this study, a password-protected computer will be used with Microsoft Excel/SPSS 26 that will be used to clean data.

According to the University of Pretoria definition (UP, 2020) data analysis is the summation of collected data. It is inclusive of the interpretation of data that is collected through analytical reasoning in order to determine trends and patterns as well as relationships. The different types of analysis include regression analysis which is the analysis of multiple relationships, cluster analysis which is the process of grouping similar sets of data to show a familiar relationship and content analysis is Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data (i.e. text).

For the purpose of this research variance testing, correlation analysis and regression analysis will be used to analyse the various relationships between the variables specific to the study. (Chatterjee & Hadi, 2015).

The coding structure will also be reflected in the five point likert scale, which ranges from highest to lowest in the most positive responses to the most negative responses.

3.3.6 Description of the research respondents

The research respondents have the possible following characteristics:

Ages will range between 25 – 65, with a varied gender representation. The sample represented are all specialists in their field aside from the operations team which are generalists. Number of participants range between 100 – 150

Billings	These users deal with billing of information that passes through the internal payment system while reporting on the regulated requirements
Operations	These users deal with implementation on several platforms, which include implementation to end users, business requirement instruction to system developers, training and education for internal and external stakeholders.
IT	Involved in system development specific

	to implementation of regulatory requirements for payment collection system
Commissions	Specific to multi-level finance industry and are involved in the payment of commissions to end user agents while taking into consideration the regulatory requirements

3.4 Research strengthens—reliability and validity measures applied

Reliability and validity demonstrate the way in which research processes are done as well as whether or not those research findings are trustworthy or not. The research should not mislead the participants or those who intend to use it.

If research is to be helpful, it should avoid misleading those who use it. The factors that influence validity and reliability are the initial research question the way in which data is collected and how it is analysed as well as what conclusions are drawn from it (Roberts & Priest, 2006)

Content validity is defined as "the degree to which items in an instrument reflect the content universe to which the instrument will be generalized" (Straub, Boudreau et al. 2004). The limit of the content validity is that content experts are not always available to validate the information as they may be situated in different geographical locations (Choudrie and Dwivedi, 2005).

From a reliability point of view if the sample group gives the same answers more than once, that is a test of reliability is then satisfied. (Trotter, 2012).

For the purpose of this study, Cronbachs alpha test will be employed to test reliability and validity of the results.

3.5 Research weaknesses—technical and administrative limitations

The limitations of the research are possible non-involvement of certain participants, which is mitigated by the sample size. It is also quite possible that some participants may not answer all the questions or answer the questions in ways that do not correlate with the structure of the questionnaire. Technical aspects could be potential loss of data during power surges.

4 PRESENTATION OF RESEARCH RESULTS

4.1 Introduction

The primary objective of the research is to evaluate the current technological interventions and the impact they have on business and consumer buy-in in the insurance industry with specific focus on payment collection systems and how it conforms to the Unified theory of acceptance and use of technology.

The purpose of using UTAUT theory within the insurance context is to validate certain assumptions, mainly whether there is a lack of understanding and knowledge from a user capability perspective, if age and competence play a significant role in acceptance of new technology as well as to determine if the quality of the user experience impacts user capabilities and attitudes.

The research gap was identified, as there currently are no empirical studies for the impact that payment regulation changes have on the corporate user within South Africa. Therefore, this chapter is set out to present and illustrate the findings of the first research question (section 4.2) – Assessing the impact with respect to business processes and whether PASA and Banking institutions are well equipped regarding technological advancements. This section is accompanied by an analysis of reliability and validity statistics, the descriptive statistics for our dependent variable and lastly the significance results from our Kruskal Wallis Test. It is also accompanied by its hypothesis: guidance and knowledge sharing does positively impact people's perceptions of their user experience when using DebiCheck. The second research question (4.3) - Evaluating whether Debicheck Payments collection systems and KPIs harbours more trust amongst stakeholders was analysed using an ordinal regression to determine whether peoples understanding of their KPIS as well as the thinking around the Debicheck Implementation process could predict the amount of trust that people had in the system. As in question 4.2, the reliability and statistics were run as well as descriptive statistics and Goodness of fit table as well as Parameter estimates were implemented. It is also accompanied by its hypothesis. Lastly, we analyse the results from our Ordinal Regression analysis and see whether our model is a good fit.

Third, in section (4.4), - analysing the effects of technological ability on implementing a national debit order collection system, a linear regression analysis was employed to predict whether the technological ability of an individual influences the perception

around the debit order collection system. Assumptions included homoskedacity and linearity (Yan & Gang Su, 2003). The Tech Savvy variable was treated as a continuous variable and then the results from a simple linear regression was employed to determine if the model was statistically significant and a good fit.
Each research questioned is accompanied by their respective hypothesis as outlined in section 1.2.3. Lastly, section 4.5 provides conclusions to the answers for the questions stated above.

4.2 Research Question 1: Assessing the impact with respect to business processes and whether PASA and Banking institutions are well equipped regarding technological advancements

A Kruskal Wallis Test was utilised in to determine whether guidance and knowledge would lead people to believe that their roles have a bigger impact concerning the Debicheck Implementation process. For this section, we analyse reliability and validity statistics (Table 3 and Table 5), the descriptive statistics for our dependent variable (Table 6) and lastly the significance results from our Kruskal Wallis Test (Table 8). The Kruskal-Wallis test is the nonparametric counterpart to the one-way ANOVA and is generally used when the normality and equal variances assumption has not been satisfied (Van Heck, 2011). Moreover, it is also used when the independent are not categorical as this implies that the items within the scale have equal distances amongst them.
The null and alternative hypothesis concerning the regarding the research question is that guidance and knowledge sharing specifically related to Debicheck systems have an influence on the perception of whether technological advancements are deemed to be positively impactful. First, we evaluate the reliability statistics concerning the *Guidance and Knowledge Sharing* variable, which was computed in SPSS using a multitude of questions relevant to the variable. Second, we analyse the descriptive statistics as well as conduct tests of normality in order to substantiate the reasoning for conducting a non-parametric test in the form of a Kruskal-Wallis as opposed to its parametric counterpart. Lastly, we observe results from our Kruskal-Wallis test and determine whether the differences in means are statistically significant.

4.2.1 Validity and Reliability Measures – Guidance and Knowledge Sharing

A reliability test is run in order to assess inter-item reliability of the scale concerning our selection of certain Likert scale questions that we think should be related to the same construct. This is done with the objective of computing a new scale variable that we can further use in in our Kruskal-Wallis test, which compares the means between three or more groups. Furthermore, a Pearson's correlation test is also conducted to establish whether items in the scale concerning *Guidance and Knowledge Sharing* is statistically valid for our study.

Table 1: Reliability Statistics – Guidance and Knowledge sharing scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.768	.768	5

In Table 1 above, the reliability statistics for *the Guidance and Knowledge scale* contained a Cronbach's Alpha statistic of .768. Other studies have shown that a Cronbach's alpha statistic greater than a value of .700 is generally accepted.

4.2.2 Descriptive Statistics – Reliability Analysis (Guidance and Knowledge sharing)

Table 2: Descriptive Statistics – Guidance and Knowledge Sharing Scale

	Mean	Std. Deviation	N
Debicheck Impact	3.88	.832	49
Debicheck Training	4.12	.857	49
Debicheck Limitations	3.55	.792	49
Debicheck Tech Ability	4.00	.764	49
Debicheck Process Perception	3.08	.954	49

Table 2 above displays the descriptives for our reliability analysis. Forty-nine observations were selected when conducting the statistical procedure concerning our scale. All questions contained within the scale followed a 5-scale Likert approach. Participants were asked certain aspects specifically related to Debicheck knowledge and guidance perceptions whereby they had to disagree or agree on the various elements. The resultant correlation co-efficient table indicates the relationship between these elements. The relationships between DebiCheck Impact and DebiCheck Training as well as DebiCheck limitations are statistically significant which implies that Training

is something that is perceived to be important to corporate users in order to have a greater impact with regard to the DebiCheck process. We also see that the DebiCheck Limitations are statistically significant to the DebiCheck Process Perceptions. This implies that the perceived elements that hamper the progress of the process impact the DebiCheck process as a whole.

Table 3: Correlations – Guidance and Knowledge sharing scale

		DI	DT	DL	DTA	DPP
Debicheck Impact	Correlation Coefficient	1	.664**	.515**	.459**	.511**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	49	49	49	49	49
Debicheck Training	Correlation Coefficient	.664**	1	.451**	.223	.191
	Sig. (2-tailed)	.000		.001	.124	.188
	N	49	49	49	49	49
Debicheck Limitations	Correlation Coefficient	.515**	.451**	1	.241	.546**
	Sig. (2-tailed)	.000	.001		.095	.000
	N	49	49	49	49	49
Debicheck Tech Ability	Correlation Coefficient	.459**	.223	.241	1	.200
	Sig. (2-tailed)	.001	.124	.095		.168
	N	49	49	49	49	49
Debicheck Process Per.	Correlation Coefficient	.511**	.191	.546**	.200	1
	Sig. (2-tailed)	.000	.188	.000	.168	
	N	49	49	49	49	49
***** Correlation is significant at the 0.01 level (2-tailed).***						

Table 3 above displays the Pearson's Correlation for all the items related to the *Guidance and Knowledge sharing* variable that is to be computed. This is done in order to ensure convergent validity for statistical tests following this section. *Debicheck Impact* had a statistically significant result with *Debicheck Training* ($r(49) = .664$, $p < .01$), *Debicheck*

Limitations (r (49) = .551, *p* <.), *Debicheck Tech Ability* (r (49) = .459, *p* <.01) as well *Debicheck Process Perception* (r (49) = .511, *p* <.01). *Debicheck Training* demonstrated a statically significant result with *Debicheck Limitations* (r (49) = .451, *p* <.01) and showed statically insignificant results concerning *Debicheck Tech Ability* and *Debicheck Process Perception*. *Debicheck Limitations* exhibited statically significant correlations with *Debicheck Process Perception* (r (49) = .546, *p* <.01). *Debicheck Tech Ability* showed statically insignificant results for all other variables except for the *Debicheck Impact variable*. Lastly, *Debicheck Perception Process* demonstrated statically insignificant results for both *Debicheck Training* and *Debicheck Tech Ability*. Based on the results of the correlation analysis, we can conclude that are results are reliable as the variables each contain at least one statistically significant result. Moreover, we then computed a *Guidance and Knowledge Sharing* variable by summing (adding) the responses.

4.2.3 Statistical Hypothesis Testing – Descriptive statistics for computed Guidance and Knowledge sharing variable

Table 4: Descriptive statistics for Guidance and Knowledge sharing variable

Descriptives	Statistic	Std. Error
Mean	22.7551	.52613
Lower Bound	21.6972	
Upper Bound	23.8130	
5% Trimmed Mean	22.9422	
Median	23.0000	
Variance	13.564	
Std. Deviation	3.68290	
Minimum	8.00	
Maximum	30.00	
Range	22.00	
Interquartile Range	4.00	
Skewness	-1.323	.340

When evaluating the descriptive statistics with respect to the *Guidance and Knowledge and Sharing* (*M* = 22.7751, *SD* = 3.6829) variable, the distribution is negatively skewed or skewed towards the right. One requirement concerning the running of a parametric test in the form of a One-Way ANOVA, is that it requires normality as well for the

dependent variables to be categorical, implying no importance in terms of the order of the groups, a condition that the variables in our hypothesis does not satisfy (Chan & Walmsley, 1997). We investigated the validity of the normality assumption by means of the following normality test below:

Table 5: Tests of normality

	Statistic	df	Sig
Shapiro Wilk			
Guidance Knowledge sharing a Lilliefors Significance Correction	0.911	49	0.001
Kolmogorov-Smirnov			
Guidance Knowledge sharing a Lilliefors Significance Correction	0.153	49	0.006

For the table above (Table 5), we require that the p-value to for either statistic to be greater than 5% for normality to be assumed. Both statistics demonstrate a statistically significant result, which leads to reject the null hypothesis that the distribution is indeed symmetrical.

4.2.4 Statistical Hypothesis Testing – Kruskal-Wallis test results

A Kruskal Wallis test was run, as dependent variable did not satisfy the normality assumption. Furthermore, our independent variables are also ordinal which is not ideal for a One-Way ANOVA statistical analysis. The dependent variable for this study is our computed variable while our independent variable is *Role Impact* at an individual level. This variable was obtained via the questionnaire whereby respondents had to rate whether their roles had a positive impact concerning the Debicheck process. The null hypothesis for this test is that Guidance and Knowledge is not a significant factor based on people's perception of their roles regarding the Debicheck implementation process.

Table 6: Kruskal-Wallis test results – Descriptive Statistics

Ranks	Role Impact	N	Mean Rank
Guidance and Knowledge Sharing	**Very Dissatisfied**	2	2.75
	Dissatisfied	3	19.83
	Neutral	26	21.35
	Satisfied	17	32.91
	Very Satisfied	1	45.50
	Total	49	

When observing the descriptive statistics above, we see that those that rated themselves as *Very Satisfied* contained the highest mean (*M = 45.50*). It also contained the least number of observations (1).

Table 7 - Kruskal-Wallis test results

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.a
Very Dissatisfied-Dissatisfied	-17.083	12.956	-1.319	.187	1.000
Very Dissatisfied-Neutral	-18.596	10.414	-1.786	.074	.742
Very Dissatisfied-Satisfied	-30.162	10.610	-2.843	.004	.045
Very Dissatisfied-Very Satisfied	-42.750	17.382	-2.459	.014	.139
Dissatisfied-Neutral	-1.513	8.654	-.175	.861	1.000
Dissatisfied-Satisfied	-13.078	8.888	-1.472	.141	1.000
Dissatisfied-Very Satisfied	-25.667	16.388	-1.566	.117	1.000
Neutral-Satisfied	-11.566	4.427	-2.613	.009	.090
Neutral-Very Satisfied	-24.154	14.463	-1.670	.095	.949
Satisfied-Very Satisfied	-12.588	14.604	-.862	.389	1.000
Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.					
Asymptotic significances (2-sided tests) are displayed. The significance level is .050.					

Evaluating Table 7 above, statistically significant results were shown for groups *Very Dissatisfied-Satisfied (F=-30.162, p<.050), Very Dissatisfied – Very Satisfied (F=-42.750, p<.050) as well as Neutral-Satisfied (F=-11.566, p<.050).*

In the table above, we focus on the fourth column (sig) and are able to identify the significant relationships from those that are less so.
Those less than .5 (0.004) have a statistically significant difference between two groups which are very dissatisfied and satisfied and neutral-satisfied.
These results indicate that those participants who were very dissatisfied did not believe that guidance and knowledge helps in this process.
Those who indicated that they were satisfied said that guidance and knowledge does help.
Dissatisfied-Neutral (.861) – this result is statistically insignificant and there is very little or no difference between the feelings of these participants.
Neutral-Satisfied (.009) – this result is statistically significant. In this we are able to build on the aspects that do infact make participants satisfied and try to implement those elements in order to get buy in from those are dissatisfied.

Based on the results of the correlation analysis, we can conclude that results are reliable as the variables each contain at least one statistically significant result. Moreover, we then computed a Guidance and Knowledge Sharing variable by summing (adding) the responses.
Furthermore, the overall result derived from SPSS is as follows:

Table 8: Hypothesis test summary

Hypothesis Test Summary		
Null Hypothesis	Sig a	Sig b
The distribution of Guidance Knowledge is the same across categories of Role Impact.	0.006	Reject the null hypothesis.
a *The significance level is .050.*		
b Asymptotic significance is displayed.		

Based on the evidence described above we can therefore reject our null hypothesis and conclude that Guidance and Knowledge does have an impact on people's perceptions of their own positive impact concerning the Debicheck Implementation process.

4.3 Research Question 2: Evaluating whether Debicheck Payments collection systems and KPIs harbours more trust amongst stakeholders.

An Ordinal regression was run to determine whether peoples understanding of their KPIS as well as the thinking around the Debicheck Implementation process could predict the amount of trust that people had in the system. The main reason why an ordinal regression was considered over its linear counterpart is due to the dependent variable having ordinal properties (Liu & Koirala, 2012). In this section we analyse the reliability and statistics for both the Payment Collection Process and KPI scores (Table 9,10,11 and 12), the descriptive statistics (Table 13), the model summary (Table 15), the Goodness of fit table (Table 16) as well as the Parameter Estimates (Table 19).
The null and alternative hypothesis for this specific research question is that the payments and collection systems as well as KPIs regarding the Debicheck process creates more trust amongst the relevant stakeholders. First, we observe the reliability statistics concerning the *Payment Collection Process* and The *KPIs* variable, which was also computed in SPSS, similar to the method in the previous statistical test. Lastly, we analyse the results from our Ordinal Regression analysis and see whether our model is a good fit.

Table 9: Reliability Statistics – Payments and Collection Systems Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.873	**.873**	**3**

The *Payments and Collection Systems* scale comprises of three questions intended to measure respondents' beliefs concerning the functionality of the Debicheck system. In Table 9 above, the reliability statistics for the *Payments and Collection Process* produced a Cronbach's Alpha statistic of .873, which would deem our scale to be fairly reliable.

Table 10: Reliability Statistics – KPIs

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.862	.862	2

The KPIs scale comprised of two items and satisfies the requirements for reliability as seen in Table 10 above. The Pearson's Correlation Coefficient for this statistic was statistically significant and relatively strong as seen in Table 11 below

Table 11: Correlations – KPIs

		KPI-Q	KPI-E
KPI - Query	Correlation Coefficient	1	.757**
	Sig. (2-tailed)		.000
	N	49	49
KPI - Escalation	Correlation Coefficient	.757**	1
	Sig. (2-tailed)	.000	
	N	49	49

Table 12: Correlations – Payments and Collection Process sharing scale

		PC-S	PC-E	PC-R
PayCollect - Systems	Correlation Coefficient	1	.706**	.722**
	Sig. (2-tailed)		.000	.000
	N	49	49	49
PayCollect - Education	Correlation Coefficient	.706**	1	.663**
	Sig. (2-tailed)	.000		.000
	N	49	49	49
PayCollect - Reporting	Correlation Coefficient	.722**	.663**	1
	Sig. (2-tailed)	.000	.000	
	N	1	.706**	.722**
***** Correlation is significant at the 0.01 level (2-tailed).***				

Table 12 above shows that all variables have relatively strong relationships with one another and have statistically significant correlations. We can therefore assume that the requirements for convergent validity have been satisfied and therefore we are able to proceed with our study. Similar to how to the *Guidance and Knowledge sharing* variable was computed in the previous research question, we summed the variables in order to compute a *Payment Collection Process* score.

4.3.1 Statistical Hypothesis Testing – Descriptive statistics for computed Payments and Collection Systems Scale

For our ordinal regression, the dependent variable is identified as Debicheck trust, which is an ordinal variable. Moreover, the independent variables are *Debicheck familiarity (Y/N)* which is categorical and the previously computed *Payment Collection Process* score, which has scale data properties.

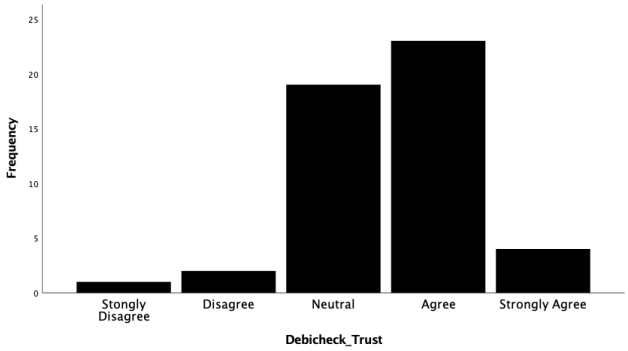

Figure 1: Frequencies for Debicheck Trust

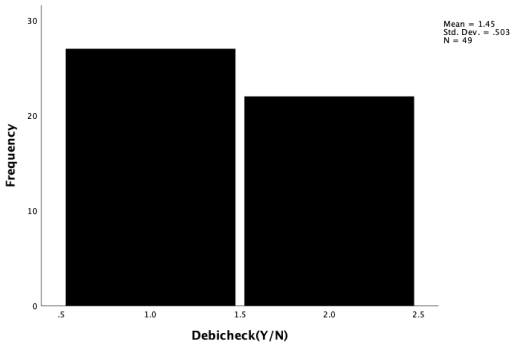

Figure 2: Frequencies for Debicheck (Y/N)

Source: Based on results of Field Work Surveys and created using SPSS

When observing the figures above, Figure 1 shows that most people agree that the Debicheck check system can indeed be trusted. Furthermore, figure 2 demonstrates that the participants in the study are also familiar with the Debicheck system.

By running an ordinal regression *with Debicheck Trust* being the dependent variable and Debicheck (Y/N), *KPI Score* and *Payment and Collection Sco*res, which are identified as our independent variables, we endeavour in trying to predict DebiCheck trust. A noteworthy observation is that those who were not familiar with the DebiCheck system displayed the highest mean, which may indicate that age or technical ability may play a role in skewed perceptions and possible resistance to the new DebiCheck system.

Upon further analysis, concerning the table below, the model explains 25.2% of variance in the dependent variable (there is a relatively good chance to predict variance in peoples trust in DebiCheck).

Table 13: Descriptive statistics For Payment collection Process score by Debicheck Familiarity

Descriptives			Statistic	Std. Error
Pay Collect Process Score	Debicheck (Y/N)			
	Yes	Mean	9.2593	.51083
		Median	9.0000	
		Variance	7.046	
		Std. Deviation	2.65435	
		Skewness	-.262	.448
		Kurtoses	.257	.872
	No	Mean	9.4545	.50849
		Median	9.0000	
		Variance	5.688	
		Std. Deviation	2.38502	
		Skewness	12.00	
		Kurtoses	-.367	.491

Observing the descriptive statistics concerning the *Payment Collection Process* score, those that were not familiar with the Debicheck system displayed the highest mean (*M=9.4545, SD=2.3850)*. However, those that are familiar with the system, demonstrated a higher standard deviation (*M=9.2593, SD=2.6543)*. Upon further evaluation, we also concluded that for the Payments Collection process score, the distribution does not deviate from normality and the variances between the groups in terms of familiarity are all equal as shown in the relevant tests in Table 14 below. The results are statistically insignificant for at least one of the groups.

Table 14: Tests of Normality and Equal Variances

	Statistic	***df***	***Sig***
Shapiro Wilk			
Yes	0.98	27	0.854
No	0.872	22	0.008
Kolmogorov-Smirnov			
Yes	0.128	27	0.2
No	0.288	22	<.001
Levene's Test of Equal Variances	0.787	57	0.379

4.3.2 Statistical Hypothesis Testing – Ordinal regression Analysis

We ran an ordinal regression *with Debicheck Trust* being the dependent variable. Furthermore, Debicheck (Y/N), *KPI Score* and *Payment and Collection Sco*res are identified as our independent variables. The results from the analysis are as follows:

Table 15: Model-Fitting information – Ordinal Regression Analysis

Model	**-2 Log likelihood**	**Chi-Square**	**df**	**Sig.**
Intercept Only	77.293			
Final	73.607	3.686	2	.006
Link function: logit				

Table 15 shows that we obtain a statistically significant result, which indicates that, our independent variables are able to accurately predict the variance in the dependent variable.

Table 16: Goodness of Fit – Ordinal regression analysis

Final	73.607	3.686	df
Pearson	115.067	.327	2
Deviance	69.905	.999	
Link function: logit			

Table 16 exhibits a statistically insignificant result for both the Pearson *(F (2) =115.607, p>.05)* and Deviance *(F=69.905, p>.05)* values which leads us to reject the null hypothesis and indicates that the model is a good fit. Upon further analysis concerning Table 17 below, the model explains 25.2% of variance in the dependent variable

Table 17: Goodness of Fit – Ordinal regression analysis

Pseudo R-Square	
Cox and Snell	.226
Nagelkerke	.252
McFadden	.113

Table 18: Test of proportional odds – Ordinal Regression Analysis

Model	**-2 Log likelihood**	**Chi-Square**	**df**	**Sig.**
Null hypothesis	81.116			
Final	64.355	16.812	9	.052
The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.				

Across the groups of people's trust, there are different perceptions of levels of trust. Do they trust it and distrust it the same way? These results are statistically insignificant accepting the null hypotheses showing that the location parameters are equal.

Table 19 – Parameter estimates

Descriptives		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Debicheck_Trust = 1]	1.171	1.714	0.467	1	0.495	-2.189	4.531
	[Debicheck_Trust = 2]	2.401	1.594	2.268	1	0.132	-0.724	5.525
	[Debicheck_Trust = 3]	5.336	1.731	9.504	1	0.002	1.943	8.728
	[Debicheck_Trust = 4]	8.459	1.995	17.983	1	0	4.55	12.369
Location	PayCollectSystems_Score	0.111	0.119	0.866	1	0.352	-0.122	0.344
	KPI_Score	0.746	0.251	8.818	1	0.003	0.254	1.238
	[DebiCheck=1]	-0.267	0.575	0.215	1	0.643	-1.393	0.86
	[DebiCheck=2]	0a	.	.	0	.	.	.
Link function: Logit								
a This parameter is set to zero because it is redundant.								

In the table above, we see that the KPI score is statistically significant and the Pay Collect Systems score being insignificant which doesn't lend to a trust score. It is not dependent on the system itself or whether the system is valid or not, but focus is placed on the KPIs in terms of trust.

Holistically if KPIs are included in the mix, payment collection systems cannot predict trust, but if we look at it together with KPIs, it does provide a more comprehensive outcome when trying to evaluate trust.

Therefore, process, familiarity and KPIs equals 25.3% of the model, which is a small but significant percentage.

An Ordinal Regression was conducted to test whether the payments collection process as well as KPIs could predict the level of trust with respect to the Debicheck System. It was discovered that there is a statistically significant relationship with KPIs and the Payment Collection process score as a collective. The independent variables also proved to be statistically reliable as well as valid for our study.

Therefore, the results affirm the hypothesis that the newly implemented debit order collection system will create trust in the stakeholders when evaluating whether Debicheck Payments collection systems and KPIs harbours more trust amongst stakeholders.

4.4 Research Question 3: Analysing the effects of technological ability on implementing a national debit order collection system

A linear regression analysis was employed to predict whether the technological ability of an individual influences the perception around the debit order collection system. Key assumptions of the regression include normality, homoskedacity and linearity (Yan & Gang Su, 2003). Furthermore, the researcher is to pay close attention to issues related to independence of observations, outliers as well as endogeneity.

The null and alternative hypothesis evaluates whether there is a relationship between the perceived technological ability of the user as well as the process surrounding the Debicheck Payment collection process. We observe the descriptive statistics concerning our *Tech Savvy* variable – an ordinal independent variable that we will treat as a continuous variable. We then evaluate the results from the simple linear regression analysis and determine whether our model is statistically significant and a good fit.

4.4.1 Descriptive Statistics

Table 20: Simple Linear Regression Descriptive Statistics

	Mean	Std. Deviation	N
Pay Collect Process Score	9.3469	2.51289	49
Debicheck Tech Savvy	4.00	.764	49

Table 20 shows that the variable with the highest mean value as well as standard deviation is *Pay Collect Process Score (M = 9.3469, SD = 2.51289).*

4.4.2 Statistical Hypothesis Testing – Simple Linear Regression Analysis

Table 21: Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error	Durbin-Watson
1	.369a	.136	.118	2.36020	1.492

In Table 21, the linear regression shows via the model summary that the predictor variable is able to explain 13.6% of the variance in the outcome variable (R Square). Due to this being a cross sectional study, the Durbin Watson statistic can somewhat be

ignored. However, if the study incorporated any time-series related elements, autocorrelation would still not be present, as an acceptable statistic ranges from 1.5-2.5

Table 22: ANOVA statistics

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.286	1	41.286	7.411	.009b
	Residual	261.816	47	5.571		
	Total	303.102	48			
a. Dependent Variable: Pay Collect Process Score						
b Predictors: (Constant), Debicheck Tech Savvy						

The ANOVA statistics in Table 22 above tests whether the linear regression model is a good fit. One should also take note that the p-value value is heavily influenced by the sample size. Larger sample sizes tend to drive statistical significance, which is not the case in our study. Based on the level of significance, the model is a good fit as p=.009(<.050).

Table 23: Coefficients table

Model	Descrip.	Unstandardized coefficients		Standardized	t	Sig	Collinearity Diagnostics	
		B	SE	Beta			Tolerance	VIF
1	Constant	4.490	1.816		2.473	.017		
	Debicheck Tech Savvy	1.214	.446	.369	2.722	.009	1.000	1.000
a. Dependent Variable: Pay Collect Process Score								

The Coefficients table (Table 23) exhibits that for every 1-unit increase in the independent variable results in an increase of 121.4% increase in the dependent variable. The result is also statistically significant for the independent variable *Debicheck Tech Savvy (p=.009).* Furthermore, since we are running a simple linear regression, multicollinearity would not affect our model, as there are no other independent variables in our study concerning the relevant research question.

Our Linear regression equation can therefore be written as follows:

$$Pay\ Collect\ Process\ Score = 4.490 + 1.214 DebiCheck\ Tech\ Savvy$$

Evaluating further assumptions – Simple Linear Regression Analysis

4.4.3 Normality and Homoscedastic Assumptions

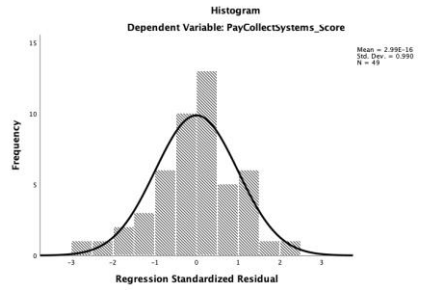

Figure 3: Normal Probability Plot for Dependent Variable

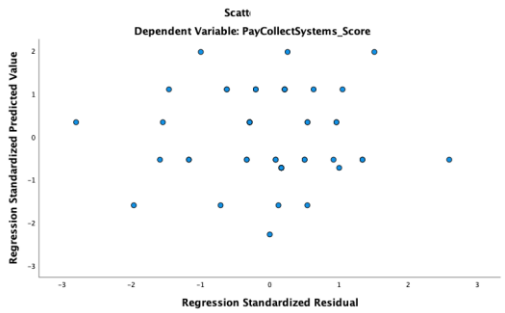

Figure 4: Residual Plot for Dependent Variable

Source: Based on results of Field Work Surveys and created using SPSS

Two assumptions concerning linear regression analysis is that the residuals are equally as distributed (Homoskedacity) and that they are normally distributed (Normality). When analysing figure 4 above, we cannot identify a clear pattern in the chart, and we can therefore assume that the homoscedastic assumption has not been violated. Moreover, figure 3 shows that although there could be a possible negative skew, the normality assumption is not violated. Even if the opposite were to be true, normality is not a critical factor that would invalidate the model.

Based on our findings above, we can therefore reject the null hypothesis and conclude that having a higher technological quotient does indeed lead to a better perception concerning the Payment Collection Processes for the Debicheck System

According to the literature, the challenges experienced in South Africa is not that there is a lack of technological advancement, but more that there is a lack of understanding and knowledge in the user capability as well as the access to the existing technology. These results affirm the hypothesis that technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing

4.5 Closing of Presentation of the Findings

A Kruskal Wallis Test was run in order to test if there was a significant relationship between Guidance and Knowledge as well as the impact of an individual. The scale of the computed Guidance and Knowledge sharing variable proved to be statistically reliable. The outcome of our inferential statistical procedure demonstrated that there is an impact concerning Guidance and Knowledge as there was a difference in means with respect to the ordinal variable (*Role Impact*).

Moreover, an Ordinal Regression was conducted to test whether the payments collection process as well as KPIs could predict the level of trust with respect to the Debicheck System. It was discovered that there is a statistically significant relationship with KPIs and the Payment Collection process score as a collective. The independent variables also proved to be statistically reliable as well as valid for our study.

Lastly, we ran a linear regression analysis to predict the relationship between the Payment Collection process score as well as technological quotient of the user. Although the technological quotient (Tech Savvy) is an ordinal variable, many studies have demonstrated that for the purposes for a linear regression analysis, we can treat it as continuous or scale data.

In Chapter 5 we discuss the findings in more detail and evaluate whether the findings agree to the contents presented in Chapter 2 of the Study.

5 DISCUSSION OF RESEARCH FINDINGS

5.1 Introduction

In this chapter, we explore the findings and interpretations from the results we have extracted and analysed from the research data. Further extrapolation of the results are explored by linking the results to the literature provided in Chapter 2. The objective in this chapter is to compare the research findings to the literature provided. Results that are similar as well as those that are contrasting are expanded on. Detail is given in support or negation of the hypothesis provided in the research questions. To end this chapter a summary of the analysis is given and further recommendations and conclusions given in Chapter 6.

5.2 Interpretation and discussion of the research findings

5.2.1 Assessing the impact with respect to business processes and whether PASA and Banking institutions are well equipped regarding technological advancements

From Chapter 4 the results of the analysis indicated that Guidance and Knowledge does have an impact on people's perceptions of their own positive impact concerning the Debicheck Implementation process.

This was discovered through elements that arose from questions 15 – 19 in the survey which were DC Impact, DC Training, DC Limitations, DC Tech ability and DC Process Perception. When analysing these elements via a correlation analysis, we found a significant relationship that presented itself through these elements.

The relationships between DebiCheck Impact and DebiCheck Training as well as DebiCheck limitations are statistically significant which implies that Training is something that is perceived to be important to corporate users in order to have a greater impact with regard to the DebiCheck process.

According to the literature, Bell and Pravitt (1992), believed that the accumulation of technology is not necessarily what brings a comparative advantage to corporates, rather, it is the technological knowledge and understanding, which is a "source of comparative advantage".

According to Niehaves and Plattfaut (2014), they argue that as organisations use the advance in technology to cut costs in service offerings to the consumer, "IT offers the

potential to raise economic performance, quality of life, and encourage full participation in society." (Niehaves & Plattfaut, 2014)

With these disparities provided, we see that there is most definitely a gap that exists in user capacity and capabilities that organisations should be cognisant of when implementing ICT advancements, even when it is thought to bring about a progressive step toward efficiencies. The cognisance in this instance is that in order to create a more interactive corporate user, the need for guidance and knowledge sharing is necessary.

A Kruskal Wallis Test was run in order to test if there was a significant relationship between Guidance and Knowledge as well as the impact of an individual. The scale of the computed Guidance and Knowledge sharing variable proved to be statistically reliable. The outcome of our inferential statistical procedure demonstrated that there is an impact concerning Guidance and Knowledge as there was a difference in means with respect to the ordinal variable (*Role Impact*).

The fourth determinant, according to Venkatash et all, 2003, when referring to the four determinants within the UTAUT framework, is facilitating conditions, which refers to the extent to which the participants believe that the new technology can be implemented or applied much more easily through the use of infrastructure. In this instance infrastructure can also be identified not only as physical machinery but also the use of formalised knowledge tools to create a greater participation and acceptance of the new technology.

According to Leahy & Dolan (2010), some people are excluded from the "knowledge society" that now exists when referencing the digital world and the results have shown that users find more value in being included through guidance and knowledge sharing.

The research question as to whether or not financial institutions are well equipped regarding technological advancements, can be answered by the fact that the analysis has confirmed the hypothesis that indeed, technological advancement is or will be more positively impactful if there is more guidance and knowledge sharing.

5.2.2 Evaluating whether Debicheck Payments collection systems and KPIs harbours more trust amongst stakeholders.

According to the results from Chapter 4, it has been identified that indeed the new DebiCheck system created trust in stakeholders.

When assessing the results of the ordinal regression, which was conducted to test whether the payments collection process as well as KPIs could predict the level of trust with respect to the Debicheck System, it was discovered that there is a statistically

significant relationship with KPIs and the Payment Collection process score as a collective. The independent variables also proved to be statistically reliable as well as valid for our study.

The analysis included two elements. One was KPIs and the other was Payment Collection Processes. When the two results were combined, it was identified that there was a more significant result which assumed the fact that KPIs when included in the analysis created a more holistic result and as a result implied that KPIs or perceived value from performance was what created trust amongst individuals together with trying to assess the variation in the levels of trust a participant had in the system.

The UTAUT framework relates to these findings through the first determinant of the framework, which is performance expectancy, which is defined as "the degree to which the user expects that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p. 447). According to the research, this has been identified as one of the most influential determinants in terms of a participant's intentional use of technology. However, it does not fully elaborate on the element of trust in terms of the setting and achieving of KPIs, which will be further added to the recommendations section in Chapter six of this research report.

In other research it has been identified that there is a larger focus on trust relationships between the user and Internet System itself, however this neglects to include the other elements that may also drive user trust and in this research report, it can be argued, that KPI's may be one of those elements.

Trust is a valuable element that reduces social and technical complexity (Luhmann, 1979; Gefen, 2000; Lee & See, 2004) and this trust becomes increasingly more important as technology advances along quite rapidly and includes more automation and system complexity. According to Vargo et al, 2008) value in the digital age will be created through increased cooperation from many stakeholders which increases trust. Further literature explains that regulations rolled out by government affect financial services in that it increases the workload and affects productivity levels for those in the financial industry in order to adapt business processes to comply with these regulations. (Silver, 2019).

The consequences of not addressing this issue in South Africa would lead to increased fraud **and reduced trust in the processes** of the NPS (National Payment System) and other financial role players in South African financial services industry.

Therefore, the results affirm the hypothesis that the newly implemented debit order collection system will create trust in the stakeholders when evaluating whether Debicheck Payments collection systems and KPIs harbours more trust amongst stakeholders.

Based on the results of the analysis and literature, it can be concluded that trust is a key elemental driver when implementing the payment system and KPIs together with process familiarity increases trust in the DebiCheck process.

5.2.3 Analysing the effects of technological ability on implementing a national debit order collection system.

This research question aims at analysing the effects of technological ability on implementing a national debit order collection system by trying to evaluate whether guidance and knowledge sharing will lend to technological advancements that will be more positively impactful. In negation to that, the null hypothesis states that the technological ability of a user does not impact the progress of implementing a national debit order collection system.

In Chapter 4, we ran a linear regression analysis to predict the relationship between the Payment Collection process score as well as technological quotient of the user. Although the technological quotient (Tech Savvy) is an ordinal variable, many studies have demonstrated that for the purposes for a linear regression analysis, we can treat it as continuous or scale data. According to this analysis, the results affirm the hypothesis that technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing.

The results in this research question do lend to affirming the hypothesis of the research question, however, it is noteworthy to mention that those participants who had a lower involvement in the process were more likely to reject the guidance and knowledge sharing and those that had a higher involvement in the process were more likely to accept the guidance and knowledge sharing.

This could be determinant of a perception of apathy for systems that are not fully integrated into the participant's work function or performance measures and a higher appreciation for the value that guidance and knowledge sharing brings in accordance with having a higher technological ability and being more involved in the process. It could also be indicative of the findings in the literature which speaks to the age of users which is also a determinant toward technology adoption as is evidenced in an article by

Niehaves and Plattfaut (2014) that internet users from the ages of sixty five years and above tend to be less technologically savvy when it comes to the use of ICT platforms.

The framework in Chapter 2 suggests that the second determinant is which is effort expectancy and is explained as the "anticipated complexity of the technology and the degree of energy needed to use it." (Vermaut, 2017, p. 5) could be relevant in order to encapsulate the result in this research question.
Based on our findings above, we can therefore reject the null hypothesis and conclude that having a higher technological quotient does indeed lead to a better perception concerning the Payment Collection Processes for the Debicheck System
According to the literature, the challenges experienced in South Africa is not that there is a lack of technological advancement, but more that there is a lack of understanding and knowledge in the user capability as well as the access to the existing technology. These results affirm the hypothesis that technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing

5.3 Conclusion of research findings

From the research and the analysis thereof, we find that all three questions have sufficiently satisfied each of the research question hypothesis.
In question one we assessed the impact with respect to business processes and whether PASA and Banking institutions are well equipped regarding technological advancements. The analysis indicated that indeed if guidance and knowledge sharing was more of a focus, it would positively impact technological advancements.
In question two, we sought to evaluate whether Debicheck Payments collection systems and KPIs harbour more trust amongst stakeholders. The resultant research indicated that the newly implemented debit order collection system would create trust in the stakeholders with a keen focus on KPI formulation.
When interrogating the statistical results question three we endeavoured to analyse the effects of technological ability on implementing a national debit order collection system. The conclusive statistical evidence indicated that technological ability of a user and technological advancements are more likely to be positively impactful if there is more guidance and knowledge sharing.
In Chapter 6, we discuss the conclusions and limitations in more detail and summarise the report with recommendations for further exploration of this study.

6 SUMMARY, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

6.1 Summary

The aim of this research project was to understand the Government regulated collection systems and its relationship to the financial corporate user in South Africa and the impact that these regulated collection systems have on the users in terms of their perceptions, trust and ability. This research project is posited against the backdrop of a technologically advanced environment with a lack in technological understanding and adaptability. It sought to identify elements within the DebiCheck process that were either detrimental or assistive to the implementation of the regulatory process as well as the way in which the participants perceived the process and these elements.

It was discovered that **technological advancements** are more likely to be positively impactful if there is more guidance and knowledge sharing when which speaks directly to the literature when referencing Bell and Pravitt (1992), who believed that the accumulation of technology is not necessarily what brings a comparative advantage to corporates, rather, it is the technological knowledge and understanding which is a "source of comparative advantage".

Secondly, the research discovered that indeed the newly implemented debit order collection system will create trust in the stakeholders (viz: corporate users) provided that their Key Performance Indicators speak directly to the process.

Third, it was discovered through the analysis that technological advancements are more likely to be impactful if there is more guidance and knowledge sharing when implementing a national debit order system.

We can also surmise from the research study that there are challenges however; these can be circumvented through practical applications like guidance, knowledge sharing as well as setting key performance indicators that directly relate to growing a sense of purpose and value specifically for those directly involved in the process.

6.2 Limitations

The research study was focused on financial service providers in South Africa but did not include information or survey results from all financial service organisations in South Africa.

The survey sample was not satisfied to its full extent as many participants in the survey did not respond to the survey, however the percentile of those who did respond was over 50% and therefore sufficient in order to conduct the research.

The respondents in the sample were chosen as they were specialists whose roles incorporated DebiCheck, which is a specialised function, therefore, the sample size was much smaller and the researcher relied on Whatsapp and online referral of the survey in order for it to be conducted.

6.3 Recommendations

Further study can be done by expounding on this topic as there is very limited research material and journal articles relating to DebiCheck, as it is a relatively new payment collection process.

Corporates that deal directly with DebiCheck should implement KPIs that sufficiently speak to the uptake of the process for the specialised groups.

There is room for further interaction between PASA and corporate users in order to further refine this process and incorporate more buy in through guidance and knowledge sharing.

According to the UTAUT framework, we find that additional targets or elements are neglected as a result of focus being poured into the relationship between the user and the IS itself. Other elements that are specific to the users and their own views on acceptance of new technology with regard to trust have not been broached in the framework literature. From an academic standpoint, this can be expounded on with further study into the way Key Performance Indicators impact the trust element when newly technologies are developed for adoption.

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Appendices

Appendix A: Research Online Survey (Questionnaire)

Structured Online Questionnaire

Thank you for participating in this study. Below is a declaration you will need to read in order to accommodate participation.

Declaration:

I hereby agree to participate in this research on an analysis of the impact of government regulated collection systems in the South African financial industry. I understand that I am participating based on my own will. I understand that this is a research project that will not benefit me personally but may make a contribution to literature. I understand that my participation will remain confidential and anonymous. I voluntarily choose to participate in this study.

The questionnaire may take 5-10 minutes of your time.

Start of Survey

1. How long have you worked in the insurance industry?

0-5 years	
6-10 years	
11-20 years	
More than 20 years	

2. How old are you?

25 - 35 years old	
36 - 45 years old	
46 – 55 years old	
Older than 56	

3. What is your gender?

Male	
Female	
Prefer not to say	

4. What department do you belong to?

Billings	
Operations	
Commissions	
IT	

5. Are you involved in the implementation of the DebiCheck process?

Yes	
No	

6. Is the implementation of DebiCheck part of your key performance measures?

Yes	
No	

7. Do you find reporting and implementing DebiCheck complex?

Yes	
No	

8. Do you believe DebiCheck will be effective in combatting debit order abuse in South Africa?

Yes	
No	

9. Do you believe DebiCheck will be effective in combatting debit order abuse in your current organisation?

Yes	
No	

10. Do you know why DebiCheck was implemented?

Yes	
No	

11. How satisfied are you with the processes involved in query resolution with regard to the banks response in relation to the following:

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Query Resolution					
Escalation					
Stakeholder satisfaction					

12. To what extent are you satisfied with the implementation of DebiCheck as part of your key performance indicators in terms of?

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Query Resolution					
Escalation					

13. To what extent are you satisfied with the way in which the payment collection system was implemented in your organisation in terms of

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Systems					
Education and knowledge sharing					
Reporting expectations					

14. To what extent are you satisfied with the way in which your role positively impacts the implementation of DebiCheck in relation to:

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Individual performance					
Acknowledgement of your value in the process					

15. To what extent do you agree that the newly implemented DebiCheck system will positively impact your organisation?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

16. To what extent are do you agree that if more training and knowledge sharing was available, that there would be a more positive attitude toward the implementation of DebiCheck by your clients?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

17. To what extent do you believe that the end user (clients) and the corporate user (you) would trust the DebiCheck system while acknowledging the technological limitations that exist?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

18. To what extent do you agree that if the end user (clients) were more technologically savvy, your role of implementation would be a lot easier?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

19. To what extent do you agree that internal systems and processes in your organisation promote the ease of implementation of DebiCheck?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

20. What could regulators and banks do to create more efficiency for the corporate users to implement DebiCheck?

    Free text response required, use the box below to respond.

Appendix B: Figures

Figure 1. Source: National statistical offices and ITU World Telecommunication Indicators Database.

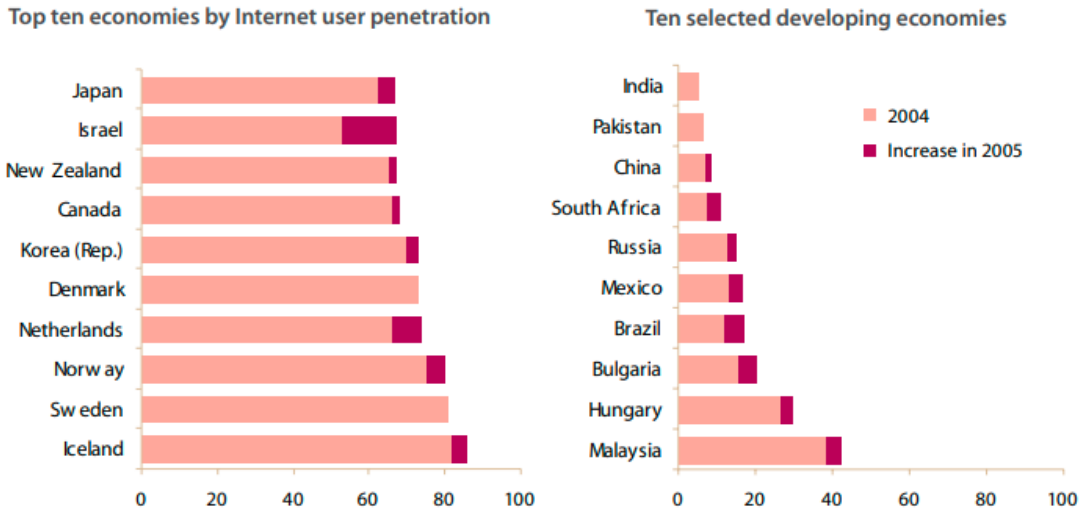


Figure 2. Source: ITU World Telecommunication Indicators Database

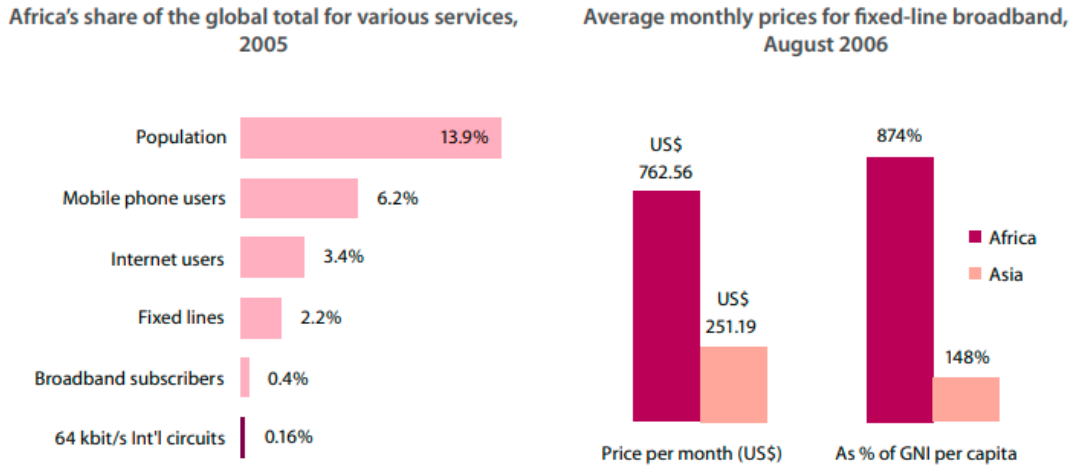
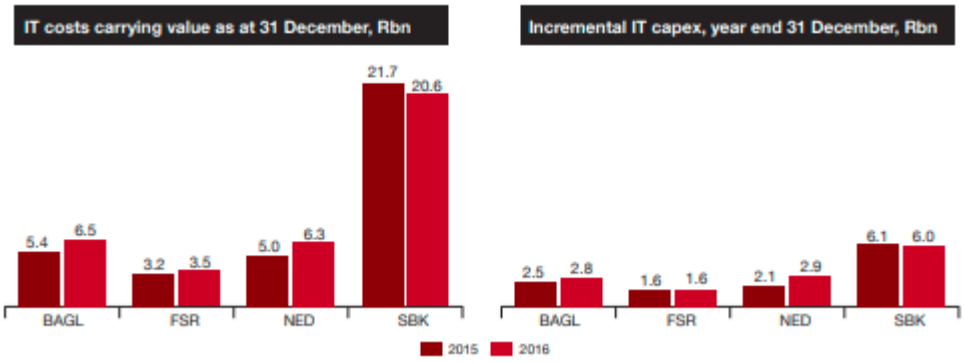


Figure 3. Source: Global Financial Development, 2014 and authors' calculations.

Region/Sub-Region		ATM per 100,000 adults	% of adults using mobile money	% of adults using electronic payments
Africa		15.4	7.7	3.4
of which	Sub-Saharan Africa	13.9	8.8	3.7
	North Africa	16.8	6.6	3.1
	East Africa	3.4	21.8	2.4
	West Africa	7.8	1.6	0.9
	West Africa without Nigeria	6.5	0.6	0.7
	Southern Africa	26.7	5.6	8.0
	Southern Africa without South Africa	22.5	5.7	7.4
Latin America & Caribbean		43.2	1.4	5.8
High income: OECD		97.0	2.3	57.9
Low income group including Africa		14.7	8.5	2.6
Low income group excluding Africa		14.1	4.4	2.8

Figure 4. Source: Barclays, FirstRand, Nedbank and Standard Bank annual reports; Strategy & analysis



Appendix C:

Figure 5: Summary of UTAUT Applications (Venkatesh et al, 2003)

Table 1. Summary of UTAUT Applications

Source	User	Technology	Task	Time	Organization	Location	Relationships Validated
Alapetite et al. (2009)	Physicians	Speech recognition	Electronic medical recording	Adoption	Clinical departments in a hospital		Expectations vs. experiences of UTAUT variables
Al-Shafi et al. (2009)	Citizens	E-government services		Adoption	Fifteen public agencies	Qatar	Main effects and the moderating effects of age, gender, and experience
Bühler & Bick (2013)	Citizens	Accessing political social media appearances	Political campaigns	Adoption and use		Germany	Main effects and the moderating effects of age, gender, experience, and voluntariness
Chang et al. (2007)	Physicians	Clinical decision support system	Diagnosing	Adoption	Three hospitals	Taiwan	Main effects in UTAUT
El-Gayar and Moran (2007)	Students	Tablet PC	Learning	Adoption	A public university	Midwest USA	Main effects in UTAUT
Gruzd et al. (2012)	Academic researchers	Social media	Research	Adoption and use	The American Society for Information Science and Technology		Main effects in UTAUT
Gupta et al. (2008)	Employees	Internet		Adoption	A government organization	India	Main effects and the moderating effects of gender
Liao et al. (2004)	Students	Web-based learning environment	Learning	Adoption	A university	South USA	Main effects in UTAUT
Pynoo et al. (2011)	Teachers	Digital-learning environment	Teaching, communication, and administration	Adoption, initial use, and final use	A secondary school	Dutch-speaking part of Belgium	Main effects in UTAUT
Seid & Lessa (2012)		Telecenter		Adoption		Ethiopia	Main effects in UTAUT
Workman (2014)	Consumers	Social media and smartphone applications	Social networking and daily 'functions' such as navigation, weather information, & travel arrangement	Use		Florida, USA	Main effects and the moderating effects of experience

Figure 6: Summary of UTAUT Integrations (Venkatesh et al, 2003)

Table 2. Summary of UTAUT Integrations

Source	Technology	Dependent Variable	Theoretical Foundation	Role of UTAUT	Other Mechanisms
Guo & Barnes (2011, 2012)	Virtual world	Purchase intention	Motivation theory, transaction cost theory, and UTAUT	Performance expectancy, effort expectancy, and social influences affect intention	Perceived value, enjoyment, general achievement, and habit
Hess et al. (2010)	Online discussion forum	Intention to use	Equity-implementation model (Joshi, 1991) and UTAUT	Main effects in UTAUT	Perceived equity
Hong et al. (2011)	Agile IS	User acceptance	Tripartite model of attitude (e.g., Eagly & Chaiken, 1993), status quo bias, omission bias, and the availability heuristic	Performance expectancy, effort expectancy, social influences, and facilitating conditions affect intention	Disconfirmation and satisfaction, comfort with change, habit, and personal innovativeness
Kim et al. (2007)	Portfolio of IT applications	IT use	IS success model (DeLone & McLean, 1992) and UTAUT	Performance expectancy and social influences affect IT utilization	User satisfaction affects IT use
Lian & Yen (2014)	Online shopping	User acceptance	Innovation resistance theory and UTAUT	Main effects of UTAUT as the drivers of online shopping acceptance	Usage, value, risk, image, and tradition as the barriers of online shopping acceptance
Miltgen, Popovic, & Oliveira (2013)	Biometrics	User acceptance	Technology acceptance model (TAM), diffusion of innovations (DOI), and UTAUT	Social influences and facilitating conditions affect user acceptance	Innovativeness and compatibility from DOI, perceived usefulness and perceived ease of use from TAM, trust, privacy concern, and perceived risks
Oliveira, Faria, Thomas, & Popovic (2014)	Mobile banking	User adoption	Task-technology fit theory (TTF), initial trust model, and UTAUT	Main effects of UTAUT and the moderating effects of age and gender	Task-technology fit affects performance expectancy and adoption intention, environmental factors and performance expectancy affect initial trust that in turn influences adoption intention
Pramatari & Theotokis (2009)	RFID-enabled services	Consumer acceptance	Theory of planned behavior (Fishbein & Ajzen, 1975)	Performance expectancy and effort expectancy affect attitude	Attitude, technology anxiety, and privacy concern
Sun, Liu, Peng, Dong, & Barnes (2014)	Social networking	Continuance intention	IS continuance, flow theory, social capital theory, and UTAUT	Main effects of social influence and effort expectancy	User satisfaction, perceived enjoyment, norms, trust, tie strength, and perceived usefulness

Appendix D:

Figure 7: Types of UTAUT Extensions (Venkatesh et al, 2003)

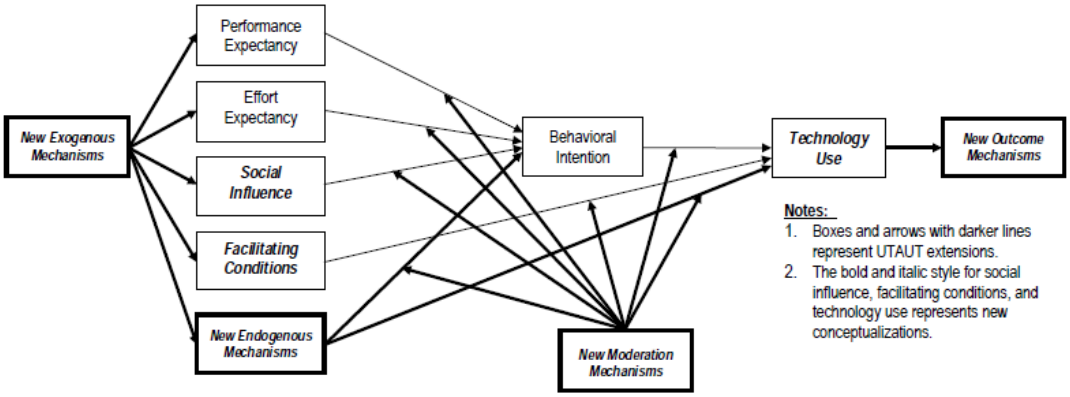
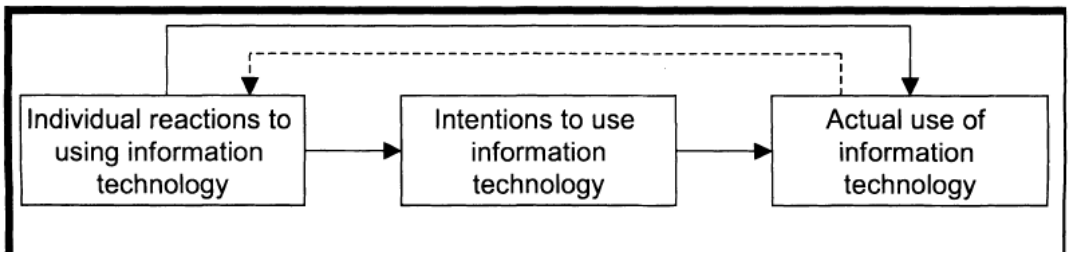


Figure 8: Basic concept underlying user acceptance models (Venkatesh et al, 2003)



Appendix E:
Figure 9: Summary of UTAUT Findings (Venkatesh et al, 2003)

Hypothesis Number	Dependent Variables	Independent Variables	Moderators	Explanation
H1	Behavioral intention	Performance expectancy	Gender, Age	Effect stronger for men and younger workers
H2	Behavioral intention	Effort expectancy	Gender, Age, Experience	Effect stronger for women, older workers, and those with limited experience
H3	Behavioral intention	Social influence	Gender, Age, Voluntariness, Experience	Effect stronger for women, older workers, under conditions of mandatory use, and with limited experience
H4a	Behavioral intention	Facilitating conditions	None	Nonsignificant due to the effect being captured by effort expectancy
H4b	Usage	Facilitating conditions	Age, Experience	Effect stronger for older workers with increasing experience
H5a	Behavioral intention	Computer self-efficacy	None	Nonsignificant due to the effect being captured by effort expectancy
H5b	Behavioral intention	Computer anxiety	None	Nonsignificant due to the effect being captured by effort expectancy
H5c	Behavioral intention	Attitude toward using tech.	None	Nonsignificant to the effect being captured by process expectancy and effort expectancy
H6	Usage	Behavioral intention	None	Direct effect

Appendix F: Permission Letter

University of the Witwatersrand,
Wits Business School
2 St Davids Pl &, St Andrew Rd, Parktown, Johannesburg, 2193
011 717 3544

Company Secretary
Wilna van Zyl
Clientele
Clientele Office park, Cnr. Alon and Rivonia Roads, Morningside, Sandton, 2128

9th February 2021

Dear Madam,

Re: Permission to conduct research at Clientele

My name is Claire Peters

I am an operations manager at Clientele.
I am studying for an MBA in the Wits Business School at the University of the Witwatersrand. I am seeking permission to do research at Clientele.

I am conducting research on the ***Government regulated collection systems and the financial corporate user in South Africa***. in reference to the digital divide as well as the user capabilities and the users willingness to adopt the new technology.

The research will entail collecting data from staff.

I will invite individuals from your organisation to participate in this study.
I will be conducting an online survey with the billings, operations, IT and commissions teams in the organisation.
If they agree, they will be asked to complete an online survey that is about 10 minutes in length and responses will be collected via survey monkey or qualtrics which are survey tools.

Participants will be asked to give their written or verbal consent before the research begins. Their responses will be treated confidentially, and identities (their names and the name of the organisation) will be anonymous unless otherwise expressly indicated. Individual privacy will be maintained in all published and written data resulting from the study.

The results will be communicated in an MBA research article (dissertation)

The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study. The participants will not be paid for this study.

All research data will be destroyed.

I therefore request permission in writing to conduct my research at your organisation.

The permission letter should be on your organization's headed paper, signed and dated, and specifically referring to myself by name and the title of my study.

Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely,

Claire Peters

Researcher
Claire Peters
072 844 2230
912525@students.wits.ac.za

Supervisor
Ms. Rukudzo Pamacheche
011 717 3544
698247@students.wits.ac.za

Appendix G: Consent Form

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Consent Form

Title of Research: Government regulated collection systems and the financial corporate user in South Africa

Name of researcher: Claire Peters

I, ……., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

Please circle the options that are relevant to you below

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in her research report	YES	NO
I agree that the online survey results may be recorded on a password protected computer	YES	NO
I agree that the information I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained.	YES	NO

Name of participant: _____

Signature of participant: _____

Date: _____

Name of researcher: Claire Peters

Signature of researcher: CPeters

Date: _____

Appendix H: Participation form

Re: Letter of Participation

Dear Sir / Madam,

My name is Claire Peters and I am a Masters student in Wits Business School at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating ***government regulated collection systems and the financial corporate user in South Africa*** under the supervision of Ms. Rukudzo Pamacheche . The aim of this research project is to find out what impact government regulation implementation has on the corporate user.

As part of this project, I would like to invite you to take part in answering an online survey questionnaire. This activity will involve answering a few survey questions and will take around 10 minutes . With your permission, I would also like to record the survey using online survey database technology.

There will be no personal costs to you if you participate in this project, You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The online survey will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. If you experience any distress or discomfort at any point in this process, you may stop the survey or resume at another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. The data collected from this research project will be stored on a password protected laptop. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrec-medical.researchoffice@wits.ac.za

Yours sincerely,
Claire Peters

Researcher:
Claire Peters, 912525@students.wits.ac.za, 072 8442230
Supervisor:
Rukudzo Pamacheche, 698247@students.wits.ac.za, 011 717 3544

Appendix I: Permission Letter

Claire Peters

University of the Witwatersrand
WITS Business School
2 St David's Pl & St Andrew Rd
Parktown
2193

9 February 2021

Dear Claire

RE: PERMISSION TO CONDUCT RESEARCH AT CLIENTÈLE LIMITED

Permission is hereby granted for you to conduct research at Clientèle Limited and its subsidiaries on the **Government regulated collection system and the financial corporate user in South Africa** in reference to the digital divide as well as the user capabilities and the user's willingness to adopt the new technology.

It would be appreciated if a copy of your final research (dissertation) could be shared with Clientèle Limited.

Yours sincerely,

Wilna van Zyl

Group Company Secretary

Appendix J: Ethics Clearance

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

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

Ethics Clearance Certificate

Ethics protocol number: WBS/BA912525/230
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

This certificate is only valid if accompanied by formal permission from the relevant stakeholder(s).

Project title	Government regulated collection systems and the financial corporate user in South Africa.
Investigator / Researcher	Ms Claire Peters
Nature of Project	MBA (Research Article)
Decision of the Committee	Approved unconditionally
Issue Date of Certificate	2021-02-05
Expiry date	Date of submission of the project report
Chairperson	Prof Anthony Stacey ☎ +27 11 717 3587 +27 82 880 4531 Anthony.Stacey@wits.ac.za

Declaration by Researcher

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

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

Signature

2021-02-05

Date: