

https://dspace.org/

Factors influencing the adoption social media banking : a South African retail banking perspective

Twum-Ampofo, Yaw Ofosu

2018
https://hdl.handle.net/10539/30608

Downloaded from a DSpace repository. https://dspace.org/

Factors Influencing the Adoption of Social Media Banking: A South African Retail Banking Perspective

Yaw Twum-Ampofo

455816

A research article 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

Johannesburg, 2018

Protocol number: (**WBS/BA455816/460**)

DECLARATION

I, Yaw Twum-Ampofo, declare that this research article is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Yaw Twum-Ampofo

Signed at …Johannesburg……

On the …28th day of …March…… 2018…..

ACKNOWLEDGEMENTS

I would like to express my sincere thanks and appreciation to the following people:

- Thuthuka Mashaba, my supervisor for his time and guidance
- Senyo Kofi Cudjoe who assisted me with my statistical analysis
- My family and friends for their constant encouragement and support

SUPPLEMENTARY INFORMATION

Nominated journal:	South Africa Journal of Information Management (SAJIM): https://sajim.co.za/
Supervisor / Co-author:	Thuthuka Mashaba
Word count †:	12,770
Supplementary files:	Research Questionnaire

ABSTRACT

Social media banking has increasingly been adopted by western countries leading to the provision of banking products and services to a wider and younger base of customers. Social media banking in South Africa is still in its early stages and has thus far experienced a low rate of adoption by South African customers. This study aimed to identify the factors influencing the adoption of social media banking in South Africa.

The study utilised the deductive research design methodology. Content of previous literature on technology adoption was discussed using the technology acceptance model (TAM), theory of reasoned action (TRA), theory of planned behaviour (TPB), innovation diffusion theory (IDT) and theory on trust, forming the basis in deriving the hypotheses for this study.

Data was collected from a total of 233 respondents. 29 of these respondents did not complete the questionnaire, while one respondent did not give consent to partake in the questionnaire. These 30 respondents were excluded from the analysis. The remaining 203 usable responses were used to conduct the analysis.

The findings of the study were analysed and are represented in frequency tables and graphs. A reliability analysis was conducted using Cronbach's alpha coefficient for internal consistency. This test aimed to measure how closely related each set of questions in the survey is to their construct. The Pearson product-moment correlation coefficient was then performed for each hypothesis to measure the strength of the linear relationship between each of the variables. An Analysis of variance (ANOVA) test was performed to determine whether there are statistically significant differences at a 95% confidence interval between the various age groups for each variable. The Tukey test was then conducted for each variable which were found to be statistically significant.

The study identified relative advantage, complexity, compatibility, awareness, trialability, attitude, perceived usefulness, perceived ease of use, and trust to

have an influence on the probability of adoption of social media banking. The hypotheses were accepted at a 95% confidence interval. There was a generally negative sentiment towards social media banking with only 26.1% of respondents having a positive attitude towards it. However, the findings showed that males had a more positive attitude than females; with 30.7% of males being positive compared to 20.7% of females. Males were also more willing to adopt social media banking with 41.4% of males intending to adopt it compared to 33.7% of females. The study further showed that the younger group of respondents had a more positive attitude and were more trusting of social media banking.

The recommendations flowing from the study are for South African banks to increase their awareness of their social media banking services and to educate customers regarding the security and confidentiality of the personal information aspects of social media banking.

In addition to the recommendations, it is evident from the study that further research on this topic should encompass a broader view of the demographics of South Africa to get a better understanding of the demographics' probability of adoption of social media banking; and a consideration of the adoption of digital banking (including social media banking) in the SME segment needs to be conducted.

INTRODUCTION

Purpose of the study

The purpose of this research is to explore the factors that influence the adoption of social media banking in South Africa. The results of this study should provide valuable insights to South African banking institutions to help them better understand customer banking behaviour and assist to drive their consumer banking strategies.

Context of the study

The South African social media landscape has grown by over 140% from 2012 to 2016. Social media is beginning to mature into a stable and measurable environment that can be leveraged by organisations and brands to reach and provide services to their customer base (Goldstuck, 2016). Facebook was the most popular social media channel in South Africa with 14 million users in 2016 followed by YouTube and Twitter with 9 million and 8 million users respectively. A key trend to note is that there is an increase in customers accessing social media channels through mobile devices with 85% of Facebook users now accessing the platform through a mobile device. Mobile phones have clearly become the principal form of accessing and engaging on social networks (Goldstuck, 2016). Mobile phones offer a combination of portability, personal control, and flexibility that make them attractive and disruptive (Castells et al). Irungu (2016) alludes to the increase in mobile usage to the drop in prices of mobile phones from an average of $230 to $160 in 2015. The drop in the average price of data per megabyte by almost 60% from 2011 to 2015 has also been an important contributor in the increased mobile phone usage in South Africa (Vermeulen, 2015).

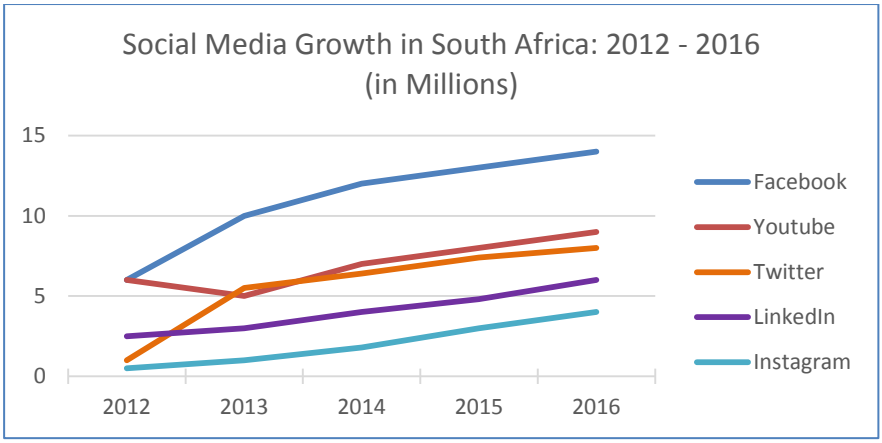


Figure 1: Social Media Growth in South Africa: 2012-2016. Source, BlueMagnet

With the rise in popularity and usage of social media channels, technology firms are increasingly staking a claim in the payments and banking space. Facebook in the USA has launched a mobile payment system on its platforms. Snapchat has enabled functionality for users to transfer money via its mobile Application (App). Apple has launched the Apple Pay functionality which enables its customers to make and receive payments with the use on an Apple device (Finnegan, 2015). Baker (2016) explains that Apple Pay accounted for two-thirds of all contactless spending in the USA in January 2015. These are examples of how major technology companies are encroaching into territories historically associated with the traditional retail banks. Shezi (2017) highlights that the threat of these technology firms creates an opportunity for banks to begin expanding their payments and banking services beyond their traditional service channels into other third party social network channels. This expansion creates an opportunity for banks to meet the increasing demands and high expectations of the digital savvy younger generation who currently dominate social media usage with 58% of South African of users being between the ages of 13 and 29 (Shezi, 2017).

This study aimed to expand the technology adoption debate to understand how South African consumer behavioural patterns impact on their decision to adopt social media banking. This study was carried out across South African retail banking customers.

Social Media Banking

Definition

Social media banking can be defined as the provision and availability of banking related products and services through the use of social media channels (Marous, 2014). These channels include Facebook, Twitter, YouTube, Pintrest, LinkedIn, Google+, WeChat and Instagram. These banking services include the following functionalities:

- Identification and authentication of the customer.
- Viewing of account information such as personal information, account lists, balances and transaction history.
- Purchase of airtime, electricity and lottery tickets.
- Payments and Inter-account transfers.

Overview of Social Media Banking

The increased popularity of social media has led to banks becoming more proactive in using social media channels to reach out to current and prospective customers with product offerings and banking functionalities (Costin, 2015). Costin (2015) further explains that the more people interact on social media channels, the more they expect the banks to be immersed in their daily lives and therefore the greater the expectation they have for banks to provide them with a deepened banking experience via social media channels. The internet has become a catalyst for spreading information to mass customers. Dedu and Nițescu (2014) however explain that banks need to begin to expand their distribution channels through mobile and social media networks as more and more individuals are adopting these channels as their everyday communication channels of choice. The ability of banks to leverage human behaviour is said to be the most effective way of improving the overall customer banking experience (Dedu and Nițescu, 2014).

St Clair (2017) states that social media banking is well set for future growth and there has been good traction amongst early adopters in South Africa who remain active on this channel. Uptake thus far has however not been as significant as other channels such as the mobile banking apps due to consumers' lack of knowledge and resistance in using bot-type services. Mitroff (2016) defines a bot as an application that performs an automated task. Adoption is however expected to increase once the level of comfort and the awareness of functionality of social media banking increases (St Clair, 2017). St Clair (2017) further highlights that the current barriers to the growth of social media banking in South Africa are awareness and trust. The more people use these platforms to consume banking services, the more they will gain trust in these channels.

Problem Statement

St Clair (2017) describes the adoption of social media banking by South African retail banking customers to be very slow. With the increase in social media usage by South Africans across a number of social media platforms, banking institutions are beginning to actively leverage off these social media channels to provide their customers with banking services and to attract the younger generation of customers who are highly active on these social media platforms. It is therefore important for South African banks to understand the factors that drive customer adoption of social media banking. Failure for banks to understand the drivers of social media banking could lead to loss of market share, especially within the younger generation who are heavily active on social media.

This problem this research therefore aims to investigate is the low adoption of social media banking and what factors influence adoption. This study will highlight the factors that influence social media banking and provide insights to South African banks to assist with their digital banking strategies.

Significance of the Study

This study will provide South African banks with insight regarding the factors influencing the adoption of social media banking in South Africa. This is important because South African social media banking penetration is low (St Clair, 2017) despite its benefits including the ability for banks to serve their clients at a lower cost due to the channel being cheaper, and allowing for a wider range of customers to be reached and therefore banked.

With the rapid increase in social media adoption among South African consumers as depicted in Figure 1, the outputs of this study will provide valuable input as to how banks can leverage these platforms to enable banking and payment services.

Delimitations of the study

The term “social media banking” refers to banking that is done via social media platforms. The scope of this study focuses on social media banking and therefore excludes internet and mobile banking. These channels are excluded due to an extensive array of studies that have already focused on these areas both in South Africa and globally. This study will focus on South African retail banking customers.

Assumptions

The study assumes that the majority of respondents of the study are active users of social media and are familiar with other digital forms of banking such as internet and mobile banking.

LITERATURE REVIEW

Introduction

This chapter reviews the literature which formed the background for this study. The purpose of this review was to justify the theoretical choices made during the course of the research and to develop the formal hypotheses to explain the probability of adoption.

Mobile banking adoption in South Africa

Recent figures disclosed by South African banks indicate that migration to mobile banking is fast gaining traction. Nedbank reported a 68% increase in the value of transaction through its mobile application in the 6 month period ending June 2017. Over the same period Standard Bank reported a 55% increase, and First National Bank (FNB) a 68% increase in the value of transactions on their mobile applications (Naidoo, 2017). Despite the increase in adoption of mobile banking, Malinga (2017) notes that adoption in the lower end segment of retail banking has not been as prominent due to cost factors, access to smartphones and the lack of exposure and knowledge about using digital platforms. Prozesky (2017) adds that further barriers that prevent customers from banking digitally are a lack of trust and security fears.

Denecker et al (2014) reports that in developed nations such as the United States of America, one-third of customers are using their smartphones to make payments and most of these payments are being made through mobile applications controlled by online payment specialists and social channels. As payments remain the forefront of banking relationships, this relationship comes under threat if banks do not tap into banking opportunities through social media channels to further entrench customer banking relationships (Denecker et al, 2014).

Adoption Theories

Adoption theory refers to the Information Systems theory that models how users come to accept and use a new technology. It insinuates that when faced with a new technology, a number of factors influence the user's decision on how and when they will use it. Rogers and Shoemaker (1971) define adoption as the acceptance and continued use of a service or an idea. Rogers (1995) further goes on to explain that before a customer is ready to accept a service or idea, they would have undergone a process of knowledge, persuasion, decision and confirmation as depicted in Figure 2 below:

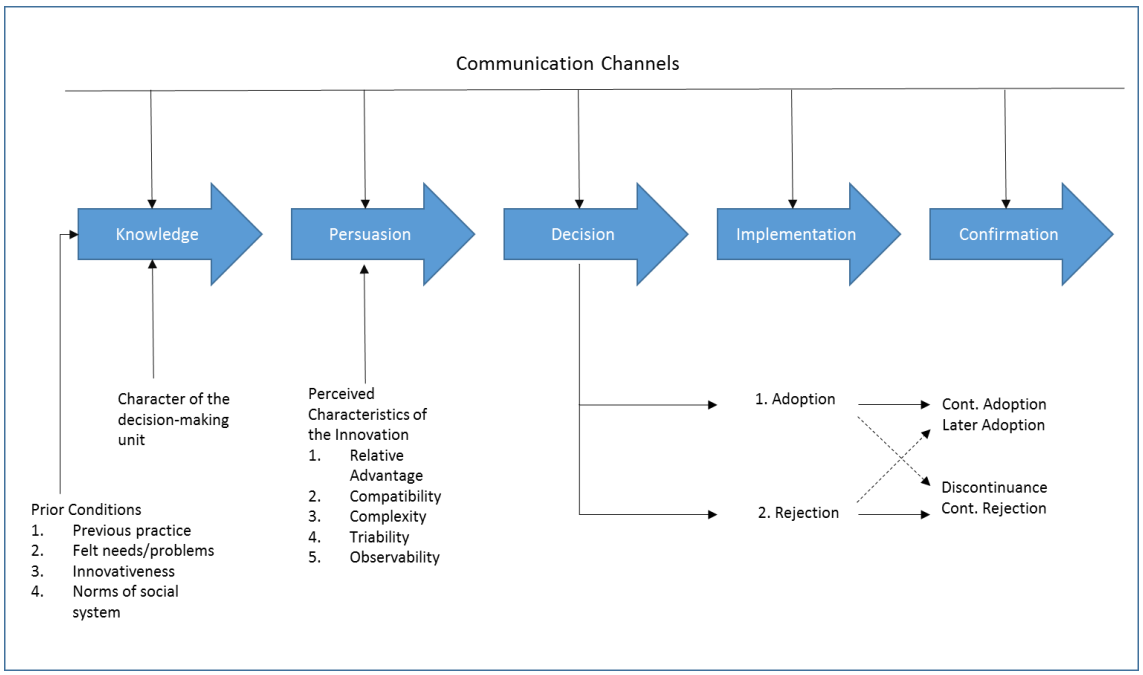


Figure 2: A model of Stage in the Innovation-Decision Process. Source: Rogers, 1995

Theory of Reasoned Action (TRA)

An individual's behavioral intention to perform a particular action is explained by the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1975). Puschel et all (2010) describes it as one of the most significant psychological theories used to explain human behaviour. Three factors are found to explain the theory:

1) **Behavioural intention** which is explained by people's attitudes towards specific behaviours. This includes behavioural beliefs; assessment of the consequences of behaviour, subjective norms, normative beliefs and motivations that must be answered (Riivari, 2005).

2) **Behavioural attitude** describes an individual's sense of favourableness or unfavourableness towards an idea or action (Ajzen and Fishbein, 1980).
3) **Subjective norms** describes a person's estimate of pressures and influence from society to either perform or not perform a particular intended behaviour based on their perception of what people may think about the intended behaviour (Ajzen and Fishbein, l980).

Laukkanen & Cruz (2009) explain that as long as behaviour is voluntarily controlled by the individual, the TRA can accurately be used to explain the factors of technology adoption. However, Sheppard et al. (1988) pointed out a couple of issues with the theory. The first issue is the differentiation between behaviour and intention. The issue is highlighted due to a range of factors including intention which are influential factors that determine how behaviour is performed. Secondly, the model does not consider whether the probability of failing to perform is due to one's behaviour or their intentions. In order to cater for these issues, Ajzen (1985) extended the TRA into a new model named the Theory of Planned Behaviour (TPB) which included a new construct in order to predict behavioural intentions and behaviour.

Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) explains the best way to predict behaviour is by asking the individual if they intend to behave in a particular manner (Ajzen, 1985). It must also be noted that the individual's intention may not always lead to the execution of the behaviour if unexpected obstacles stand in the way. Ajzen (1985) identifies three factors that explain behavioural intention as depicted in Figure 3:

1. **Attitude** which describes a person's own opinion about the intended behaviour.
2. **Subjective norm** which describes other people's opinion about the behaviour
3. **Perceived behavioural control** which describes a person's belief in their own ability to succeed or accomplish a task

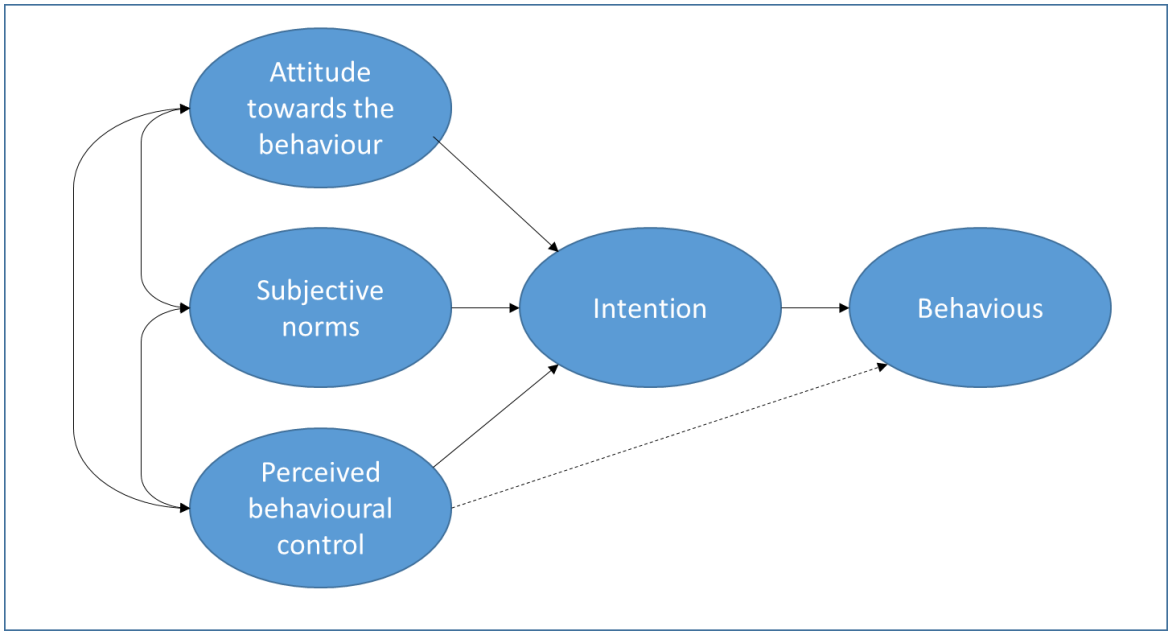


Figure 3: Theory of Planned Behaviour. Source: Ajzen, 1985

The model explains that attitude, subjective norms and perceived behavioural control predict the intention of the individual, which in turn predicts the behaviour. These factors therefore explain the behavioural intention before the behaviour actually takes place (Ajzen, 1985). Kor & Mullan (2011) however believe that intentions can be a poor determinant of behaviour due to an individual's strong capacity to override or constrain their impulses. This claim is supported by Hardeman et al. (2002) who found 24 studies in which the TBT was used in the development or evaluation of an intervention. They concluded that the available evidence was not enough to draw a concrete conclusion about the usefulness of the theory.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) which was introduced by Davis (1989), is adopted from the Theory of Reasoned Action (TRA) and specifically focuses on modelling user acceptance of information systems. Davis (1989) defines the TAM by stating that a users' adoption of a new information system is determined by that users' intention to use the system, which in turn is determined by the users' beliefs about the system. The aim of the TAM is to assist in highlighting the factors of technology acceptance that can explain user behaviours across a wide range of end user technologies. Baranghani (2007)

explains that an ideal model is one that is not only helping for prediction, but also for explanation in order to assist practitioners and researches to identify why a particular system might be unacceptable and enable them to pursue the appropriate corrective actions. A key purpose of the TAM is therefore to provide a basis for tracing the impact of external factors on internal beliefs, attitudes, and intentions.

Figure 4 below depicting the TAM model suggests that the two beliefs namely, perceived usefulness (PU), and perceived ease of use (PEOU), are the principal relevance factors for technology acceptance behavior. The notion of PU is defined as the degree to which a potential user of a technology believes that using that technology will improve their performance. PEOU on the other hand refers to the degree to which a potential user believes that using a specific technology will be easy. In all likelihood a technology that is perceived to be easier to use than another is more likely to be accepted and adopted by a user.

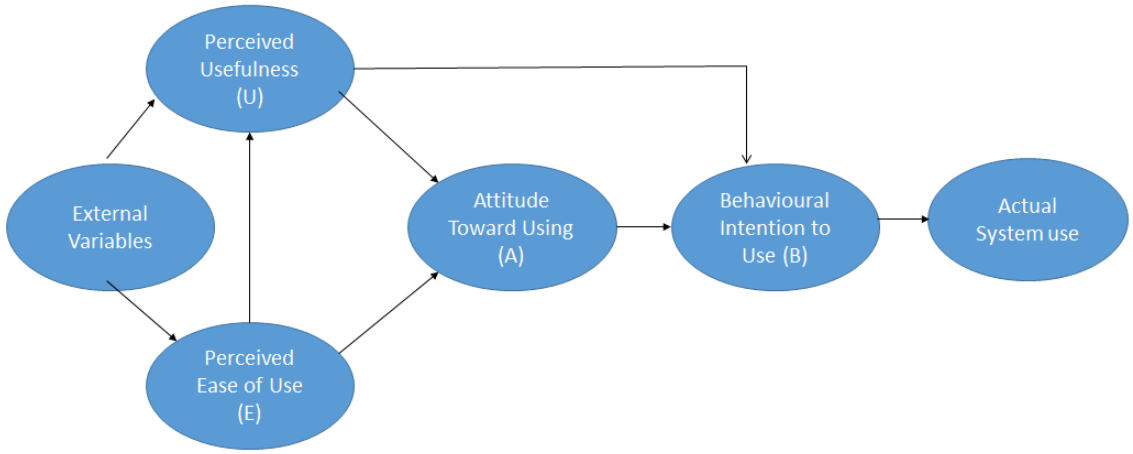


Figure 4: Technology Acceptance Model (TAM). Source: Davis 1989

However, one criticism of the TAM highlighted by Geffen & Keil (1998) is that there is limited research that targets the study of the factors that affect PU and PEOU. This prompted Venkatesh and Davis (2000) to develop the Extended Technology Acceptance Model (TAM2) (See Figure 5) by including a number of determinants to perceived usefulness (PU) into the newly adopted model because it drives usage intentions, as well as to understand how these determinants influence changes over time, with continuous usage of information systems. Social influence processes (*Subjective Norm, Voluntaries and Images*) and the Cognitive Influence Processes (*Job Relevance, Output Quality, Results*

Demonstrability and Perceived Usefulness) are integrated into the model to explain perceived usefulness and usage intentions.

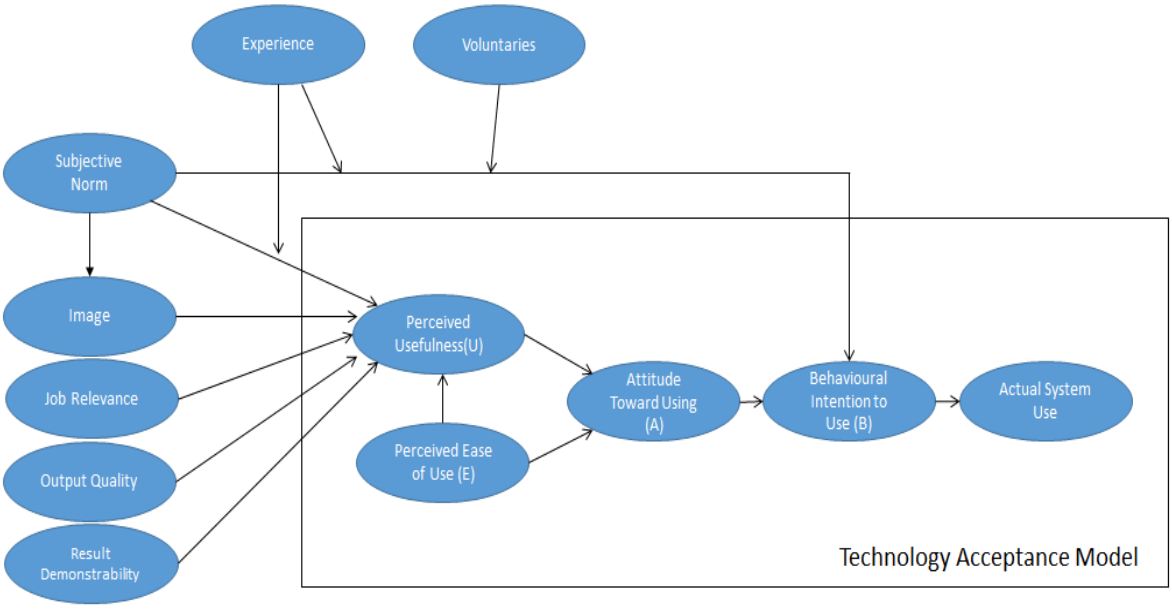


Figure 5: Extended Technology Acceptance Model (TAM2). Source: Venkatesh and Davis, 2000

Innovation Diffusion Theory (IDT)

Rogers (1995) introduced another theory relating to the adoption of new technologies named the Innovation Diffusion Theory (IDT). In 2003 he introduced five characteristics that are perceived to form favorable or unfavorable attitude towards an innovation. These characteristics are: relative advantage, complexity, compatibility, observability and trialability.

1. **Relative advantage** defines the degree to which a new innovation is perceived to be superior to the technology or idea it replaced. This construct is seen as a key factor in predicting the adoption of an innovation.
2. **Compatibility** refers to the degree to which an innovation is viewed as consistent with an individual's needs, values and experience.
3. **Complexity** is the individual's perceived level of difficulty in the understanding and use of the innovation.
4. **Trialability** is the degree to which innovations can be tested on a limited basis.

5. **Observability** refers to the degree in which results of innovations can be observed by a larger group of people. Rogers (2003) attributes these characteristics to the explanation of human adoption of innovations and the decision-making process. Argarwal (2000) further emphasis that users make decisions to either reject or adopt an innovation based on the decisions they form about the innovation.

Trust

Stewart et al. (2001) define trust as a set of beliefs held by individuals derived by their own perceptions about certain attributes. Trust is normally related to risk and security avoidance more especially in the online context where security issues are essential as it involves the user's direct activities who have very little idea regarding the service provider's intentions and capabilities (Urban et al., 2001). Mayer et al (1995) supplements the definition by defining trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to control or monitor the other party". Mayer et al (1995) further go on to explain that this definition centers on the trustor allowing themselves to be vulnerable, thereby implying that something of significance could potentially be lost due to the trustor's participation in the relationship. This can be true in the context of social media banking where the trustor makes themselves vulnerable by engaging in banking transaction on social media platforms with the expectation that the platform will perform in the manner the users expects without breach of security and technology malfunction. Trust is therefore perceived by customers as a major challenge to social media banking.

Conclusion

The literature suggests that there are various factors that potentially influence the adoption of a technology. A study performed by Suoranta (2003) on the adoption of mobile banking in Finland found the following factors to support the adoption of mobile banking: *perceived relative advantage; perceived*

compatibility; awareness via media channels; and trialability. Another adoption study by Baraghani (2007) found the following factors to have a positive effect on the adoption of internet banking: *attitude of the customer towards the technology; subjective norms; trust; perceived ease of use; and perceived usefulness.* Based on the research, this study uses Innovation, behavioural, and trust as constructs to identify the factors influencing the adoption of social media banking in South Africa. Previous research on technology adoption has found these constructs to be the most reliable and have been consistently used in past technology adoption studies.

Hypothesis

A number of hypotheses were therefore identified to be consistent with factors found to positively influence adoption of technologies in previous studies. These being:

Hypothesis: Innovation Attributes

H1a: *The greater the perceived relative advantage of social media banking, the more likely it will be adopted by customers.*

H1b: *The lower the perceived complexity of social media banking, the more likely it will be adopted by customers.*

H1c: *The greater the perceived compatibility of social media banking, the more likely that it will be adopted by customers.*

H1d: *The greater the awareness of social media banking, the more likely it will be adopted by customers.*

H1e: *The greater the trialability of social media banking, the more likely it will be adopted by customers.*

Hypothesis: Attitudes towards Innovation

H2: *The greater the customers attitude towards social media banking, the more likely that it will be adopted by customers.*

Hypothesis: Predictors of adoption

H3a: *The greater the perceived usefulness of social media banking, the more likely that it will be adopted by customers.*

H3b: *The greater the perceived ease of use of social media banking, the more likely that it will be adopted by customers.*

Hypothesis: Trust

H4: *There greater the perceived trust of social media banking, the more likely that it will be adopted by customers.*

Conceptual Framework

From the discussed literature, it can be noted that there are a number of factors that may cause the adoption of social media banking in South Africa. Figure 6 depicts the relationship between the constructs and their influence on the intention of customers to adopt social media banking.

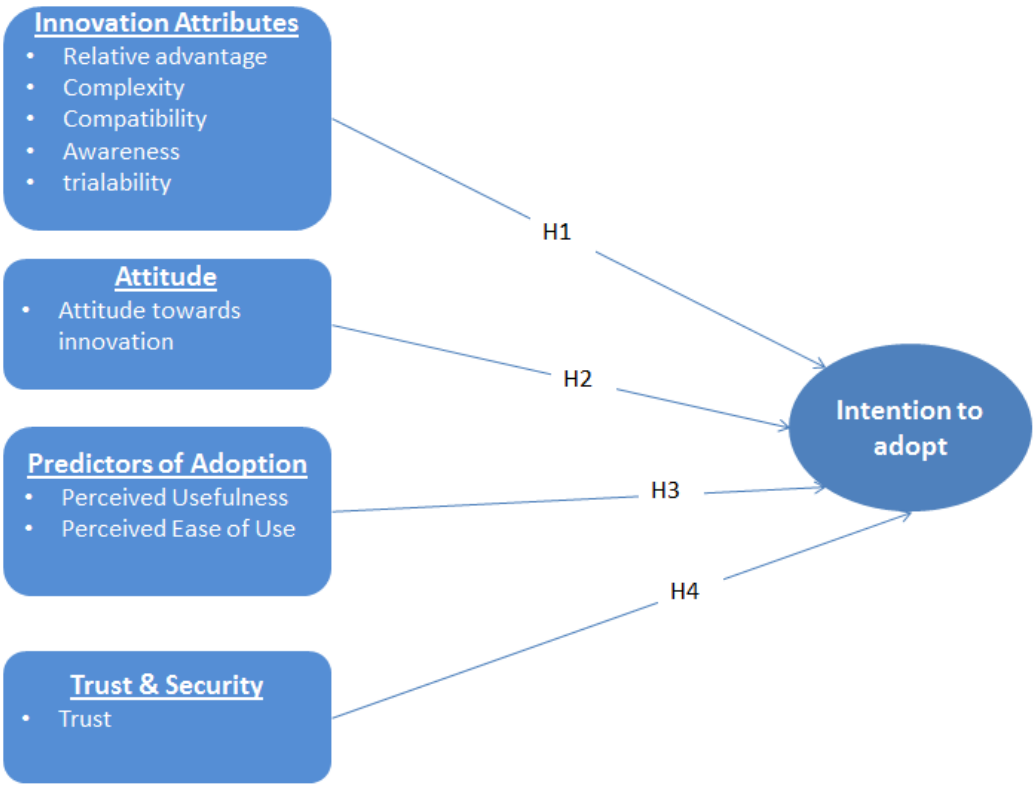


Figure 6: Conceptual Framework

RESEARCH METHODOLOGY

Research methodology

The quantitative research method was the chosen research methodology for this study. This research methodology is used to quantify attitudes, opinions and behaviours, and generalise the results from a defined population size (Nenty, 2009). Sukamolson (2007) describes it as numerical representation and manipulation of observable data for the purpose of describing and explaining the occurrences that those observations reflect. It provides the necessary tools for measuring concepts and dealing with issues relating to population and sampling. In addition, it also uses a deductive model in testing the relationship between variables and providing evidence in support or against pre-defined hypothesis (Neuman, 2003). In past studies of technology adoption, a similar methodology was used therefore using it for this study creates consistency and comparability for future studies.

This study aimed to test various assumptions made on factors that lead to customers adopting social media banking. The responses received during the data collection process were converted into usable statistics in order to quantify attitudes and behaviours of the population in relation to social media banking.

The deductive research approach was used for this study as there is theory that exists from which conclusions can be drawn from to explain causal relationships between concepts and variables and to measure concepts quantitatively.

Research Design

The methodological approach that was adopted for this study was a survey in the form of an online questionnaire. This particular approach was selected due to its appropriateness for this type of study in that a large sample population is required in order to form a better description of the relative characteristics of the general population (Sincero, 2012). The questionnaire was also a convenient data gathering method which allows for the collection of data from a wider

spread of the South African population. Surveys however do possess a disadvantage in that they are inflexible, and the questions cannot be changed during the data gathering process in order to cater for observed trends in the earlier surveys collected (Sincero, 2012). The responses may also not be an accurate reflection of the respondent due to some respondents possibly misunderstanding questions and answering the survey inaccurately. This limitation was mitigated by spreading and enabling a wider range of responses for the respondent.

Population and Sample

Population

The population of interest was the South African retail banking customer that is active on social media channels.

Sample and Sampling method

Non-probability sampling was used due to the respondents from the sample population being selected in a non-random manner. A combination of convenience sampling and snowball sampling was used to collect data. The original population sample selected was based on respondents that were accessible to the researcher. Thereafter referrals in the form of snowballing were used in order to increase the pool of respondents. This method was used in order to obtain a consistent demographic sample base of respondents that have a South African banking account and have access to social media.

The central limit theorem states that the sample of data collected will be closer to the mean of the overall population in question as the sample size increases (Khan, 2011). Khan (2011) further states that as a general rule, sample sizes equal to or greater than 30 are considered sufficient for the central limit theorem to hold, meaning the distribution of the sample means is fairly normally distributed. The survey was completed by 233 respondents which ensured that the data collected was as close to the population mean as possible, thereby

limiting the influence of outliers and extreme observations. Of the 233 respondents, one respondent did not give consent to partake in the study and 29 respondents did not complete the study. These 30 respondents were therefore excluded from the data analysis. The risk of undergoing the survey was the potential of a low response rate. To mitigate this, a clear description of the content and the purpose of the survey were conveyed to the respondent as well as a guarantee that their responses were to remain confidential and anonymous. Follow up emails on a frequent basis was also be used to remind the respondents to complete the survey. No incentives were offered to respondent to complete the survey.

The Research Instrument

A closed format questionnaire was used as it was the ideal to perform preliminary analysis for calculating statistical data and percentages (Sincero, 2012). The questionnaire was administered in English and comprised of four sections arranged as follows:

- The first section was for the respondent to give consent to partake into this study. Upon giving consent they were directed to the beginning of the questionnaire.
- The second section was focused on gathering demographic information about the respondents.
- The third section was focused on gathering general information on the respondent’s social media and banking behaviour.
- The fourth section was focused on the perceptions of the respondent on social media banking linked to the hypothesis. This was done using a 7-point likert scale ranging from "strongly disagree" to "strongly agree" as it allowed the respondents to provide more accurate responses.

The likert scale is best used to measure and evaluate customer sentiment on a specific product, service or experience (Vagias & Wade, 2006). In this study it was used to measure the respondent’s sentiments on social media banking.

Procedure for Data Collection

The questionnaire was made available to respondents through an online survey. An internet address link was provided in an email to the respondents with a clear description of the contents of the study as well as the purpose of the survey. The responders were then able to access the online questionnaire electronically via the link provided. This approach improved efficiency as it reduced the potential for errors in data capturing, and it allowed for easier analysis of the data due to the collected data being in electronic format. All the data collected remained anonymous and confidential. Any personal information that could possibly identify the respondent was not included in the questionnaire and therefore was not captured. Participation in the questionnaire was voluntary and the respondent could withdraw at any time without penalty. By completing the survey, the respondent indicated that they voluntarily participate in this research by providing consent to partake in the study.

Data Analysis and Interpretation

Invalid and incomplete questionnaire responses were excluded from the data analysis. The remaining valid questionnaire responses were then analysed based on the responses to the demographic and general information questions, as well as the social media banking adoption questions using a 7-point likert scale. Likert scales are a psychometric response scale used to measure respondents' attitudes to a particular question or statement. Likert scale data is ordinal data as we can only measure a score relative to another, but not the distance between the points (Bertram, 2012). The most appropriate measure of the likert scale for central tendency is the mode or the median. The mean cannot be defined for ordinal data. Pett (1997) recommends the use of frequencies and percentages of responses in each category when analysing ordinal data. Bertram (2012) however suggests negativities of likert scale analysis in that likert scales are subject to distortions and biases from several causes, namely, the avoidance of respondents to use extreme response categories (*central tendency bias); respondents* agreeing with statements as

presented (*acquiescence bias*); respondents attempting to portray themselves or their organization in a more favourable light (*social desirability bias*).

A reliability analysis was conducted using Cronbach's alpha coefficient for internal consistency. This test aimed to measure how closely related each set of questions in the survey is to their construct. The Pearson product-moment correlation coefficient was then performed for each hypothesis to measure the strength of the linear relationship between each of the variables.

Analysis of variance (ANOVA) test was performed to determine whether there are statistically significant differences at a 95% confidence interval between the various age groups for each variable. A further test named the Tukey test was conducted for each variable which were found to be statistically significant. The Tukey test aimed to further reveal the age groups in which there was a statistical difference at a 95% confidence interval.

Similar studies have applied the acceptance criteria of a statistic at a 95% confidence interval. This study applied the same acceptance criteria for consistency. A statistic was accepted at a p-value less than or equal to 0.05 (p-value =< 0.05). Statistics at a p-value greater than 0.05 (p-value > 0.05) were rejected and said to be not statistically significant.

Limitation of the study

Due to the scope of this research study, the population sample may not reflect an accurate demographic representation of the South African population due to the convenience sampling method that was used to collect data. The study was also limited to the personal banking segment of customers and excludes business and corporate banking customers.

Validity and reliability

Validity is defined as the extent to which a data collection method is accurately measured in a quantitative study (Saunders and Thornhill, 2003). Four types of validity were performed in this study;

- **Face Validity** by assessing at face value whether the questions effectively appear to be measuring the construct. The assistance of an expert in the field of study was used to perform face validity.
- **Construct Validity** by testing the extent to which the questionnaire actually measures what the theory says it would through the assistance of an expert in this field of study.
- **Content Validity** by evaluating the validity of the constructs and whether all aspects of the constructs are covered in the questionnaire.
- **Criterion Validity** by measuring the extent to which a construct is related to an outcome.

External Validity

External Validity refers to the extent the results of the study of a sample population can be generalised for across the entire population in scope (Brink, 1993). To ensure the results of the sample population for this study was a general reflection of the entire population, we ensured close alignment of the characteristics and demographics of the population sample to that of the target population of the study. The questionnaire was also sent to a large sample size of respondents across the different regions of South Africa in order to cover a wide-spread population sample.

Internal Validity

Internal Validity refers to the extent in which the findings of the study are a true representation of reality (Brink, 1993). Internal validity was considered in this study through a structured and careful review of the literature.

Reliability

Reliability was measured through observation of the degree to which the respondents provide consistent answers in the questionnaire (Brink, 1993).

PRESENTATION OF RESULTS

Introduction

The results of the research study are presented and described in this section. Data was collected from 233 respondents. 29 of these respondents did not complete the questionnaire, while one respondent did not give consent to partake in the questionnaire. These 30 respondents were therefore excluded from the analysis. The remaining 203 usable responses were analysed and interpreted using statistical methods with the aid of tables and graphs.

Demographic profile of respondents

The respondents were South African based individuals with a banking account and are active on one or more social media platforms.

Table 1: Profile of respondent's demographic variables

Variable	Level	Frequency	Percentage
Gender	Male	111	54.7%
	Female	92	45.3%
Age	18 - 24 years old	13	6.4%
	25 - 34 years ol	102	50.2%
	35 - 44 years old	79	38.9%
	45 - 54 years old	4	2.0%
	55 years old	5	2.5%
Higehst Education Level	High School	7	3.4%
	Diploma	22	10.8%
	Bachelors Degree	50	24.6%
	Honours Degree	76	37.4%
	Masters Degree	46	22.7%
	Doctorate	2	1.0%
Gross Annual Salary	R0 - R119,999	21	10.3%
	R120,000 - R299,999	15	7.4%
	R300,000 - R749,999	95	46.8%
	R750,000 +	72	35.5%

Gender

Table 1 displays the demographic distribution of the participants in the survey. From this total number of participants in the survey, there were 92 females representing 45.3% while there were 111 males representing 54.7%. Figure 7 displays the distribution of gender among the participants. The graph indicates that majority of the participants were males.

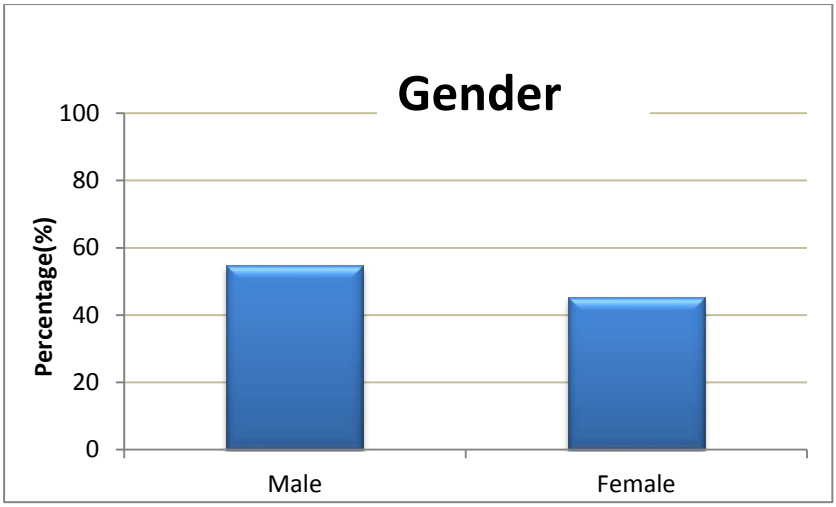


Figure 7: Percentage number of respondents by gender

Age Group

From the total number of participants that took part in the survey, there were 102 respondents representing 50.2% who were in the 25-34 age category, 79 representing 38.9% were in the 35-44 age category, 13 representing 6.4% were in the 18-24 age category, 5 representing 2.5% were above 55 years and 4 representing 2% were in the 45-54 age category. Figure 8 displays the distribution of the current age groups of the participants in the study. It shows that majority of the respondents are between the ages of 25-34 years, with the least respondents being in the age group between 45-54 years.

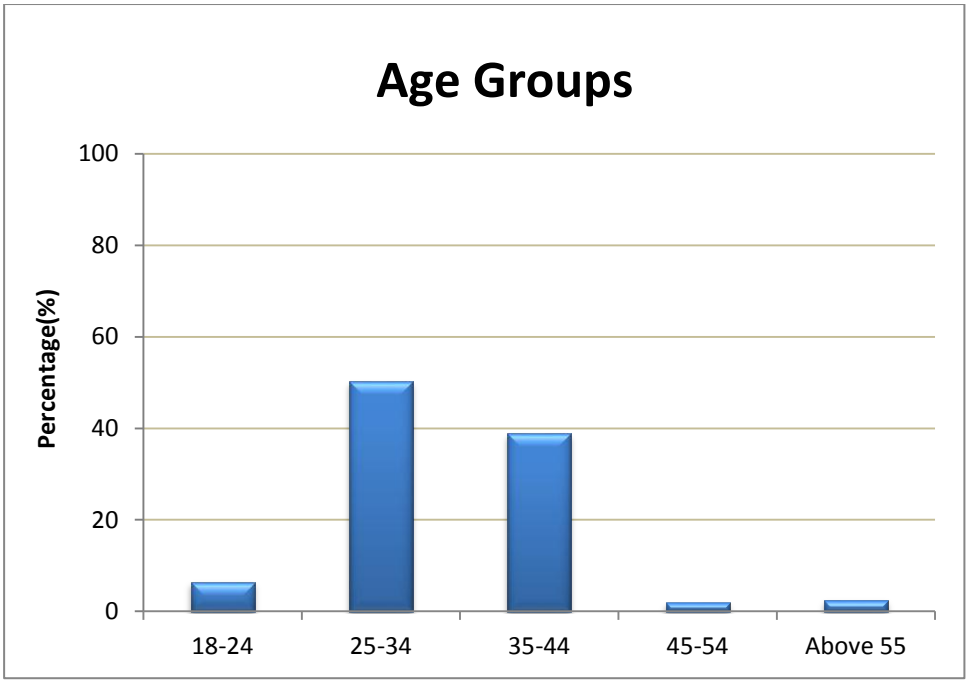


Figure 8: Percentage number of respondents by age group

Highest Education Levels

From the available data, there were 76 respondents representing 37.4% who's highest qualification were an honours degree, 50 respondents representing 24.6% highest qualification was Bachelor's degree, 46 respondents representing 22.7% highest qualification was a Master's degree, 22 respondents representing 10.8% highest qualification was a Diploma, 7 respondents representing 3.4% highest qualification was high school while 2 respondents representing 1% had a doctorate degree.

Gross Annual Salary

The gross annual income of the participants was also collected. From the available data, 95 respondents representing 46.8% of the total number of participants in the study earned between R300,000 - R749,999; 72 respondents representing 35.5% earned above R750,000, 21 respondents representing 10.3% were in the R0 - R119,999 annual salary category and 15 respondents representing 7.4% were in the R120,000 - R299,999 annual salary category.

General banking and technology usage

Table 2 highlights the most frequently used social media platforms by the respondents. The respondents were required to select all the social media platforms they frequently use and therefore multiple selections were enabled. Based on this the frequency does not add up to the 203 respondents as most respondents selected more than one social media platform.

Table 2: Commonly used social media platforms

Variable	Social Media Platform	Frequency	Percentage
Commonly used Social Media Platforms	Whatsapp	196	96.6%
	Facebook	128	63.1%
	Instagram	100	43.9%
	Youtube	73	36.0%
	Twitter	60	29.6%
	Google+	16	7.9%
	Pintrest	13	5.9%
	WeChat	1	0.5%

Table 3 highlights the amount of time the respondents spend on social media on a daily basis.

Table 3: Social media usage

Variable	Social Media Usage	Frequency	Percentage
Commonly used Social Media Platforms	0 - 1 hour a day	33	16.3%
	1 - 2 hours a day	57	28.1%
	2 - 4 hours a day	71	35.0%
	4 - 6 hours a day	24	11.8%
	More than 6 hours a day	18	8.9%

Table 4 shows that the respondents between the ages of 18-24 and 25-35 mostly use Facebook, Whatsapp, YouTube and Instagram. Those respondents in the age groups of 45-54 and above 55 years of age mainly use Facebook and Whatsapp, however Instagram and YouTube are not commonly used platforms for this group.

Table 4: Common social media platforms by age group

Most common social media platforms by age group (Frequency)						
	18-24	25-34	35-44	45-54	55+	Total
Whatsapp	13	96	78	4	5	**196**
Facebook	10	63	50	2	3	**128**
Instagram	5	56	39	0	0	**100**
Youtube	6	39	27	1	0	**73**
Twitter	1	33	25	0	1	**60**
Google+	1	3	8	3	1	**16**
Pintrest	1	6	6	0	0	**13**
WeChat	0	1	0	0	0	**1**

The data available in table 5 suggests that 87 respondents representing 42.9% of the total number of participants use FNB as their primary bank; 41 respondents representing 20.2% use Absa as their primary bank; 37 respondents representing 18.2% use Standard Bank as their primary bank; while 4 respondents representing 2.0% use Capitec as their primary bank; and one respondent uses bank outside of the 6 major South African banks.

Table 5: Profile of respondents general banking variables

Variable	Primary Bank	Frequency	Percentage
Primary Bank	Absa	41	20.2%
	FNB	87	42.9%
	Standard Bank	37	18.2%
	Nedbank	14	6.9%
	Investec	19	9.4%
	Capitec	4	2.0%
	Other	1	0.5%

Table 6 highlights that only 14.3% of the respondents have previously banked on social media.

Table 6: Social media banking usage

Variable	Social Media Banking	Frequency	Percentage
Banked on Social Media	Have banked on social media	29	14.3%
	Have not banked on social media	174	85.7%

Commonly used social media platforms

From the available data, 196 respondents representing 96.6% of the total number of participants use Whatsapp as a social media platform; 128 respondents representing 63.1% use Facebook; 100 respondents representing 43.9% use Instagram; 73 respondents representing 36.0% use YouTube; 60 respondents representing 29.6% use Twitter. Only 1 respondent representing 0.5% uses WeChat.

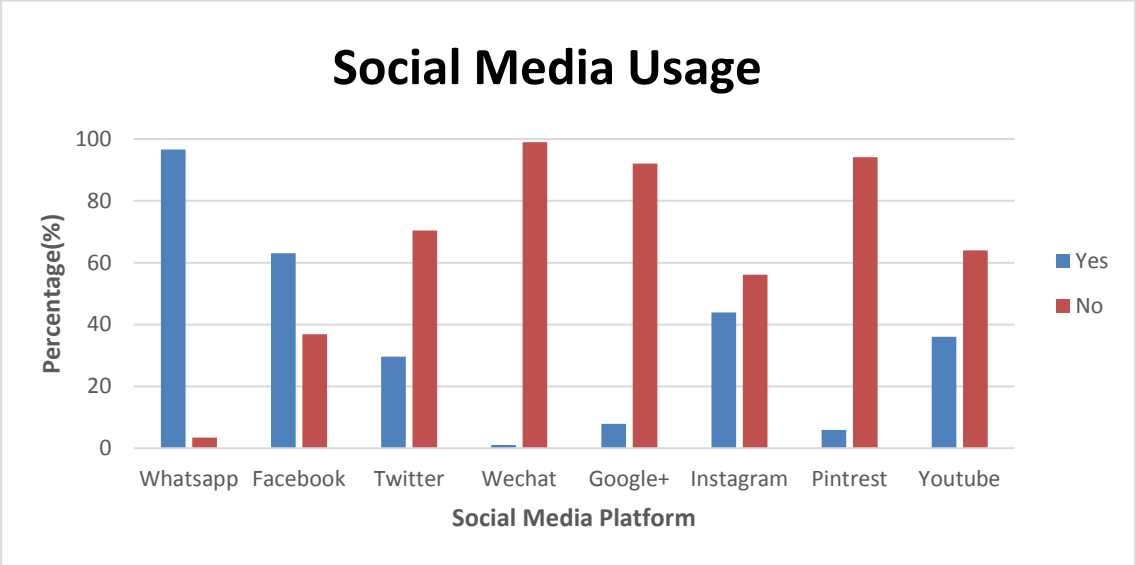


Figure 9: Percentage usage by social media channel

Time Spent on Social Media

From the available data, 71 respondents representing 35% of the total number of participants in the study spend 2-4 hours a day on social media, 57 respondents representing 28.1% spend 1-2 hours a day on social media; 33 respondents representing 16.3% spend 0-1 hour a day on social media; 24 respondents representing 11.8% spend 4-6 hours a day on social media; while 18 respondents representing 8.9% spend more than 6 hours a day on social media.

Social Media Banking

From the data available in the survey, there were 174 respondents representing 85.7% of the total sample population who have not banked on social media, while 29 respondents representing 14.3% have banked on social media.

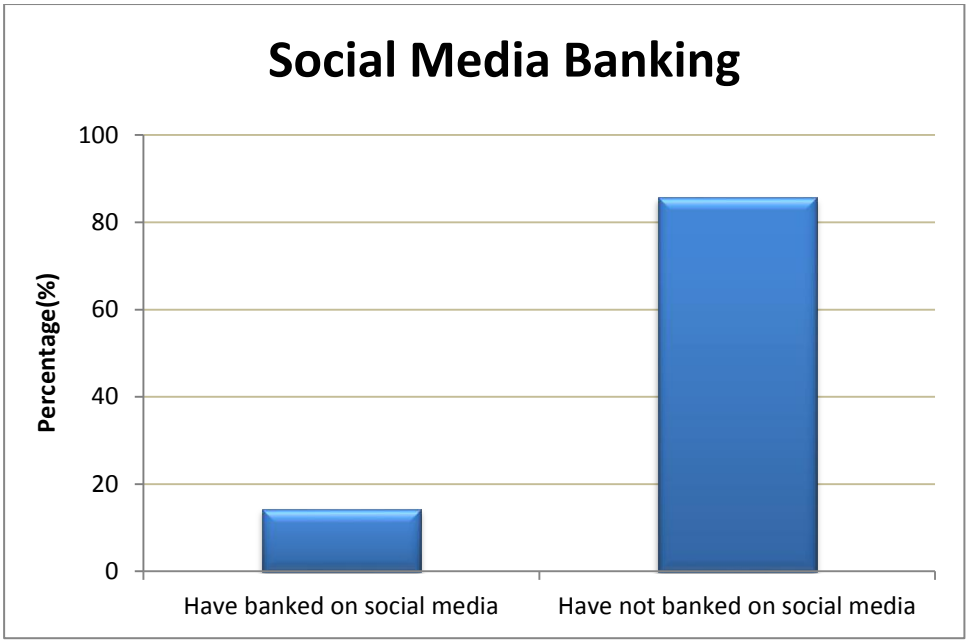


Figure 10: Percentage usage of social media banking

Measurements of constructs amongst gender

The average scores obtained by males and females for each construct is displayed in table 7. These average scores are determined by the responses of each of the respondents for the various constructs. The scores are rated from one to seven based in the selected response of the respondent. One being “strongly disagree” and seven being “strongly agree”. It is evident from the results that males scored higher than females for most of the constructs, meaning that they agreed more with the questions than females.

Table 7: Measurements of constructs amongst gender

	Male	Female	T value	p-value
Attitude	3.7	3.2	2.2021	0.02882
Trust	3.4	2.9	2.16	0.03204
Perceived usefulness	3.9	3.6	1.1224	0.2631
Perceived ease of use	4.7	4.6	0.58412	0.5599
Trialability	5.1	4.7	1.8743	0.06244
Complexity	5.6	5.9	-1.3339	0.1839
Relative advantage	5.3	5	1.3373	0.1827
Compatibility	6.0	5.9	0.5292	0.5973
Awareness	4.5	4	2.2321	0.02682
Intention to Adopt	4.2	3.8	1.5088	0.133

The average scores for males regarding attitude is 3.7 while it is 3.2 for females. There was a statistically significant difference (p-value=0.02882) between males and females regarding attitude. The result suggests that males have a greater attitude towards social media banking than females.

The average scores for males regarding trust is 3.4 while it is 2.9 for females. There was a statistically significant difference (p-value=0.03204) between males and females regarding trust. The result suggests that males are more trusting of social media banking than females.

The average scores for males regarding awareness is 4.5 while it is 4.0 for females. There was a statistically significant difference (p-value=0.02682) between males and females regarding awareness. The result suggests that males are more likely to use social media banking than females if they are aware of it.

There was no statistically significant difference between males and females regarding perceived usefulness ease of use, trialability, relative advantage, compatibility, complexity and intention to adopt.

Analysis of variance (ANOVA) for age groups

Table 8: Analysis of variance (ANOVA) for age groups

	F value	p-value
Attitude	6.998	0.000027
Trust	11.22	< 0.0001
Perceived usefulness	4.291	0.00237
Perceived ease of use	3.777	0.0055
Trialability	1.671	0.158
Complexity	2.307	0.0595
Relative advantage	1.439	0.223
Compatibility	0.626	0.644
Awareness	1.438	0.223
Intention to Adopt	3.307	0.0119

The p-value (0.000027) for the ANOVA test shows that there is a statistically significant difference among the different age groups regarding attitude. The results of a Tukey test revealed that was a significant differences in attitude between participants who were above 55 years and those in the 18-24 age category (p-value=0.00015), between participants above 55 years and those in the 25-34 age category (p-value=0.00066) and between participants above 55 years and those in the 35-44 age category (p-value=0.011).

The p-value (p-value < 0.001) for the ANOVA test shows that there is a statistically significant difference among the different age groups regarding trust. The results of a Tukey test revealed that there were significant differences in trust between participants who were in the 18-24 age category and those in 35-44 age category (p-value=0.0055), between participants in 18-24 age category and those above 55 years (p-value=0.000013), between those in the 25-34 age category and 35-44 age category (p-value=0.0005), and those in the 25-34 age category and those above 55 years (p-value=0.00003), and between 35-44 age category and those above 55 years (p-value=0.0065).

There was a statistically significant difference among the different age categories regarding perceived usefulness (p-value = 0.00237). A further test revealed that there was difference between those above 55 years and those in the 18-24 age category (p-value=0.03), between those in 25-34 age category and those above 55 years (p-value=0.003), and between those in the 35-44 age category and those above 55 years (p-value=0.03).

The p-value (p-value=0.005) for the ANOVA test shows that there is statistically significant difference among the different age categories regarding perceived ease of use. A further test revealed that there was difference between those in the 18-24 age category and those above 55 years (p-value=0.005).

There was a statistically significant difference (p-value=0.0119) among the different age groups regarding intention to adopt. The results of the Tukey test show that there was a significant difference between those in the 18-24 category and those above 55 years (p-value=0.03) and also between those in the 25-34 age category and those above 55 years (p-value=0.04).

From the results obtained, there were no statistically significant differences in complexity, relative advantage, compatibility, and awareness among the different age categories.

Reliability and Validity

Reliability analysis was conducted using Cronbach's alpha coefficient for internal consistency. This test measures how closely related each set of questions in the survey is to their construct. Field (2005) provides the following guidelines for Cronbach's alpha: > 0.9 is Excellent; > 0.8 is Good; > 0.7 is Acceptable; > 0.6 is Questionable; > 0.5 is Poor; and < 0.5 is Unacceptable.

The results of the reliability analysis are summarized in Table 9. The reliability coefficients for all the constructs used in the study exceed the threshold of 0.70 which is considered acceptable and indicates good internal reliability of the scales.

Table 9: Cronbach alpha

Cronbach alpha	
Attitude	0.94
Trust	0.88
Perceived usefulness	0.91
Perceived ease of use	0.88
Trialability	0.92
Complexity	0.90
Relative advantage	0.93
Compatibility	0.85
Awareness	0.86
Intention to Adopt	0.86

Results pertaining to Hypothesis 1

Table 10 below presents the correlation between the Innovation attributes.

Table 10: Correlation coefficient for innovation attributes

Correlation Coefficient for Innovation Attributes					
	Relative Advantage	Complexity	Compatibility	Awareness	Trialability
Relative Advantage					
Complexity	-0.2				
Compatibility	0.7	-0.3			
Awareness	0.6	-0.2	0.5		
Trialability	0.7	-0.2	0.5	0.6	
Intention to Adopt	0.6	-0.3	0.5	0.6	0.6

Relative advantage has strong positive correlations with compatibility, awareness, trialability and intention to adopt which indicate strong evidence of association between these attributes. Compatibility has an average positive correlation with awareness, trialability and intention to adopt which shows evidence of association. Complexity is negatively correlated to all the attributes.

Table 11: Correlation between Intention to Adopt and Innovation attributes

	Correlation coefficient	t-value	p-value
Trialability	0.6	9.4484	< 0.0001
Relative advantage	0.6	10.98	< 0.0001
Compatibility	0.5	7.7081	< 0.0001
Complexity	-0.3	-4.3351	< 0.0001
Awareness	0.6	10.496	< 0.0001

Hypothesis 1a

H1a: *The greater the perceived relative advantage of social media banking, the more likely it will be adopted by customer.*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Hypothesis 1b

H1b: *The lower the perceived complexity of social media banking, the more likely it will be adopted by customer*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Hypothesis 1c

H1c: *The greater the perceived compatibility of social media banking, the more likely that it will be adopted by customer*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Hypothesis 1d

H1d: *The greater the awareness of social media banking through media channels, the more likely it will be adopted by customer*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval

Hypothesis 1e

H1e: *The greater the trialability of social media banking, the more likely it will be adopted by customer*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Results pertaining to Hypothesis 2

Table 12 below presents the correlation between attitude and Intention to adopt.

Table 12: Correlation coefficient between attitude and intention to adopt

	Correlation coefficient	t-value	p-value
Intention to Adopt	0.6	10.56	< 0.0001

Hypothesis 2

H2: *The greater the customers attitude towards social media banking, the more likely that it will be adopted by customer.*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Results pertaining to Hypothesis 3

Table 13 below presents the correlation between predictor of adoption attributes.

Table 13: Correlation coefficient for predictors of adoption

Correlation coeffient for Predictors of Adoption		
	Perceived Usefulness	**Perceived Ease of Use**
Perceived Usefulness		
Perceived Ease of Use	0.6	
Intention to Adopt	0.6	0.5

Perceived Usefulness has a strong positive correlation with Perceived Ease of Use and Intention to adopt which indicates strong evidence of association between these attributes. Perceived Ease of Use shows a positive correlation with Intention to adopt indicating a positive correlation.

Table 14: Correlation between Intention to Adopt and predictors of adoption attributes

Correlation coeffient for Predictors of Adoption		
	Perceived Usefulness	**Perceived Ease of Use**
Perceived Usefulness		
Perceived Ease of Use	0.6	
Intention to Adopt	0.6	0.5

Hypothesis 3a

H3a: *The greater the perceived usefulness of social media banking, the more likely that it will be adopted by customer.*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Hypothesis 3b

H3b: *The greater the perceived ease of use of social media banking, the more likely that it will be adopted by customer.*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Results pertaining to Hypothesis 4

Table 15 below presents the correlation between trust and Intention to adopt

Table 15: Correlation coefficient between trust and intention to adopt

	Correlation coefficient	t-value	p-value
Intention to Adopt	0.6	10.12	< 0.0001

Hypothesis 4

H4: *There greater the perceived trust of social media banking, the more likely that it will be adopted by customer.*

Accept hypothesis, the p-value (p-value < 0.0001) is significant at 95% confidence interval.

Summary of the results

The chapter summarises all the results from the data collected from the 203 usable responses of South African bank account holders. The demographic results were elaborated according the various demographic categories, namely gender, age, highest education levels and salary range. The reliability and validity of the research instrument was tested using the Cronbach alpha. All the Cronbach alphas were above 0.7 indicating a good internal reliability of the scales and are therefore found to be reliable and valid.

The results found that relative advantage, complexity, compatibility, awareness, trialability, attitude, perceived usefulness, perceived ease of use and trust at all relevant at the 95% confidence interval. These results will be further discussed in the following chapter.

DISCUSSION OF THE RESULTS

Introduction

This research aims to understand the factors influencing the adoption of social media banking by South African banking customers. This chapter provides a summary and discussion of the findings of the factors that influence the adoption of social media banking.

This section discusses the key findings obtained from the respondents pertaining to their responses to the demographics and the constructs. This section also discusses the relationships between the relevant constructs.

Demographics

Gender

Males represented 54.7% of the survey respondents while females represented 45.3%. The average score obtained for the time spent on social media indicates that females are more active on social media than their male counterparts. Despite the lower number of female respondents for the survey, there were more females that have banked on social media. Out of the 29 respondents that indicated to have banked using a social media platform, 52% were females while 48% were males.

The average scores of the constructs in table 7 Indicate that males have a more positive attitude towards social media banking; males are more trusting to do their banking on social media platforms and males are more likely to adopt social media banking if there is greater awareness of it.

Age Group

Qwerty Digital (2017) found that 61.2% of active social media users fall between the age groups of 18-24 and 25-34. This is consistent with the survey where it

was found that respondents between the ages of 18-24 spend the most time on social media followed by respondents in the age group of 25-34. This is consistent with the notion that social media primarily attracts the younger generation.

The analysis identifies that there is a statistically significant difference in attitude towards social media banking between respondents above 55 years of age and those in the 18-24 age group; between those above 55 years and age group 25-34; between those 55 years and age group 35-44. This highlights that the younger generation has a more positive attitude towards adopting social media banking. The analysis further identifies the difference in trust levels of the various age groups with the respondents being less trusting of performing their banking activities on social media as the age groups increase. The younger generation found that banking on social media will be more useful and convenient for them then the elder age groups. This is consistent with the finding that those in the age groups of 18-24 perceive social media banking to be easier to use than those above 55 years of age. The younger age groups of those aged between 18-24 and 24-34 were more willing to adopt social media banking as compared to those above 55 years of age.

The results of this study support a study conducted by Olson et al (2012) which found that younger adults are more likely to use a greater breadth of new technologies. Karjaluoto, Mattila & Pento (2002) further support that notion by arguing that older consumers struggle with new technology and are more likely to have negative attitudes towards change.

Social Media platform usage

The results suggest that Whatsapp followed by Facebook, Instagram and YouTube are the four most frequently used social media platforms amongst the respondents. However, the research conducted by Qwerty Digital (2017) found that Facebook, followed by YouTube and Whatsapp comprise the three most frequently used social media platforms. It becomes evidently clear that these social media platforms are the most popular amongst South Africans.

Social Media Banking

The survey identified that only 14.3% of the sample population have banked on social media. Of those respondents that have banked on social media, 48.3% of them fall within the age group of 34-45. FNB customers comprises of 44.9% of those that have banked on social media. The low numbers of respondents that have banked on social media suggests that there has been a slow rate of adoption of social media banking in South Africa as argued by St Clair (2017).

Discussion pertaining to Hypothesis 1

Hypothesis 1a

Hypothesis 1a states that the greater the perceived relative advantage of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.6 between relative advantage and the intention to adopt indicates that Individuals need to be shown that the technology is significantly better with greater benefits than what they are accustomed to in order to increase their likelihood of adoption. These results are consistent with (Mairura, 2016) who in a separate study found that relative advantage of one technology over another was found to be a key determinant of the adoption of new technology as well as Algaith et al (2010) who found that relative advantage influences the adoption and usage of online services. Social media banking provides a convenient alternative for customers to do their banking. Since they are already spending a lot of time on social media on a daily basis, it becomes more convenient to perform banking activities on those platforms than having to log into their internet or mobile banking.

Hypothesis 1b

Hypothesis 1b states that the lower the perceived complexity of social media banking, the more likely it will be adopted by customer. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. Complexity

measures the extent which a particular technology is seen as being complex to use. The correlation coefficient of -0.3 between complexity and the intention to adopt indicates that Individuals need to be shown that the technology is significantly less complex than what they are accustomed to in order to increase their likelihood of adoption. The negative correlation explains that the more complex social media banking is, the less likely it will be adopted. These findings are consistent with past technology adoption studies by Rogers (2005) and Kolodinsky, Hogarth & Hilgert (2004).

Hypothesis 1c

Hypothesis 1c states that the greater the compatibility of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.5 between compatibility and the intention to adopt indicates that the technology is consistent with the set of norms and values the individual holds. The greater the individual feels comfortable with the technology; the more likely they will use it. The results indicate that people spend a considerable amount of time on social media, more especially in the younger age groups. With social media now becoming their way of life, it increases the likelihood of their compatibility to social media banking thereby increasing the likelihood of adoption. These results are further supported by Brown et al (2003) and Rogers (2005).

Hypothesis 1d

Hypothesis 1d states that the greater the awareness of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.6 between awareness and the intention to adopt indicates that is a relatively strong correlation between aggressive promotion and marketing campaigns and the individual's likelihood of adoption. The more people know about a technology, the more they are likely to become interested in it and to use it. Pikkarainen, et al (2004), found that awareness of online banking was an important factor in influencing user acceptance of the technology. This is further supported by

Sathye (1999) who found that customers considered the amount of information available to them as an influencing factor in determining whether they adopt internet banking.

Hypothesis 1e

Hypothesis 1e states that the greater the trialability of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. Rogers (1995) argues that new innovations may be uncomfortable and complex for users. New users will therefore need to spend some time trying out the technology in order for them to reach a level of comfort which in turn increases the probability of adoption. The correlation coefficient of 0.6 between trialability and the intention to adopt indicates that is a relatively strong correlation. This is supported by Souranta (2003) who argued that trialability reduces fears and gives confidence to individuals using the new technology.

Discussion pertaining to Hypothesis 2

Hypothesis 2 states that the greater the customer's attitude towards social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.6 between attitude and the intention to adopt indicates that Individuals with a positive attitude towards the technology have an increased likelihood of adoption. If users feel good about a new technology, like the technology and generally have positive attitude towards it, it becomes difficult to disassociate them from it thereby increasing their probability of adoption. This is supported Ajzen (1985) who argues that an individual's attitude towards a behaviour leads to behavioural intention, which in turn ultimately leads to the individual actually performing the behaviour.

Discussion pertaining to Hypothesis 3

Hypothesis 3a

Hypothesis 3a states that the greater the perceived usefulness of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.6 between perceived usefulness and the intention to adopt indicates that Individuals who find the technology useful have an increased likelihood of adoption. This result is supported by Lee et al (2007) who found perceived usefulness to be a key determinant influencing the adoption of digital banking. This is further supported by Davis (1989) who found that perceived usefulness is directly correlated with the uptake if information technologies.

Hypothesis 3b

Hypothesis 3b states that the greater the perceived ease of use of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.5 between perceived ease of use and the intention to adopt indicates that Individuals who find the technology easy to use are more likely to adopt it. This supports the notion that users want to use technology which is easy to use and understand. This result is further supported by Jayasingh & Eze (2010) who found that perceived ease of use positively correlates to the adoption of mobile technologies.

Discussion pertaining to Hypothesis 4

Hypothesis 4 states that the greater the perceived trust of social media banking, the more likely it will be adopted. This hypothesis was accepted at a p-value (< 0.0001) and 95% confidence interval. The correlation coefficient of 0.6 between trust and the intention to adopt indicates that Individuals who find the technology trustworthy are more likely to adopt it. The issue of trust in technology and banking is especially significant due the high rate of identity

theft and personal information such as banking details. Cheng et al (2006) state that financial transaction, especially those in transactions performed digitally involves a greater risk for customers and therefore trust becomes a key factor in the success of digital banking channels. Lee et al (20070) further highlights that trust is distinguished between the digital platform delivering the service and the actual service providers of the service. In this case, between the social media channel and the bank providing the banking service.

Conclusion

A number of factors associated with technology acceptance were explored to understand their influences on South African retail banking customers to adopt social media banking. The study achieved its intended purpose by positively identifying those factors are influence the adoption of social media banking amongst South African retail banking customers, and to understand why there is a current low adoption of social media banking.

The principle findings of the study conclude that all the attributes of the innovation, attitude, predictor of adoption and trust categories are statistically significant at a 95% confidence interval and therefore are very likely to influence the adoption of social media banking in South Africa. The results highlight that there is very low adoption of social media banking in South Africa despite the very high usage of social media platforms. The low rate of adoption is primarily attributed to the lack of awareness and exposure to social media banking, security concerns and the lack of trust of social media platforms in ensuring customer information is not compromised. The results further confirm males to have a more positive attitude towards social media banking. Males were also found to be more trusting of the technology and more likely to adopt social media banking if there is greater awareness of it. The results indicate that the younger respondents have a greater attitude and are more trusting to do their banking on social media platforms than the older age groups. The younger respondents are also more likely than the older age groups to adopt if they perceive social media banking to be easy to use and useful to use.

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction

This section provides an overview of the study and its findings. It draws conclusions and makes recommendation and suggestions for future research.

Conclusions of the study

Social media banking in South African banks is still in its infancy meaning that it is still experiencing a low rate of adoption. Social media banking creates an additional digital channel for banks to provide a service to their customers; engage and market products and services. Of the 203 respondents who took part in the survey, 100% of them are actively engaged on one or more social media channel and 14.3% of the respondents have banked on social media. Of the respondents who have banked on social media, 55.2% used it to make payments, 48.3% made prepaid purchases, 37.8% checked their balances and 17.2% used it to verify their accounting details.

There is generally a negative attitude towards social media banking. The findings of the study show that 26.1% of respondents had a positive attitude; 17.2% were neutral and 56.7% had a negative attitude. However, males have a more positive attitude towards social media banking with 30.7% of males having a positive attitude and only 20.7% females having a positive attitude towards social media banking. More males than females expressed an intention to adopt social media banking with 41.4% of males intending to adopt while only 33.7% of females were intending to adopt.

The study showed that age plays a factor in attitude towards social media banking. There was a statistically significant difference in attitude towards social media banking between respondents above 55 years of age and those in the 18-24, 25-34 and 35-44 age groups therefore highlighting that the younger generation are more receptive to banking on social media. The younger age

groups were shown to be more trusting of banking on social media and believed that it will be a more useful and convenient form of banking than the older age groups.

There was a positive correlation between the innovation attributes with relative advantage having a strong positive correlation with compatibility, awareness, trialability and intention to adopt thus indicating strong evidence of correlation between these attributes. Compatibility also had a positive correlation with awareness and trialability also showing evidence of association. Complexity showed to be negatively correlated with all the innovation attributes. The predictors of adoption attributes show a strong positive correlation with perceived usefulness and perceived ease of use showing strong evidence of association between them.

All the tested variables were found to be significant. Relative advantage, complexity, compatibility, awareness, trialability, attitude, perceived usefulness, perceived ease of use, and trust were all found to be significant at the 95% confidence interval. All the hypotheses were therefore accepted and none were found to be insignificant. The results of the hypotheses were similar to a previous study conducted by Zolait and Sulaiman (2008) who found that all attributes influenced an individual's intent to adopt internet banking.

Due to the convenience and snowballing sampling effect, the respondents of the survey consisted primarily of educated middle class individuals. If the study were to be performed with a lower Living Standards Measure (LSM) group of individuals, there may have possibly been different results.

This study has identified that relative advantage, complexity, compatibility, awareness, trialability, attitude, perceived usefulness, perceived ease of use, and trust have an influence on the probability of adoption of social media banking especially among the younger generation age groups of 18-24 and 24-34.

Recommendation

South African banks are increasingly playing in an extremely competitive banking sector with customers constantly looking for improved service and banking convenience. With the majority of respondents not knowing that some of the South African banks already provide functionality to perform banking on social media channels; South African banks need to actively increase awareness of their social media banking services. It will be useful for banks to educate their customers on the benefits of social media banking. Customers do not trust social media platforms to keep their private information safe, therefore it is important for banks to reassure their customers regarding the security measures they have in place to ensure that the customers have a safe social media banking experience. The younger age groups are more receptive to social media and banking on social media therefore, South African banks should consider promoting social media banking services to this segment of customers. South African banks should also consider opportunities to closely collaborate with social media companies to improve the security aspects and perceived trust of these social media platforms so as to build consumer confidence in doing their banking on social media.

Suggestions for further research

Further research should encompass a broader view of the demographics of South Africa to get a better understanding of the demographics' probability of adoption of social media banking

Small and medium enterprise (SMEs) businesses are looking for faster and more convenient banking and business value added services from their banks. In light of this, further studies can also be conducted to understand the probability of adoption of digital banking (including social media banking) in the SME segment.

REFERENCES

1. Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behaviour: In Action Control: From Cognition to Behaviour Kuhland, J., and Beckman, J. (Eds), Springer, Heildelberg, pp. 11-39
2. Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour. Englewood Cliffs, NJ: Prentice Hall.
3. Alghaith, Waleed, Sanzogni, Louis, Sandhu, Kuldee (2010). The Electronic Journal of Information Systems in Developing Countries
4. Baraghani, N (2007). Factors Influencing the Adoption of Internet Banking
5. Booz, Allen and Hamilton (1997). *Internet banking: A study of potential.* INC, New York.
6. Brink, H (1993). Validity and Reliability in Qualitative Research. Conference Paper delivered at SA Society of Nurse researchers' Workshop – RAU 19 March 1993
7. Brown, A (2017). Is it all over for internet banking in South Africa? Retrieved 22 November, from https://businesstech.co.za/news/columns/163657/is-it-all-over-for-internet-banking-in-south-africa/
8. Brown, I., Zaheeda, C., Douglas, D. & Stroebel, S. (2003). Cell phone banking: predictors of adoption in South Africa – an exploratory study, *International Journal of Information Management*, Vol. 23, pp. 381-394.
9. Castells, M., Fernández-Ardèvol, M., Qiu, J. L., & Sey, A. (2007). Mobile communication and society: A global perspective (Information Revolution and Global Politics). Cambridge, MA: MIT Press
10. Costin, D. (2015). "Banking Business and Social Media – A Strategic Partnership" *Theoretical and Applied Economics Volume XXII (2015), No. 4(605), Winter, pp. 121-132*
11. Coulter, K.S. and R.A. Coulter (2002). Determinants of trust in a service provider: The moderating role of length of relationship. *Journal of Services Marketing, 16*(1), 35-50.
12. Davis, F.D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology*. MIS Quartely, 319-340.*
13. Davis,F.D., Bagozzi, R.P. and Warshaw, P.R.(1989). User acceptance of computer technology: *A comparison of two theoretical models. Management Science, 35(8), 982*-1003.
14. Dedu, V. and Nițescu, D.C., 2014. Banking relationship management – A new paradigm?. *Theoretical and Applied Economics*. Vol. XXI, No. 4(593), pp. 7-22

15. Denecker, O, Gilati, S & Niederkorn, M (2014). The digital battle that banks must win. Retrieved 22 November, from https://www.mckinsey.com/industries/financial-services/our-insights/the-digital-battle-that-banks-must-win
16. Dickerson, M. D., & Gentry, J. W. (1983). Characteristics of adopters and non-adopters of home computers. *Journal of Consumer research*, 225-235.
17. FinMark Trust (2016). Results from FinScope South Africa 2016 Survey on Financial Inclusion: Retrieved 04 October, from https://www.finmark.org.za/results-from-finscope-south-africa-2016-survey-on-financial-inclusion/
18. Finnegan, M. (2015). Tech Firms taking on the Banks: 6 Companies moving into Payments. Retrieved 04 October, from https://www.techworld.com/picture-gallery/business/tech-firms-taking-on-banks-6-companies-moving-into-payments-3604734/
19. Goldstuck, A. (2016). SA Social Media Landscape 2017. Retrieved 13 September 2017, from http://www.worldwideworx.com/wp-content/uploads/2016/09/Social-Media-2017-Executive-Summary.pdf
20. Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing, 18*(4), 37-44.
21. Hayishi, F (2000). Econometrics - Princeton University Press
22. Hardeman, W., Johnston, M., Johnston, D. W., Bonneti, D., Wareham, N., & Kinmonth, A. L. (2002). Application of the theory of planned behaviour in behaviour change interventions: A systematic review. Psychology & Health, 17(2), 123–158. doi:10.1080/08870440290013644a
23. Heale, R & Twycross, A. (2015). Validity and Reliability in Quantitative Studies. Retrieved 19 September 2017, from http://ebn.bmj.com/content/18/3/66
24. Hertog, P, van der Aa, W, & Jong, MW 2010, 'Capabilities for Managing Service Innovation towards a Conceptual Frame Work', *Journal of Service Management* Vol. 21 No.4 2010.
25. Jayasingh, S., & Eze, U.C. (2010). The role of moderating factors in mobile coupon adoption: An extended TAM perspective. Communications of th IBIMA. Retreived September 13, 2012 from http://www.ibimaoublishing.com/journals/CIBIMA/cibima.html.
26. Jayawardhena, C & Foley, P (2000). "Changes in the banking sector – the case of internet banking in the UK", Internet Research: Electronic Networking Application and Policy, Vol 10, No 1, pp19-30.

27. Karjaluoto, H (2001). “Measuring Attitudes towards internet banking: Emperical Evidence from Finland”. Proceedings of the European Marketing Academy Conference. Bergen, Norway, May 8-11, 2001)
28. Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International journal of bank marketing*, *20*(6), 261-272.
29. Khan, S (2011). Central Limit Theorem. Retrieved 02 January 2018, from https://www.khanacademy.org/math/ap-statistics/sampling-distribution-ap/sampling-distribution-mean/v/central-limit-theorem
30. Kolodinsky, J.M., Hogarth J,M., and Hilgert, M.A., (2004).The adoption of electronic banking technologies by US consumer.Marketing, 22, 238-259.
31. Kor, K., and Mullan, B.A. (2011). Sleep hygiene behaviours: An application of the planned behaviour and investigator of perceived autonomy support, past behavior and response inhibition. Psychology and Health, 26, 1208-1224.
32. Laukkanen, T. and Cruz, P. (2009), “Comparing consumer resistance to mobile banking in Finland and Portugal”, in Filipe, J. and Obaidat, M.S. (Eds), e-Business and Telecommunications, Springer, Berlin, pp. 89-98.
33. Lee, Y., Hsieh, Y., & Hsu, C. (2011). Adding Innovation Diffusion Theory to the Technology Acceptance Model: Supporting employees intentions to use e-learning systems. Educational Technology & Society, 14(4), 124-137.
34. Lehtinen, U., Lehtinen, J.R. (1991). Two Approaches to service quality dimensions. *Services Industries Journal, 11*(3), 287-303.
35. Lester, (2017). Where is the Smartphone now: Key mobile usage trends in South Africa 08 September 2017, from http://blog.effectivemeasure.com/za-mobile-usage-trends-2017
36. Malinga, S (2017). Customers still wary of using digital banking channels. Retrieved 22 November, from http://www.itweb.co.za/index.php?option=com_content&view=article&id=164058
37. Marous, J (2014). Minding The Gap in Social Banking Expectations. Retrieved 02 November 2017, from https://thefinancialbrand.com/39352/2014-capgemini-social-media-banking-research-study/
38. Mayer, R.C. Davis, J.H. and Shoorman, F.D. (1995). An Integrative Model of Organisational Trust,” Academy of Management review, Vol 20, No.3, pp,709-734

39. Mitroff, S (2016). What is a bot? Here's everything you need to know. Retrieved 25 March 2018, from https://www.cnet.com/how-to/what-is-a-bot/
40. Mairura, K (2016). Relative Advantage as a Determinant of Technology Adoption among Automobile Mechanics in Micro and Small Enterprises in Kenya. IOSR Journal Of Humanities And Social Science (IOSR-JHSS). Volume 21, Issue 1, Ver. IV (Jan. 2016) PP 86-92
41. Naidoo, P (2017). Digital banking fast gaining traction in SA. Retrieved 22 November, from https://techcentral.co.za/digital-banking-fast-gaining-traction-sa/77425/
42. Neuman, W. L., (2003). Social Research Methods: Qualitative and Quantitative Approaches. Boston. Pearson Education Inc.
43. Nenty, H. Johnson. "Writing a Quantitative Research Thesis." *International Journal of Educational Science* 1 (2009): 19-32; Ouyang, Ronghua (John). *Basic Inquiry of Quantitative Research*. Kennesaw State University.
44. Olson, K. O'Brien, M. Rogers, W. Charness, N (2012). Diffusion of technology: Frequency of use for younger and older adults. Retrieved 19 March 2018 from https://www.ncbi.nml.nih.gov/pmc/articles/PMC3370300/
45. Perrigot, R. & Pénard, T. (2012). Determinants of E-commerce adoption by franchisors: insights from the US market. *26th Annual International Society of Franchising Conference*.
46. Pett, M. (1997) Non-Parametric Statistics for Health Care Research, Sage Publications, London.
47. Prozesky, R (2017). Customers still wary of using digital banking channels. Retrieved 22 November, from http://www.itweb.co.za/index.php?option=com_content&view=article&id=164058
48. Qwerty Digital (2017). The Digital landscape in South Africa 2017. A data driven look at South Africa's relationship with Digital. Retrieved 20 March 2018 from https://qwertydigital.co.za/wp-content/uploads/2017/08/Digital-Statistics-in-South-Africa-2017-Report.pdf
49. Riivari, J. (2005), "Mobile banking: a powerful new marketing and CRM tool for financial service companies all over Europe", Journal of Financial Services
50. Rogers, E.M (1995). "Diffusion of Innovation" (4th ed), New York: The Free Press
51. Rogers, E. M. (2003). Diffusion of innovation (5th Ed.). New York: Simon and Schuster, Inc.
52. Rogers, E.M & Shoemaker, F (1971). "Communication in Innovation", Free Pressm New York, NY

53. Santos, J. (2003). E-service quality: A model of virtual service quality dimensions. *Journal of Managing Service Quality, 13*(3), 233-244.
54. Sathye, M. (1999), Adoption of Internet Banking by Australian customers, International Journal of bank marketing, Vol. 17, pp 324-334.
55. Saunders, M. & Thornhill, A (2003). Organisational justice, trust and the management of change an exploration, Personnel Review VOl. 32, No. 3, pp. 360-375
56. Sha, R. (2017). Surge In SA internet users. Retrieved 04 October, from http://www.heraldlive.co.za/business/2017/07/20/surge-sa-internet-users/
57. Shezi, L. (2017). SA's 26.8 million internet users spend almost three hours a day on social media. Retrieved 02 November, from http://www.htxt.co.za/2016/04/29/the-stuff-south-africa-26-8-mil-internet-users-spend-most-their-time-doing-online/
58. Sincero, S. (2012) Advantages and Disadvantages of Surveys. Retrieved 02 November 2017, from https://explorable.com/advantages-and-disadvantages-of-surveys
59. Stafford, T. F. (2003). Differentiating between adopter categories in the uses and gratifications for Internet services. Engineering Management, *IEEE Transactions on*, 50(4), 427-435.
60. St Clair, B. (2017). Why Absa thinks social media banking is a big deal for Africa. Retrieved 12 September 2017, from https://www.mediaupdate.co.za/social/134496/why-absa-thinks-social-media-banking-is-a-big-deal-for-africa
61. Sukamolson, S (2007). Fundamentals of Quantitative Research. Retrieved 05 October 2017, from http://www.culi.chula.ac.th/Research/e-Journal/bod/Suphat%20Sukamolson.pdf
62. Sundbo, J, & Gallouj, F 2000, 'Innovation as a Loosely Coupled System in Services',London: Kluwer Academic Publishing, pp. 43-68.
63. Surjadjaja H, Ghosh S & Antony J (2003). Determining and assessing the determinants of e-service operations. *Managing Service Quality, 13*(1), 39-53.
64. Suoranta, M. (2003). The Adoption of Mobile Banking in Finland.
65. Tayler Katherine and Edmund Stanley (2007). The role of trust in financial services business relationship. *Journal of Services Marketing, 21*(5), 334-344.
66. Tiwari, R., Buse, S., and Herstatt, C., (2006). Mobile Banking As Business Strategy: Impact Of Mobile Technologies On Customer Behaviour And Its Implications For Bank. January 2006, Working Paper No. 37

67. Urban, G.L., Sultan, F. and Qualls, W.J. (2001). Placing trust at the centre of your internet strategy. *Sloan Management Review, 42*(1), 1-39.
68. Veijalainen, J., Terziya, V., Tirri, H., (2006). Transaction management for m-commerce at a mobile terminal. Electron. Commer.Re. Appl. 5(3), 229-245.
69. Venkatesh, V. & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science, 46(2), 186-204.
70. Vermeulen, J. (2015). The massive rise of mobile data in South Africa in 5 charts. Retrieved 02 November 2017, from https://mybroadband.co.za/news/cellular/133090-the-massive-rise-of-mobile-data-in-south-africa-in-5-charts.html
71. Wah, L. (1999). "Banking on the Internet". American Management Association Vol. 88, No.11, pp.44-48
72. Yang Jiaqin, Li Cheng and Xia Luo (2007). A comparative study on e-banking services between China and USA. *International Journal of Electronic Finance, 2*(5), 235-252.
73. Yuan Lu, I, & Jui Tseng, C 2010, 'A Study of the Service Innovation Activities of Tourist Hotels in Taiwan', *International Journal of Organizational Innovation,* Vol. 3 No.1 Summer 2010
74. Zhou, T. (2011). An empirical examination of users' post-adoption behavior of mobile services, *Behaviour & Information Technology*, 30 (2), pp. 241-250.