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The Impact of Mobile Banking Technology Adoption on The Demand for Cash in South Africa

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The Impact of Mobile Banking Technology Adoption on The Demand for Cash in South Africa

Ntwanano Nghatsane

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

Wits Business School

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ABSTRACT

Mobile Technology's exponential advances in the last century have dramatically altered how the planet works. From the invention of the aircraft, which revolutionized aviation, through the more modern invention of the internet, which has influenced how individuals and companies interact and do business. ATMs (Automated Teller Machines) are a clear example of how banking technology has progressed.

This study investigated how the technology adoption theories with focus on, usefulness, ease of use, credibility, attitudes towards use and intention towards use can be utilised to understand if and how mobile banking technologies can be used to substitute for cash demand within the Gauteng, South Africa.

It was found that whilst all of the factors researched do play a role in determining if consumers are likely to use mobile banking technologies over cash, credibility played the most important role.

Future studies can expand the geographical reach of the study to see if any variations will be realised.

DECLARATION OF ORIGINAL WORK

I, Ntwanano Nghatsane, declare I declare that the impact of banking technology adoption on the demand of cash in South Africa is my work and that all the sources that I have used or quoted have been indicated and acknowledged, utilising complete references.

Student Name	Signature	Date
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I dedicate this thesis to everyone that supported me and pushed me along the way. Firstly, my wife and daughter from whom a lot of time I stole. Without your understanding, it would have made this even more difficult than it already was. Secondly, to my parents, thank you for instilling the importance of education in me and leading the way by example. The sacrifices that you made for me to get to where I am is greatly appreciated.

Thirdly, I am grateful to everyone (family and friends) who pushed me to complete this research after having taken a break and finding it hard to start again. Without the constant pressure, I am not sure if I would have started. Lastly, thanks to my supervisor who took me on and guided me along the way. Your honest feedback will not be forgotten.

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Mobile technology has changed how businesses communicate to consumers, stakeholders and other third parties (Poznanska & Badzinska, 2017). The South African telecommunications market made ZAR145 billion in service revenue in 2017, 76,6% of which was from mobile technology, highlighting the dominance of mobile for personal and productivity purposes (Mason, 2019). Different industries across the world have utilised this growth in mobile availability to develop value- added solutions for their customers. Kim et al (2014) are of the view that mobile technology is significant in improving productivity, facilitating access to information, enhancing communications and reducing operational costs and that the early adopters of these technologies will set the direction and will achieve a competitive advantage.

The banking industry has been one such industry and this has enabled the industry to develop new solutions which in some instances have replaced existing products (Deloitte, 2014). The South African banking market has historically been dominated by the use of cash as means of transacting but digital disruption in the industry has altered how consumers use banking services and products (PWC, 2020). Mobile technology refers to wireless internet connectivity through smartphones/tablets, USB flash drives, wireless modems, and other mobile devices. Data networks like SMS (short message service) and MMS (multimedia service) were first launched in 1991 as part of the second generation (2G) of cell phone technologies, and eventually developed into wireless internet connectivity with GPRS (General Packet Radio Service). and EDGE (Enhanced Data GSM Evolution) (ElectronicsForu, 2018).

In Urban settings such as the Gauteng Province, banking customers seems to have switched from cash and other products (such as cheques) to new payments technologies (Gibert, 2019). The cheque is a major causality to these changes as it got discontinued in the country as a payment instrument as of 31 December 2020 (SARB, Cheques will no longer be used in the national payment system, 2020).

Literature highlights the impact advances in mobile technologies have on cash demand diffusion (Mlambo, 2020). The improvement in-network coverage to nearly the entire country has further accelerated the adoption of this technology in South Africa (Malinga, 2019). This improved access to mobile technology is expected to have an impact on the types of banking services which customers utilise. This study aims to assess how customers are likely to use mobile payment technologies as an alternative to cash.

1.2 PROBLEM STATEMENT

Mobile technology has revolutionised the way business is conducted, and the banking sector has not been left out in this regard. As technological advancement occurs, banks have been trying to understand how to integrate new technologies into their industries (Dwi Suhartanto, 2019). Technologies such as electronic wallets which allow users to send money without the need for a bank account, mobile banking applications which gives consumers the ability to perform banking services on their mobile devices are some of how majority of the banks have successfully implemented new technologies within their industries (Arunda, 2015).

The challenge is that little research has been conducted on South Africa's Commercial Banking sector to understand how mobile technology usage impacts the demand for cash by the banking customers and what drives banking customers to adopt mobile technology over the alternative of using traditional cash. This study assesses the impact of mobile technology usage as alternative to cash demand in commercial banks in the Gauteng province of South Africa.

1.2.1 PRIMARY OBJECTIVE

This study aims to assess how mobile technology has affected the use of cash in urban areas of South Africa. Our objectives are, therefore:

- To examine the determinants of the usage of mobile technology as an alternative to cash by banking customers in Gauteng

1.2.2 Research questions

- What are the determinants of the usage of mobile technology over cash by banking customers in Gauteng?

1.3 THE SIGNIFICANCE OF THE STUDY

The primary objective of the study is to determine the impact and adoption of mobile technologies innovations towards cash demand usage in commercial banks in South Africa. Although many papers focus largely on trying to understand how new technologies are adopted, a few papers do exist which try to understand specifically the determinants of the adoption of banking technologies.

This research aims to add to the body of information by examining the effect of different banking innovations and their implementation on overall cash demand, with a particular emphasis on the South African industry at the consumer level. The study's aim is to see whether any country-specific patterns and characteristics have an effect on overall demand adoption in South Africa.

1.4 DELIMITATIONS OF THE STUDY

The study focuses on the banking customers of any of the five commercial banks in South Africa, namely Standard Bank, ABSA, Nedbank, FNB and Capitec. The customers are expected to have used more than one type of mobile banking technologies transactional systems. Commercial banking clients were not included in the report because it only aimed at private entities. This study's technology is limited to the mobile banking payment technologies that consumers use to complete transactions.

CHAPTER 2: LITERATURE REVIEW

2.1 THEORETICAL UNDERPINNING

The aim of the chapter is to review the new technology adoption theories and how these technologies are disseminated across potential users. Furthermore, it reviews the impact that banking regulations have on new technologies and how banks in South Africa take this into account.

2.1.1 Theory of Reasoned Action (TRA)

Working on the assumptions that people make use of all the information available and make choices rationally and sensibly , Sheppard, Hartwick, and Warshaw (1988) asserted that attitudes and subjective norms would direct the actions and choices of individuals. The intention, driven by the attitudes and subjective norms, drives the end action of the individual. Two factors: beliefs and evaluations about the consequences of the action, impact the attitudes that people have. The perception of expectations of action by significant others and people's motivations to comply with these expectations impact the subjective norms. The theory of reasoned action is used in the study to evaluate if subjective norms impact the adoption of non-cash payment technologies and to what degree?

2.1.2 Theory of Planned Behaviour (TPB)

Ajzen (1991) theorised that the best predictor of whether a person was going to do something was largely based on the persons intention. In applying it to technology the model asserts that the probability of someone accepting a new technology is largely based on their willingness. The Theory of Planned Behaviour is an evolution of the TRA model by adding dimension to Behavioural and Normative beliefs. TPB posits that perceived behavioural control of an action has a large influence on whether a certain action will be conducted. If an individual believes that they will be able to perform the action they are most likely to perform it. The Theory of Planned Behaviour asserts that an individual's decision takes into account three different beliefs: behavioural, normative and control beliefs. Behavioural beliefs are determined by the probability that certain consequences are likely and usual normally result in a favourable or unfavourable attitude toward a specific behaviour. Normative beliefs are

determined by how an individual believes other people expect their behaviour to be and result in increased social pressure. Control beliefs add a third dimension whereby an individual believes that certain factors exist that may directly affect how positive or negative the result of decision is. In ideal circumstances, the greater the influence of these factors, the likelier that a particular decision will be taken (Sniehotta, Presseau, & Araújo-Soares, 2014). The TPB theory is used to determine if people perception of being able to utilise the new technology impact their propensity to use it.

2.1.3 Technology Acceptance Model (TAM)

TAM is one of the most influential extensions of Ajzen and Fishbein's theory of reasoned action (TRA) in the literature. Davis's technology acceptance model (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989) is the most widely applied model of users' acceptance and usage of technology (Venkatesh, 2000). This model is an extension of the theory of reasoned action and asserts that the usefulness as perceived by the individual and the ease of use are the biggest determinants of acceptance of new technology (Venkatesh & Davis, 2000). This model was developed initially to understand how people in the work environment are likely to utilise new technologies. Perceived usefulness can be described as the belief that the new technology will result in improved performance whilst ease of use is defined as the impact that the new technology will have on the effort required to perform similar tasks. Dahlberg, Mallat, and Öörni (2003) added additional elements, namely trust and security, to this model to make it more robust in their analysis of consumer acceptance of mobile payment solutions.

According to the TAM model, two variables determine a person's willingness to use new innovations: convenience and usability. Convenience is defined as how much an individual accepts that using a certain technology would free them from the effort required to perform and existing task. (Davis et al., 1989: 985). The impact of apparent usability on demeanour has appeared in different investigations applied to various settings (Chau and Lai, 2003, Hernández, 2010). It was additionally discovered that this build emphatically affects the demeanour toward versatile interpersonal organisation games (Park, Baek, Ohm, and Chang, 2014); and as per Ha, Yoon, and Choi (2007) on disposition toward portable games. Thinking about these basics, we have defined the accompanying theory: Since the first TAM, seen value has been

applied to a wide scope of ITs to quantify development execution for work, life and study (Liu and Li, 2011). As per Davis (1989), saw value can be characterized as: "how much an individual accepts that utilizing a particular framework will expand their work execution" (p. 985). The TAM model is utilised to understand how people perceive non-cash payment methods and how easy it is to perform similar payments for similar transactions.

2.1.4 Dissemination of mobile technology innovations (DOI)

The Diffusion of Innovation theory was developed by E.M. Rogers in effort to understand how new ideas and developments are adopted across a selected group of individuals. The adoption of a revolutionary idea is the result of this diffusion by individuals who are critical to a social framework. The characteristics and behaviour patterns vary amongst the different groups across the adoption spectrum. Adopters can be grouped into innovators, early adopters, early majority, late majority, and laggards. (Rogers, 1976)

A number of different factors will impact how far and how fast a new development is adopted across a selected sample. How easy an idea is, how ready the people and the systems are to implement the new idea, how safe people believe the new idea development to be and what perceived advantages that the new development will bring are the critical considerations which will impact diffusion (Oliveira, Thomas , & Espadanal, 2014).

There comes a moment in the pace of adoption when an innovation hits critical mass. Diffusion takes several forms and is very dependent on the sort of adopters and the innovative decision-making process. Innovativeness, defined as the degree to which an individual adopts a novel concept such as mobile banking technology, is the criterion for adopter classification (Zhu, Lyu, Long, & Wachenheim, 2021).

2.2 BANKING REGULATION

The South African banking industry is regulated by the Banks Act, the Financial Sector Regulation Act 9 of 2017, the Mutual Banks Act 124 of 1993, the Co-operative Banks Act 40 of 2007, and the Co-operatives Act 14 of 2005. These acts serve to ensure adequate governance and to ensure that the rights of the public and the banks are upheld (SARB, Regulated Institutions, 2021).

It is because of the regulations, that any changes and innovations that banks develop go through a thorough process of scrutiny to ensure that they meet the requisite regulations and security requirements. It is because of this that banks employ experts in security, legislation, and other key areas to ensure that day to day developments new payment methods meet all the requirements (Insights, 2020). These internal controls are what lead to the constant development of new banking technology by banks.

2.3 RELATIONSHIPS BETWEEN CASH AND OTHER PAYMENT INSTRUMENTS

Several assertions have been developed which allude to how consumers will decide on a particular payment instrument at the point of sale. Using the consumer's extensive and intensive margins economic theories to understand why individuals reduced their use of cheques as a mean of payment, Schuh and Stavins (2011) found that the choices were attributed to the payment characteristics of the instrument (costs, convenience, record keeping and timing), the increase in the acceptability of other payment instruments and differences in demographic attributes.

Wakamori and Welte (2013) found that the decision to use a particular payment instrument was largely determined by the value of the transactions that the consumers were doing. It found that in the UK and Canada consumers chose to utilise cash for transactions below $25. In conducting this research, the authors identified four different consumer groups: Cash Users: consumers who choose to pay only by cash; Debit Users: consumers who utilise debit cards as a first preference but will switch to cash where they are not accepted; Credit Users: consumers who utilise debit cards (payment card which accessing funds from a user's bank account) as a first preference

but will switch to cash where they are not accepted and Mixed Users: consumers which utilise all three different kinds of payment methods (Wakamori & Welte, 2013).

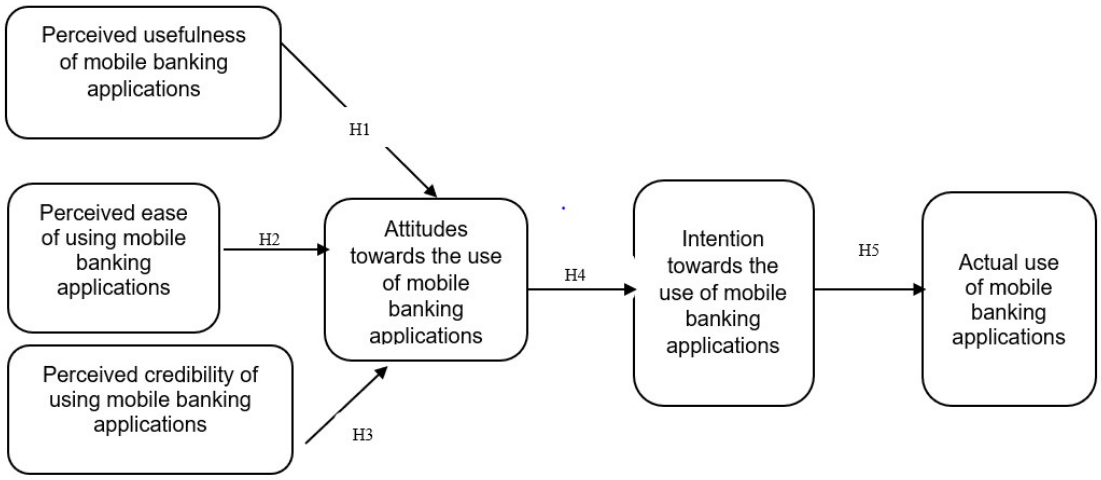
The split was conducted to highlight that some consumers have strong preferences towards a single method of payment and as such would use them only when accepted by merchants. The research tried to understand if the preferences were either demand (consumers) or supply (merchants) driven where consumers might have been avoiding the costs which are incurred when using other payment forms (in this case bank cards). It was found that the choice to utilise cash for smaller value transactions would not be impacted by a change in the acceptability of cards by merchants or a reduction in the costs incurred (Wakamori & Welte, 2013). Bounie and François (2006) also found similar results in their work where the hypothesis was to see a decrease in cash usage as a result of technological payment alternatives.

Goodhart and Krueger (2001) concluded that although technology-based payment systems may be “fascinating”, they were very far from replacing cash usage. They found that some people still preferred to use cash, especially where there was an element of anonymity involved. Cash was also preferred over other forms of payment because the recipient could use it immediately after they had received it. Cash usage also did not require any learning of systems and that most literate and illiterate individuals could utilise the payment method without the need for new learning. It was also found that the existence of black and grey economies would continue to ensure the existence of currency in the future. As part of the research, the pair found that the advance of ATMs had had a positive impact on the demand for cash as a result of increased availability. Card payments did however have a negative impact on the demand for cash. The impact however for both ATMs and card payments was linked to smaller denominations of money implying that these were used to settle smaller transactions. (Goodhart & Krueger, 2001). Arango, Huynh, Fung, and Stuber (2012) found that the type of debit and credit card account plans individuals had affected how consumers pay at the point of sale. During this study, they found similar to Wakamori and Welte (2013) that for values below $25 cash is the most dominant means of payment but this moves towards debit and credit cards once the value passes this

threshold. Cash was found to dominate small value purchases because of the ease of use and limited alternative that can be used.

Koulayev, Rysman, Schuh, and Stavins (2016) developed a model to explain how the adoption and use of payment instruments work in the United States. Using data from the Federal Reserve Bank of Boston they showed that the adoption and use of a particular payment instrument were largely affected by the demographics, such as income and education. Debit and credit cards were a direct substitute for cash and cheque payments indicating that an increase in the number of a card-based transaction would reduce the cash demand for those consumers. Although the value did not play a significant role in determining the preference for a card or cash the transaction played a role in determining the chosen payment instrument. The study also found that the costs incurred for the transactions would impact the payment instrument. This finding is similar to findings by Wakamori and Welte (2013).

Figure 1: Conceptual Model



Source: Derived from the Technology Acceptance Model

HYPOTHESES

H1: Perceived usefulness of has a positive and significant impact on attitudes towards the use of mobile banking applications.

H2: Perceived ease of use has a positive and significant impact on attitudes towards the use of mobile banking applications.

H3: Perceived credibility has a positive and significant impact on attitudes towards the use of mobile banking applications.

H4: Attitudes towards the use of mobile banking applications have a positive and significant impact on the intention of the use of mobile banking applications.

H5: Intention towards the use of mobile banking has a positive and significant impact on the actual use of mobile banking applications.

2.4 Summary

This preceding chapter reviewed the varying literature which has been highlighted as significant and relevant to this study. The theory of reasoned action, the theory of planned behaviour, the technology acceptance model, the diffusion of innovation and banking regulations in South Africa were reviewed and served as the building blocks for the conceptual model and the hypotheses which were formed

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This section details the methodology which will be applied throughout this research. The section will commence with the literature review behind the methodology that was chosen, followed by a discussion of the research design and the instrument that will be utilised. The section will conclude with a discussion regarding the data collection process and the analysis that will be conducted.

3.2 RESEARCH STRATEGY

This study will utilise a quantitative research methodology. Creswell Blanche, Durrheim, and Painter (2006) assert that a quantitative approach, which can also be referred to as post-positivist, reflects a deterministic philosophy in which causes have a probability of determining the outcomes. This methodology applies best in this research as the aim is to understand the causes that affect the overall demand for cash. (Blanche et al., 2006)

The literature review has provided the theory required to develop the hypotheses and this methodology will be utilised to either prove or disprove the hypotheses. This study can therefore be described as descriptive research with the assumption that the propositions would explain the elements which affect technology adoption and demand for cash through behaviour which occurs naturally.

Quantitative research usually works well when the results will be generalised to the entire population but in order to do this the sample will need to be as representative of the entire population as possible. (Bryman & Bell, 2015)

The advantage of using a quantitative approach is that it can be used to find relationships and trends that may otherwise be too subtle to been seen by other methodologies. Quantitative research also has the ability to not only prove or disprove any propositions but to also understand the quantum of the relationships. Quantitative research also allow the research to view gaps within the literature and thus is able to provide a direction to future research. (Green & Hall, 1984)

3.2.1 Research design

In order to collect the requisite data a cross-sectional survey will be utilised. This type of study is very useful in understanding causation (Mann, 2003). These instruments are very useful in understanding the cause and effect of certain decisions that are taken by the respondent. This research aims to understand the decisions of respondents in their choice to utilise mobile technology other than cash as a payment instrument and as such this study type will be most appropriate.

The advantage of using this type of study is that more than one outcome can be studied and therefore as per the number of propositions developed in the literature review more than one hypothesis can be evaluated. This type of research is also advantageous in that all the information is collected at a single time reducing potential problems of respondents having outside influences. (Bryman & Bell, 2015)

A disadvantage of this method however is that it does not provide an explanation for the findings (Mann, 2003).

3.3 SAMPLING DESIGN PROCEDURE

Sampling is process by which researchers gather objective and representative observations from a group from which decisions and behaviours about the whole can be ascertained. (Sarstedta, Bengartc, Shaltonid, & Lehmanna, 2017). A four-step process is utilised as part of the sampling process: Definition of the intended target population, identification of sampling units, determining the sampling method, and determining the size of the sample. (Creswell & Poth, 2016)

3.3.1 Target population

The target population can be defined as the elements or units of a group that are of interest the researcher for data collection. It is from these elements that a researcher is able to make inferences about the whole. (Chu & Ke, 2017)

The target population was existing banking customers in the Gauteng, South Africa.

3.3.2 Sampling method

Because of the study's physical and time constraints, a non-probability convenience sampling approach was chosen as the best choice. Convenience sampling has the benefit of enabling researches to gather responses from respondents in a shorter time period. (Sarstedta, Bengartc, Shaltonid, & Lehmanna, 2017)

3.3.3 Sample size

The sample size refers to the number of people who answer to a given research instrument. Without a sufficient sample size, the probability of achieving statistically significant, and therefore useful, research results reduce (Pan, 2020).

Based on similar significant studies which utilised between 200 and 400, the sample size of 201 was deemed reasonable and usable in this research.

3.4 DATA COLLECTION METHOD

As this research sought to explain the behaviours of the respondents through a quantitative approach, a closed survey was utilised as the research instrument. The design of the survey was closed to limit the number of possible options to explain certain behaviours. The use of surveys enables researches to better code, analyst and interpret the results. A questionnaire with 30 questions was utilised.

3.4.1 Questionnaire design

A self-administered research survey was utilised to reduce the potential number of inaccurate and incomplete responses which can plague online and web-based questionnaires. A five-point Likert scale was used to gather the responses. These scales are easy to use and much easier coding and evaluation of responses. (Chyung, Roberts, Swanson , & Hankinson, 2017)

3.4.2 Questionnaire layout and question format

The questionnaire was divided in to two sections. Section A was used to determine the demographic profile of the respondents whilst Section B determined the drivers of decision making as derived from the literature review outcomes and applicability to the current research. Five-point Likert scales were utilised to gather the data in Section B.

3.5 DATA PREPARATION

3.5.1 Descriptive statistics

SPSS 27 software was utilised to develop the descriptive statistics from the results in the form of frequency tables and charts.

3.5.2 Measures of central location

The mean was used to measure the centrality of the results. The mean is calculated as the total sum divided by the total number of results.

3.5.3 Dispersion of variability

Standard deviation was used to understand the dispersion. The standard deviation measures how far a result varies from the mean average (Ewing & Park, 2020). The standard deviation of a sample is referred to as and can be determined using the formula below:

$$s = \sqrt{\frac{\sum(x-\bar{x})^2}{n-1}}$$

s = sample standard deviation

$\sum$ = sum of…

$\bar{x}$ = sample means

n = number of scores in the sample

3.5.4 Frequency distribution

The study utilises charts and tables to highlight the frequency distribution of the results. The benefits of frequency distribution are easily summary large quantities of data for easier interpretation.

3.6 DATA ANALYSIS

The data was analysed utilising two programmes. In order to code and clean the data as well as the represent the frequency distribution, Microsoft Excel was utilised. Outputs of the cleansed data was input into SmartPLS. Structural equation modelling was utilised to test the developed hypotheses. Structural equation modelling enables researchers to evaluate any relationships between variables in a model (Civelek, 2019).

3.6.1 Structural Model

R square coefficient and Stone-Geisser's Q2 were used to determine the quality of the model and the significance of the results. Bootstrapping was utilised to evaluate the coefficients' significance. By bootstrapping a research is able obtain a larger number of model estimates (Yaghoubi, Vakilzadeh, & Abrahamsson, 2018).

3.7 RELIABILITY

In determining reliability of a measuring instrument, the researcher seeks to understand how consistent their results will be assuming a test is rerun and conditions are the same (Mohajan, 2017). Cronbach alpha was utilised as a measure for internal reliability. As the value of alpha increases so do the reliability. The results are presented in chapter 4.

3.8 VALIDITY

Zikmund et al. (2013), define external validity as the accuracy with which survey results can be applied over and above the current survey. They also claim that in order to increase the validity of a results the sample selected has to be as well representative of the entire population. A purely random sampling method will be conducted in different location to get the most representative sample within the country.

3.8.1 Internal Validity

Zikmund et al. (2013) defined internal validity as the ability of the independent variable being measured having a direct impact on the dependant variable. In other words, would changes in what is being measured truly affect the results of the experiment? When internal validity exists, it implies that the research methods which was employed in the test was the correct one to test the hypothesis.

3.9 ETHICAL CONSIDERATIONS

Before research was conducted an ethics application was sent to the Wits Business School for approval. In order to ensure the confidentiality of the respondents, no personal information was collected and each research was conducted following ethical standards. All subjects were informed that the research was to be used for the purposed of the MBA thesis.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 INTRODUCTION

This chapter aims to present the analysis and findings of the gathered data.

4.2 BIOGRAPHICAL INFORMATION OF THE SAMPLE

Pie charts were utilised to present the results. The demographic details of the sample are covered in Section A of the questionnaire.

Figure 2: Gender

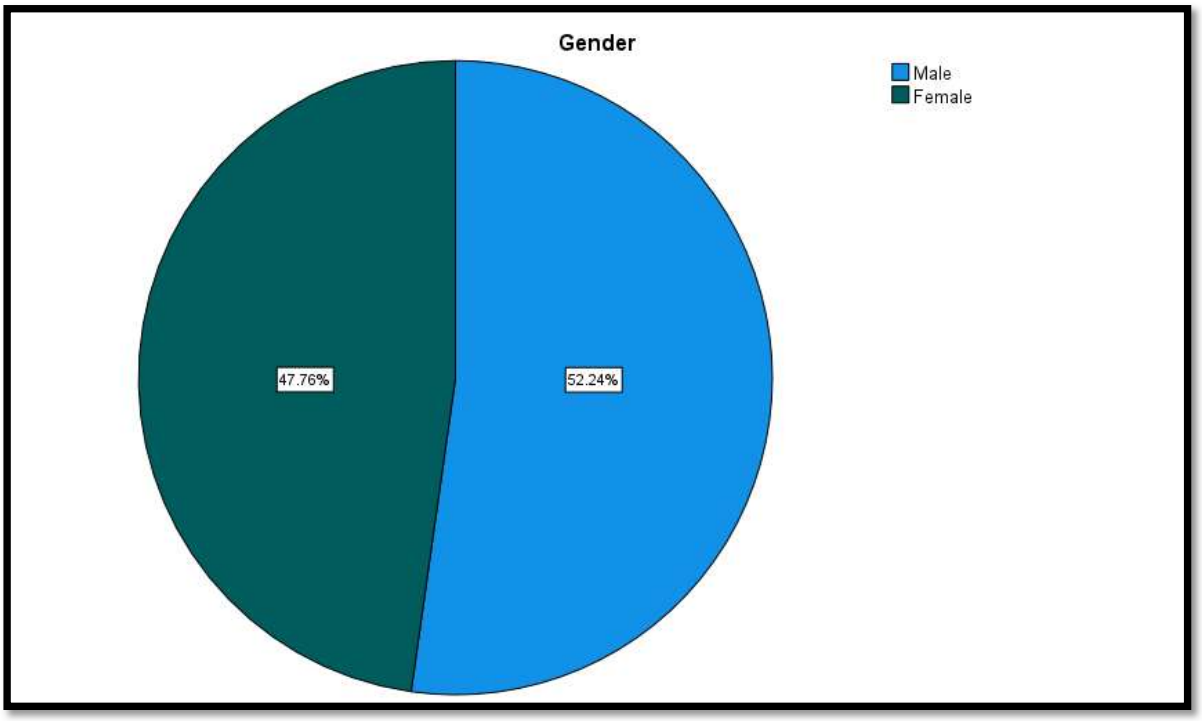


Table 4.1: Gender Profile

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	105	52.2	52.2	52.2
	Female	96	47.8	47.8	100.0
	Total	201	100.0	100.0	

The classification of details related to the participants' gender can be seen in Figure 2. 52.2 % of the respondents were male at 105 with the remainder being female at 47.8 percent representing 96 respondents.

4.2.1 Age

Figure 3: Age distribution of the respondents

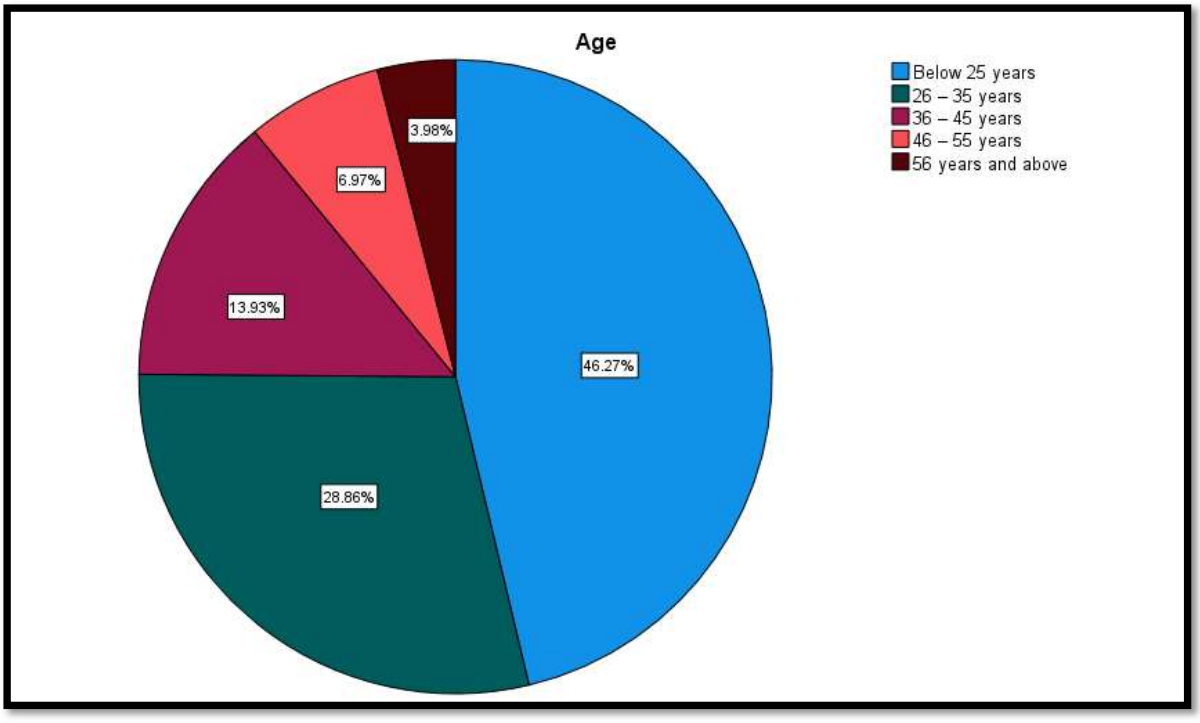


Table 4.2: Age Profile

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25 years	93	46.3	46.3	46.3
	26 – 35 years	58	28.9	28.9	75.1
	36 – 45 years	28	13.9	13.9	89.1
	46 – 55 years	14	7.0	7.0	96.0
	56 years and above	8	4.0	4.0	100.0
	Total	201	100.0	100.0	

Respondents of the age of 25 years and below represented the largest group of respondents at 46.3%, closely followed by 28.9% who indicated being aged between 26 to 35 years. This was followed by 13.9% in the age range of 36 to 45 years of age. Of the smaller remaining groups, 7.0% indicated that they were between 46 to 55 years of age and respondent's 4.0% indicated that they were over the age of 55.

4.2.2 Educational level

Figure 4: Education level

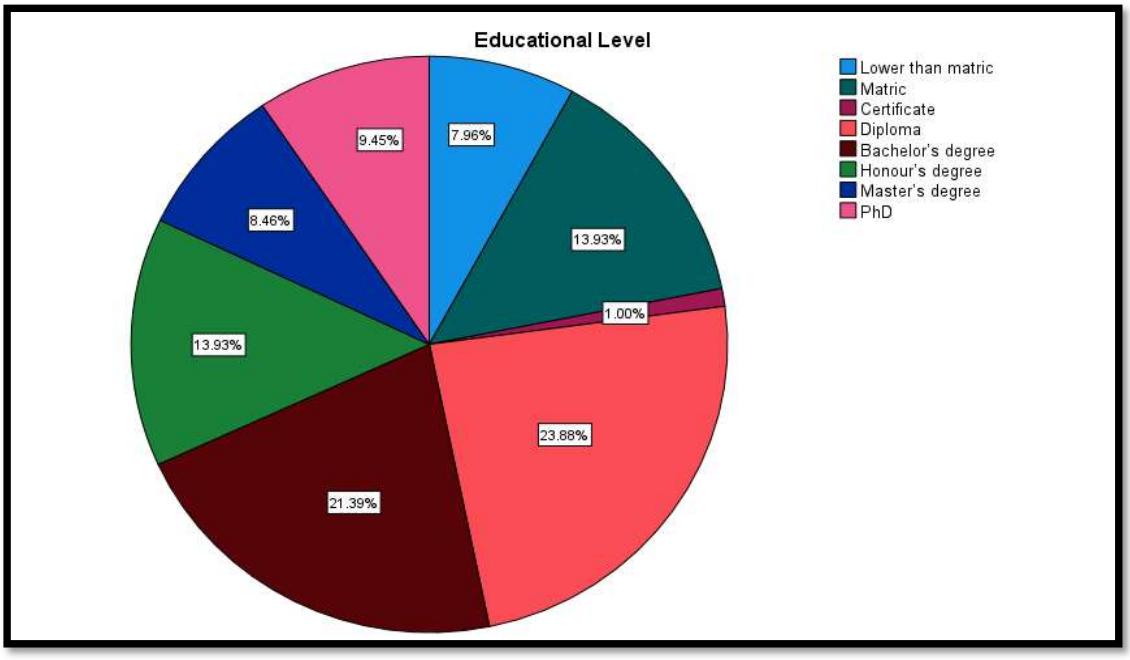


Table 4.3: Educational Level Profile

Educational Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lower than matric	16	8.0	8.0	8.0
	Matric	28	13.9	13.9	21.9
	Certificate	2	1.0	1.0	22.9
	Diploma	48	23.9	23.9	46.8
	Bachelor's degree	43	21.4	21.4	68.2
	Honour's degree	28	13.9	13.9	82.1
	Master's degree	17	8.5	8.5	90.5
	PhD	19	9.5	9.5	100.0
	Total	201	100.0	100.0	

Most of the respondents, 23.9%, indicated that their maximum qualification was a diploma in the education section. This was followed by 21.4 per cent of the respondents who indicated that they have bachelor's degrees. 13.9 percent of the respondents indicated that they only had a matric whilst the same number of respondents indicated that they had honours degrees. Furthermore, 9.5 per cent indicated that they have PhDs and this is followed by 8.5 per cent who indicated that they are holders of master's degrees. 8.0 per cent indicated that they have never finished matric and only 1.0% indicated that they had reached the certificate level.

Figure 5: Marital status

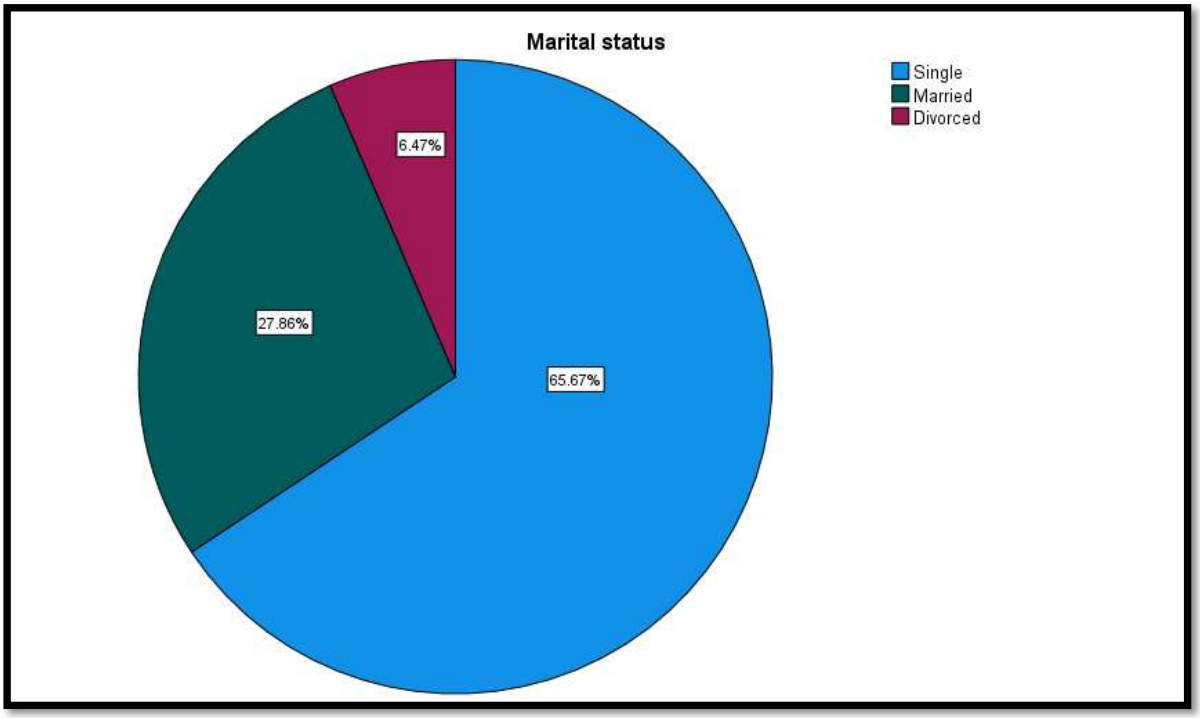


Table 4.4: Marital Status Profile

Marital status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	132	65.7	65.7	65.7
	Married	56	27.9	27.9	93.5
	Divorced	13	6.5	6.5	100.0
	Total	201	100.0	100.0	

65.7 percent of the respondents indicated that they were single, followed by those who revealed that there were married at 27.9 percent. 6.5 percent indicated that they were divorced.

4.2.3 Occupation

Figure 6: Occupation

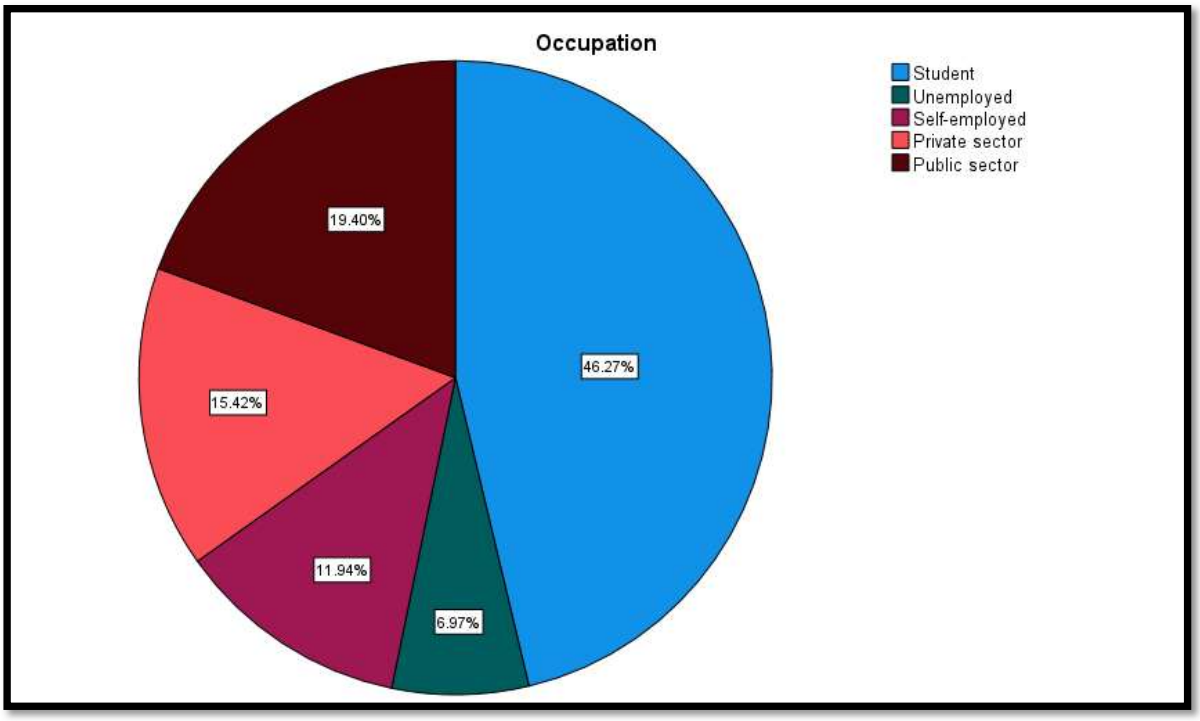


Table 4.5: Occupation Profile

Occupation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	93	46.3	46.3	46.3
	Unemployed	14	7.0	7.0	53.2
	Self-employed	24	11.9	11.9	65.2
	Private sector	31	15.4	15.4	80.6
	Public sector	39	19.4	19.4	100.0
	Total	201	100.0	100.0	

The occupations of the respondents are highlighted in Figure 6. The largest portion of the sample were students at 46.3%, followed by those who revealed that there were working in the public sector 19.4%. Additionally, 15.4 percent revealed that they were

working in the public sector. 11.9% indicated that they were self-employed. 7.0% of the respondents indicated that they were unemployed.

4.2.4 Race

Figure 7: Race

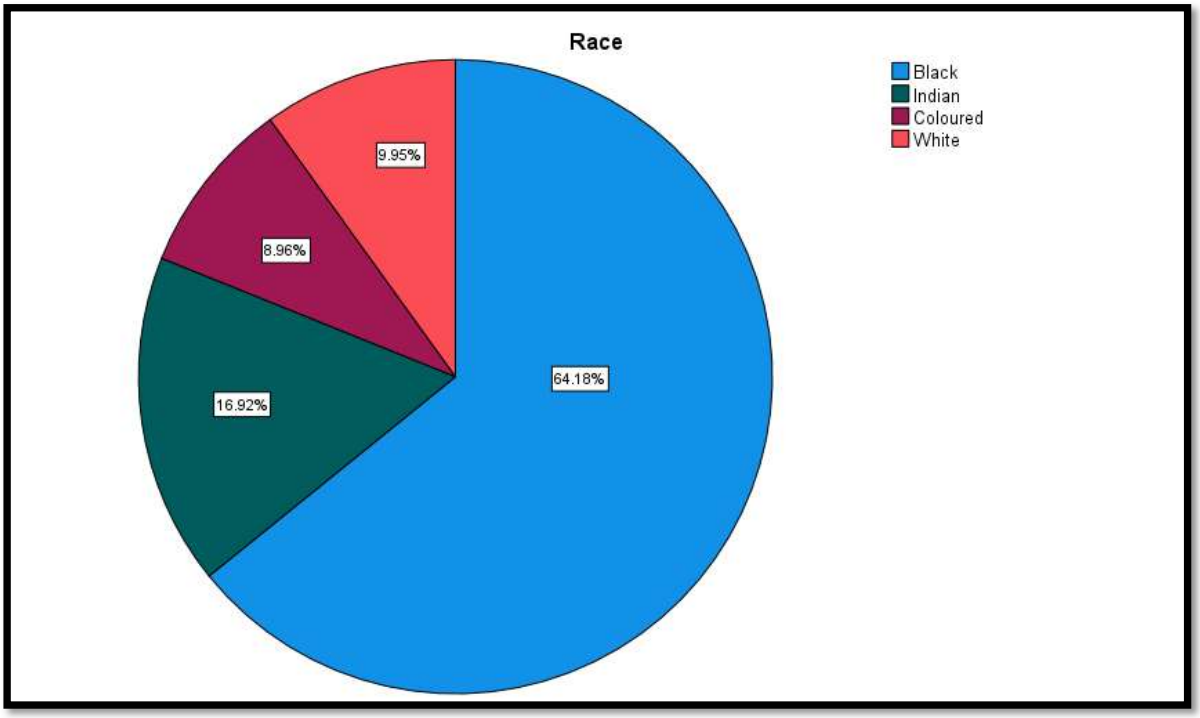


Table 4.6: Race Profile

Race					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	129	64.2	64.2	64.2
	Indian	34	16.9	16.9	81.1
	Coloured	18	9.0	9.0	90.0
	White	20	10.0	10.0	100.0
	Total	201	100.0	100.0	

The largest portion of the sample indicated that there was black 64.2% and followed by those who revealed that there was an Indian 16.9%. Besides,10.0% revealed that they were white. Moreover, the remainder of the respondent's 9.0% revealed that they were coloured.

4.3 DESCRIPTIVE STATISTICS

The analysis proceeded to determine the level of respondents' agreement or disagreement for each construct. Tables 4.7, 4.8, 4.9, 4.10, and 4.11 reports on the descriptive statistics comprising the means and standard deviations. The mean was used to determine the centrality of the results whilst the standard deviation highlighted how the results varied from the mean which is interpreted as the distribution of results. A small standard deviation, result below 1, indicates that results are consistent and fall close the mean average. The mean value of the results observed, indicate respondents were either neural in their view or were in agreement with the statements posited.

Table 4.7 Perceived usefulness of mobile banking applications - Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PU1	201	1	5	3.74	.903
PU2	201	1	5	4.10	.891
PU3	201	1	5	4.06	.970
PU4	201	1	5	4.14	.855
PU5	201	1	5	3.02	.956
Valid N (listwise)	201				

For the perceived usefulness of mobile banking applications, PU4 had the highest mean of 4.14 whilst PU5 had a mean of 3.02. The value PU5 at 3.02 indicated that respondents were neutral when it came to using the mobile banking technology to find bank related information. Overall, the table indicated that respondents felt that

perceived usefulness of using of mobile banking apps in contrast to cash was positive. The standard deviation of all the elements was below 1 which indicates that responses were close to the mean and do not represent outliers.

Table 4.8: Perceived ease of using mobile banking applications - Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PEOU1	201	1	5	4.15	.882
PEOU2	201	1	5	4.44	.932
PEOU3	201	1	5	4.66	1.693
PEOU4	201	1	5	4.02	.961
PEOU5	201	1	5	4.52	1.025
Valid N (listwise)	201				

Respondents indicated with a mean of 4.66 that they would Know how to access, register and use mobile banking applications (PEOU3). The lowest mean was element PEOU4 with at 4.02. The standard deviation, was lower than 2 indicating that values were close to the mean, however element PEOU3 had a higher standard deviation of 1.693 indicating that in comparison, the values were more spread although no significant outliers were observed.

Table 4.9: Perceived credibility of using mobile banking applications - Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PC1	201	1	5	4.52	1.073
PC2	201	1	5	4.34	.919
PC3	201	1	5	4.11	.986
PC4	201	1	5	4.21	1.075
Valid N (listwise)	201				

The highest mean score under perceived credibility of using mobile banking was 4.52 for element PC1 whilst the lowest was 4.11 for element PC3. Overall, no elements returned a mean lower than 4 indicating that most respondents felt that they could find mobile banking applications credible. Standard deviations were close to wone indicating that values were close to the mean and no outliers were observed.

Table 4.10: Attitudes towards the use of mobile banking applications – Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ATT1	201	1	5	4.14	1.079
ATT2	201	1	5	4.31	1.098
ATT3	201	1	5	4.13	1.089
ATT4	201	1	5	4.28	1.093
ATT5	201	1	5	3.78	1.022
Valid N (listwise)	201				

The highest mean of 4.28 for element ATT4, which reflects how favourable a respondent thought the Mobile Banking Apps were to them, was for Attitude towards the use of mobile banking applications. The lowest mean was for element ATT5 at 3.78 indicating that respondents were someone neutral and close to agreeing that they wouldn't be anxious about using any form of Mobile Banking Application. The standard deviations for all elements were close to 1 indicating that they were close to the mean and no outliers were observed. Overall attitudes towards the use of mobile banking applications were positive.

Table 4.11: Intention of the use of mobile banking applications - Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
BI1	201	1	5	4.37	1.007
BI2	201	1	5	4.49	1.087
BI3	201	1	5	4.65	1.212
BI4	201	1	5	4.47	1.020
BI5	201	1	5	4.19	.978
Valid N (listwise)	201				

Reviewing the intention to use mobile banking applications highlighted the highest mean for element BI4 at 4.47 whilst the lowest element had a mean of 4.19. Overall, the mean for all the elements was above 4 indicating a high degree of agreement toward the intention to use mobile banking applications by respondents. The standard deviation for all elements were close to one indicating that responses were close the mean and no outliers were observed.

Table 4.12: Actual use of mobile banking applications - Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
AU1	201	1	5	4.25	1.005
AU2	201	1	5	4.33	1.041
AU3	201	1	5	4.11	1.011
AU4	201	1	5	4.47	1.096
Valid N (listwise)	201				

Most respondents responded that they actually use or would use mobile banking applications over cash. This is represented by the mean values being above 4 for all elements in this section. The standard deviation was close to 1 indicating that responses were close to the mean and no outliers were observed.

4.4 STATISTICAL ANALYSIS PROCEDURE

Statistical Package for Social Science (SPSS) was used analyse the geographical responses of the respondents and SMART-PLS was used to conduct the remaining data. Path coefficients, multi-linear regression, and CFA (confirmatory factor analysis), a second-generation multivariate research methodology, are all used in PLS-SEM (Partial Least Squares Structural Equation Modelling). Using structural template analysis, this explains the heterogeneity in the dependent variable (Hair, et al 2012). PLS-SEM is useful for complex models with moderation, small samples, and data that is less susceptible to multivariate data (Vlaji et al., 2018). The reflective measurement model was used in this analysis, in which measurements represent latent variables and the relation is made from the build or latent variable to the measure (Diamantopoulos & Winklhofer, 2001).

4.5 RELIABILITY ANALYSIS

Table 4.7 highlights the how reliability and validity was measured in the exercise.

Table 4.13: Measurement accuracy assessment

Research constructs	PLS code item	Cronbach's alpha value	Composite reliability	Average variance extracted (AVE)	Factor loadings	VIF (outer) values
Perceived usefulness of mobile banking applications	PU1	0.833	0.883	0.601	0.709	1.334
	PU2				0.746	1.432
	PU3				0.845	1.338
	PU4				0.811	1.785
	PU5				0.759	1.553
Perceived ease of using mobile banking applications	PEOU1	0.701	0.804	0.510	0.822	1.676
	PEOU2				0.617	1.872
	PEOU3				0.733	1.692
	PEOU4				0.667	1.772
	PEOU5				0.822	1.798
Perceived credibility of using mobile banking applications	PC1	0.749	0.841	0.570	0.686	1.524
	PC2				0.714	1.570
	PC3				0.816	1.745
	PC4				0.797	1.878
Attitudes towards the use of mobile banking applications	ATT1	0.800	0.864	0.562	0.817	1.926
	ATT2				0.729	1.945
	ATT3				0.765	1.982
	ATT4				0.818	1.926
	ATT5				0.598	1.956
Intention towards the	BI1	0.781	0.848	0.528	0.747	1.987
	BI2				0.787	2.008

use of mobile banking applications	BI3				0.664	2.061
	BI4				0.690	2.642
	BI5				0.739	2.724
Actual use of mobile banking applications	AU1	0.773	0.855	0.596	0.728	2.002
	AU2				0.835	2.192
	AU3				0.732	1.692
	AU4				0.788	1.772

4.6 MEASUREMENT MODEL ASSESSMENT

Composite reliability, outer loadings and average variance extracted were used to evaluate the outer model. The use of composite reliability is advanced by the fact that it accounts for varying outer loadings. The lowest value of 0.804 for the research elements indicates that the instrument is reliable and satisfactory as more than 50% of the elements the required minimums (Nitzl, 2016). The lowest Cronbach's alpha of 0.701 observed in the results meet the minimum criteria for reliability of 0.6 (YURDUGÜL, 2008). The model's validity is enhanced when this is paired with an average variance derived of at least 0.4. In order to determine discriminant validity, the Fornell-Larcker method was used (Fornell & Larcker, 1981). If the square root of the AVEs is greater than the inter-factor correlations, discriminant validity is achieved, according to this method. The discriminant validity analyses shown in Table 2 show that all of the square roots of the AVEs are greater than the correlations between the constructs, suggesting that discriminant validity of the measurement has been created. After verifying the measurement model's validity, the structural model was evaluated to ascertain the hypotheses' significance.

Table 4.14: Discriminant validity (Fornell-Larker criterion)

Variables	AU	ATT	BI	PC	PEOU	PU
AU	**0.772**					
ATT	0.572	**0.750**				
BI	0.603	0.580	**0.727**			
PC	0.494	0.776	0.541	**0.755**		
PEOU	0.560	0.658	0.570	0.707	**0.714**	
PU	0.493	0.660	0.520	0.530	0.661	**0.775**

Source: Calculated from survey results

4.7 STRUCTURAL MODEL ASSESSMENT

The inner model (structural model) was used to determine the relationship between endogenous and exogenous variables. The path coefficients for the non-return model were determined using a non-parametric, boot-strapping routine for 261 cases and 5000 samples (Vinzi et al. 2010). (no sign changes; two-tailed; 0.05 significance level). The goodness of fit (GoF) and the standardised root mean square residual were used to evaluate the model's fitness (SRMR). In the following pages, these indices will be described in greater detail.

4.7.1 Assessment of the goodness of fit (GoF)

Figure 4.7 shows that the study model describes 68.9%, 33.6 percent, and 36.3 percent of the difference in the endogenous variables, respectively, based on the R^2 values for Attitudes toward using mobile banking apps, Intention to use mobile banking apps, and Actual use of mobile banking apps.

The goodness of Fit = $\overline{2\sqrt{\text{(average of all AVEs values* average of all } R^2)}}$

= $2\sqrt{0.561*0.231}$

= 0.37

here the average of all AVE values for the study variables is represented as AVE, while the average of all R^2 values in the complete path model is R^2. The estimated global GoF is 0.37, which is higher than Wetzels, Odekerken-Schröder, and Van Oppen's suggested threshold of GoF > 0.36. (2009). As a result, the study model can be assumed to have a good overall fit.

4.7.2 Multicollinearity assessment of the outer model

For PLS-SEM, common method bias (CMB) is detected through a full collinearity assessment approach (Kock, 2015). VIF values should be lower than the 3.3, threshold (Hair et al., 2011, Kock, 2015). This is indicative that the model is free from common method bias. Any value, greater than 3.3 means the model is affected by CMB. Therefore, upon following standard procedures in business research, the variance inflation factor (VIF) values were computed instead of reporting the collinearity issues in this work. The SMART PLS 3 output reports that the VIF (outer) values for all the constructs/variables ranged from 1.334 to 2.724. All the items had VIF values less than 3.3 which means that they were not affected by CMB.

4.7.3 The Standardized Root Mean Square Residual (SRMR)

The SRMR measures the average of standardized residuals between observed and hypothesized covariance matrices (Chen, 2007). The SRMR is used to measure the predicted model fit.

The research model has a good fit when SRMR = 0.08 (Hu & Bentler, 1998); a lower SRMR indicates a better match

Table 4.15: Model fit summary.

Estimated Model	
SRMR	0.070
d_ULS	1.727
d_G1	0.941
d_G2	0.783
Chi-Square	1919.097
NFI	0.901

Source: Calculated from survey results

4.7.4 Path model

The PLS estimation path coefficients values as well as the item loadings for the research construct are shown in Figure 8

Figure 8: Structural model.

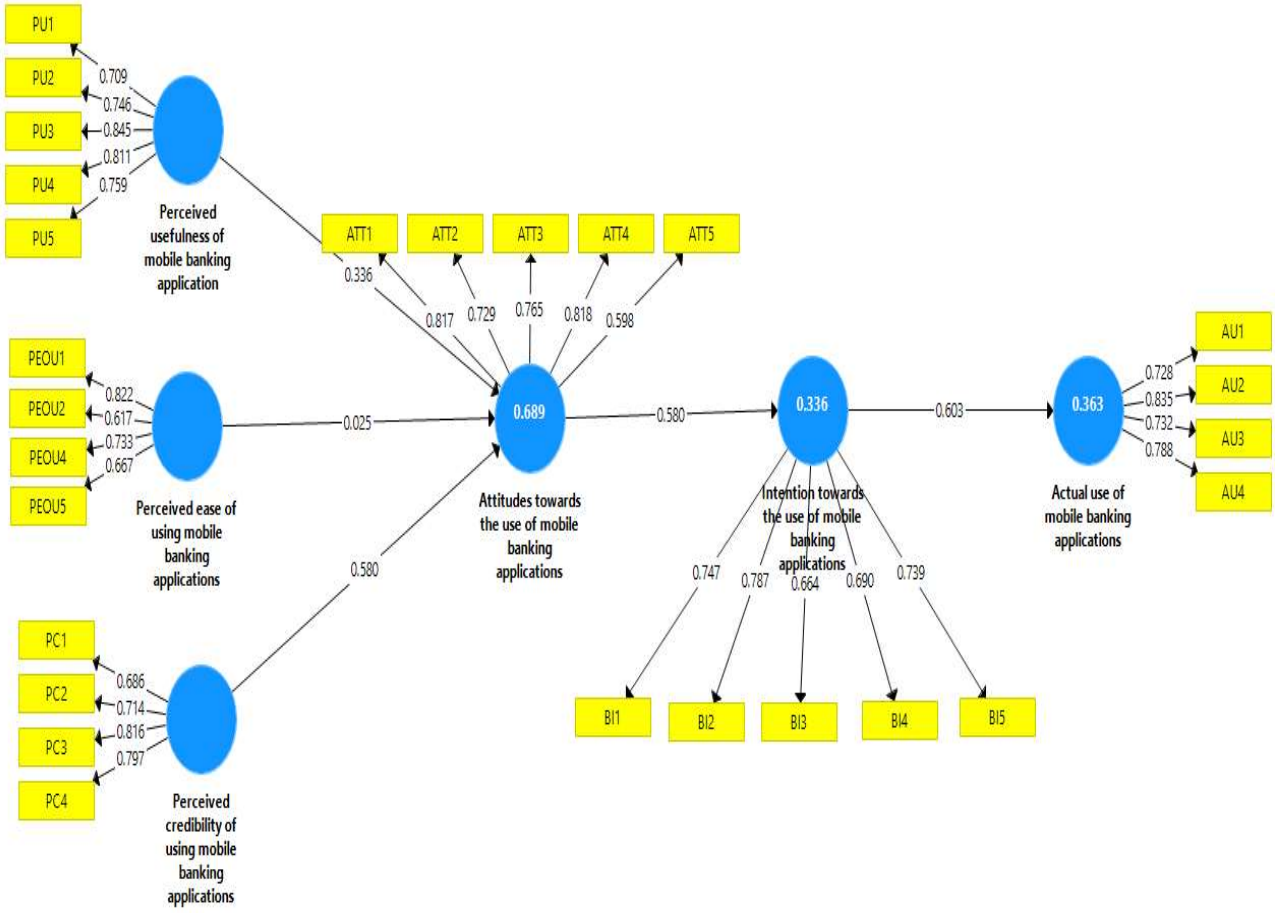


Table 4.16: Outcomes of structural equation model analysis

Path	Hypothesis	Path coefficients (β)	T-Statistics	P-value	Decision
Perceived usefulness of mobile banking application -> Attitudes towards the use of mobile banking applications	H1(+)	0.336	5.159	0.000	Positive and significant
Perceived ease of using mobile banking applications -> Attitudes towards the use of mobile banking applications	H2(+)	0.025	0.325	0.745	Positive and insignificant
Perceived credibility of using mobile banking applications -> Attitudes towards the use of mobile banking applications	H3(+)	0.580	7.965	0.000	Positive and significant

Attitudes towards the use of mobile banking applications -> Intention towards the use of mobile banking applications	H4 (+)	0.580	10.993	0.000	Positive and significant
Intention towards the use of mobile banking applications -> Actual use of mobile banking applications	H5 (+)	0.603	12.732	0.000	Positive and significant

4.8 OUTCOME OF HYPOTHESES TESTING AND DISCUSSION OF RESULTS

The path coefficient values, including the t-values from the structural model, were used to test hypotheses. T-values are used to understand the overall size of the variation within the given sample data. T-value of 1.96 at 5% level of significance are considered statistically significant (Chin 1998).

4.8.1 Outcome and discussion of Hypothesis1:

Perceived usefulness of mobile banking application and Attitudes towards the use of mobile banking applications

The primary hypothesis states that the perceived usefulness of mobile banking applications has a positive effect on attitudes toward using mobile banking apps; this observation was confirmed in this study. The perceived usefulness of mobile banking apps had a favourable effect (β = 0.336) and was statistically important (t = 5.159) in forecasting attitudes regarding the usage of mobile banking applications, as seen in Table 4.10. This outcome proposes that perceived usefulness of mobile banking application stimulates attitudes towards the use of mobile banking applications. In this vein, this test fails to rule out H1.

4.8.2 Outcome and discussion of Hypothesis 2:

Perceived ease of using mobile banking application and Attitudes towards the use of mobile banking applications.

The secondary hypothesis notes that perceived ease of use of mobile banking apps has a favourable impact on attitudes toward using mobile banking apps, as this research proved. As seen in Table 4.10, perceived ease of using mobile banking apps had a positive (β = 0.025) but statistically negligible (t = 0.325) effect on attitudes toward the use of mobile banking applications. This result indicates that the relative simplicity at which mobile banking systems can be used favourably affects attitudes toward their use. Its meaning, though, is that the level is weak.

4.8.3 Outcome and discussion of Hypothesis 3:

Perceived credibility of using mobile banking applications and Attitudes towards the use of mobile banking applications.

According to the third hypothesis, attitudes regarding the use of mobile banking apps are favourably affected by assumed legitimacy of mobile banking applications. This hypothesis is supported in this analysis. Table 4.10 highlights that perceived legitimacy of using mobile banking apps has a favourable impact (β = 0.580) and is measurably important (t = 7.965) in forecasting perceptions toward using mobile banking apps. This result reinforces the belief that the higher the assumed legitimacy, the more favourable attitudes toward the use of mobile banking apps are. As a result, this investigation backed up H3.

4.8.4 Outcome and discussion of Hypothesis 4:

Attitudes towards the use of mobile banking applications and Intention towards the use of mobile banking applications.

According to the fourth hypothesis, views toward the use of mobile banking services have a positive effect on the decision to use mobile banking apps. This theory is confirmed in this inquiry. As per Table 4.10, expectations about the use of mobile banking apps have a favourable (β = 0.580) and important (t = 10.993) effect on the decision to use mobile banking applications. The higher the level of attitudes against the use of mobile banking apps, the higher the level of intentions to use mobile banking applications, according to this result. As a result, H4 is helped by supported by the analysis.

4.8.5 Outcome and discussion of Hypothesis 5:

Intention towards the use of mobile banking applications and actual use of mobile banking applications.

The fifth hypothesis states that having a positive desire to use mobile banking applications has a positive effect on actually using mobile banking apps. This research backs up this theory. In Figure 4.7 and Table 4.10, it can be found that aim to use mobile banking applications has a favourable impact (β = 0.603) and is statistically important (t = 12.732) in forecasting real use of mobile banking applications. This result

indicates that maintaining a constructive outlook toward using mobile banking apps promotes actual use of such apps. In this vein, this test fails to rule out H5.

4.9 CHAPTER SUMMARY

The primary goal of this research is to find out what influences affect people's decision to use mobile banking apps instead of cash, which has traditionally been the preferred method of payment. The previous chapter gave an overview of the findings after data collection and analysis. The study tool's usability and validity are considered to be satisfactory based on the findings. The data collection was subjected to descriptive analysis and structural equation simulation with the aid of the PLS. Specifically, a series of steps were followed, and they started from data coding on Excel, followed by data cleansing process, and data importation to the Statistical Package for the Social Sciences (SPSS) 27 software (for descriptive statistics and SmartPLS 3 software for partial least squares structural equation modelling (PLS-SEM). Once the data was imported to the statistical software, the analysis process started. Consistent with McEachern and Willock's (2004)'s suggestion, it was advantageous to adopt an SEM for the current study as this tool created the capacity to simultaneously scrutinise a series of relationships. As a consequence, SEM was used to define the relationship between the constructs (Smart PLS). Fit results are shown lineated diagrammatically from that point on the model, with closing remarks on the study's hypothesis hypotheses and discussion of the hypothesis findings. The findings of this study contribute to what is has been discovered about mobile banking as a replacement for cash transactions in the literature.

CHAPTER 5: ANALYSIS AND DISCUSSION OF RESULTS

5.1 INTRODUCTION

“There are many advantages of data analysis,” says Mohabier (2016:78), “but the most important is that it assists in structuring the results from data collection channels and divides macro issues into micro parts.” To successfully conclude this analysis, the gathered evidence must be analysed to validate the theories and answer the testing questions. This chapter addresses the study's observations and how they were examined and interpreted.

5.2 THEORY TESTING

The path coefficient values and the t-values for the structural model obtained from the bootstrapping algorithm were used to evaluate the hypothesis in this analysis. Path coefficients (β) and t-statistics for a model are used to evaluate the relationship between the independent variables and the dependent variable. To put it another way, the path coefficient and t-values look at how far the results back up the hypothesised model (Subramaniama et al. 2017:53).

Outcome and discussion of Hypothesis 1: Perceived usefulness of mobile banking application and Attitudes towards the use of mobile banking applications

The primary hypothesis states that the perceived utility of mobile banking apps has a positive effect on attitudes toward their use, and this observation was confirmed in this study. The perceived utility of mobile banking applications had a favourable (β = 0.336) and statistically meaningful (t = 5.159) effect on perceptions toward using mobile banking apps as a cash replacement. This finding suggests that the perceived utility of mobile banking apps influences attitudes toward their use. In this vein, this test fails to rule out H1. This observation is consistent with Dixit and Prakash (2018), who found that both the perceived usefulness and efficacy of using a social networking site influenced attitudes toward using the platform directly and favourably. The results of this research are similar to those of Van De Bogart and Wichadee (2015), who found that students' LINE PU had a positive effect on their attitude.

Outcome and discussion of Hypothesis 2: Perceived ease of using mobile banking application and Attitudes towards the use of mobile banking applications.

The primary hypothesis states that perceived ease of use of mobile banking apps has a positive effect on attitudes toward their use; this observation was confirmed in this study. In forecasting behaviours toward the use of mobile banking services, perceived ease of use had a favourable effect (β = 0.025) but was statistically negligible (t = 0.325). This finding suggests the perceived ease of use of mobile banking apps encourages people to use them. Its importance, on the other hand, is at a low level. Since a correlation between perceived ease and usability has been discovered. As a result, these findings back up Mohd Suki and Mohd Suki's (2011) claim that customers who make it easier to use technology (both mentally and physically) are more likely to prefer mobile based transactions over conventional purchases.

Outcome and discussion of Hypothesis 3: Perceived credibility of using mobile banking applications and Attitudes towards the use of mobile banking applications.

According to the third hypothesis, attitudes regarding the use of mobile banking apps are favourably affected by assumed legitimacy of mobile banking applications. This hypothesis is supported in this analysis. Figure 4.7 and Table 4.10 indicate that perceived legitimacy in using mobile banking apps has a favourable impact (β = 0.580) and is measurably important (t = 7.965) in forecasting perceptions about using mobile banking apps. This result reinforces the belief that the higher the assumed legitimacy, the more favourable attitudes toward the use of mobile banking apps are. As a result, this investigation backed up H3. These observations are consistent with those of Mir and Zaheer (2012), who discovered that PC of UGC on social networking sites boosts attitudes toward product-related UGC.

Outcome and discussion of Hypothesis 4: Attitudes towards the use of mobile banking applications and Intention towards the use of mobile banking applications

According to the fourth theory, views toward the use of mobile banking services have a positive effect on the decision to use mobile banking apps. This theory is confirmed in this inquiry. According to Figure 4.7 and Table 4.10, expectations about the use of mobile banking apps have a favourable (β = 0.580) and important (t = 10.993) effect on the decision to use mobile banking applications. According to this finding, the higher the level of attitudes toward the use of mobile banking applications, the higher the level of intentions to use mobile banking apps. As a result, H4 is helped by this inquiry. These results corroborate those of Kanchanatanee, Suwanno, and Jarernvongrayab (2014), who discovered that SMB owners' attitudes toward E-marketing are a significant determinant of their decision to use E-marketing. Furthermore, Dixit and Prakash (2018) say that BI's attitude toward social networking sites has a big influence on whether or not they use these sites, and, more specifically, whether or not they use them.

Outcome and discussion of Hypothesis 5: Intention towards the use of mobile banking applications and actual use of mobile banking applications.

According to the fifth hypothesis, expressing a positive intention to use mobile banking applications has a positive influence on actively using them. This research backs up this theory. In Table 4.10 it can be found that aim to use mobile banking applications has a favourable influence (β = 0.603) and with a and with a t-statistics (t = 12.732) is useful in forecasting real use of mobile banking applications. This result indicates that maintaining a constructive outlook toward using mobile banking apps promotes actual use of such apps. In this vein, this test fails to rule out H5. The BI of third-generation (3G) mobile telecommunication networks have a positive impact on AU operation, according to Wu, Tao, and Yang (2008). The target and actual system use are related, according to Baby and Kannammal (2019). Users' intentions to use technology, according to Cheung and Vogel (2013), play a role in their actual adoption or use. Furthermore, in their study, Yi and Hwang (2003) discovered a deep and significant connection between BI and real-world web-based environment use.

5.3 CHAPTER SUMMARY

This chapter included a broad discussion of the study's key findings. SEM was used to determine the association between the structures (Smart PLS). The hypotheses testing results revealed that perceived usefulness, perceived ease of use and perceived credibility of mobile banking applications have a positive impact on attitudes towards using mobile banking applications. The study's findings indicated that views toward mobile banking services have a positive impact on the desire to use mobile banking applications. Furthermore, it was discovered that having the desire to use mobile banking applications has a positive effect on actually using them. To support the study conclusions, the findings were compared to the literature. The study's key thesis and guidelines will be presented in the following chapter.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

The analytical observations were reviewed and examined in the previous chapter. This chapter gives a broad outline of the research project by setting the theoretical and methodological goals in perspective. The study's aim was to figure out what variables affect people's real use of mobile banking apps as an alternative to cash. Theoretical and observational findings are used to make recommendations to bank management, with the advantages, drawbacks, and consequences for future studies discussed.

6.2 OVERVIEW OF THE STUDY

It is critical to draw clear recommendations and conclusions based on the knowledge collected in the previous five chapters of the study. The primary goal of Chapter 1 was to establish the study's context, identify the issue, propose research goals, and map out research methods. In Chapter 2, the proposed study model and hypotheses formulation were discussed. The mathematical analysis methods used in this research were presented in Chapter 3, followed by the ethical guidelines followed in this study. Chapter 2 concentrated on the study's theoretical basis, including perceived simplicity of using mobile banking applications, perceived legitimacy of using mobile banking applications, attitudes toward using mobile banking applications, and plan to use mobile banking applications, intention towards the use of mobile banking applications and the utilisation of mobile banking applications was discussed comprehensively.

Chapter 3 included a summary of the study's analysis methods. The study's target population was limited to customers or clients in the Gauteng province. The participants in this research were individuals or clients who lived in Johannesburg, Gauteng. Following that, a convenient sample of 201 clients was chosen at random, as described by the target population. The requisite data was gathered using a standardized questionnaire that used existing scales.

The results of the study's methodological section were stated in Chapter 4. The results in this chapter are consistent with the study's conceptual aims. The effects of the analytical research were reviewed and discussed in Chapter 5. SEM was used to

define the relationship between the constructs (Smart PLS). To substantiate the study finding, the findings were related to literature.

6.3 CONCLUSION OF THE STUDY

The analysis priorities had to be addressed depending on the study's derived findings to ensure that the study's expected targets were fulfilled. The theoretical and methodological goals are revisited in the following segment to prove that they were fulfilled within the scope of the analysis.

The purpose of this study was to determine the factors that influence the actual use of mobile banking applications as an alternative to cash. Each of the goals mentioned in Chapter 1 is described, followed by a review of the research findings.

6.3.1 Perceived Usefulness

The researchers used SEM and Smart PLS to see how perceived utility affects attitudes toward using mobile banking apps. According to the findings of structural equation model study, perceived utility has a major positive effect on attitudes against the usage of mobile banking apps, as shown by a path coefficient of 0.336 and a t statistic of 5.159.

6.3.2 Ease of Use

The second hypothesis was to figure out whether the impact of perceived ease of use on attitudes towards the use of mobile banking applications. SEM, utilising Smart PLS was used to determine whether perceived ease of use influences attitudes towards the use of mobile banking applications. As seen by a path coefficient of 0.025 and a t statistic of 0.325, perceived ease of usage favourably influences attitudes toward the use of mobile banking services in a non-significant way.

6.3.3 Credibility

The third Hypothesis set out was to determine the impact of perceived credibility on attitudes towards the use of mobile banking applications. SEM employing Smart PLS was used to determine whether perceived credibility influences attitudes towards the use of mobile banking applications. Perceived credibility has a major positive impact on attitudes about the usage of mobile banking applications, according to the results

of a structural equation model study, as demonstrated by a path coefficient of 0.580 and a t statistic of 7.965.

6.3.4 Attitudes

The fourth empirical hypothesis set out was to determine the impact of attitudes on intention towards the use of mobile banking applications. SEM utilising Smart PLS was used to determine whether attitudes towards the use of mobile banking applications influences intention towards the use of mobile banking applications. According to the findings of structural equation model review, behaviours have a substantial positive effect on plan to use mobile banking applications, as demonstrated by a path coefficient of 0.580 and a t statistic of 10.993.

6.3.5 Intentions

The fifth empirical hypothesis set out was to determine the impact of intention towards the use of mobile banking on actual use of mobile banking applications. SEM employing Smart PLS was used to determine whether intention towards the use of mobile banking influences actual use of mobile banking applications. According to the findings of structural equation model study, intention to use mobile banking applications has a substantial positive effect on actual use of mobile banking applications, as shown by a path coefficient of 0.603 and a t statistic of 12.732.

6.4 RECOMMENDATIONS

The foregoing recommendations are focused on an analysis of the literature and, more specifically, retrospective study findings: Bank managers should pay careful attention to perceived value, perceived ease of use, and perceived credibility factors and ensure that these factors are met in order to increase the acceptance and use of mobile banking applications. Since perceived credibility is the most important factor in shaping attitudes toward the use of mobile banking apps, it's crucial for digital marketers and bank executives to focus on features that make mobile banking apps trustworthy for customers and provide them with reliable information while designing them. Marketers should also provide online and offline help and support, such as tutorials and FAQs, to make the mobile applications easier to use. Furthermore, since this study shows the considerations that consumers consider important in deciding whether or not to

use a mobile banking app, bank managers can gain further insight into what consumers trust in powerful factors related to intent to use a mobile banking app. The mobile banking application's offerings can be tweaked to make it more competitive. Given the strong link between perceived ease of use of banking apps and intent to use mobile banking apps, mobile banking app managers should work to enhance the app's usability and interactivity so that users consider it as simple to use. By achieving these recommendations more users are likely to find themselves using mobile technologies rather than cash as a means of transactions. This can save money across the entire cash value chain.

6.5 LIMITATIONS AND FUTURE RESEARCH OPPORTUNITIES

After analysing the findings of this study, it's crucial to remember that it has limitations that can be addressed in future research. The fact that the survey population was so small was due to the fact that it only featured consumers from one part of South Africa: Johannesburg. This limits the findings' applicability to all South African customers. As a result, the study's findings could only be applied to clients in Johannesburg. A total of 201 people took part in the thesis. In the future, studies could use a larger sample size, which could result in more insightful findings. Extending the study to other areas of South Africa and bringing the conceptual paradigm to the test might be an interesting research path to pursue. Furthermore, the study model's predictability may have been improved if more independent variables were used in the model to influence the behavioural intention to use mobile banking apps. More variables, on the other hand, would lengthen the questionnaire and make respondents less likely to respond, making primary data collection more difficult. Academics should use the current thesis as a springboard for potential research opportunities. Although only three antecedents, perceived utility, perceived ease of use, and perceived reputation, were analysed in this report. Other factors that affect the decision to use mobile banking apps, such as perceived risk, ease, enabling circumstances, social influence, time, and an immediate need for service, can be investigated by academics in the field of digital marketing.

6.6 CHAPTER SUMMARY

The keywords for this research have been introduced, the study's core questions and goals have been identified, and a literature review has been undertaken to gain an

outline or a better understanding of the concepts. The research confirms that mobile banking apps' perceived utility, ease of usage, and reputation have a favourable effect on attitudes toward using mobile banking apps as an alternative to cash. The study's findings revealed that attitudes toward mobile banking services have a strong impact on the desire to use mobile banking applications. Furthermore, it was discovered that voicing a willingness to use mobile banking apps has a positive influence on actually using them. This research has theoretical as well as institutional implications.

Theoretically, this research advances marketing management theory and customer behaviour by methodically analysing the interplay between perceived utility, perceived ease of use, and perceived legitimacy of mobile banking applications on attitudes toward using mobile banking apps, as well as how attitudes toward using mobile banking apps will affect the adoption of mobile banking technology over cash. Furthermore, how one's plan to use mobile banking apps influences one's real use of mobile banking applications. As a result, the thesis contributes significantly to the current literature on the topic. On a realistic basis, bank marketing professionals can use the demographic profile of the customers who took part in this study to assess their affordability in terms of household income. If these tasks are completed more precisely, the mobile banking systems would undoubtedly have excellent support.

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ANNEXURE A: QUESTIONNAIRE



Hello Respondent

RE: ASSISTANCE: QUESTIONNAIRE COMPLETION

I am a registered Master of Business Administration student at Wits Business School. I am conducting a research study which seeks to determine the factors that influence the actual use of mobile banking applications.

You have been identified as one of the respondents comprising of the sampling frame. May I humbly request your assistance in completing the attached structured questionnaire. It should take approximately 10–15 minutes to complete the questionnaire. Please note that there is no right or wrong answer and kindly be honest and objective when answering the questions. From an ethical perspective, please be assured that all the information you provide will be strictly confidential, all responses will remain anonymous and the responses will only be used for statistical analysis. In addition, your participation is merely voluntary and there is no coercion or undue influence in completing this questionnaire. Moreover, you may refuse to participate or discontinue your participation at any time.

I shall personally collect the questionnaires once completed. If you have any queries kindly contact me on the details provided above.

Thank you for your willingness to complete the questionnaire.

Kind regards

INSTRUCTIONS TO RESPONDENTS

1. Please answer all questions.
2. Please indicate your response by ticking **(✓)** one response only.
3. Please do not leave any question/statement blank.

SECTION A: DEMOGRAPHIC PROFILE

Please provide information about yourself by ticking **(✓)** the appropriate response.

A1: Please specify your gender.

1.1	Male	1
1.2	Female	2

A2: Kindly indicate your age category.

2.1	Below 25 years	1
2.2	26 – 35 years	2
2.3	36 – 45 years	3
2.4	46 – 55 years	4
2.5	56 ears and above	5

A3: What is your highest educational attainment?

3.1	Lower than matric	1
3.2	Matric	2
3.3	Certificate	4
3.5	Diploma	5
3.6	Bachelor's degree	6
3.7	Honour's degree	7
3.8	Master's degree	8
3.9	PhD	9

A4: Marital status

5.1	Single	1
5.2	Married	2
5.3	Divorced	3

A5: Occupation

6.1	Student	1
6.2	Unemployed	2
6.3	Self-employed	3
6.4	Private sector	4
6.5	Public sector	5

A6: Race

7.1	Black	1
7.2	Indian	2
7.3	Coloured	3
7.4	White	4

Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	**Strongly agree** **5**

SECTION B: PERCEIVED USEFULNESS OF MOBILE BANKING APPLICATIONS

Usefulness of Mobile banking Applications				
PU1. Using Mobile banking Applications makes it easier to make banking transactions				
1	2	3	4	5
PU2. Using Mobile banking Applications would help me to communicate and get feedback from my bank.				

1	2	3	4	5
PU3. Using Mobile banking Applications would take less time and effort than using traditional banking methods				
1	2	3	4	5
PU4. By using Mobile banking Applications, my experiences as a consumer would be improved (flexibility, speed, convenience, security)				
1	2	3	4	5
PU5. I find Mobile banking Applications to be useful for finding banking delated information				
1	2	3	4	5

SECTION C PERCEIVED EASE OF USING MOBILE BANKING APPLICATIONS.

	Ease of Using Mobile banking Applications				
PEOU1	1. My interaction with Mobile banking Applications is clear and understandable.				
	1	2	3	4	5
PEOU2	2. It would be easy for me to become skilful at using Mobile banking Applications.				
	1	2	3	4	5
PEOU3	3. I would know how to access, register for & use any Mobile banking Applications				
	1	2	3	4	5
PEOU4	4. Mobile banking Applications do not require a lot of mental effort to learn and use				
	1	2	3	4	5

PEOU5	5. Overall, I would find it easy to use Mobile banking Applications to do my banking				
	1	2	3	4	5

SECTION D: PERCEIVED CREDIBILITY OF USING MOBILE BANKING APPLICATIONS

	Credibility of Mobile banking Applications				
PC1	6. Using Mobile banking Applications as a banking channel would not disclose my personal information.				
	1	2	3	4	5
PC2	7. I believe my information is kept confidential.				
	1	2	3	4	5
PC3	8. I would find Mobile banking Applications secure in conducting transactions.				
	1	2	3	4	5
PC4	9. I can use Mobile banking Applications, as I have trust in them				
	1	2	3	4	5

SECTION E: ATTITUDES TOWARDS THE USE OF MOBILE BANKING APPLICATIONS

	What I think of Mobile banking Applications (Attitude)				
ATT1	10. I feel that it is beneficial to use Mobile banking Applications as a source of my banking needs.				
	1	2	3	4	5

ATT2	11. I feel that Mobile banking Applications are convenient and practical.				
	1	2	3	4	5
ATT3	12. I prefer Mobile banking Applications to the trading ways of physically going to the bank				
	1	2	3	4	5
ATT4	13. Using Mobile banking Applications is favourable for me.				
	1	2	3	4	5
ATT5	14. I feel that I wouldn't be anxious or nervous about using any form of Mobile banking Applications.				
	1	2	3	4	5

SECTION F: INTENTION TOWARDS THE USE OF MOBILE BANKING APPLICATIONS

	Intentions of using Mobile banking Applications				
BI1	15. Given that I have access to digital devices, I will use Mobile banking Applications.				
	1	2	3	4	5
BI2	16. I prefer using Mobile banking Applications as an information source.				
	1	2	3	4	5
BI3	17. I am likely to use Mobile banking Applications in the near future.				
	1	2	3	4	5
BI4	18. I would use Mobile banking Applications as a first reference, regardless of whether I have access to traditional marketing (brochures, newspapers, magazines, etc.).				
	1	2	3	4	5
BI5	19. I always try to use Mobile banking Applications in as many occasions as possible.				

	1	2	3	4	5

SECTION G: ACTUAL USE OF MOBILE BANKING APPLICATIONS

	Use of Mobile banking Applications				
AU1	1. I use/would consider using Mobile banking Applications.				
	1	2	3	4	5
AU2	2. I feel positive about using Mobile banking Applications and expect to continue feeling this way.				
	1	2	3	4	5
AU3	3. I expect Mobile banking Applications to become my main source of banking information.				
	1	2	3	4	5
AU4	4. I would recommend the use of Mobile banking Applications to my friends and family.				
	1	2	3	4	5

Please insert comments if any:

THANK YOU FOR PARTICIPATING IN THIS QUESTIONNAIRE

THE END

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