

UNIVERSITY OF KWAZULU-NATAL

THE INFLUENCE OF MARKETING COMMUNICATIONS ON
THE YOUTH'S ADOPTION OF M-PAYMENTS IN KWAZULU-
NATAL

By

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DECLARATION

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DEDICATION

My research work is dedicated firstly to God Almighty for the wisdom, strength, patience and perseverance He has given me to complete this project. I also dedicate this to my parents, Charles and Jayne, and my partner, Julia, for their undying support and encouragement.

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ABSTRACT

There has been poor subscription and usage of m-payments in the recent past in South Africa (RSA), especially with the failure of Vodacom M-Pesa and MTN Mobile Money. Presumably, this is attributed to a lack of knowledge on the functionality and benefits of such services and the fact that 'cash is king'. This study places integrated marketing communications (IMC) at the centre of the adoption of m-payments, as it plays a key role in informing users on the effect of reducing user uncertainties and risks as knowledge structures are built.

The study adopted a survey research design to determine the influence of IMC on the adoption and use of m-payments among the youth in KwaZulu-Natal. The questionnaire utilised in the study adopted scale items from constructs embedded within the Unified Technology Acceptance and Use Theory 2 (UTAUT2) and the communication performance construct, to obtain quantitative data. Quota sampling was used to draw a sample of 383 respondents from three institutions of higher learning located in the cities of Durban and Pietermaritzburg. With a 73% response rate, analysis of the gathered data was carried out using descriptive and inferential techniques. Hypotheses were tested using multiple linear regression, Student's t Test, exploratory factor analysis, confirmatory factor analysis and structural equation modelling, so as to refine and develop a conceptual model.

The structural model was found to have a good fit with all but two hypotheses-linked paths being statistically significant and hence supported. IMC measured in the form of communication performance was found to have a strong direct positive impact on the risk factors (functional risk, social influence, price value and facilitating conditions). Communication performance had the greatest positive impact on price value, suggesting that the youth are a rational user market segment with a need for utilitarian motivation within m-payment purchase or use situations, regardless of gender.

This study explored the relationship between IMC and innovation adoption, thereby extending the body of knowledge in a multidisciplinary field of marketing and information technology, producing a model that may be used in probing m-payments use behaviour from a marketing perspective.

Key words: Integrated marketing communications, mobile payments, structural equation modelling, technology adoption, youth market.

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter covers the background of the study, detailing mobile payment as an innovation and its current position within the payments industry in South Africa. The chapter presents the identified research gap and details the problem statement in the context of the background literature presented. This is followed by an outline of the research questions, together with aligned research objectives of the study. A brief description of the Unified Theory of Acceptance and Use of Technology 2 is provided, leading to the conceptual framework that guided the study. The chapter also outlines the significance and rationale of the study at hand, a brief description of the indicative methodology and limitations encountered. The final sections of the chapter provide details regarding ethical considerations taken in the study, and a logical outline of the chapters presented in the research report is provided.

1.2 Background to the Study

Mobile payments (m-payments) have been described as monetary transactions that utilise mobile devices as a platform, to effect payments for bills, goods, and services, or complete bank transfers via mobile-based technology (Dahlberg, Mallat, Ondrus & Zmijewska, 2008:165; Jia, Hall & Sun, 2014:1). M-payments have emerged to adjoin the broad e-commerce sector as a myriad of convenient payment solutions. The payment platform is described as being broad yet dynamic, embracing various services such as cash remittances and contactless payment. Technologies include Near-Field Communications (NFC), Quick Response (QR) Codes, Short Messaging Service (SMS), Unstructured Supplementary Service Data (USSD) and Bluetooth Low Energy (BLE) beacon (Dennehy & Sammon, 2015:49; van der Boor, Oliviera & Veloso, 2014:1597; Cellum Internal Research, 2014:1).

Previous studies (Joubert & Belle, 2009:5; Hamid & Cheng, 2013:28; Liebana-Cabanillas, Munoz-Leiva & Sanchez-Fernandez, 2013:320) have revealed that there is implicit risk and perceived benefits as a result of utilising mobile commerce (m-commerce), mobile banking (m-banking) and mobile money (m-money) in transactions, all of which are various forms of m-payments. However, it should be noted that the models used to ascertain the level of consumer behaviour have been successful in Asian and Western markets (Akturan & Tezcan, 2012:4; Featherman & Pavlou, 2003:457; Hamid & Cheng, 2013; Liébana-Cabanillas, Muñoz-Leiva & Sánchez-Fernández, 2017:29; Marchewka, Liu & Kostiwa, 2007:95; Zhang, Tan, Xu & Tan, 2012:10 and Zhou, 2013:1088). Conversely, in RSA, the application of these models and availability of literature in the area seldom exists to explain the uptake of m-payments in its various forms.

Therefore, the main goal of this study is to investigate the effect of marketing communications (MC) on consumer behaviour, affecting the use behaviour (UB), of the youth to adopt m-payments. The results obtained from this study may aid marketing practitioners, m-payment operators, and related financial service providers to have a firm

grasp on behaviour from a user's perspective, and to further provide insight on how to effectively market their services, with potential and current end-users being the focal point of IMC strategy.

According to Matambo and Schaefer (2013:2), with regard to the evolution in the information, communication and technology (ICT) sector within the continent, RSA's economy serves as one the forerunners in embracing a "cash-light" payments society. The country is adjudged to be in the transition phase of achieving this, with the retail sector having witnessed approximately 32.5% of electronic payments (e-payments) and roughly 62.5% in cash payments (Matambo & Schaefer, 2013:2). Furthermore, the RSA government has a long-term commitment to development through financial inclusion for all – m-payments are considered as a breakthrough in this regard. Advances in financial inclusion and the financial services sector may have a direct positive impression at grass root levels and on RSA's Gross Domestic Product (GDP) as a whole because it has support from the South African Reserve Bank and industry regulators (Matambo & Schaefer, 2013:2). As such, collaborative support from different concerned entities may be an essential ingredient to guaranteeing the successful integration of m-payments into the financial services ecosystem.

In RSA, m-payments have been taken up considerably well due to the significant penetration of cellular devices, the availability of reliable mobile network service operators, and improved security measures to blanketing mobile transaction services (Li, Dong & Chen, 2012:121). However, reports by the Financial Mail indicate that usage of these services is largely niche-based and has not been embraced by the mass market (Claasen, 2013: para 3). According to Standard Bank South Africa's (SBSA) Head of Inclusive Banking, Audrey Mothupi, the lustreless nationwide uptake of Vodacom's former M-PESA (an m-payment service) was linked to consumers' attitude and behavioural setting and their not employing cellular devices to fully supplement the facilitation of financial services (Spillane, 2013). Further afield, Yolande van Wyk, eWallet's chief executive at First National Bank (FNB) states that only 22% of South Africans have utilised a form of m-payments, and that this payment solution needs more time to gain traction, and to operate within a befitting working model, in order to be widespread (Claasen, 2013: para 7-9).

A 2014 report estimated the annual yield volume of m-payments in RSA in 2017 to amount at ZAR 83 billion (Accenture, 2014:2). This advertently places m-payments at a lucrative standpoint within the country's financial services market as it stands to play a major role in financial inclusion, and perhaps revolutionising economic development. In fact, literature does reveal that there is certain enthusiasm to take up m-payments in RSA. It is indicated that 66% of youth aged between 18 and 29 years plan to adopt m-payments to make peer to peer (P2P) payments, to pay for goods and services, fuel, utility bills, taxi fares and to buy bus/train/flight tickets (and to display a digital ticket) (Accenture, 2014:4-6).

Accenture (2014:3) acknowledges that a gap in consumer awareness and UB of m-payments does exist, thereby stunting actual adoption of the innovative payment solution. In the presence of this gap, lie consumer concerns surrounding transaction and private information security, perceived value, and convenience. To address these concerns, Accenture (2014:3) posits that consumer behaviour towards widespread m-payments adoption be incentivised through value-added services and promotional activities such as reward programmes, discounts, and

loyalty points. Likewise, to drive up consumer demand and to reach critical mass for m-payments, consumer education on the benefits of the service ought to be carried out (Dennehy & Sammon, 2015:50).

1.3 Research Problem

It is likely that financial services providers are facing an uphill task in convincing the mass market to employ m-payments as a relatively new payment option to effect 'small-value' transactions. From the background presented above, it has been acknowledged that consumer attitudes and behavioural mind-sets may be the stumbling blocks towards widespread use of m-payments. Spillane (2013) indicates that poor user attitudes and behaviour stand in the way of mass adoption of m-payments. Accenture (2014:3) takes cognisance of the fact that an apparent gap exists between m-payments awareness and actual use. The company posits that this gap may be bridged through MC, whereby MC plays a key role in addressing user risks such as perceived functional risk, and perceived value in order to boost adoption. This in addition reflects the findings of Joubert and Belle (2009:5) and Riquelme and Rios (2010:329), that consumer perceptions limit innovation adoption.

According to Laukkanen, Sinkkonen and Laukkanen (2009:112) and Rogers (2003:11-12), at the earliest stage of technology diffusion, company-driven communication through mass media plays a key role in user awareness and in lowering user resistance caused by inherent user risks. The innovation-adoption hierarchy of response model by Kotler and Keller (2016:585), Saxena (2009:161) and Rogers (1983:164), further upholds that awareness is the first step for achieving user behavioural change. Therefore, MC is propounded to be influential in providing knowledge and understanding to potential users by positively affecting user attitudes and behaviour, leading to innovation adoption.

In the recent past, there have been many m-payment services introduced by major banks and mobile service providers in the country such as FNB (with Cell Pay Point), NedBank (with PocketPOS), Amalgamated Banks of South Africa (ABSA) (with Payment Pebble) and Standard Bank (with SnapScan) coming into the fray of cashless transactions (Henderson, 2014: para 3; Mail & Guardian Online, 2014: para 7; Meyer, 2015: para 4). In addition, Vodacom successfully re-launched its M-PESA service in mid-2014 with an immense turn-around strategy focusing on mass market roll-out (Coetzee, 2014: para 4-9). However, Vodacom M-Pesa and MTN Mobile Money were both shut down by their parent companies in May and September 2016 respectively, due to poor service subscription numbers and lack of widespread adoption (van Zyl, 2016: para 10). According to the Mobile Marketing Association of South Africa (MMA), in 2014 financial services companies outspent other firms in various sectors with a substantial increase of 30.4% from the previous year in advertising spend (adspend), accounting for 16.5% of total investment in advertising in RSA (MMA, 2014:21). With this in mind, it is evident that financial services providers were pushing the envelope and investing more in marketing communications to reach the mass market.

Rogers (2003:18) states that communications must be a focal point in strategies aimed toward comprehending social change, taking into account changes in technology as well. Therefore, as a key assumption in this proposed

study, it is presumed that carefully crafted integrated marketing communications (IMC) programs directed toward specific target audiences in RSA may assist in subduing the already present and upheld perceptions, as suggested by Jamwa, Perumal and van Niekerk (2016:1105). Beyond simply creating awareness, IMC may be integral in sensitising consumers on the positive attributes and workings of m-payments offerings available in the financial services market. Therefore, with an informed consumer market, behaviour can better be ascertained to determine the use and adoption of m-payments.

1.4 Research Questions

The following research questions were put forward for this study:

- i) What is the KwaZulu-Natal youth's level of awareness of m-payments services available in the consumer market?
- ii) How does the youth perceive m-payments network operators' marketing communication performance on the adoption of m-payments?
- iii) What is the link between the use of m-payments and IMC?

1.5 Research Objectives

The study set out to accomplish the following objectives:

- i) To determine the level of youth awareness on various m-payments available in the financial services market.
- ii) To determine the youth's perception of m-payments network operators' marketing communication performance on the adoption of m-payments.
- iii) To develop a conceptual framework to effectively measure marketing communications effectiveness toward m-payments adoption in a RSA context.

1.6 Theoretical Framework

Prior research on behaviour towards technology acceptance has employed the use of complex models, ranging from the Diffusion of Innovation (DOI), Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA) to the Unified Technology Acceptance and Usage Theory (UTAUT) among others. However, it should be noted that these models have been used to predict behaviour in North American, European, Middle-Eastern and Asian settings in a bulk of innovation adoption studies including Akturan and Tezcan (2012), Featherman and Pavlou (2003), Hamid and Cheng (2013), Liébana-Cabanillas *et al.* (2017) Marchewka, Liu and Kostiwa (2007), Zhang, Tan, Xu and Tan (2012) and Zhou (2013). This current study takes a snapshot of all but a portion of the UTAUT2 (represented in Figure 1-1) conceptualised by Venkatesh,

Thong and Xu (2012:160), and introduces the influence of IMC by Laukkanen *et al.* (2009), in m-payments' adoption and UB within the holistic model. The rationale behind opting for the UTAUT2 to guide the study is because, as a model, it culminates eight different conceptual standpoints from various technology acceptance models into one (Raman & Don, 2013:158-159). In addition, the UTAUT2 is an improvement of the UTAUT by Venkatesh, Morris, Davis and Davis (2003:447) as it incorporates new variables (including price value, habit and hedonic motivation), better reflecting innovation use in a consumer context.

Little research on technology acceptance has been carried out squarely underpinned by the UTAUT2 to comprehend m-payments use and adoption in RSA.

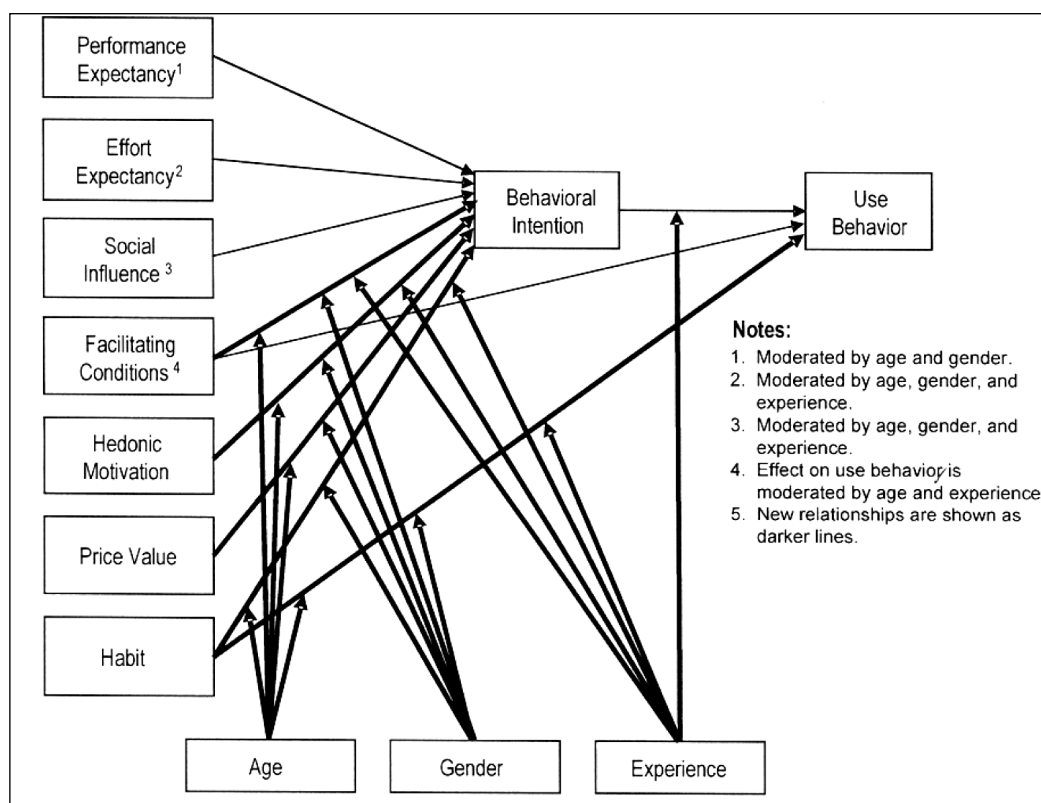


Figure 1-1: The Unified Theory of Acceptance and Use of Technology 2

Source: Venkatesh *et al.* (2012:160)

From the UTAUT2 model, several variables influencing behavioural intention (BI) and subsequent UB associated with technology adoption, are used in the study. It is the assumption of this study that the true essence of each of these variables is encapsulated within the context of m-payments, as illustrated in the conceptual framework. However, Hedonic Motivation which is described as the pleasure drawn from putting the technology into use (Venkatesh *et al.*, 2012:161), will not be captured in the conceptual framework, as monetary exchange functions are assumed to be utilitarian and riddled with a myriad of consumer perceived risks thereby limiting impulse. In addition, Habit is excluded as the study views m-payment solutions as a relatively new payment channel

whereupon prior behaviour and use shall not be examined. Likewise, experience is disregarded as this research is a cross-sectional study, observing UB at a single moment in time.

Thus, the conceptual framework that guide the study is illustrated in Figure 1-2:

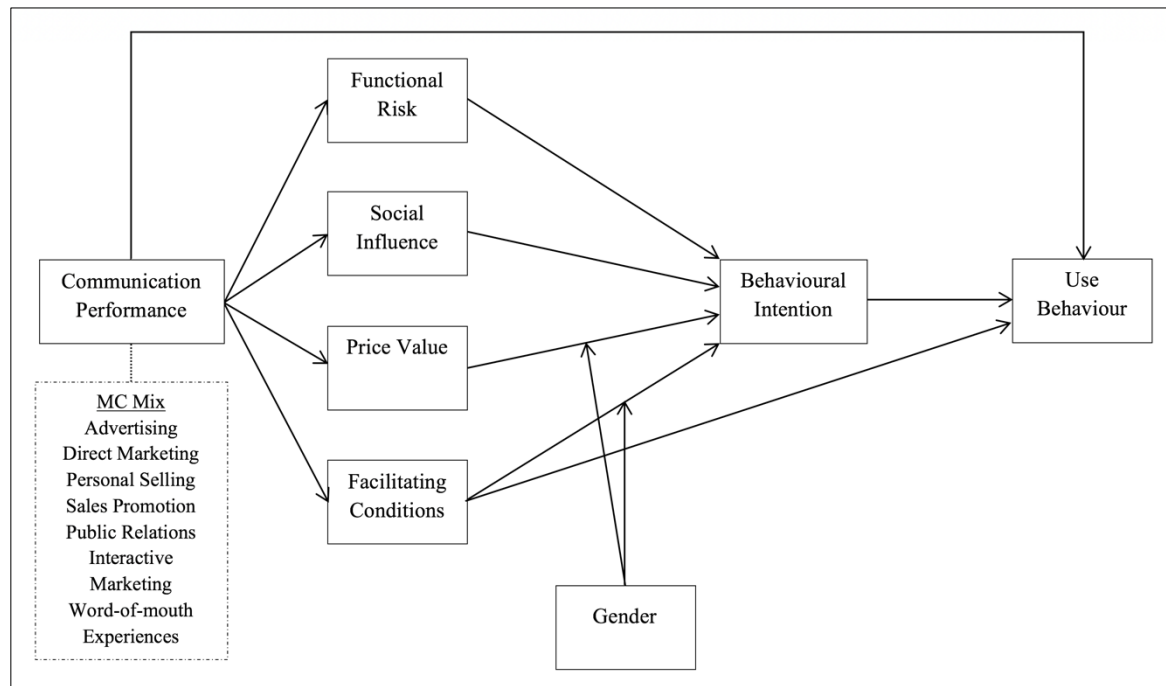


Figure 1-2: The Conceptual Framework

Marketing Communications (MC) achieved through effective advertising and promotion have been reported to influence favourable consumer attitudes, reinforce behaviour of existing customers, and create brand awareness and demand for new or potential customers (Duncan, 2002:507). Carefully curated marketing campaigns serve the benefit of communicating a corporate brand idea and image, and establishing required brand and product associations. Therefore, MC in this study is measured by Communication Performance (CP), to directly impact Functional Risk (FR), Social Influence (SI), Facilitating Conditions (FC) and Price Value (PV), by assisting in building consumer knowledge structures on m-payments solutions, and support services to influence BI for new users. Alternatively, MC moderates the relationship between BI and UB by reinforcing consumer behaviour through advertising and promotions.

FR in the conceptual framework encompasses both Performance Expectancy (PE) and Effort Expectancy (EE). This study suggests FR to be a combination of these constructs because empirical evidence by Tobbin and Kuwornu (2011:66-67), reveals that they possess a high correlation, as they are ideally closely connected in the minds of users. PE designates the extent to which the utilisation of a technological innovation will deliver the expected benefits to the user, that is, the perception upheld by the consumer that employing m-payments will assist and improve cash transfer tasks (Martins, Oliveira & Popovic, 2014:4). EE on the other hand, involves the amount of ease with which activities can be performed when using the innovation. Therefore, FR is characterised

as the user perception linked with being able to use the m-payment platform to effect P2P or M2M transactions effectively, in a timeous manner, and with minimum effort throughout the process, from initiation to completion (Chen, 2013:416).

SI, on the other hand, is characterised as the degree to which the use of the technology is viewed in relation to the user's social circle(s) to encompass family and friends. FC in the UTAUT2 describes the innovation user's perception of obtainable behaviour enabling resources and support. These may include a service provider's institutional and technical substructure to promote usage of m-payments (Martins, Oliveira & Popovic, 2014:4). UM, also referred to as Extrinsic Motivation, is concerned with the consumer's degree of subjective belief regarding the perceived usefulness of the service in terms of it being able to perform and accomplish tasks more efficiently and effectively (Teo, Lim & Lai, 1999:25-26). Venkatesh *et al.* (2012:161) explicate that PV entails the cognitive compromise between the benefits a consumer perceives to derive from the use of a technology, and the actual monetary cost linked to running it. The actual cost includes that of obtaining the technology and the related pricing structure for subsequently maintaining the use of and for performing actions within the service or technology (Zhang *et al.*, 2012:9; Venkatesh *et al.*, 2012:161).

Gender has an intervening impact on the association between FC and BI. With an increase in age, comes more heightened gender dissimilarities in task preference and a focus on utility. Distinct gender roles become more substantial, especially from teenhood to adulthood (Venkatesh *et al.*, 2012:162). It is suggested by Venkatesh *et al.* (2012:162-63), that the older females get, the more significance they place on FC, to shorten the learning curve requisite in utilising new technology, primarily at the onset of its use. However, the current study focuses on the youth as a singular age set, without having multiple age groups within the population of interest.

Males and females traditionally assume totally distinct social functions bottling down to their separate behaviours. Males predominantly exhibit independence and competitiveness, and arrive at conclusions resultant of selective information and common-sense rules (Venkatesh *et al.*, 2012:163). Females, on the other hand, exhibit interdependence, cooperation and take into account more details in decision-making (Venkatesh *et al.*, 2012:163). In retrospect, female consumers are certain to consciously consider the price of commodities, as compared to males, as the former are more responsible with handling money (Venkatesh *et al.*, 2012:163). Males are likely to designate a higher PV to innovations in comparison to females, and this gender disparity brought about by conventional social functions are heightened with age (Venkatesh *et al.*, 2012:163).

The variable of Hedonic Motivation is omitted in the conceptual framework as it is assumed that the use of m-payments in transactions is regarded as high-risk, and requires high involvement. This is guided by the notion that the intangible nature of m-services is engulfed by consumer perceived risk, and dealing with money is sensitive as well. Hence, the service user is deemed to possess a hybrid of consumer behaviour that is both rational and cognitive during a purchase decision as propounded by Schiffman, Kanuk and Wisenblit (2010:300) and Mihart (2012:123). Secondly, experience is also disregarded as prior exposure and use of m-payments is not necessary because the population of interest includes non-users of the payment platform.

Hence from the conceptual framework (refer to Figure 1.2), the following hypotheses are proposed:

H₁: The impact of communication performance on functional risk will be positive.

H₂: The impact of communication performance on social influence will be positive.

H₃: The impact of communication performance on price value will be positive.

H₄: The impact of communication performance on facilitating conditions will be positive.

H₅: The impact of functional risk on behavioural intention will be positive.

H₆: The impact of social influence on behavioural intention will be positive.

H₇: The impact of price value on behavioural intention will be positive and moderated by gender, such that it will be stronger for females.

H₈: The impact of facilitating conditions on behavioural intention will be positive and moderated by gender, such that it will be stronger for females.

H₉: The impact of facilitating conditions on use behaviour will be positive.

H₁₀: The impact of communication performance on use behaviour will be positive.

H₁₁: Behavioural intention will have a significant positive influence on use behaviour.

1.7 Significance of the Study

With RSA being the fourth (4th) highest ranked nation in Africa in terms of financial market development in Sub-Saharan Africa (SSA), and ranked forty fourth (44th) globally by the World Economic Forum (WEF) (Schwab & Sala-i-Martin, 2017:268), regionally the country's economic, technological and m-innovation implementation background is quite unique. Recently, advances in the mobile telecommunications sector in RSA have witnessed the integration and consequent penetration of m-payment systems to bolster the degree of financial inclusion. Literature reveals that the use of m-payments within the country is dismal, in comparison to other emerging markets in Africa (Claasen, 2013: para 3-9; MasterCard, 2014; Tubbs, 2014) and as such, there is need for a tailor-made framework to assist in understanding local consumer behaviour.

Findings from this study may assist mobile payment operators and marketing practitioners in structuring appropriate marketing communications to counter the four perceived risk dimensions (as embodied in the conceptual framework) among youthful potential, current, and non-users of m-payments.

1.8 Rationale for the Study

This study was conducted as a gap exists in understanding m-payments diffusion among consumers in RSA. If such a study is not undertaken, several innovative payment systems may become white elephants or may generate total losses for industry players within the financial services sector. The study sets out to ascertain the youth's familiarity with, and willingness to use various forms of m-payments services in the presence or lack thereof, of various communications media. It should be noted that lack of education or familiarity of m-payments may serve as an obstacle to innovation adoption, thereby creating a degree of reluctance among consumers. In the face of uncertainty, consumer confidence must be instilled by payment network vendors, banking institutions, retail merchants, m-payments application developers, relevant financial services governing bodies, and marketers at large, to ease adoption.

At the centre of consumer confidence is trust, which is needed to realise true and profitable adoption of m-payments. In order to bestow trust upon the consumer market, effective marketing communications strategies may play the role of assisting potential service users to overcome consumer risk as an obstacle and drive up BI and eventual adoption. The study provides a pathway for understanding the role of IMC in altering the belief structure of consumers with regards to the effective adoption of m-payments service and other similar innovations. Therefore, the key contribution of the research was to empirically test a conceptual model that may be used to determine the uptake of new alternative payment solutions that are mobile-based, from a marketing perspective.

1.9 Methodology

A descriptive research design was applied to carry out the study. The study conducted a survey by gathering primary data from users, non-users, and prospective users, of m-payments. Primary data was gathered via personally administered questionnaires with close-ended survey items.

The population of interest includes undergraduate and post-graduate students from the University of KwaZulu-Natal (UKZN), Durban University of Technology (DUT) and Mangosuthu University of Technology (MUT), with campuses spread across the KwaZulu-Natal (KZN) province's districts of eThekweni and uMgungundlovu. This population's subset aged between 18 to 34 years, is deemed suitable for the study as it is indicated that university youth are likely to serve as key gatekeepers for diffusing IT to society at large (Davis, 1999:86). With a total population of 79,645, a required sample size of 383 was calculated using a 95% confidence level. Using quota sampling, respondents were proportionately drawn from the three institutions.

Internal reliability was ensured by using scales adapted from standardised tests by Venkatesh *et al.* (2003:460), Venkatesh *et al.* (2012:178) and Laukkanen (2009) to measure the relationship between communication performance and technology adoption. Cronbach's coefficient alpha was used to ensure inter-item consistency within the constructs of the survey instrument. Construct validity of the survey instrument was further measured through factor analysis to ascertain the goodness of data. Descriptive data was analysed and presented using bar charts, pie charts, and distribution tables. Among the statistical operations used to analyse data were: binomial

testing, Student's t test, multiple regression analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM). SEM assisted in developing a theoretical model for measuring m-payments adoption.

1.10 Ethical Consideration

In order to engage university students in this study, ethical clearance was obtained from UKZN's Humanities and Social Sciences Research Ethics Committee, while gatekeeper's letters were acquired from UKZN, DUT and MUT. An introductory section was appended to the questionnaire to inform respondents about the study at hand, providing the research declaration and a portion where participant consent was provided. A covering letter was provided to indicate that respondent-participation was voluntary, and that their responses and identification would be kept confidential for the duration of and after the study. The survey contained a confidentiality clause signed by the researcher and acknowledged by the respondent, binding both parties to the agreement. Upon completion of the study, custody of the physical surveys was handed over to UKZN's School of Management, Information Technology and Governance for five years, after which survey materials will be discarded accordingly.

1.11 Delimitations of the Study

The study used personally administered questionnaires for the data collection phase, thereby presenting challenges in reaching respondents in a timeous manner. Since the survey was administered during the academic period when students were readily available on campus, there was a challenge getting participants to take part in the study because of sustained student protests. This effectively prolonged the data collection phase of the study, heightening the time consumption and expenses linked with hiring field research assistants.

The population of interest in this study was limited to only university students located in the province of KwaZulu-Natal (KZN), in and around the cities of Durban and Pietermaritzburg. More insight on the youth's m-payment adoption may have been gained if the study were to include students located in other provinces such as Gauteng and Western Cape, with these provinces having robust commercial centres and sizeable youth and student populations. Due to limited resources, the scope of the study was restricted to only three institutions in KwaZulu-Natal.

It should be noted that the research undertaken herein is of a cross-sectional nature. In order to adequately gauge the effect of IMC on the BI, and use of m-payments, a longitudinal study could be undertaken and particularly in conjunction with a service provider in the course of their marketing campaign, and engage respondents at the beginning and at the end of the campaign.

1.12 Orientation of the Thesis

This study is logically structured into the following chapters:

Chapter One: Introduction

This chapter introduces the study by presenting the background information, the research gap in terms of the problem statement, the research objective and questions, together with the linked hypotheses. Details regarding the significance, rationale and indicative methodology of the study are presented. The chapter concludes with the study's delimitations.

Chapter Two: Integrated Marketing Communications

This chapter comprehensively presents literature regarding the tools used in IMC: advertising, direct marketing, personal selling, sales promotion, public relations, interactive marketing, word-of-mouth and events/experiences. Further literature on the youth's preferred MC channels, the role MC plays in innovation adoption and the impact of effective communication, is discussed.

Chapter Three: Mobile Payments

This chapter details m-payments and its variations that include m-banking, m-wallets, NFC payments, QR code payments and BLE payments. This is followed by a description of the payments landscape in RSA, showcasing the distribution of commercial banks and ATMs and the payments behaviour exhibited by South Africans. The youth are described and their behaviour concerning payments is elucidated.

Chapter Four: Technology Adoption Theories

This chapter presents literature regarding a number of technology innovation adoption theories, that include: Diffusion of Innovation, Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, the Unified Technology Acceptance and Usage Theory and the Unified Technology Acceptance and Usage Theory 2. This is followed by a discussion regarding the conceptual framework, detailing the variables used in the study and their linked hypotheses.

Chapter Five: Research Methodology

This chapter sets off with a discussion on research philosophies, research approach and strategy and research designs. Various alternatives of these research concepts are presented, and a reason is given for each one's selection and suitability for the study. Information regarding the population of interest and the sampling strategy employed is discussed. This is followed by the data collection method used in the study, that is, questionnaire surveys. A discussion on the data analysis techniques for both primary and secondary data used herein, validity and reliability, methodological limitations and ethical considerations is presented.

Chapter Six: Data Analysis and Presentation of Results

This chapter provides an analysis, interpretation and presentation of the quantitative data regarding the effect of IMC on the adoption of m-payments services. Descriptive results herein are presented in tables, bar graphs and pie charts, while inferential data is presented in tables and figures in the form of path diagrams to present CFA and SEM models. The formulated hypotheses and their research outcomes are presented in a table as well.

Chapter Seven: Discussion of Findings

This chapter presents the findings of the study underpinned by the empirical evidence tabled in the previous chapter. Discussions therein follow a logical order of the research objective and questions provided in Chapter One. Findings in the chapter are discussed so as to provide a sufficient understanding of the essence of the study, which is to create a link between IMC and adoption of m-payments among the youth.

Chapter Eight: Conclusions and Recommendations

As the final chapter, Chapter Eight summarises the study and goes on to provide implications of the study, together with recommendations for future areas of research linked to the research area.

1.13 Conclusion

This chapter has comprehensively introduced the concept of m-payments and the state of m-payments in RSA. The chapter has also provided preliminary literature and background information to set up the basis upon which the research problem is constructed and presented. The research objectives and questions are outlined, and the study's underlying theory and conceptual framework, detailed. The significance and rationale of the study was presented, followed by a brief discussion of the indicative methodology used to guide the research process. The following chapter delves into literature concerned with IMC and its tools.

CHAPTER TWO: INTEGRATED MARKETING COMMUNICATIONS

2.1 Introduction

The essence of this chapter is to outline the core functions of IMC through its various tools, and create a link with how IMC plays a role in mitigating inherent user risk in the mind of consumers. This chapter presents literature on how effective communication strategy is formulated and implemented through various tools used within the MC and promotion mix. It begins by defining IMC and how it has evolved in the modern day, where the consumer wields more power. The seven major tools used by marketing practitioners in the IMC mix are presented. They are advertising, direct marketing, word-of-mouth marketing, personal selling, promotions, event marketing and sponsorship, interactive or digital marketing and public relations. The chapter explores their fit within the mix and how they influence use intention and consumer behaviour and how their effectiveness can be gauged. Chapter Two wraps up by explaining the role IMC plays in innovation adoption and how effective communications are developed and implemented.

2.2 Integrated Marketing Communications Defined

IMC is defined as a “concept and process of strategically managing audience-focused, channel-centred and result-driven brand communication programs over time” (Kliatchko, 2005:21). It involves the “planning, creation, integration and implementation of various forms of marketing communications...ultimately to influence or directly affect the behaviour of the target audience” (Shimp, 2010:10). Duncan (2002:8) describes IMC as a “process for managing the customer relationships that drive brand value”. Elements of the definitions by Duncan (2002:8) and Shimp (2010:10) best suit the nature and tone of this study. In this regard, the operational definition of IMC assumed in this study is: an unremitting customer-centric perception management process through brand communications initiatives. This definition is further supported by Potluri’s (2008:61) and Biedenbach and Marell’s (2009:245) suppositions that with effective channels used in IMC, consumer confidence in a company’s product, its value and brand equity is bolstered.

According to du Plessis, van Heerden and Cook (2010), IMC involves a mix of strategic communication tools such as advertising, personal selling, direct marketing, sales promotions, general sponsorships and public relations campaigns, among others, to realise convergent optimal communications impact. Hackley and Hackley (2015:78) state that IMC employs the various qualities of distinct media in a coordinated effort to conserve homogenous brand values, irrespective of which communication contact point or tool a consumer gets to experience. All these communication channels are carefully put together so as to positively affect purchase decisions and overall buyer behaviour by countering the shortcomings inherent in one communication channel with the strength(s) of another (Nielsen, 2009; Stoica & Cretoiu, 2009; Polyorat, 2012; Mapheto, Oni & Matiza, 2014:112). IMC plays a role in educating beyond simply informing the target market about a firm’s offerings (Tsikirayi, Muchenje & Katsidzira, 2013:9).

The prominence of IMC practice has come to the fore due to various factors. Fill and Jamieson (2006:13) believe consumers now spend their leisure time in different ways; as a result, they are getting less and less exposed to traditional marketing channels. Notably, Hackley and Hackley (2015:79) attribute IMC use to audience and media fragmentation, and the shift in the audience's patterns of media usage and uptake on the grounds of an upsurge of innovative media channels and platforms. Webster and Ksiazek (2012:39-40) are of the same opinion stating that audience fragmentation has occurred because of the augmentation of digital media and from the engagement of media platforms and audiences. Additional platforms have been made available through digital technologies, enabling effortless shift across media channels for content and consumers, making audience media consumption patterns diverse (Webster & Ksiazek, 2012:40).

More specifically, the elements shaping media fragmentation include media providers and media users. Firstly, in consideration of media providers, there has been a stable increase in the sum of media platforms and related products contending for limited audience attention (Webster & Ksiazek, 2012:40). This has been as a consequence of traditional media such as print and broadcast media expanding and/or when innovative media linked to digital technology like the internet come into the fray. Therefore, media providers do whatever it takes to capture the attention of their target audiences by further claiming their stake in delivering communications through new media channels. Secondly, Webster and Ksiazek (2012:41) note that media users exhibit specific preferences reflecting their individual needs, attitudes and overall behaviour, although their rational actions and decisions are made within the confines of their psychological inclinations, leading to selective exposure.

The current trends in IMC mirror a power switch from companies and their brands to the consumer, a switch from mass advertising and promotions to niche-based data-driven marketing practices and the proliferation of round-the-clock consumption patterns (Hackley & Hackley, 2015:79). With the advent of new technology and digital media platforms, interactive varieties of MC have been realised, shifting greater balance of power and responsibility towards the target audience(s) with regard to the flow of information and the communication process as a whole. This notion is upheld by Fill and Jamieson (2006:13) who note a shift in approach by IMC practitioners from intervention-based to permission-based communications. The former entails marketers attempting to capture the attention of those consumers who may not be interested in the offering through mass communications, while the latter entails marketers focusing their communications efforts on consumers who have shown interest in the offering via target-specific MC strategies.

The digital age has brought with it a continuous growth in its role in IMC via the ubiquity of smart mobile devices such as phones and tablets, while the internet and social media continue to grow in short order as influential media platforms in comparison to others (Hackley & Hackley, 2015:69). As a result, IMC trends have switched over from conventional practices to post-modern advertising and promotion, characteristically, towards branded content that works and can be accessed across various media platforms (Hackley & Hackley, 2015:69). All this has dramatically altered how the media, brands and marketing practitioners connect with, and engage their target audiences (Moderandi Inc, 2013: iii).

2.3 Tools in the Marketing Communications/Promotion Mix

The MC or Promotion Mix has been characterised as comprising a specific fusion of communication tools that a firm utilises to convincingly “communicate customer value and build customer relationships” (Kotler & Armstrong, 2012:408). Over the recent past, there has been a paradigm shift in the marketing environment and how firms effectively communicate with target audiences. Technology advancement has given and continues to give rise to new media and various MC mix combinations. Several elements of the MC mix currently are in use by marketers to engage the target market. They include advertising, direct marketing, personal selling, sales promotion, public relations and publicity, interactive or online marketing, word-of-mouth marketing, and events and experiences (Belch & Belch, 2003:16; Kotler & Keller, 2012:478). Table 2.1 outlines a variety of communication platforms used within the stated MC mix elements above.

Fill and Jamieson (2006:13) put forward that the MC/promotion mix has evolved to use Below-the-line (BTL) and Through-the-line (TTL) campaigns whereby promotional activities are designed to be more direct, customer-centric and heavily targeted, unlike in previous times, whereby Above-the-line (ATL) campaigns were designed to place great intensity on mass communication. Figure 2-1 below illustrates the difference in these MC strategies.

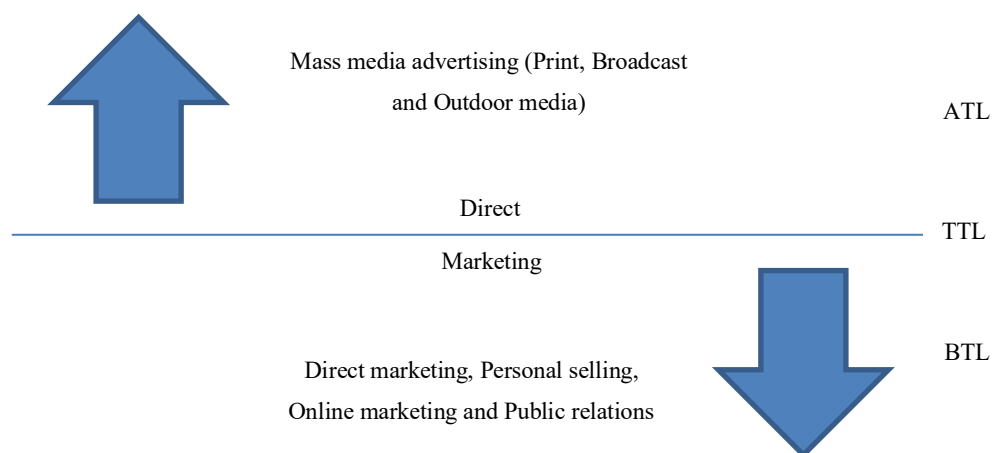


Figure 2-1: Marketing Communications Strategies

Adapted: Fill and Jamieson (2006:14)

As illustrated in Figure 2-1, ATL campaigns include mass and broadcast media such as television, radio, press, print and outdoor advertisements (ads). BTL campaigns on the other hand, include sales promotions, direct selling, internet marketing, public relations and branding specialities (branded items). Finally, TTL campaigns attempt to encompass elements enshrined within both ATL and BTL in an integrated manner, placing the brand and/or offering at the cornerstone of strategy (Hackley & Hackley, 2015:78).

Table 2-1: Marketing Communication Platforms within the Marketing Communications Mix

Advertising	Direct Marketing	Personal Selling	Sales Promotion	Public relations and Publicity	Interactive Marketing	Word-of-Mouth Marketing	Events and Experiences
Print and broadcast ads	Catalogues	Sales presentations	Contests and game shows	Press kits	E-shopping	Person-to-person	Sports
Packaging and inserts	Direct mail	Incentive programs	Premiums and gifts	Speeches	Mobile marketing	Chat-rooms	Entertainment
Cinema	E-mail	Samples	Sampling	Seminars	Company blogs	Blogs and micro-blogs	Concerts and festivals
Brochures and booklets	Telemarketing	Trade shows and fairs	Trade shows and fairs	Annual reports	E-mail	Social media	Arts
Posters and Leaflets	Voicemail		Exhibits	Charitable donations	Websites		Causes
Directories	SMS marketing		Product demonstrations	Publications	Search engine optimisation		Factory tours
Billboards	Infomercials		Coupons	Company magazine and trade journals	Pay-Per-Click		Company museums
Signage			Rebates	Community relations			Street activities
POS displays			Low-interest financing	Lobbying			Brand activations
DVDs			Loyalty programmes	Identity media			

Adapted: Kotler and Keller (2012:479)

The following subsections take a closer look at the specific tools used within the MC mix, categorised into traditional and new media.

2.3.1 Advertising

Kazmi (2012:231) defines advertising as “any paid form of non-personal mass communication through various media to present and promote offerings, brands and ideas by an identified sponsor”. Traditional mass media used in advertising have a wide reach and are effective over a large geographical distribution; however, they are relatively expensive (Moderandi Inc, 2013:59). Some of the forms of traditional media categorised under advertising include: print media (newspapers and magazines), broadcast media (television and radio) and outdoor/out-of-home media (signage, billboards, product placement and public spaces) (Kotler & Keller, 2012:479). These media are used to generate leads, establish offering or brand visibility and steer promotional activities. According to Moderandi Inc (2013:60), ATL campaigns employing mass media advertising should be considered longer-term investments as their returns often trickle in stepwise, to achieve a company’s or a brand’s strategic objective (Hackley & Hackley, 2015:77).

Due to the wide reach of advertising as an MC tool, it may prove to be cost effective, reaching a broad spectrum of the population with considerably low cost implications per exposure (Kotler & Keller, 2012:507), given that the communicated message may need to be repeated throughout a campaign’s duration. Companies may use celebrity endorsers and public figures in various advertising media to boost company or brand image (Kazmi, 2012:231), by leveraging their fame and popularity. Hackley and Hackley (2015:70:71) indicate that advertising’s effects can go beyond influencing a company, its brands’ and offerings’ images, and change consumer behaviour by placing specific ideas in the minds of target audiences, to develop a positive predisposition and to deliver the product story of uniqueness, among other benefits.

The following subsections detail broadcast media in the form of television and radio advertising, print media and out-of-home media.

2.3.1.1 Broadcast Media

Television ads may be used to realistically showcase an offering’s attributes and convincingly illustrate its benefits to the target audience using drama to depict use and usage imagery, the brand’s personality and intangibles via visual cues (Belch & Belch, 2012:362). Well-constructed and executed television ads can be quite effective in enhancing brand equity and in positively impacting on sales and profits in the longer-term. However, the advertised product or brand message may be ignored or overlooked by the consumer due to the creative elements within the television ad that often serves as a distraction (Kotler & Armstrong, 2012:424).

Radio as a medium is pervasive, quite flexible and extremely targeted. Most radio listenership usually occurs in the morning when people are in transit, that is, in a car or in taxis and out of home (Kotler & Keller, 2012:509). Firms that use this kind of mass media advertising are able to target either localised or general audiences (Kotler

& Keller, 2012:509), as individual radio stations usually cater to a specific listener base with homogenous demographics. The production and placement of a radio ad is considerably inexpensive, with an actual ad's short length allowing for a relatively quick customer response, thereby actuating quick sales (Kotler & Armstrong, 2012:424). As much as radio ads lack visual cues, well produced and executed ads with good copy can overcome this shortcoming. This is achieved by leveraging the creative use of audio cues through music and sound effects to establish a connection with the target audience's imagination to forge relevant and appropriate brand/product images and associations (Kotler & Keller, 2012:509).

Kotler and Armstrong (2012:424) state that a grand advertising campaign communicates volumes in terms of the sponsoring firm and the advertised product, translating to a positive image in the minds of consumers, showcasing the firm's magnitude, popularity, and prosperity. Essentially, due to the very public and open characteristic of advertising, the advertised product and message are generally viewed to have credibility. In the long run, advertising may be utilised to augment and cement a lasting favourable image of the product, brand and company as a whole (Kotler & Armstrong, 2012:424).

Be that as it may, advertising is adjudged as being very capital intensive in comparison to the actual target audience exposed to the promoted message (Kazmi, 2012:232). According to Kotler and Armstrong (2012:424), television advertising calls for a sizeable budget, compared to print and radio advertising. Radio and television ads barely furnish the consumer with enough detailed information about the offering, due to their brief and fleeting nature (Kotler & Keller, 2012:507). It is also quite difficult to measure mass media advertising effectiveness, as its effect is seldom immediate (Kazmi, 2012:232). As such, the impact of advertising on a product's or service's sales performance can barely be gauged in real-time. In addition, the existence of clutter within the mass media advertising space has rendered the use of this MC tool less effective in terms of commanding target audience attention (Kazmi, 2012:232), and evoking timely and desirable consumer response.

Austin, Barnard and Hutcheon (2015:4) report that average mass media consumption worldwide has shown a steady decline over the last few years. In 2014 and in 2015, television consumption was 183.9 minutes and 179.5 minutes per day respectively; it was forecast that this would further decline to 176.7 minutes and 175.4 minutes per day in 2016 and 2017 respectively. Radio consumption by individuals exhibits a similar downward trend, with consumption minutes per day dipping between 2014 and 2015, from 58.4 to 56.8 (Austin *et al.*, 2015:4). The report further predicted that by 2017, the average radio consumption would fall to approximately 55 minutes per day, a 3.5% decrease from the previous year.

The Broadcast Research Council of South Africa (BRC) in its October 2017 report, sampled 25,082 individuals spread across metro, urban and rural areas from a population of 39.5 million people aged fifteen years and above, to capture television viewership and radio listenership in different combinations of formats (BRC, 2017:5). The BRC report indicates that 97% of television viewing occurs on television sets, 9% on smartphones, 3% on computers (desktop or laptop), 2% on tablets and 1% via gaming consoles (BRC, 2017:20). Radio listenership on the other hand, occurs 24% of the time via television sets, 43% via mobile phones (both feature and smartphones), 88% via radio sets, 76% while in transit in cars, taxis or buses, and a combined 3% via computer and tablet (BRC, 2017:20). It should be noted that, Publisher Research Council and Kantar TNS (2017:37) do indicate that there

exists a situation of cross-usage media format consumption in RSA, which refers to consumers engaging two or more media types concurrently, hence television viewership and radio listenership percentages total more than 100%.

Looking at media reach statistics published by BRC and how marketers are using various media for MC, television reach in the last 12 months has declined by three points from 97% in 2016 to 94% in 2017. Similarly, radio reach across RSA has declined, recording 71% in October 2017, which is down from 91% in the previous calendar year (BRC, 2017:21).

The BRC reports that 98% of television viewership occurs at home, 7% at either a shopping centre or banking hall, 6% at bars, pubs, shebeens or cafes, 5% in either a coffee shop or restaurant, 4% while in transit and 1% in educational institutions (BRC, 2017:29). It should be noted that the figures presented here are representative of cross-usage media consumption, where consumers engage two or more viewership settings concurrently, therefore television viewership percentage total is beyond 100%. Between October 2016 and October 2017, at-home television consumption via the television set averaged 95% (BRC, 2017:29). The medium's consumption has been fairly distributed across each Socio-economic Segment (SEM – formerly referred to as the Living Standard Measure, LSM – refer to Appendix I). SEM 1 and SEM 2 television consumption stand at 91% as being the lowest, while SEM 8 to SEM 10 stands at 99%. It is further indicated that in RSA there are a total of 14.006 million households with television sets, with 8.2 million watching free-to-air (FTA) channels, 5.8 million watching Multichoice's DSTV and just over 0.7 million subscribed to Open View HD (OVHD) (BRC, 2017:108).

According to Omnicom Media Group (OMG) (2016:54), Nielsen Multimedia indicates that television adspend by organisations in 2016 accounted for 55.4% of the national ATL total, with a reported figure of ZAR 24.208 billion, a 7% increase from the previous year. Radio advertising, on the other hand, accounted for 15.9% of total ATL adspend, totalling ZAR 6.69 billion in 2016, a 5.18% increase from 2015. Table 2-2 gives a breakdown of broadcast media adspend within the country between 2011 and 2016.

2.3.1.2 Print Media

In contrast to other broadcast advertising media, print can be consumed at the pace or leisure of the target audience due to their pervasive nature (Kotler & Keller, 2016:612), permitting print ads to be replicated severally to amplify target audience exposure (Kotler & Keller, 2016:596). Newspapers and magazines furnish the reader with detailed product information, thereby successfully conveying user and use imagery. However, still images in print ads render the demonstration of the product or service to be rather elusive, making the advertised message relatively passive. Newspapers and magazines are further known to have a relatively short shelf-life, and, as such, the impact of print ads therein on the target audience may be diminished (Duncan, 2002:378-388).

As stated by Austin *et al.* (2015:4) the consumption of newspapers was at 16.3 and 15.2 minutes per day in 2014 and 2015 respectively, while that of magazines within the same time period was reported at 8.3 and 7.9 minutes

per day. In the period between 2016 and 2017, it was predicted that these figures would slightly fall from 14.6 to 14.1 minutes per day for newspapers and 7.5 to 7.3 minutes per day for magazines (Austin *et al.*, 2015:4).

Table 2-2: ATL Media (Broadcast and OOH) Adspend in RSA (2011-2016)

Broadcast Media Category	2011		2013		2015		2016	
	ZAR	Percentage share	ZAR	Percentage share	ZAR	Percentage share	ZAR	Percentage share
Television	14 684	69,5%	17 928	69,5%	22 591	72,2%	24 208	72,4%
Radio	4 479	21,2%	5 825	22,6%	6 617	21,1%	6 960	20,8%
OOH	1 970	9,3%	2 026	7,9%	2 099	6,7%	2 251	6,7%
Total	21 133		25 779		31 307		33 419	

*Adspend figure in ('000,000)

Adapted: Omnicom Media Group (2016:54)

Table 2-3: ATL Media (Print) Adspend in RSA (2011-2016)

Print Media Category	2011		2013		2015		2016	
	ZAR	Percentage share	ZAR	Percentage share	ZAR	Percentage share	ZAR	Percentage share
Daily newspapers	3 837	38,0%	3 803	37,3%	3 675	38,8%	3 676	39,9%
Weekend newspapers	1 787	17,7%	1 922	18,9%	1 538	16,2%	1 530	16,6%
Local newspapers	1 813	18,0%	2 003	19,7%	2 063	21,8%	1 904	20,7%
Consumer magazines	2 155	21,4%	2 055	20,2%	1 854	19,6%	1 762	19,1%
Trade, technical & financial	499	4,9%	401	3,9%	349	3,7%	337	3,7%
Total	10 091		10 184		9 479		9 209	

*Adspend figure in ('000,000)

Adapted: Omnicom Media Group (2016:54)

In RSA, BRC (2017:20) indicates newspaper readership to occur on four major platforms - smartphones, printed paper copies, computers, and tablets. BRC (2017:20) reports that 17% of readership happens through smartphones, 91% through printed copies, 7% through computers and finally, 6% through computers. On the other hand, magazine readership occurs 17% of the time on smartphones, 7% on tablets, and 8% on computers, with physical magazine printouts accounting for 83% of total media usage figures. On a national scale, the readership of newspapers and magazines by target audiences has shown a sharp decline between 2016 and 2017, from 47% to 33%, and from 32% to 14% respectively (BRC, 2017:20). Table 2-4 outlines newspaper circulation and readership within the province of KwaZulu-Natal.

Table 2-4: Newspaper Circulation and Readership in KwaZulu-Natal Province (2016)

Editorial Title	Target Area	Circulation Cycle	Readership
The Mercury	Durban	Daily	200 000
Daily News			275 000
Isolezwe			1 157 000
Witness	Pietermaritzburg		92 000
Ilanga	Durban	Weekly	757 000
Ilanga Langesonto			753 000
Independent			95 000
Isolezwe ngeSonto			784 000
Post			247 000
Sunday Tribune			290 000

Adapted: Omnicom Media Group (2016:56)

2.3.1.3 Out-of-Home (OOH) Media

This type of media is also referred to as place advertising media, whereby marketers and organisations intend to grab consumer attention in their place of work, leisure, and shopping (Kotler & Keller, 2016:617). OOH advertising has been facilitated through several platforms including roadside billboards, posters, bulletins, transit vehicles, street and retail furniture, public restrooms, public bus-stop shelter, refuse bins and skips, buildings, baggage carousels in airports, shopping trolley signage, in-store digital television and displays in passageways, aisles and points-of-sale (POS), cinemas, and aerial and water-borne displays (Franke & Taylor, 2017:396; Roux & van der Waldt, 2016:387; Roux, 2016:182-184). Ostensibly, roadside billboards dominate approximately 66% of the total OOH media vehicles used in this type of mass advertising (Franke & Taylor, 2017:396).

Proponents of OOH media prefer this MC platform because of their visibility, as they can be viewed effortlessly, and are able to create a lasting imprint on the minds of audiences (Franke & Taylor, 2017:396). OOH media is relatively efficient, especially roadside billboards that are strategically positioned at high human and vehicular traffic, possess high reach and frequency ratings, at a moderately reduced cost per exposure (Roux & van der Waldt, 2016:387). Billboards and signage placed near a POS or shopping area tend to amass favourable awareness and recognition due to their local presence, influencing consumer purchase choice, close to the moment of making

an actual purchase. This sort of response for instance at a POS is a tangible element of OOH advertising, and marketers can use this opportunity to measure and monitor CP and campaign effectiveness and comprehend consumer interest in a specific locale (Franke & Taylor, 2017:396; Lai & Cheng, 2017:1). However, OOH media have a few drawbacks - for instance, limited exposure to MC in a case where human/vehicular traffic is fast and the media is in transit (Roux, 2016:185). There also exists an issue of competitive clutter within an advertising site, drowning out the intended message. Roux (2016:185) further adds that impact measurement, actual cost per exposure, and ROI is a constant challenge for traditional OOH advertisers.

Franke and Taylor (2017:395) point out that tracked revenues from advertising service providers and capital investment from other forms of traditional media have been trending downwards as OOH advertising has, of late, experienced more capital injection. In the United States of America (USA), corporate adspend on OOH advertising peaked at a record high of USD 7.3 billion in 2015, with extrapolated figures approximating that this expenditure may grow steadily by over 13% by 2019 (PricewaterhouseCoopers (PwC), 2015:1). In RSA, advertising expenditure on OOH media accumulated to ZAR 2.251 billion in 2016, accounting for 5.2% of total adspend share, a very slight increase of 0.3% from the previous year (OMD, 2016:54). More specifically, Roux and van der Waldt (2016:387) report that the use of OOH advertising in emerging markets such as Russia and Nigeria in 2016 has dramatically grown in popularity with their market share in relation to other media types, at 17.7% and 30.6% correspondingly.

The Outdoor Advertising Association of America (OAAA, 2016) and Marketing Charts (2016: para 1) suggest that this growth trend should be reflective of advertising practices across the globe and, according to PwC (2015b:1), this growth shall be propagated by advertising practitioners altering and repurposing conventional, physical and static OOH media such as billboards and posters, to combine digital features. Marketers are currently incorporating interactive elements to OOH advertising such as geo-social media data, QR codes and NFC; all integrating and enabling smartphone use, allowing brands and consumers to engage each other in real-time (Franke & Taylor, 2017:395; Lai & Cheng, 2017:1). Tadena (2015: para 3) and Franke and Taylor (2017:396) believe this digital integration has made possible an avenue for advertisers and organisations to strengthen their offer, targeting audiences through 'live' messaging within telecoms' SMS platform and in-app chats on smartphones. Digital and digitally integrated OOH media, also referred to as DOOH by PwC (2017a: para 2), has further enabled advertisers to flight MC in real-time, striking a balance with, and in accordance to pooled consumer preference, catering for a dynamic target audience (Lai & Cheng, 2017:1). Myler (2016: para 4) cites that marketers are also utilising mobile applications in tracking OOH initiatives through unique domain website links to gauge their impact online.

In RSA, the financial services sector has steadily increased adspend on ATL marketing campaigns, injecting ZAR 7.486 billion in 2016, which is a 2.4% increase coming off a steady average year-on-year increase of approximately 1.65% from 2006 (OMD, 2016:54). Additionally, the retail sector in 2016 accounted for ZAR 9.7 billion in total ATL adspend, similar to reported figures in 2015. In this regard, an increase in advertising investment for industry players within these two sectors of the economy, may positively translate to greater m-

payments adoption as commercial banks and retailers (acting as merchants and/or custodians of POSs), with their messaging centred upon informing target audiences about service offerings and their benefits.

2.3.2 Direct Marketing

Bauer and Miglautsch (1992:10) define direct marketing (DM) as “a relational and marketing process of prospecting, conversion, and maintenance that involves information feedback, and control at the individual level, by using direct response advertising with tracking codes”. Belch and Belch (2012:470) cite the Data and Marketing Association (formerly known as the Direct Marketing Association), to define DM as a facet of total marketing in that it embodies holistic market research; customer, product and market segmentation; and monitoring and evaluation, through relationship management. Belch and Belch (2012:470) add on to the definition by stating that DM is “a system of marketing by which organisations communicate directly with target customers to generate a response or transaction...whereby the response takes the form of an inquiry or a purchase...”. Kotler and Keller (2016:657) further describe DM as “the use of consumer-direct channels to reach and deliver goods and services to customers without using marketing middlemen...seeking a measurable response, typically a customer order...”. Essentially, DM aims to elicit customer response to a campaign, seeking to determine customer behaviour, for instance through service trials or direct sales. It also seeks to develop brand image, uphold customer satisfaction, and educate target audiences, to steer them towards a desired response or action (Belch & Belch, 2012:474).

According to the Direct Marketing Association of South Africa (DMASA), DM has burgeoned over the years and currently the top trends related to DM within the country include: data-driven marketing, omni-channel marketing and measurement and the incorporation of digital marketing (Ming, 2017: para 1-3). Firstly, with data-driven marketing, it is presumed that marketers and brands ideally must be aware of each interaction they have with their existing and potential customers. Each of the customer touchpoints serve to furnish the company with valuable data which can be actioned into customer intelligence on their needs, preferences and behaviour (individual or collective). Customer discernment can then be capitalised on to inform how a company relays its messages to its target audience through better developed direct marketing campaign strategies.

Secondly, omni-channel marketing and measurement points towards a situation where currently individuals demand to be immersed in an irreproachable customer experience, beyond simple brand presence and interaction via a myriad of tools within the marketing mix. Ming (2017: para 3) states that direct omni-channel marketing stretches past floating the same message across all media vehicles, to incorporate realities of the customers' status in the product lifecycle journey. This must be supplemented by the strategy used in channel or media selection and customer experience within various online platforms and related devices. The CP of these customer touchpoints ought to be monitored (in real-time where possible) and deliberated, to ascertain the ones that deliver brand promise and possess a favourable response, conversion rate, and return on investment (ROI).

Lastly, with the advancement of technology, the DMASA observes that digital marketing has been fully integrated, as consumers are largely immersed in various facets of their lives by constantly being online and

connected to one another (Ming, 2017: para 1). Companies are ever being edged to keep up with consumer trends to link with and engage audiences effectively through strategies that will convey coherent MC across all digital platforms. The DM mix has had to incorporate digital marketing elements within media, such as catalogues, direct mail, interactive television, SMS and email, for instance through embedding QR codes and website links within their messaging.

To embark on a direct marketing campaign in a financial service setting, the first step involves data preparation to enable data mining, having data sourced from customer transaction history. Data mining uses complex mathematical and statistical operations to draw forth actionable information about customer trends and various segments (Kotler & Keller, 2016:664). This preparation ensures that a befitting selection of implicit new service users is generated from a large customer profile database, streamlining the target audience with a high potential of users responding favourably (Nachev & Hogan, 2014:1; Mitik, Korkmaz, Karagoz, Toroslu & Yucel, 2017:18). The second step involves data analysis through automated data mining - commonly used techniques for this include cluster analysis, automatic interaction detection, predictive modelling, multilayer perception neural networking, decision tree approach, logistic regression, and machine learning (Elsamony, 2014:12-13). These techniques uncover significant and actionable patterns within extensive volumes of customer data whereby they can be grouped and simulated by way of their characteristics (Mitik *et al.*, 2017:18), such as demographics, transaction amounts, transaction frequency and physical location or address among others. Ideally, data mining is intended to strengthen the response rate for promotional offers, advertising interventional programmes and return on promotional or advertising spend (Nachev & Hogan, 2014:6).

The various media used in DM are discussed in the following subsections.

2.3.2.1 Direct Mail

This involves an advertising entity or a firm itself sending mail to individual consumers to communicate an offer, to remind, or to give an announcement about a product or service offering through postal service (Belch & Belch, 2012:478; Duncan, 2002:609; Kotler & Keller, 2016:659), or electronically. The commonly used forms of direct mail include letters, fliers, paper foldouts, brochures, postcards, three dimensional packages, and most recently, electronic mail (e-mail) (Duncan, 2002:609; Kotler & Keller, 2016:659; Barr, 2017: para 4).

A highly selective mailing list that makes up the (potential) customer database, determines the success of a direct mail campaign, as it allows for customer and market segmentation through demographic and geographic parameters among others. Kotler and Keller (2016:659) indicate that direct mail is a popular DM medium because MC can be articulated to suit a certain market segment, thereby being a flexible channel. Additionally, direct mail permits introductory or early-stage product, and brand testing and response rate determination, of which the latter can be performed using customer orders. Direct mail is also aimed at generating prospect leads, solidifying customer relationships, educating target audiences, and strengthening new customer brand choices (Kotler & Keller, 2016:660).

When carrying out direct mail campaigns, DM practitioners often employ the recency, frequency and monetary value (RFM) scoring method, to single out potential and current customers to be targeted (Belch & Belch, 2012:477). The RFM formula factors in the period since the customer's last purchase, the frequency of past purchases, and the customer's monetary or transactional worth, in terms of total spend from initial conversion. For example, a financial services provider may make a direct mail offer to a customer who may have transacted within the last 15 to 30 days or over two months ago, and those that spent at least ZAR 1,000 from the time they last became active customers. Customers are then selected according to a point system determined by the RFM formula, segmenting customers through assigned scoring levels through accrued points (Kotler & Keller, 2016:659). A customer becomes more prime for inclusion in a direct mail campaign if they have a high score. Notably, DM proponents also predetermine target audiences using gender, age, education level, income, religion and occasion.

According to a report compiled by Data and Marketing Association (2015:67), the average response rate in 2015 for posted direct mail sent to a database that has been internally generated by a company stood at 3.75% (with a ROI of 19%), a 0.2% increase from the previous year. Alternatively, Kotler and Keller (2016:660) report that e-mails have a very low response rate of 0.12% from an internally generated mailing list. As for a general public list, response rates are even lower for both direct mail and email, with figures indicated at 1.3% and 0.03% respectively (Kotler & Keller, 2016:659).

Direct mail adspend in RSA in 2016 amounted to ZAR 139 million, a 7.3% decrease compared to the previous year (OMD, 2016:54). In terms of total adspend across all mediums used in ATL advertising, direct mail accounted for a dismal 0.3% within the same year (OMD, 2016:54). This goes to reveal that direct mail is not a preferred nor well-utilised MC medium in the country, perhaps due to the low response rates cited above.

2.3.2.2 Catalogue Marketing

Catalogue marketing involves a company providing a catalogue from which the target audience may select products or services and then initiate direct orders via telephone, postage, e-mail or face-to-face (Liao & Chen, 2004:521). Catalogues comprise pictures of commodities offered by a company, retailer, merchandiser or distributor, and include a descriptive narrative, usually in the form of printouts, DVDs and online (Duncan, 2002:611; Kotler & Keller, 2016:660).

According to Liao and Chen (2004:521), catalogue marketing has the merits of being efficient and convenient for the consumer. At the end of the merchandiser, MC can be relayed to audiences in remote locations at a relatively low cost, as opposed to employing capital intensive channels such as having sales representatives on the ground and in-store promotions. However, catalogue marketing lends itself to being quite impersonal and inflexible, thereby being effective only on a select few product categories, let alone services. Liao and Chen (2004:522) go on to indicate that catalogues are generally limited when it comes to customer engagement, lacking in relationship management and personalised messaging. This piece of literature is of great consideration especially in service marketing of m-payments because potential users may require more information regarding the offering, and

without a flexible and personal medium to engage them, it may prove difficult to relay marketing messages. It is key to note that companies use catalogue marketing conjointly with other more conventional promotional media, to overcome inherent internal inefficiencies (Belch & Belch, 2012:479). Ideally, the authors suggest that hard copy catalogue marketing is supposed to tap into a consumer's affect, since marketers use emotional appeal in catalogues. However, this supposition is in contrast with this study's key assumption that the potential or current m-payments service user is a rational one.

2.3.2.3 Telemarketing

Duncan (2002:425) defines telemarketing as "the practice of using the telephone to deliver a brand message designed to create a sale or generate a lead, qualify customers and receive orders". This DM medium has been described by Moro, Cortez and Rita (2014:22) as MC "operationalised through a contact centre in a remote setting." Moro *et al.*'s (2014:22) definition is important as players within the financial services sector often make use of inbound and outbound calls to potential customers from a call centre, using sales operators. In inbound calling, a company receives calls from customers with queries or orders, while the opposite occurs in outbound calling where the company solicits sales or orders, conducts surveys, and manages customer service (Duncan, 2002:425-609; Kotler & Keller, 2016:660). A number of commercial banks and insurance companies in RSA usually employ outbound telemarketing strategies to cross-sell their products and services, such as credit cards and insurance policies respectively, to potential and current customers.

2.3.2.4 Infomercials

Radio and television are used by DM practitioners to flight infomercials (information commercials) presenting offers especially on public access or FTA and satellite channels to carry out direct-response marketing (Belch & Belch, 2012:480). Kotler and Keller (2016:662) point out that infomercials are usually lengthy and often blend the persuasive influence of radio and television commercial with audio and visual entertainment and cues, laced with product, service, or brand information. Additionally, infomercials are best suited for product or service categories that are complex and quite technical in nature, often warranting extensive clarification. In RSA, Hollard Insurance, a financial services company has exhaustively made use of television for DM via Multichoice's DSTV and South African Broadcasting Corporation (SABC) channels. In their infomercials, Hollard combine their messaging with a toll-free line or an SMS number whereby potential clientele can contact sales representatives, allowing the customer to receive a free quote or even to make a general inquiry about the offered insurance services.

Mitik *et al.* (2017:17-18) acknowledge that DM and mass marketing/advertising are heavily used by financial institutions (especially commercial banks) as quintessential MC platforms. However, advertising's efficacy has witnessed a downward shift because of the enormous amount of clutter, with several products or services, and brands competing for limited customer attention. This has in turn meant that companies are spending more and more on mass advertising to capture the attention of customers, thereby leading to decreasing return on investment

(ROI). DM on the other hand, personally informs the target audience enabling commercial banks for instance, to steer their MC strategy by using customer data to bolster response rates, and eventually ROI (Mitik *et al.*, 2017:18). As much as advertising through broadcast and print media is utilised in services promotion, especially for those services with a greater likelihood of target audience preference, the intense capital investment involved makes firms limit the use of this MC tool. Consequently, commercial banks are inclined to undertake a direct marketing strategy that is relatively cost-effective per exposure within a campaign (Nachev & Hogan, 2014:1).

2.3.2.5 Ethical Considerations in Direct Marketing

According to Kotler and Keller (2016:661), target audiences may feel irritated by the unsolicited hard-selling practices of direct marketers, that often end up invading their privacy. On the other hand, direct marketers may take advantage of consumers that are either impulsive or vulnerable. In other cases, direct marketers include copies that deliberately mislead target audiences in terms of product specifications, performance, and price – these deceptive and fraudulent practices by marketers are considered to be unethical (Kotler & Keller, 2016:661).

In RSA, the Consumer Protection Act 68 of 2008, Chapter 2, Parts A, B and E, govern direct and indirect marketing practices in terms of protection against discriminatory marketing, the consumers' right to privacy and their right to fair and responsible marketing, respectively (PwC, 2011:1). For instance, regulations within the Act stipulate that, "a direct marketer must assume that a pre-emptive block has been registered unless the registry confirms the contrary in writing", whereby a company or market must institute processes to enable the receipt of demands posed by the consumer to cease from direct marketing practices (PwC, 2011:3). The Consumer Protection Act accords the consumer the right to express in writing whether he or she desires to receive DM materials; this includes placing a "no junk mail" notification on their mailbox. On the condition that the consumer has expressed interest in and agreed to DM, the Act stipulates that marketers cannot engage in DM at consumers' premises between 7:00PM and 8:00AM on weekdays, neither before 9:00AM and after 12:00 noon on Saturdays, nor on Sundays or public holidays (PwC, 2011:3).

Direct marketing practitioners face the ethical issues raised above, and if not addressed, may lead to progressively unfavourable consumer attitudes and even lower consumer response rates (Kotler & Keller, 2016:661). Therefore, it is imperative to carry out DM campaigns within the confines of the law.

2.3.3 Word-of-Mouth Marketing

Word-of-mouth (WOM) marketing is described as an unsolicited and unaided form of two-way communications between or among people, to create product or brand awareness through interpersonal channels (Rogers, 2003:205; Tran & Croner, 2016:85; Kotler & Keller, 2016:645). WOM occurs in two distinct forms, either offline or online. Offline WOM, also referred to as traditional WOM, takes place by way of face-to-face and telephone exchange, where interpersonal communication takes place between friends, family, peers, colleagues, opinion leaders, experts, professionals, and an organisation's staff members (Tran & Croner, 2016:85; Kotler & Keller,

2016:645; Lee, Lee & Schumann, 2002:22). Online WOM, also known as electronic WOM (eWOM) is carried out over the internet via social media, where communication transpires, and information is shared among members within virtual communities (Tran & Croner, 2016:86). Social media are defined as “a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010:61). Some of the commonly used social media platforms include online forums, blogs or vlogs, social networking websites such as Facebook and Twitter, content creation and share websites such as Instagram and YouTube, and mobile chatting applications such as Whatsapp and WeChat. Kotler and Keller (2016:465) report that 75% of WOM occurs face-to-face, 15% over the telephone and 10% on social media.

The exchanges that take place via either WOM or eWOM are postulated to effectively dispel psycho-social barriers that may exist within the mind of a consumer or user during innovation adoption (Tran & Croner, 2016:85). Social circles, opinion leaders and even superiors can assist in disseminating innovation-related information gathered from mass advertising to imitators (as upheld by the innovation diffusion cycle), who seldom pursue it. Shaikh and Karjaluo (2016:1499) state that favourable WOM exudes positive brand images, easing the process of decision-making for the target audience and advocating for the offering; unfavourable WOM on the other hand breeds a negative brand, therefore, marketers consider the effects of negative WOM to outweigh those of positive WOM.

WOM in all its forms brings about social influence on the part of the participant, which plays a major catalytic role in technology diffusion because interpersonal reference points may positively impact an individual’s use intention and decision (Court, Elzinger, Mulder & Vetvik, 2009:231; Püschel, Mazzon & Hernandez, 2010:10). It is elucidated that WOM assists the intending user in modelling immanent perceptions, especially as affects PU (López-Nicolás, Molina-Castillo & Bouwman, 2008:78; Ratten, 2011:47), inherent beliefs on the benefits and perceived enjoyment (Mills, Tennant & Chevers, 2011:3-7), in employing innovations such as remote payments and mobile banking, for both potential and current users. Proponents of offline WOM indicate that it has a strong persuasive command more so on late adopters and imitators (Lee *et al.*, 2002:23; Tran & Croner, 2016:97).

eWOM via social media is almost immediate, with messages being able to be disseminated in the shortest time possible to a wide audience, compressing the timeframe required for innovation diffusion, in comparison to traditional WOM (Tran & Croner, 2016:86). Social media provide a platform for the advertiser and peers within virtual communities to engage with prospective innovation adopters in very particular and widely rooted relationships. Due to the immediate and rather simultaneous interaction phenomenon within social media, the channel has elevated social presence among participants, enabling it to foster greater social influence on user behaviour, particularly among the youth (Kaplan & Haenlein, 2010:61; Needham, 2008:61).

Keller and Fay (2012:460) reveal that WOM in both its forms has the impact of driving sales, or adoption in this case, because it inspires a high level of credibility. In their study examining fifteen product and service categories, the majority of consumers preferred the high credibility of information gathered from WOM interactions with peers, in comparison to developing purchase intentions resulting from the WOM (Keller & Fay, 2012:460).

Figure 2-2 is a representation of these findings.

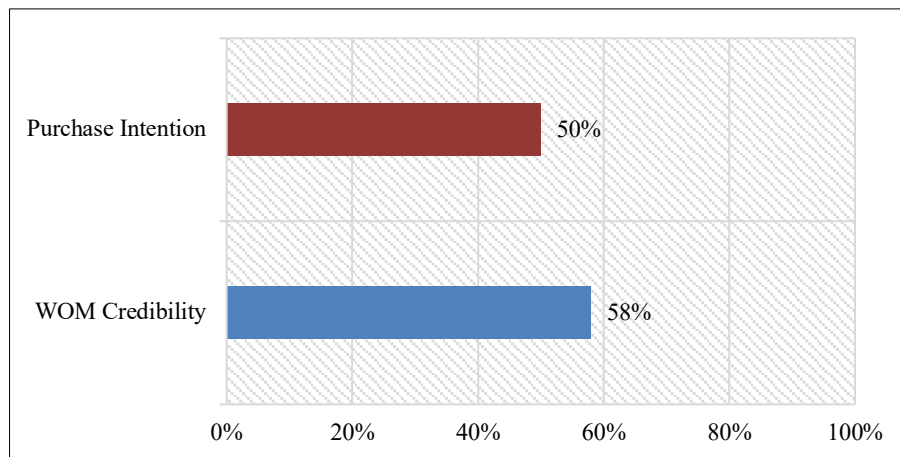


Figure 2-2: Percentage Rating of WOM Credibility and Purchase Intention Likelihood

Adapted: Keller and Fay (2012:460)

The findings of Keller and Fay (2012:46) on WOM credibility are supported by empirical evidence from Shaikh and Karjaluoto (2016:1502), who found that positive WOM has a vital impact on m-banking services use, by making service-related information easily accessible, and heightening user satisfaction and retention rates.

Keller and Fay (2012:462) further put forward that 20% of WOM is paid, or rather sponsored by brands, with the rest occurring organically among consumers within their social circles recommending brands, often sparked by exposure to mass media advertising. Television ads are the most referenced in WOM, followed by internet ads and newspapers (Keller & Fay, 2012:462). It is added that WOM becomes even more robust as an average of 25% of consumer conversations on brands are a direct result of mass media advertising, because consumers have conversations about these ads across various product/service categories. Financial services ads inspire approximately 19% of referenced WOM among consumers (Keller & Fay, 2012:462).

2.3.3.1 Blogs

Kotler and Keller (2016:643) and Belch and Belch (2012:709) describe blogs as periodically updated electronic diaries or journals, published and provided in reverse chronological order. Several blogs exist online covering a wide array of areas of interest, from personal blogs to corporate blogs with a wide audience reach, all of which congregate virtual communities with shared interests (Kotler & Keller, 2017:643).

Belch and Belch (2012:582-583) state that personal blogs can be about consumer experiences with brands and products, some positive, others negative – with information streams that are unstandardised being disseminated to a number of recipients within the social network. They add that a drawback of personal blogs is that once information is in the public domain, organisations or brands do not have any form of control over it, especially

when the information revolves around negative product, or service reviews or feedback. However, if personal blogs have positive product reviews and brand experience information, this works in favour of organisations and advertisers in terms of target audiences advocating for their brand, thereby having the effect of promoting product uptake (Court *et al.*, 2009:231; Püschel *et al.*, 2010:10; Tran & Croner, 2016:97).

Organisations can also get into the blogosphere and create their own blogs to disseminate product-specific information with up-to-date messaging and weekly and daily newsletters (Kotler & Keller, 2016:643). According to Kritzinger and Weideman (2017:2), blogs are employed by companies to make a more direct connection with their audiences through informative and personalised messaging, and they also serve the purpose of being a promotional vehicle for marketers (Kritzinger & Weideman, 2017:2). In operating their own blogs, corporates must also exercise care in monitoring other related blogs and popular personal blogs that are essentially run by opinion leaders and social influencers, and leverage MC accordingly (Kotler & Keller, 2016:6430).

Khatri (2017: para 2) expresses that the use of blogs by major brands in RSA was registered at 36% in 2017, which is a 12% increase from 2016. In 2018, corporate blog usage within brands' social media strategy package is predicted to peak at 44%, with more investment expected to be directed towards expansive content creation on the social media tool (Khatri, 2017: para 2).

2.3.3.2 Social Networks

Social networks exist virtually on the internet and are a key prerequisite to business-to-customer (B2C) marketing, with several organisations and brands having a Facebook page, a Twitter handle or a YouTube channel (Kotler & Keller, 2016:644; Naylor, Lamberton & West, 2012:105). These networks provide an avenue for organisations to deeply engage with target audiences, gain useful insight about what people are saying about brands, and even serve as a quick response tool to deal with customer issues (Adamson, 2009: para 6-8). Popular networks offer maximum product exposure where companies can share MC and brand messages with connected individuals, social groups and large virtual communities (Kotler & Keller, 2016:644). It is upon the organisation to curate a powerful and formidable online presence to build brand credibility, which goes on to act as a source of reference when information-seeking customers have unfavourable perceptions about the product offering. Often, when a company has a strong presence within an online community, connected individuals within the network can advocate for the company's offering and brand (Kotler & Keller, 2016:645).

In RSA, it is indicated that all social media users amount to 16 million active users, 14 million of which access these networks via mobile devices (Mabizela, 2017:1). BRC (2017:39) breaks down the social media activity by device with 76% engagement occurring on mobile phones, 53% via tablet and 33% either via desktop or laptop computers. It is key to note that social media access across these devices overlaps, whereby users engage via more than one device category. Mabizela (2017: para 4) adds that 73% of brands or organisations within the country have inculcated social media in their marketing strategy.

A description of the common social media networks in RSA is given as follows:

- Facebook

Kotler & Keller (2016:37-39) define Facebook as an expressive and collaborative social networking platform that allows for personal connections and for users to generate content that can be shared; they further state that the platform has duly revolutionised how brands and advertisers interact with target audiences and vice versa. Facebook requires every user in the network to input personal data upon initial sign up (Facebook, 2017a: para 1) It has a plethora of user data (including location data) that when mined, can generate and segment suitable target audiences (Quinn, 2014: para 2-5). Furthermore, data mining allows for advertisers and organisations to predict with a degree of accuracy, users that are most likely to respond to brand messages, or even download a mobile application (Quinn, 2014: para 3). Organisations are also able to deliver highly personalised marketing communications round the clock, to potential and current customers in an ubiquitous manner (Quinn, 2014: para 5), through Facebook’s ad-targeting (PwC, 2017b:16).

A tool within the social network known as ‘Facebook Collection’ allows advertisers and brands to incorporate rich-media, where videos, slideshows and web banners are combined with product images, and viewed by individuals via mobile devices (PwC, 2017b:16; Facebook, 2017b: para 1). Targeted individuals can click on the product image and view a catalogue of other related offerings where, if one is selected, the user is taken to the advertising company’s website to access more product information, or make a purchase. Facebook Collection works well for brands that may want to cross-sell related product offerings within their portfolio (PwC, 2017b:16). According to Facebook (2017c: para 1-3), Adidas embarked on an advertising campaign between December 2016 and January 2017 using Facebook Collection to cross-sell its new Z.N.E Road Trip Hoodie (refer to Exhibit 2-1), alongside other sportswear including shoes and accessories, achieving a 43% reduction in conversion costs per customer, and over 500% ROI. The success of the Adidas campaign is credited to creating an immersive experience that was able to positively influence consumer purchase intention and eventual product purchases.

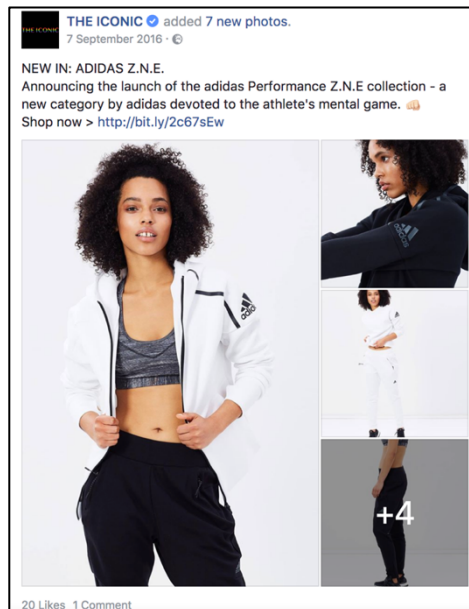
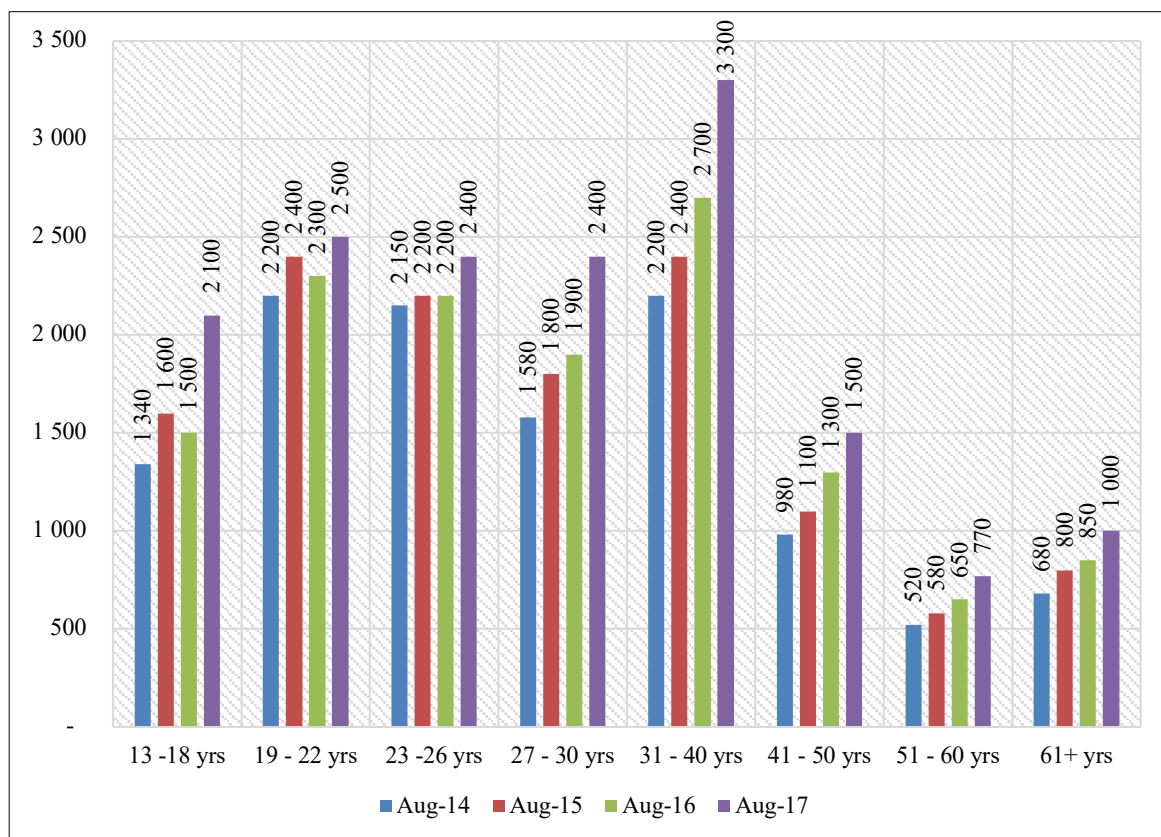


Exhibit 2-1: Adidas Z.N.E. Facebook campaign

Source: Facebook (2016)

PwC (2017b:15-16) reports that there are 14 million active Facebook users in RSA per month, solidifying its status as the most dominant social networking platform in the country. BlueMagnet (2016:10) indicates that, in 2016, 85% of RSA’s user base accessed Facebook from their mobile phones every single day, an 8% increment on 2015’s reported figures. According to Goldstuck (2017: para 4) there are 7.3 million active Facebook users aged between 19 and 30 years, more than any other age group in the country. It is reported that user engagement on the platform in RSA is highest on Tuesdays and Wednesdays (Mabizela, 2017:1), from 10:00 AM onwards (BlueMagnet, 2016:6).

Figure 2-3 shows the Facebook user demographic in RSA over the last four years.



*Population figures in ('000)

Figure 2-3: Facebook User Demographic in RSA (2014-2017)

Adapted: Goldstuck (2017)

- Twitter

Twitter is described as “an interactive social media platform that allows users to microblog or post short statements” (Taecharunroj, 2017:556), that are 280 characters long (initially 140 characters) (Perez, 2017: para 1). These short statements can have embedded images, audio, videos, hashtags and website links (Twitter, 2017a: para 1-4) to give more depth to audience engagement and action (Twitter, 2017b: para 2). The use of the platform is ubiquitous across several organisations because it is not capital intensive to operate, in relation to the potential

wide reach of the platform, which has many active users (Bokunewicz & Shulman, 2017:206). World Wide Worx (2017:2) recently reported that Twitter has a user base of approximately 8 million individuals in RSA, a 4% increase from figures reported in 2016. Of the major social media networks popular in RSA, the platform has the highest level of audience engagement overall (BlueMagnet, 2016:13). Empirical evidence reveals that Twitter has the most consistent user activity on weekdays between 09:00 AM and 05:00 PM (Mabizela, 2017:1), with activity beginning an hour earlier than Facebook at 08:00 AM (BlueMagnet, 2016:6) and peaking slightly from 06:00 PM (Goldstuck, 2017: para 5). Interestingly, individuals use the social network more before and after working hours, with usage peaking at 09:00 PM (BlueMagnet, 2016:8). Thursday is singled out as the most active day on Twitter (Goldstuck, 2017: para 5).

Organisations and advertisers alike can leverage Twitter to obtain information regarding what is currently happening and conversations gravitating around their brand and product offerings, enabling them to respond accordingly so as to add value (Twitter, 2017c: para 2). The social networking website can also serve to develop brand awareness and promote new products or services (refer to Exhibit 2-2) whereby companies are able to ‘tweet’ or post MC to interact with current followers and gain new ones to boost messaging impact and reach (Twitter, 2017c: para 3; Taecharungroj, 2017:556). Twitter is used by organisations to extend opportune customer service, assisting them to promptly and effortlessly respond to target audiences (Taecharungroj, 2017:556). This is because virtual community members may ordinarily communicate about brand experience, products used, and services employed within the platform. In fact, Twitter (2017c: para 4) reports that 85% of small and medium-sized businesses the world over employ the social networking platform to extend customer support.



Exhibit 2-2: Zapper and FlySafair Twitter campaign

Source: Twitter (2017e)

Hennig-Thurau, Malthouse, Friege, Gensler, Lobschat, Rangaswamy and Skiera (2010:312) and Twitter (2017c: para 5) state that the social network helps companies build and maintain an online reputation management mechanism, enabling them to foster strong relationships with their external publics. In addition, Twitter is leveraged to link brands with customers, brand proponents and social influencers. Connections with opinion leaders, influencers, and product aficionados, have the potential of opening up previously inaccessible customer and market segments, augmenting a company’s product profile (Twitter, 2017c: para 5), as witnessed in a campaign by mobile telecommunications firm Cell C using media personality, Bonang (Twitter, 2017d: para 1).

Exhibit 2-3 depicts the Twitter campaign by Cell C.



Exhibit 2-3: Bonang by Cell C Twitter Campaign

Source: Twitter (2017d)

- Instagram

Instagram is a social networking mobile application that is mainly based on the concept of sharing, having connected users creating and publishing images and audio-visual content (Latiff & Safiee, 2015:14). Mabizela (2017: para 2) dubs Instagram “the leisure-life platform”, as its usage in South Africa is highest over the weekends.

A user or a business can simply create a profile and begin sharing content with followers, allowing potential customers to access the organisation’s page to view posted content depicting product and service offerings (Latiff & Safiee, 2015:18). Alternatively, a business is able to get onto the platform without having a dedicated profile, by using Instagram’s business service that allows for advertising content to be broadcast to a set demographic (Instagram, 2017b: para 1). Portrayed pictures and audio-visual imagery are usually interlaced with narratives containing hashtags (#) within the messaging (Geldenhuys, 2017: para 3). It is noted that connected individuals

on Instagram have a high affinity for original, narrative-driven content, informing them how a marketed product looks and feels (Geldenhuys, 2017: para 2).

Geldenhuys (2017: para 1) states that various brands drawn from the fast moving consumer goods (FMCG) and financial services sectors in RSA are now more than ever, employing Instagram to develop niche markets and customer segments, and build brand loyalty among connected individuals. This has been achieved by curating eye-catching visuals and poignant imagery on the social media platform to convey MC to target audiences. For instance, SBSA is one brand that sticks out in terms of marketing on Instagram, where its campaigns have leveraged the application to embark on brand development through meaningful and compelling audience engagement (Geldenhuys, 2017: para 3-6). SBSA's various Instagram campaigns embed conscious everyday storytelling with powerful imagery, aimed at the youth customer segment. SBSA's targeting of the youth via Instagram is in line with Latiff and Safiee's (2015:21) findings that the platform is ideal for marketing to millennials (also referred to as Generation Y or Echo Boomers) because the demographics' uptake has been overwhelming. Exhibit 2-4 illustrates a marketing campaign by SBSA titled #WeAreZA.



Exhibit 2-4: SBSA #WeAreZA Instagram Campaign

Source: Instagram (2017a)

RSA brands (such as SBSA, Amarula and Jose Cuervo) and advertising houses (such as NATIVE VML, Saatchi & Saatchi Synergize and Liquorice) primarily use the social networking channel to communicate brand or product purpose and ethos, and build customer loyalty through consistent messaging (Geldenhuys, 2017: para 9-15).

According to Instagram (2017b: para 1), the platform enables organisations to make strong connections with target audiences' affect, developing heightened relationships with them beyond an online basis. Published and shared

content have the ability to immerse the follower from a visual standpoint, inspiring customer intention and choice, by strengthening brand relationships with the customer (Instagram, 2017b: para 1). Like Facebook and Twitter, Instagram affords an organisation the opportunity to obtain real-time data on product messaging effectiveness, reach and impact, in addition to obtaining follower insights such as follower interaction with posts (Instagram, 2017c: para 1). However, the platform is unable to support common e-commerce features (Latiff & Safiee, 2015:22) and incorporate website links on posts as seen on other major social networks (Latiff & Safiee, 2015:14).

RSA's Instagram user-base grew by 9% from 2016 (Vermeulen, 2017: para 1), totalling 3.8 million users by September 2017 (Mabizela, 2017: para 2), of which 80% follow a business profile (Instagram, 2017b: para 2) and a further 75% are estimated to take action after viewing a post by liking, commenting, reposting, engaging hashtags, viewing the publishers page and visiting an associated website (Instagram, 2017c: para 1). The majority of Instagram users in the country rely heavily on work, public or at-home wireless local area network (WLAN or Wi-Fi) to either access or engage posted content or create and share content (BlueMagnet, 2016:9). Supposedly, Instagram may be ideal for new product or service roll-out because 60% of surveyed users are reported to have discovered new brands on the platform (Instagram, 2017b: para 1). World Wide Worx (2017:1) puts forward that in 2017, 62% of brands in RSA use the platform for MC, a sharp increase of 20% against 2016's reported figure of 42%.

- YouTube

YouTube is an online video viewing and sharing website where users can create (co-create), upload, share, comment on and rate content (Khan, 2017:236). The social network is considered to be a melting pot of traditional entertainment options such as television, film and music (Shao, 2009:12). Users can create a page or channel where they can post or publish their video content (Kotler & Keller, 2016:646); this applies to both individuals and organisations. Users can further subscribe to channels with which they share common interests. According to Khan (2017:237), YouTube is said to spur either active or passive user engagement by affording users a tailor-made online ambience with a number of intuitive features. The author goes on to add that unlike all other major social networking platforms, YouTube allows users to dislike published content, in addition to commenting. Brands and advertisers with a robust YouTube presence not only use YouTube to send out MC, but they heavily employ the platform to monitor customer feedback through posted comments (Khan, 2017:236; Smith, Fischer & Yongjian, 2012:104).

In addition to assisting brands attract new customers and inform current and potential ones, Costa-Sánchez (2017:19) asserts that videos are a compelling means to convey MC about new products or services. The author supposes that target audiences find brand messaging embedded in videos simpler and quicker to consume and digest; therefore, audiences may develop affection towards advertised products and re-disseminate the messaging to peers within their virtual communities and beyond (Costa-Sánchez, 2017:18). The fact that videos allow for visual cues to be processed by viewers, means that marketers are able to tap into affective or emotional content marketing where audiences are able to relate to a video of someone angry or happy, enhancing self-identification within the intended messaging (Costa-Sánchez, 2017:19). In this regard, brands employing marketing strategies

on YouTube must create interesting video content that is impactful, entertaining, and informative, to increase audience engagement and virality (Costa-Sánchez, 2017:19; Joshi, 2016: para 6).

Beyond an organisation setting up a YouTube channel and publishing videos, the video sharing platform also offers three forms of targeted, location-based advertising services. The first one is 'TrueView in-stream ads' which are videos appearing six seconds before the user-selected video and which can be skipped at the discretion of the viewer (YouTube, 2017: para 4). The second 'Bumper ads' are six second video ads that have been integrated and optimised for mobile viewership, and are ideal for short and impactful messaging, to create a lasting impression in the minds of the target audience (YouTube, 2017: para 4). 'TrueView discovery ads' is the final option, enabling a product or brand name to appear on the search results on YouTube and homepage alongside homogenous offerings within similar product categories (YouTube, 2017: para 4).

World Wide Worx (2017:1) states that in 2017 approximately 66% of the 116 major brands and/or organisations surveyed in RSA use YouTube in their social media marketing strategy, with the figure expected to increase to 82% in 2018. As of September 2017, it was reported that YouTube has a month-on-month active user-base of 9 million in RSA (Mabizela, 2017: para 2). Consumer engagement with brands on the video sharing platform is indicated to have intensified between 2015 to 2017, with the trend expected to continue in the foreseeable future (World Wide Worx, 2017:1). This has allowed organisations and advertisers in RSA to leverage the platform more effectively than ever before (World Wide Worx, 2017:2). To put this into perspective, 52% of video content published by brands achieved more audience engagement between 2016 and 2017 in the form of views, likes and shares (Mabizela, 2017: para 14). Additionally, the top brands in RSA average approximately 34,000 views per video (BlueMagnet, 2016:11). It is important to note that over 50% of YouTube video consumption by individuals in RSA occurs on mobile devices (BlueMagnet, 2016:11).

Goldstuck's (2017: para 10) findings on RSA's top ten content categories on YouTube in 2017 reveal that news and politics is the most popular, followed by entertainment, with music taking a distant third spot. In 2016, entertainment took the top spot (Mazibela, 2017: para 23). Advertisers in the country may leverage these findings to understand consumer psychology, needs and preferences, and use this to direct content to appropriate audiences on YouTube to increase messaging reach and effectiveness (Mazibela, 2017: para 23).

Figure 2-4 gives a snapshot of these popular video categories within the country.

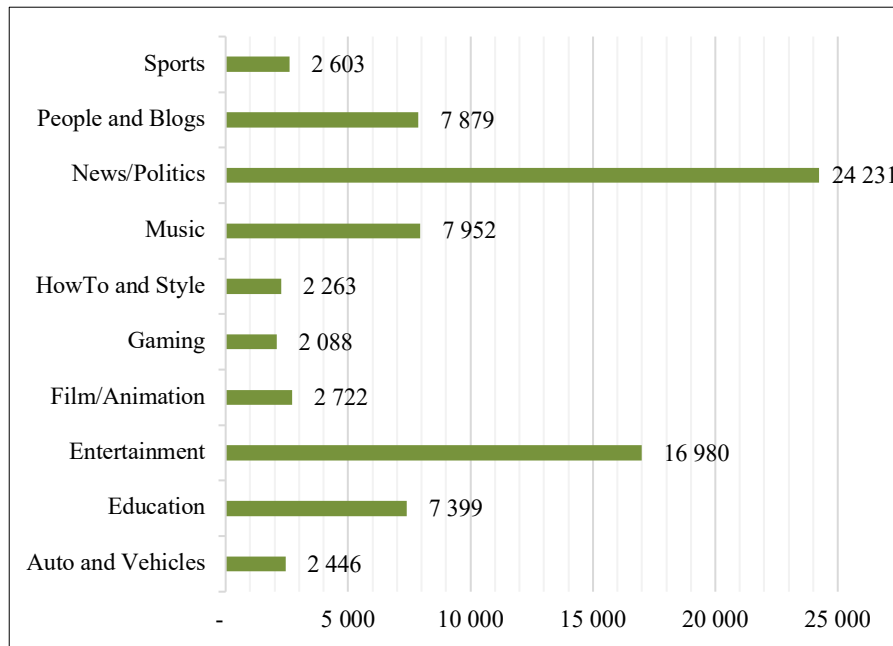


Figure 2-4: RSA's Top Ten Video Categories on YouTube based on Subscriptions in 2017

Adapted: Goldstuck (2017)

2.3.3.3 Social Media Effectiveness, Measurement and Success

A global study conducted in 2015 reveals that 46% of all target audiences exposed to MC on social networks trust product messages, while 56% may go ahead and take action on social media ads by either clicking to access a company's website for more information or to make a purchase (Nielsen, 2015a:8). Admittedly, PwC (2017b:16) states that the measurement of engagement and campaign success of social media marketing is difficult for advertisers on platforms such as Facebook and Twitter because these networks internally supply customer metrics with minimal to no third-party verification. Organisations would want to gain complete access to this customer data to have oversight on accurate and verifiable audience engagement figures. Kotler and Keller (2017:139) suggest that this information ambiguity and effectiveness measurement can be remedied through brands having to incorporate sales promotion activities such as coupons or rebates that can be redeemed in-store at POS or online during checkout.

Be that as it may, BlueMagnet (2016:4) published a report detailing the messaging effectiveness of the major social media networks used, from the perspective of the top 116 brands in RSA. Facebook is regarded to be the most effective, followed by Twitter. Figure 2.5 gives a snapshot of the social media tools' effectiveness.

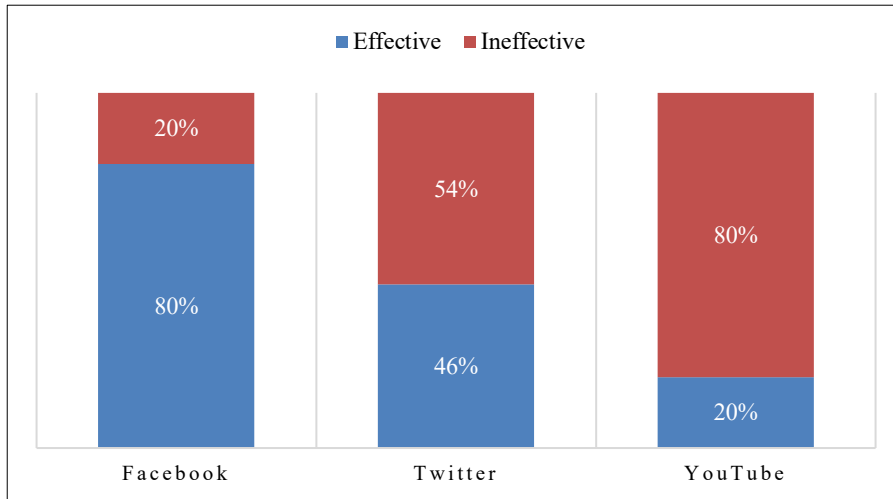


Figure 2.5: Perceived Effectiveness of Social Media Platforms in RSA

Adapted: BlueMagnet (2016:4)

The following seven-point checklist (Figure 2-6) is presented by Kotler and Keller (2016:139) to guide social media marketing success:

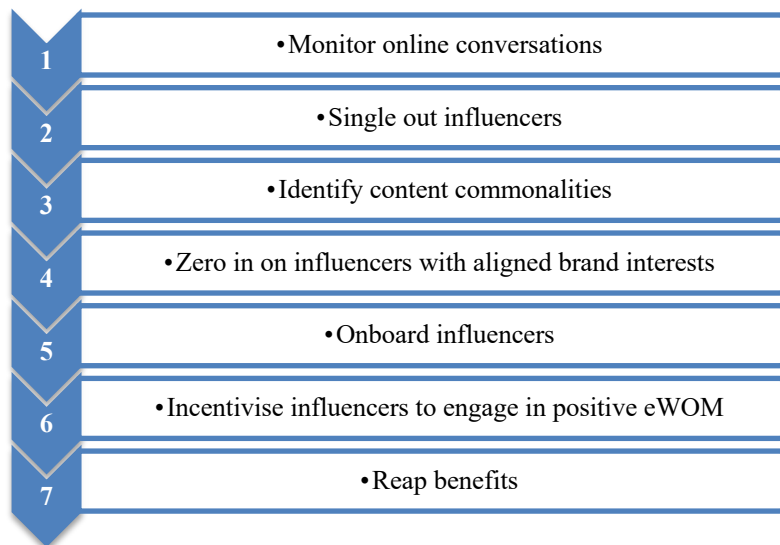


Figure 2-6: Steps for Social Media Marketing Success

Adapted: Kotler and Keller (2016:139)

2.3.4 Personal Selling

Belch and Belch (2012:716) define personal selling as “person-to-person communication in which the seller attempts to assist and/or persuade prospective buyers to purchase the company’s product or service or to act on

an idea”. It involves direct contact between the customer and the organisation or sales representative either face-to-face or over a medium such as telephone, email or online (Zabanga, 2017: para 1). Personal selling affords the marketer or organisation communication flexibility because they can assess the prospective customer’s reaction and modify and personalise MC accordingly, through an immediate and clear-cut feedback mechanism (Zabanga, 2017: para 1-2). Personal selling can be done at trade shows, through onsite sales presentations and demonstrations and through sales promotions (Kotler & Keller, 2016:479).

Antczak and Sypniewska (2017:43) indicate that, since personal selling involves two-way communication between the sales representative and the customer, the immediate feedback provides a means for an organisation to assess MC effectiveness during and after the messaging process. They add that, because of the immediate feedback and flexibility in message delivery, personal selling is well suited to convince customers, and to change their attitude about the merits of using a service as it is indicated to possess a high persuasive impact towards the target audience. The authors state that this MC tool makes it easier for an organisation to convert potential customers or users of a service as a result of demonstrations and effective knowledge transfer during the communication process that involves direct interaction, thereby allowing an organisation to realise a better ROI in comparison to mass media advertising. More specifically, in the marketing of a service, personal selling allows for the potential user to immediately know of the specific user requirements in order to employ the service.

In the recent past, organisations have embarked on upskilling their sales personnel with the so-called ‘SPIN’ strategy that is geared towards developing long-term customer relationships (Kotler & Keller, 2016:673). SPIN asserts that prospective customers must be asked questions regarding their Situation, Problems, Implications and Need-payoff (Rackham, 1988:67-81; Lardner, 2002:66). According to Rackham (1988:67-69), when sales people inquire about the customer’s situation, they seek information on what products or services they currently use; when addressing the problem aspect, they seek to explore the customer’s level of satisfaction with the current product and overall brand experience. The implication questions serve to comprehend the effects of the prospective customer’s product-related problems and dissatisfaction, while the need-payoff questions revolve around extending the new marketed product’s or service’s value proposition to the prospective customer (Rackham, 1988:73-81).

According to Kotler and Armstrong (2012:434), Kotler and Keller (2016:673) and Antczak and Sypniewska (2017:44-45), personal selling is made up of a seven-step process, which is detailed in Figure 2-7.

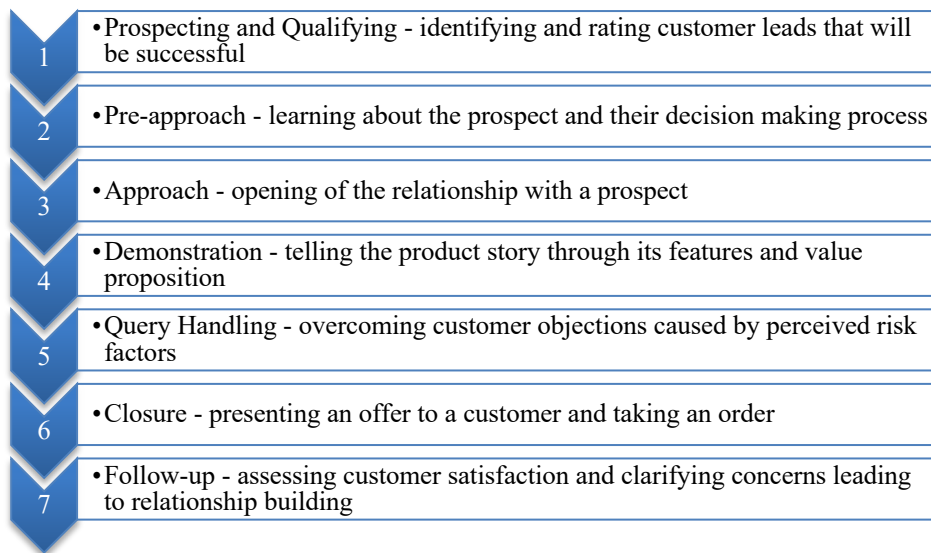


Figure 2-7: Personal Selling Process

Adapted: Kotler and Armstrong (2012:434), Kotler and Keller (2016:673) and Antczak and Sypniewska (2017:45)

Corporate websites have found their way to augment traditional personal selling by enhancing and providing a pillar to the selling initiative. They provide a wealth of information for prospective customers, whereby customers can access details about organisations, their brands, products and services (Belch & Belch, 2012:505). Collated web-visitor data can assist an organisation to come up with a prospects' database which in turn can serve to generate leads for both internal and external salespeople to follow up on (Belch & Belch, 2012:505). Such a database can further provide a means for qualifying sales prospects in a cost-effective manner, making customer targeting and segmentation possible for an organisation's sales teams (Belch & Belch, 2012:505). Likewise, advertisers can pinpoint which audiences receive MC.

The internet has also assisted personal selling efforts by stimulating product or service trial where demonstrations are offered online through audio and video tutorials, enabling prospects to remotely evaluate whether the offering does indeed meet their needs and match their expectations (Belch & Belch, 2012:505). Once satisfied, the prospective customer can then request to be contacted by an organisation's sales representative, saving time and costs for both parties (Belch & Belch, 2012:505).

Additionally, organisations now use the internet to develop and maintain personal customer relationships by providing an avenue to provide and disseminate product information and respond to queries in a timely and efficient manner (Belch & Belch, 2012:505). This smoothens the information search efforts for customers during the cognitive and affective stages of innovation adoption (Kotler & Keller, 2016:585). Furthermore, this effectively presents an opportunity for marketers and salespeople to cross-sell offerings and heighten customer retention (Belch & Belch, 2012:505).

2.3.5 Sales Promotion

Antczak and Sypniewska (2017:35) state that “sales promotion comprises all activities connected with communication techniques aimed at informing, influencing and persuading customers to buy or use a particular product or service...involves various activities of the company aimed at ensuring that customers are aware of the product’s existence, as well as its positioning and persuading customers that the product is better than the competing one and reminding them why they may want to buy it”. Sales promotions are composed of an assembly of short term incentive tools, purposed to invigorate more frequent purchase or use of a product or service by the target audience (Kotler & Keller, 2016:622).

Sales promotions are directed towards solidifying the extended marketing mix’s influence on the consumer by leveraging the product’s or service’s competitive advantage and features (Antczak & Sypniewska, 2017:35). Antczak and Sypniewska (2017:37) go on to add that within the MC mix, sales promotions aim to resolve issues around reaching potential target audiences by means of product information, and concurrently developing an enabling environment for the exchange between the marketer and prospect to take place through direct response. Kotler and Keller (2016:623) assert that the objectives of carrying out sales promotions are to encourage the consumer to buy or use more, to develop product or service trial among prospective consumers, and to entice consumer brand-switching. In the longer-term, sales promotions have the effect of an organisation gaining a large market share, and building consumer-based brand equity through short-term incentive programmes.

According to Roux (2014:244), sales promotion techniques applied to both products and services may be categorised into monetary techniques and non-monetary techniques. Monetary sales-promotion techniques include coupons, refund offers and discounts, while non-monetary techniques include raffles, sweepstakes, competitions and free gifts. Chandon, Wansink and Laurent (2000:72-73) and Roux (2014:244) state that monetary sales promotions have the effect of extending utilitarian benefits that are functional and cognitive to the consumer, and they exist in the form of monetary savings, enhanced shopping experiences, superior quality products and convenience. Non-monetary sales promotions, on the other hand, have the effect of extending hedonic benefits that are experiential and affective by design, and may encompass prospects for value expression through emotion, entertainment, pleasure, and exploration (Roux, 2014:244; Chandon *et al.*, 2000:72-73).

The sales promotional tools relevant to this study which is service-orientated are outlined in Table 2-5.

Table 2-5: Services Sales Promotion Tools

Promotion Tool	Description
Cross-promotions	Advertising a noncompeting product with another product
Tie-in	Two or more organisations pull together to offer coupons, and rebates, and carry out consumer contests
Service warranty	A promise by the organisation to reimburse the customer when the service fails
Free trial	Allowing customers to use the service without attracting any surcharges for a limited period
Prizes	Offers extended to customers in the form of cash, trips, branded merchandise, and participate in draws (contests) with a chance of winning something
Frequency/Loyalty programs	Rewarding customers in accordance to purchase or to use intensity
Rebates or Cash-back	A price/surcharge reduction post transaction
POS demonstrations	Demonstrations and displays of how the service offering works at the point of purchase

Adapted: Kotler and Keller (2016:624)

Nedbank, a commercial bank in RSA, has a promotional campaign titled Greenbacks Rewards that is a combination of a frequency program and cash-back reward where customers are rewarded each time they spend a certain amount by swiping linked cards (Nedbank, 2017: para 1). The rewards are accumulated on a shopping card that can be used in several retail stores and airlines across the country or withdrawn as cash from any auto-teller machine worldwide (Nedbank, 2017: para 2). Exhibit 2-5 is a depiction of Nedbank’s Greenbacks promotion.



Exhibit 2-5: Nedbank’s Greenbacks Rewards Promotion

Source: Twitter (2015)

Stone and Woodcock (2014:6) indicate that sales promotions interactivity brought about by the use of the internet, has made it possible to measure effectiveness successfully. This is because the internet offers an online channel for corporations to issue rebates, coupons, and other sales promotion incentives (Stone & Woodcock, 2014:6).

2.3.6 Event and Experiential Marketing and Sponsorship

Event marketing is characterised as “the practice of promoting the interests of an organisation and its brands by associating the organisation with a specific activity” (Shimp, 1993:8). Organisations can either own and run the event or endorse an event owned and run by a third-party, through financial or in-kind support (Kotler & Armstrong, 2012:486; Zarantonello & Schmitt, 2013:256). Events include trade fairs, conferences, concerts, music, arts and culture festivals, sporting games, marathons, product launches, customer contests, pop-up shops and road/street shows (Kotler & Armstrong, 2012:486; Tafesse, 2016:35). It is acknowledged by Hooper (2007:1) that in the past, event marketing and sponsorship use within IMC was more of a tactical tool rather than a fully-fledged communications strategy contributor in comparison to other forms in the MC mix. Nevertheless, sponsorship plays a somewhat strategic role in the MC mix by providing quantitative methodologies for target audience research to influence overall brand communication strategy (Hooper, 2007:1; Ashton, 2017: para 12). Event audience research can effectively gather data regarding propensity to purchase, attitude towards brand or product image, and brand recognition and recall (ESP Properties, 2017:8).

Experiencing brands and products through physical encounters within packaged environments such as events, develops and propagates positive brand and product attitudes and beliefs, eventually moving target audiences towards purchase intention and/or making an actual purchase (Kotler & Keller, 2016:626). Events and experiences allow organisations to create bespoke and captivating experiences that connect target audiences to products and showcase how they enrich their lives, beyond simply communicating product attributes and features (Kotler & Keller, 2016:628).

According to Antczak and Sypniewska (2017:48), a well matched-up event with promotional roots interweaved with experience sharing among target audiences is said to be very effective in marketing services because the user is personally engaged through activity, and gets to experience and feel the potential gains of using the service. Hooper (2007:1) points out that organisations and marketers aim to prompt consumer emotions through brand activations, by matching the right event or experience to the target audience’s interests, and by creating pivot activities. Marketers put their focal point on customer brand likeability beyond visibility, making the event sponsor and their involvement in the activation significant in the mind of the potential customer through experiential connection (Hooper, 2007:1).

A study carried out by Jack Morton Worldwide found that people find experiential marketing to be very informative in comparison to other MC tools, resulting in consumers engaging their social circles via WOM about the experience (Kotler & Keller, 2016:628). Favourably, WOM or eWOM is identified as being the leading avenue by which event attendees get to learn about events such as seminars, conferences and trade fairs, followed by

recommendations obtained from e-mails and event newsletters with occurrence rates of 66% and 59% respectively (XING Events, 2017:11). Figure 2-8 details various information sources regarding events for attendees according to XING Events (2017:11).

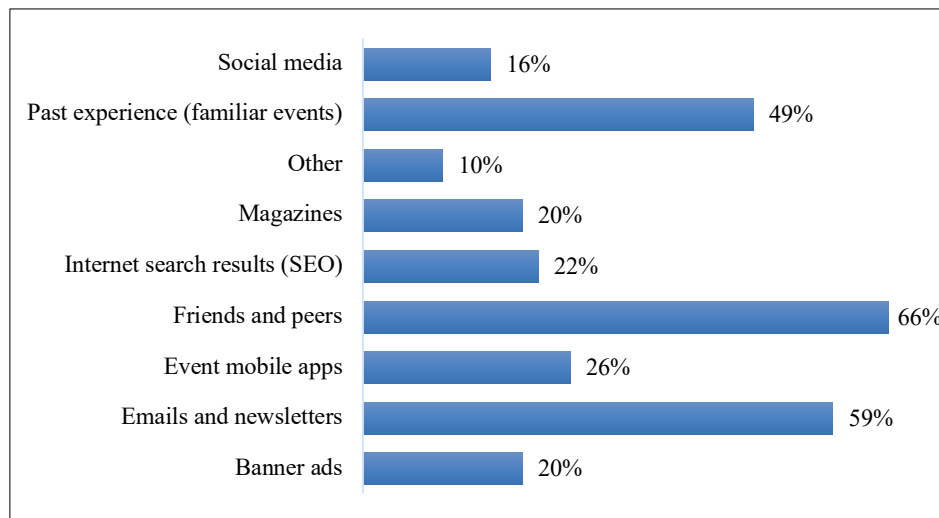


Figure 2-8: Preferred Event Information Sources for Consumers

Adapted: XING Events (2017:11)

In the light of the above findings, Marketing Charts (2017: para 1) imply that organisations and marketers should leverage traditional WOM and viral marketing when organising events to increase event awareness and effectiveness.

In RSA, Nedbank has been at the forefront of event marketing and sponsorship via flagship sporting events such as the Nedbank Cup, Nedbank Golf Challenge (refer to Exhibit 2-6) and Nedbank Ke Yona Team Search, all of which have garnered the financial institution a number of accolades (Ashton, 2017: para 2).



Exhibit 2-6: Nedbank Golf Challenge Event

Sourced: Vlismas (2017)

Tobie Badenhorst, Nedbank's Head of Group Sponsorship and Cause Marketing is reported to have said that the company's sponsored sports activities have a positive impact on brand recall and awareness among target audiences (Ashton, 2017: para 14). The brand associations made with the sponsorship properties and codes Nedbank employs in these activations have been leveraged to achieve strong brand positioning (Ashton, 2017: para 15). The Nedbank Golf Challenge over the years has been an avenue to attract customer enrolment into their long-term investment programs through customer engagement at the tournament (Ashton, 2017: para 16). In the light of customer engagement, Badenhorst states that the commercial bank has successfully leveraged interactive marketing, mobile marketing, and social media to optimise event sponsorship campaigns (Ashton, 2017: para 20). For instance, the Nedbank Ke Yona Team Search used USSD codes available on both feature and smartphones to reach potential football players aged between 18 and 23 years across the country (Ashton, 2017: para 24). It is observed that the leveraged MC tools stated above, now provide means to measure event marketing and sponsorship campaign effectiveness (Ashton, 2017: para 7-9), whereas in the past this was difficult to determine (Martensen, Grønholdt, Bendtsen & Jensen, 2007:283; Zarantonello & Schmitt, 2013:256).

2.3.7 Interactive Marketing

Today, consumers are often online and able to conduct product or service searches, send enquiries, interact with other consumers and company representatives, make purchases online, and pay remotely via smart devices (Stone & Woodcock, 2014:4). Companies have reacted by integrating their marketing strategies online to deliver MC and engage customers through their devices that they use to connect to the internet (Stone & Woodcock, 2014:4). The World Wide Web hosts an exponential amount of human data from all online interactions, which companies can utilise to create customer and market segments requiring personalised messaging strategies (Stone & Woodcock, 2014:5).

Webber (2013:306) and Stone and Woodcock (2014:5) cite that interactive marketing employs real-time data analytics to unearth robust MC opportunities that better ROI through improved understanding of customers' attitudinal, behavioural and transactional data. At the centre of this are business intelligence tools, which envelope technologies, processes and methodologies capable of analysing past and predictive data, reporting and data mining, churning raw data into actionable information used by corporations for online/digital marketing strategies (Stone & Woodcock, 2014:9).

The BRC reveals that internet use frequency in RSA averages 56.9 times a month for individuals (BRC, 2017:52). BRC add that the majority of people access the internet repeatedly on a daily basis. Figure 2-9 illustrates internet usage trends in RSA.

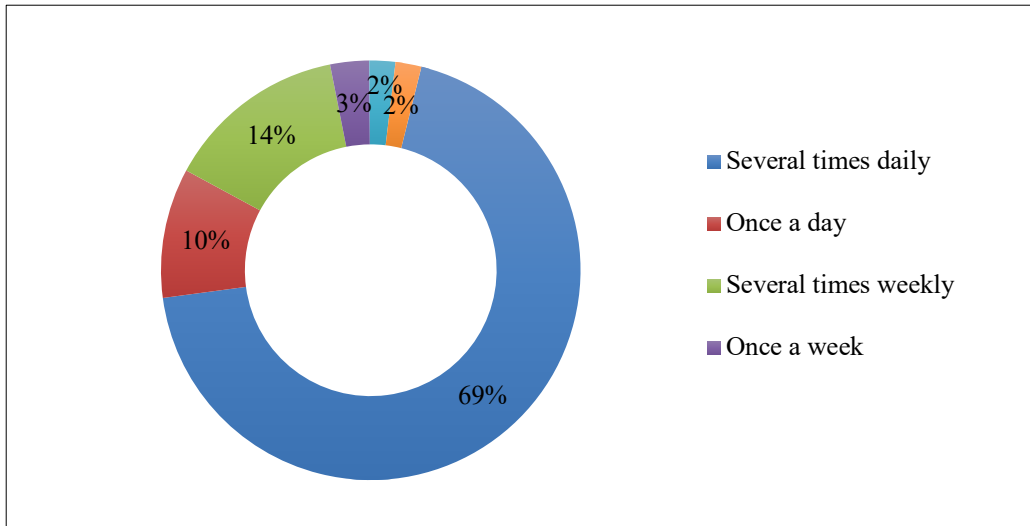


Figure 2-9: Internet Use Frequency in RSA (October 2017)

Adapted: BRC (2017:52)

From an interactive marketing perspective, it is key for marketers and organisations to comprehend what digital device is commonly used so as to know what mobile medium or channel to leverage for effective MC. BRC (2017:51) reveals that social media is most accessed via smartphones, while instant messaging through applications such as WhatsApp and SMS are most accessed using mobile. It is reported that consumer product, service or brand search occurs 77% of the time via desktop or laptop (BRC, 2017:51). South Africans are said to access their emails mainly using desktops or laptops, followed by tablets (BRC, 2017:51). Banking transactions and online shopping and payments are carried out mainly using computers, with the least occurrence reported to be via mobile handsets (BRC, 2017:51). Applications are reportedly downloaded and used mainly on smartphones and tablets (BRC, 2017:51). Figure 2-10 clearly details the digital activity rate per device in RSA.

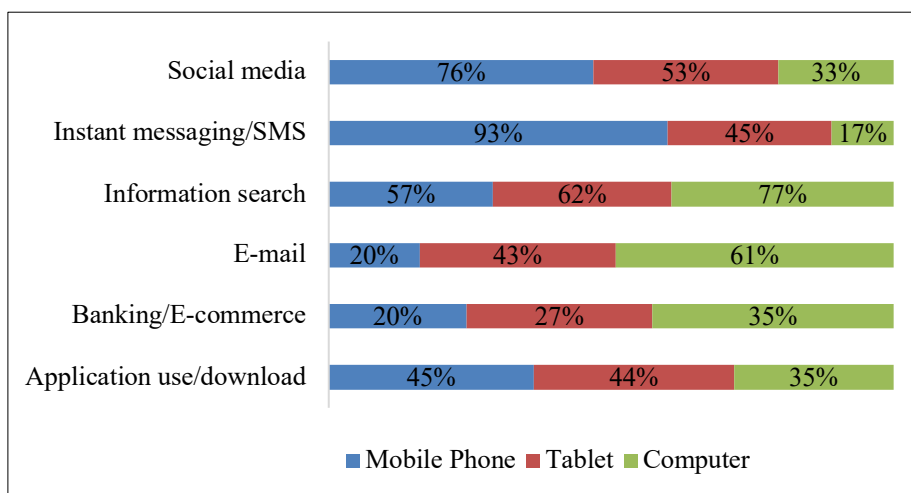


Figure 2-10: Digital Device Activity in RSA (October 2017)

Adapted: BRC (2017:51)

PwC (2017b:15) indicate that adspend on interactive marketing strategies in RSA was ZAR 5.079 billion in 2017, and is expected to grow by 14.3% in 2018, a slightly slower growth rate compared to the period between 2016 and 2017 that realised a 16.5% growth rate. Internet marketing accounts for approximately 11% of total adspend by organisations and advertisers in the country (PwC, 2017b:14-15).

2.3.7.1 Websites

Several corporates have websites detailing what they do, their history and their offerings, which act as a gateway to gaining the interest of potential customers upon the first viewing, and promote secondary visits during information search (Schifrin, 2011:54; Kotler & Keller, 2016:639). According to Rayport and Jaworski (2001:116), Tedeschi (2002) and Kotler and Keller (2016:459-460), the building blocks of an effective website are outlined in Table 2-6.

Table 2-6: Website Design Building Blocks

Design Element	Description
Context	A captivating design and layout
Content	Attractive copy, images and audio-visual elements
Community	Permits user-to-user communication
Customisation	Adapting to different users/allows for personalisation
Communication	Two-way communication within the website
Connection	Capability of the website to link with other microsites
Commerce	An e-commerce platform to allow online transactions
Constant Change	Having up-to-date information

Adapted: Rayport and Jaworski (2001:116), Tedeschi (2002) and Kotler and Keller (2016:460)

It is upon a company to have a full grasp of the functionality of the website, and usually this task is assigned to a webmaster who monitors and analyses website activity, records individual website visits (or hits), draws visitor profiles and tracking details, and frequently posts updated information onto the website (Duncan, 2002:442). Keeping an eye on website activity is beneficial for actionable marketing information to be drawn, especially tracking the number of unique visitors within a given period of time, and the time spent on the website by each visitor (Duncan, 2002:443). Data regarding where the visitors are coming from within the world wide web, and the key search words visitors input onto browsers to find corporate websites, are also beneficial to create linkages with keyword clusters to make the online experience for the visitor or potential customer easier during information search (Duncan, 2002:443).

Beyond monitoring website activity, companies are employing artificial intelligence (AI) to deliver a seamless customer experience to their online visitors (Hyken, 2017: para 1). AI, in the form of chatbots, assists in enhancing

two-way communication between the company and the customer on a website, handling customer inquiries and requests. A chatbot is an automated virtual customer service interface that primarily works on a document retrieval basis to respond to customer queries 24/7, given certain keywords (Hyken, 2017: para 1-3). One drawback of chatbots is that they do not entirely recognise natural human speech, but their performance is constantly being improved to heighten customer service past lower-level requests, queries and complaints (Hyken, 2017: para 4).

In October 2017, online website activity in RSA recorded a total of 41,894 million unique visitors, 4,348 million unique daily visitors and a cumulative page view of over 1,147 billion (Lester, 2017: para 2). Of the indicated website visits, 51% were made by male visitors and 49% by females. Lester (2017: para 2) reports that the average time spent on a website visit is 4 minutes and 6 seconds, a 0.41% increase from the previous month. Further insight reveals that 12% of website visits are made by active students, and 17% is made either by the unemployed or those looking for work (Lester, 2017: para 2). It has also been found that more than 75% of the total website traffic in RSA emanates from either smartphones or tablets (Qwerty Digital, 2017:2).

The top three most visited websites in the country in descending order are News24.com, Gumtree.co.za and Timeslive.co.za, with the three averaging approximately 62.3% visits from smartphones, against the national average of 67.1% for all the websites combined (Lester, 2017: para 2). The published list of the top ten websites, however, did not feature any financial service providers; the majority of the websites are news-related, while only two are online marketplaces. The comprehensive list is illustrated in Table 2-7 below.

Table 2-7: Top Ten Most Visited Websites in RSA (October 2017)

Website	Unique Visitors	Page Views	Mobile Device Visit Rate
News24.com	6 427 848	69 188 094	59.69%
Gumtree.co.za	5 625 408	142 531 859	56.08%
Timeslive.co.za	3 572 312	22 243 136	71.06%
iol.co.za	3 197 326	17 881 458	56.43%
msn.com	2 960 206	46 226 721	4.67%
ewn.com	2 784 210	18 128 860	76.47%
Mybroadrand.co.za	2 028 006	8 318 260	55.16%
Dstv.com	1 969 807	20 281 893	30.82%
Autotrader.co.za	1 830 775	57 651 723	53.98%
Netwerk24.com	1 761 749	14 701 046	56.56%

Adapted: Lester (2017)

As for e-commerce companies, the challenge lies with reaching the right target audience and directing web traffic to their websites. Companies have overcome this obstacle by integrating the use of traditional media, direct messaging and social media to attract website attention and drive visitors online (Duncan, 2002:433). Table 2-8

details the common ways customers reach company websites. Search engines are the most effective in driving website traffic, followed by e-mails and links connecting other websites, while newspaper ads, web banners, direct mail and radio are the least effective in attracting online engagement (Duncan, 2002:434).

Table 2.8: How Consumers Reach Corporate Websites

Channel	Occurrence Rate
Banner ads	7%
Direct mail	2%
E-Mail	38%
Links from other websites	35%
Magazine ads	25%
Newspaper ads	9%
Periodic articles	11%
Product catalogues	11%
Radio ads	2%
Search engines	57%
TV ads	14%
WOM	28%

Adapted: Duncan (2002:434)

2.3.7.2 Banner Ads

Corporates also employ banner ads as an add-on element on their websites. Internet banner ads essentially are displayed graphics that contain hyperlinks to the advertised products or service’s corporate website (Wang, Shih & Peracchio, 2013:121). According to the Interactive Advertising Bureau (IAB), banner ads include display ads and native ads (IAB, 2017:6). Banner ads are ideally meant to influence users or website visitors to click on them, to establish a connection between the advertised brand and more information about the same, through targeted communication (Wang *et al.*, 2013:121-122). Briggs and Hollis (1997:33-34) and Wang *et al.* (2013:122) state that banner ads are also designed to accelerate web traffic into the advertiser’s website as a result of heightened brand awareness and preference, and inherent consumer use or purchase intention. Additionally, research puts forward that these ads play a significant role in reminding target audiences about existing brands, and arouse dormant brand associations (Briggs & Hollis, 1997:44).

Banner ad effectiveness can be monitored and evaluated by the number of click-throughs, as a direct derivative of the target audience’s behavioural response and immediate and delayed brand interest of the advertised offering (Briggs & Hollis, 1997:33). Research has shown that these interactive ads have a very poor click-through rate (CTR) of only 1%; conversely, online marketers are finding ingenious ways to reinvigorate banners by changing elements such as colour, image, font, and the messaging, to come up with new methodologies to boost click-

through numbers (Wang *et al.*, 2013:1122). However, empirical evidence suggests that the creativity and attractiveness of the banner ad plays a secondary role in driving interest towards it, and eventual click-through (Briggs & Hollis, 1997:44). Primarily, the right audience targeting, and intrinsic customer interest of the offering category being advertised, are the key drivers of favourable CTR (Briggs & Hollis, 1997:44).

2.3.7.3 Search Engine Optimisation

Kritzing and Weideman (2017:2) describe Search Engine Optimisation (SEO) as, “a concept based on applying a search engine best practice methodology to any given website, which will result in improved organic search engine rankings for topic-related search queries”. SEO as an online marketing strategy pertains to boosting the rankings of the answers provided by a search engine to queries input by individuals (Kritzing & Weideman, 2017:3). Duncan (2002:433) suggests that companies need to register or bid with several leading search engines to give their websites more web visibility, and to gain favourable visits. Online marketers are required to structure their website content by utilising familiar keywords to fully leverage the frequency of appearing in web searches (Duncan, 2002:433), also referred to as an impression (Clarke & Jansen, 2017:143).

During information search on the world wide web, prospects may be bombarded with loads of information, some of which may not be useful – SEO steps in to streamline search results to present the prospect with the most relevant information (Kritzing & Weideman, 2017:3) on the search engine research page (SERP) (Clarke & Jansen, 2017:143). With SEO reported to be responsible for more than 70% of website traffic in RSA, it directs potential customers to an organisation’s website thereby saving time and effort for both the target audience and organisation (Stiles, 2017: para 2-4). High ad ranking on SEO boosts the image and integrity of a brand or company because prospects potentially develop trust, with the impression signifying brand or product relevance and reliability (Stiles, 2017: para 1). The key measures of SEO advertising efficiency and effectiveness include impressions, the ad rank within the organic search area and eventual linked sales or service subscriptions that signify customer conversion (Clarke & Jansen, 2017:143). In RSA, it is reported that the conversion rate of SEO campaigns is 0.38%, with the cost per click (CPC) indicated at ZAR 0.48 and ZAR 127.18 being the cost per acquisition (CPA) (Kritzing & Weideman, 2017:9). Kritzing and Weideman (2017:9) add that targeted consumers who access websites suggested on the results page, will visit a brand’s website for an average of 7 minutes 12 seconds. Exhibit 2.17 is an illustration of SEO search results on Google’s search engine.

2.3.7.4 Pay-Per-Click Advertising

Kritzing and Weideman (2017:2) define Pay-Per-Click (PPC) or AdWords as “paid advertising on search engines and other display websites...it forms part of the search engine revenue model and functions on a keyword bidding system that depends on visitors who click the advertisement”. This is a paid online platform where organisations hand in bids to search engines such as Google, Bing, Baidu, Yandex and Yahoo (Clarke & Jansen, 2017:143) for certain key phrases, where ads are made to appear on search pages utilising minimal wording, and the search engines are paid only when a user or consumer accesses the links by clicking on them (Kritzing &

Weideman, 2017:3). PPC functions to improve the rankings of a certain set of keywords as displayed within a search engine’s query results (Kritzinger & Weideman, 2017:3). Kritzinger and Weideman (2017:9) state that in RSA, it is reported that the conversion rate of SEO campaigns is 0.60%, with a CPC of ZAR 1.99 and a CPA of ZAR 333.43, and that corporate websites accessed by means of PPC have an average consumer session of 6 minutes 58 seconds.

Exhibit 2-7 is an illustration of PPC search results on Google’s search engine.

Exhibit 2.7: PPC and SEO Locations on Google’s SERP

Source: Google (2017)

2.3.7.5 Mobile Marketing

Kotler and Keller (2016:652) define mobile marketing as “a form of interactive marketing by which marketers can use text messages, software applications and ads to connect with consumers via their smartphones and tablets”. This marketing channel is ideal for organisations, as mobile devices are widely available and already in the hands of the majority of consumers (Kotler & Keller, 2016:652). Mobile marketing allows for MC to be consumed and

personalised along demographic, geographic, consumer preference and behavioural lines (Kotler & Keller, 2016:650; Tekkanat & Topaloglu, 2016:33). With 75% of internet access occurring via mobile devices in RSA (Qwerty Digital, 2017:2), this outstrips desktop or laptop access. The Cape Digital Foundation (CDF) has found that the average time spent on mobile internet in RSA is approximately 3 hours and 2 minutes daily (CDF, 2017:4). This supports O’Kane’s (2013a:87) notion that smartphones and tablets command a large proportion of attention to dominate the lives of target audiences, to the point that they are indispensable assets.

In mobile marketing, advertisers are raising brand awareness through three main ways - SMS, mobile e-mail and push notifications. SMS revolves around text messages sent via mobile telecommunications networks (O’Kane, 2013a:87). It is noted that organisations and markets alike leverage the use of SMS in their mobile marketing strategy because the channel offers immediacy to boost target audience engagement and eventual return on adspend (O’Kane, 2013a:87). In fact, Tekkanat and Topaloglu (2016:33) state that companies rolling out technological innovations use SMS as the first medium to communicate brand awareness to their audiences during the service or product launch phase. However, SMS ads require the target audiences’ consent to opt-in and receive MC from corporate entities. In RSA, the Consumer Protection Act 68 of 2008, the Protection of Personal Information Act 4 of 2013 (PoPI) and the Electronic Communications and Transactions Act 25 of 2002 (ECTA), stipulate that organisations can send MC to consumers only from a mass database up until the time the consumer opts-out (M. Prem Incorporated, 2016: para 4; Haarhoff, 2015: para 2-4; Viviers, 2017: para 3-7), shifting the communication balance of power to the consumer’s side (Tekkanat & Topaloglu, 2016:33). M. Prem Incorporated (2016: para 8) suggests that, in order to circumnavigate opt-in challenges among target audiences, brands and marketers use incentives in the form of airtime or coupons and omni-channel engagement to experiment which mobile medium is most effective in meeting marketing goals, be it brand awareness or promotions.

Mobile e-mail entails target audiences receiving MC on their mobile devices via e-mail (O’Kane, 2013a:87), as a form of direct marketing (Duncan, 2002:609; Kotler & Keller, 2016:659; Barr, 2017: para 4). E-mails are best suited to communicate an offer, remind or give an announcement about a product or service offering (Kotler & Keller, 2016:659). The CTR of mobile e-mail is indicated to be high because there is robust smartphone adoption and penetration, and e-mails are accessed through these devices with relative ease and immediacy (O’Kane, 2013a:87-88). It is key to note that mobile e-mail MC by organisations to audiences in RSA is regulated by the Consumer Protection Act, PoPI and ECTA Acts, whereby the end-user gives consent to receive e-mails (M. Prem Incorporated, 2016: para 4; Haarhoff, 2015: para 2-4; Viviers, 2017: para 3-7). According to Everlytic (2017:6), RSA’s national average e-mail CTR or click-to-open (CTO) rate via mobile devices in 2017 was 28.1%, 2.22% above the reported figure in 2016. In the same period, mobile e-mails sent out by financial institutions and e-commerce organisations had an open-rate of 27.62% and 32.56% respectively, which is above the national average across major industries in the economy (Everlytic, 2017:6). The reported CTO rates signify that targeted e-mail marketing audiences in RSA trust the brands advertising their offerings (Interactive Advertising Bureau SA, 2017: para 7). It is further stated that e-mail opt-out (unsubscribe) rates in the country were at a meagre 0.22% in 2017, down from 0.253% recorded in 2015, meaning that fewer individuals are unsubscribing, resulting from organisations sending out relevant and captivating MC (Everlytic, 2017:7).

Finally, push notifications are described as opt-in pop-up messages sent by marketers to individuals via mobile devices, often employed to announce product or service news and promotional offers (O’Kane, 2013a:88). O’Kane (2013a:88) adds that this form of MC medium is usually seconded by follow-up phone calls by the marketer or sales representative once a customer accesses a notification. Push notifications come in the form of local push notifications, app-originated notifications, in-app alerts and in-app content (O’Kane, 2013b:6). Local push notifications usually appear on a mobile device after certain user action on their device, brought about by either swiping or clicking onto a provided hyperlink to cue a related message at a specific time to remind the user to take action (O’Kane, 2013b:6). App-generated notifications are triggered by the mobile user, emanating from the application’s server when using an installed application (O’Kane, 2013b:6), for instance, when an individual scans a QR code using an application and it prompts action to access a website link. In-app alerts appear when a user is engaging a mobile application (O’Kane, 2013b:6), for example when adding a product to a cart, the application may prompt the user to select another product, or insert a coupon code prior to checking out. In-app content is used by marketer to deliver MC that employs rich-media such as banner ads, promotions, and hypertext markup language (HTML) content (O’Kane, 2013b:6). Well executed push notification strategies have the potential of achieving favourable customer engagement results and monetisation potential (O’Kane, 2013a:88).

The subsection below details the effectiveness of mobile marketing campaigns in reaching target audiences.

- Mobile Marketing Environment and Campaign Effectiveness

Effective Measure (2017a:9) have found that RSA consumers have a 45% click-through likelihood if mobile MC on a product or brand is perceived to be relevant in matching their immediate needs and preferences. A mobile ad will engage and inspire further action 33% of the time if the messaging is perceived to be safe by the target audience (Effective Measure, 2017a:9). Mobile ads have the lowest CTR if they contain video content and are seen very many times by the target audience, at 4% and 5% respectively (Effective Measure, 2017a:9).

Figure 2-11 elaborates the CTRs of mobile ads giving multiple scenarios.

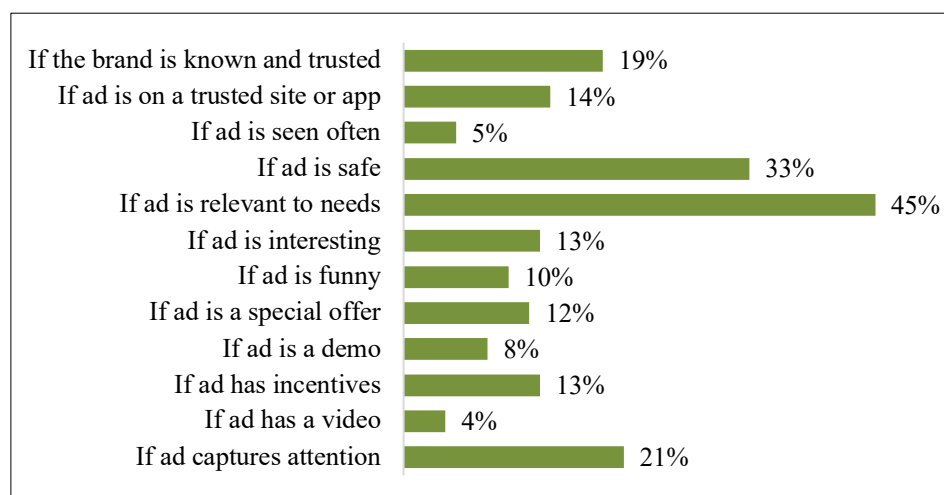


Figure 2-11: Likelihood to Click-Through a Mobile Advertisement in RSA

Source: Effective Measure (2017a:9)

Almost 75% of targeted audiences reached in RSA via mobile marketing campaigns can recall the messaging sent to them, indicating that the use of the platform scores a favourable MC recall rate (Effective Measure, 2017a:9). In their study, Effective Measure found that mobile ads received via SMS have a recall rate of 22%, those accessed via mobile websites have a recall rate of 19%, and mobile ads embedded on mobile applications have a 15% recall rate. Recall rates are lower when the messaging is through mobile gaming applications, video, and audio within mobile adverts, with recall rates of 6%, 6% and 1% respectively (Effective Measure, 2017a:9).

Kotler and Keller (2016:652) state that smart device penetration (or ownership) among consumers is key to achieving a successful mobile marketing campaign. The smartphone penetration rate in RSA stands at 51.87%, with approximately 29 million devices in use in 2017 (Shapshak, 2017: para 4). Of the reported smartphones users in the country, 27.58% cannot afford mobile broadband data and have to rely on WiFi hotspots in public spaces and at home (Shapshak, 2017: para 4). A further 24.13% are relegated to access the internet through mobile broadband data with no access to WiFi; this phenomenon is prevalent in the low-end customer segment, where there is an inflated demand for mobile broadband data (Shapshak, 2017: para 4-6). In this customer segment, there exists a very robust correlation between mobile broadband data price reduction and increased usage (Shapshak, 2017: para 5).

RSA's mobile internet penetration was reported to be at 52.3% at the end of 2016 and the figure is touted to grow by 25.5% in 2021, which signifies potential for year-on-year growth of 1% in mobile marketing expenditure for companies in the near future (PwC, 2017b:9). The fact that 75% of internet and e-mail access occurs via mobile devices (Qwerty Digital, 2017:2), makes it imperative for organisations and marketers to incorporate mobile-first strategies, above all other digital platforms (Qwerty Digital, 2017:7). Corporate websites and content should be optimised for mobile, to have a seamless user experience during information search online, putting major focus on content marketing crafted for portable viewing (Qwerty Digital, 2017:7).

2.3.8 Public Relations

Public relations (PR) involves developing favourable relations with an organisation's various external publics to secure good publicity and corporate image and provides a mechanism for managing the company's reputation in cases of negative publicity (Kotler & Armstrong, 2012: 702). The major PR vehicles organisations use include publications, audio-visual materials, special events, sponsorships, press releases, speeches, public service activities, identity media and corporate websites (Kotler & Armstrong, 2012:456-457; Kotler & Keller, 2016:630).

Kotler and Armstrong (2012:457) note that PR is the least utilised IMC tool, merely playing a supportive role. Often, its activities are carefully merged with the other MC tools, contributing to the overall integrated communication strategy. That notwithstanding, PR has been proven to be effective in enhancing brand awareness and brand preference among target audiences (Kotler & Armstrong, 2012:457). It is further indicated that PR is essential for building third party credibility and trust in the brand and the company's products and services (Batra & Keller, 2016:122-137).

In Belarus, a five-year PR action plan running between 2013 and 2018 has been implemented to educate the public on financial literacy and the availability of payment systems that promote financial inclusion (Grady, 2013:9). Within the plan, a programme employs the use of mass media through television game shows and contests among journalists and business reporters. A separate initiative organises campaigns for the unemployed, uses financial literacy tutorials and provides study guides for the youth and school children, reaching out to specific target groups (Grady, 2013:9). Another programme has financial services providers hosting open days and workshops to educate the public, influencers, educators and industry players within certain economic sectors (Grady, 2013:9). This PR plan is a unique example of how PR plays a support role in augmenting the overall IMC strategy (Kotler & Armstrong, 2012:457) used to sensitise and instil trust towards using innovative payment solutions (Grady, 2013:9; Batra & Keller, 2016:122).

2.4 The Youth and Preferred MC Channels

Nielsen (2015b: para 3) found that the youth aged 21 to 34 years (referred to as millennials or Generation Y), possess the highest trust level in MC, in both online and mobile platforms. This is attributed to the fact that millennials are considered to have grown up in the advent of the internet age. Nielsen (2015a:12) states that Generation Y have more control in their media consumption patterns in comparison to older generations, in terms of when, where and what medium to consume, and the content they choose to engage. Youth aged between 18 and 20 years (referred to as Generation Z), in addition to trusting online and mobile MC channels, exhibit the highest trust levels for mass media advertising channels, including television and print (Nielsen, 2015b: para 3). Generation Z are further indicated to be the most willing to develop purchase or use intent or act upon messaging across 84.2% of all IMC platforms (Nielsen, 2015a:12). An integrated approach (through IMC) is considered the best approach to reach both Generation Y and Generation Z, because they are reported to have a high willingness to act on and trust mass media channels, despite their dwindling reliance on these channels for MC (Nielsen, 2015a:12). Table 2.9 gives a comprehensive overview of the reliance rates of various MC media consumption between Generation Y and Generation Z.

From Table 2-8, WOM in the form of recommendations from family, friends and peers, rates highly for both youth subgroups. According to Moreno, Lafuente, Carreón and Moreno (2017:142), the youth greatly take into consideration the opinions of their peers, often consulting each other to establish the merit and relevance of a product offering and the credibility of information. WOM is closely followed by websites where the youth will access corporate or branded websites for information search so as to know more about products and services. Television ads as a traditional media format, closes off the top three most preferred MC platforms. SMS ads and web banner ads rank the least for the youth.

Table 2-9: Preferred IMC Media Formats for Generations Y and Z

MC Medium	Generation Y	Generation Z
Banner ads	47%	36%
Cinema ads	60%	54%
Corporate websites	75%	72%
E-mail newsletters	57%	54%
Editorial content (newspapers)	68%	68%
Events and sponsorships	66%	62%
EWOM (online customer reviews)	70%	63%
Magazine ads	62%	57%
Mobile marketing ads	48%	42%
Newspaper ads	62%	57%
Online video ads (YouTube)	53%	45%
OOH media	60%	59%
Product placement on television	60%	51%
Radio ads	55%	51%
SEO/SERP ads	52%	43%
SMS ads	41%	32%
Social media ads	51%	45%
Television ads	67%	58%
WOM	85%	83%

Adapted: Nielsen (2015a:13)

2.5 The Role of Marketing Communications in Innovation Adoption

According to Bauer, Barnes, Reichardt and Neumann (2005:185) and Tobbin and Kuwornu (2011:64), consumers exhibit the implicit need to lower risk, exceeding their need to take advantage of product or service utility. As such, overall consumer behaviour is largely dictated by their subjective risk perception. The probability of the presence of subjective risk in e-commerce is imminent because of the impersonal and remote nature of such transactions, as consumers are wary of the likelihood of suffering monetary loss, and their private information being misappropriated (Beldad, van der Geest, de Jong & Steehouder, 2012:168).

As indicated, the impersonal characteristic of m-payments is that it precludes the traditional physical contact between transacting parties. During transactions, transacting parties' personal data are obtained and transmitted by the payment network operator (Swaminathan, Lepkowska-White & Rao, 1999:1; Cha, 2011:120). In addition, a study on m-banking in India unveiled that service users are concerned about the security of mobile transactions and the safety of cellular devices (Ketkar, Shankar & Banwet, 2012:73). Ketkar *et al.* (2012:84) indicate that the

lack of information and poor literacy capacity of individuals may exacerbate the influence of security as an obstacle for the adoption of m-payments. These are some of the ingrained uncertainties surrounding m-payments innovations, as opposed to more traditional payment channels.

Susskind (2001) asserts that consumer cognitive resistance is influenced by the existence of uncertainty (or risk), leading to the search for more information around the new technology. Information relayed by service providers or product manufacturers through MC may serve as a risk reduction measure to alleviate consumer uncertainty and to elevate adoption (Neudorfer, 2004:6). Blythe (2005:248-249) states that greater levels of uncertainty channels the need for more information search efforts, therefore risk is lessened as knowledge increases.

Kotler and Keller (2012:478) state that MC has the effect of developing brand equity through the creation of brand awareness, etching a desired brand image in the consumers' minds, evoking favourable brand judgements and fortifying consumer loyalty. Additionally, through MC, messages directed towards a specific target audience may be used to generate a desired consumer response and subsequent behaviour, by influencing attitude formation or alteration (Mulwa & Ndeti, 2013:3). In retrospect, the messages used to convey m-payments information must be able to engage the consumers' cognitive abilities in order to have a "greater staying power", thereby impacting consumer choice alteration (Mulwa & Ndeti, 2013:4). Hence, it is important for firms to initiate carefully crafted IMC programmes directed towards consumers to build brand salience and to reduce consumer uncertainties.

Mulwa and Ndeti (2013) put forward that the communication channel is a key element in innovation diffusion and subsequent adoption. They state that a communication channel forms a medium upon which participants in the communication process build and impart information in an effort towards common understanding. Mass media channels are said to have great impact on innovation-based knowledge formation, while interpersonal channels best affect attitude formation and change with regard to an innovation (Rogers, 2003:18). Therefore, it may be presumed that consumers not only evaluate an innovation based on information from message sponsors and marketing practitioners, but also from the subjective evaluations of persons having adopted the innovation, within their social circles.

The subject at hand focuses on MC and its effect on m-payments adoption; as such, it is key to acknowledge the innovation adoption model outlined by Kotler and Keller (2016:585). The construct asserts that consumers move from the cognitive stage to the affective stage and finally the behaviour stage within a MC response hierarchy. Taking into account that the use of m-payments requires rational thinking within the 'buying-decision' (in this case, 'use-decision'), m-payments fall under the category of high involvement commodities. These services are perceivably of high differentiation and therefore assume a "learn-try-do" logical order within the mind of consumers, and this is mirrored in the MC response framework (Kotler & Keller, 2016:585). Figure 2-12 illustrates this hierarchy model according to Kotler and Keller (2016:585), Saxena (2009:161) and Rogers (1983:164-165).

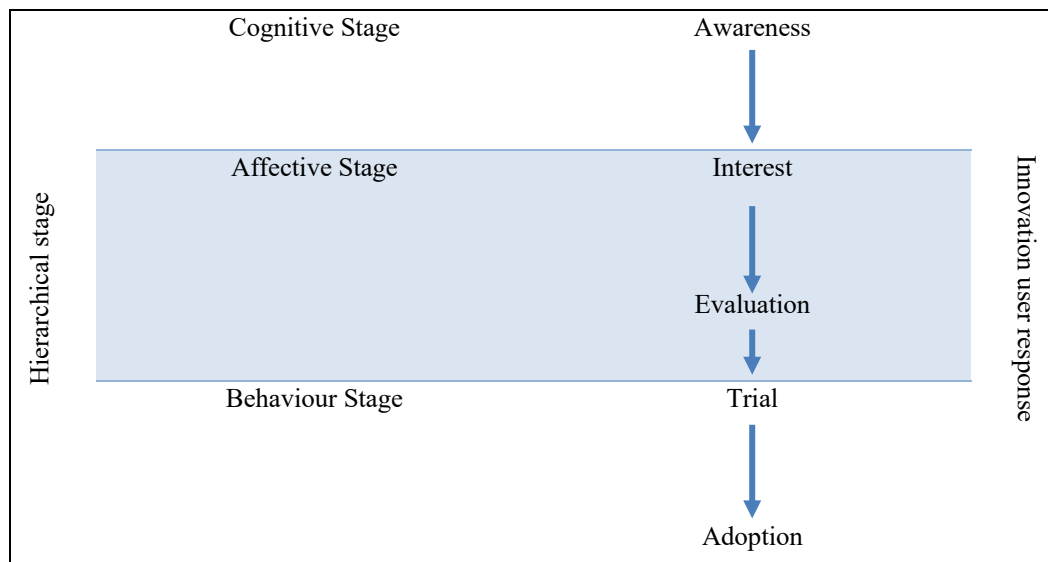


Figure 2-12: Hierarchy of Response and Innovation-adoption model

Adapted: Kotler and Keller (2016:585), Saxena (2009:161) and Rogers (1983:164-165)

At the cognitive stage, the target audience is not aware of available payment services, and it is upon the brand sponsor to develop awareness campaigns to gain brand recognition among prospective users. Once the users are aware of the service, marketers need to furnish them with more details about the service offering and its workings to include use and user requirements, service charges, available merchants, linked POS, and support services, among others.

The advertising entity must take into consideration and assess its potential users' brand and service knowledge depth, and if shallow, a brand knowledge campaign may be set in motion as a MC objective. At the affective stage, interest in the mind of the user is created, and evaluation of the service offering alternatives takes place, whereby some decision criterion is developed. According to Saxena (2009:160) the potential payments user may not know what to search for and evaluate among several offerings and will employ the input of current users (such as friends and family) and various information sources. For instance, a friend who banks with First National Bank (FNB) may be currently using eWallet and could recommend certain service benefits of the payment platform. On the other hand, there could be ads on television, radio or print media on Standard Bank's Instant Money, detailing how the service works, and how many merchants support the platform at various POSs. From this point, the potential user will develop a set of decision criteria to including benefits, ubiquity, networking effects, service charges and maintenance fees, merchant network, usability, and ease of registration. Each alternative service offering's characteristics is evaluated in a weighted manner in the mind of a consumer. Thereafter, he or she commences to search for service alternatives through various MC tools. At this stage, the user will engage in information search to build personal knowledge structures.

User preference should also be augmented by the brand sponsor by highlighting the service's competitive advantage over current service offerings within the payments and banking spaces, contrasting service quality,

convenience, performance, features, salient values and the like. This helps the target user-base make an informed choice through extensive brand evaluation. However, this must be reinforced through brand conviction, or in retrospect, service trial where, for instance, the users may be able to download the payment platform to explore service usability, or even walk into a merchant outlet to obtain more details and get a chance to experience how the service operates. MC may also take the form of BTL campaigns whereby the service operator can openly and personally engage with potential users through brand activations, personal selling, service presentations, and online and database marketing. Finally, the brand sponsor gets to move the service user to the behaviour stage, by employing incentive programs where individuals can try out and use the service without attracting service fees, or purchases made at participating POSs via the payment platform are rewarded through loyalty programs. This brings about probable service adoption (or rejection) and eventual use repetition.

McKinsey & Company note that as marketing practices evolve, and consumers become more enlightened, it is becoming highly integral for consumers to lead the direction the MC process takes within the consumer decision journey (Court *et al.*, 2009:7). This has given birth to consumer-driven marketing whereby target audiences functionally seek and pull brand and product messages that are useful and ideal for them. Court *et al.* (2009:7) found that during the affective stage (refer to Exhibit 2-8), approximately 67% of an organisation’s MC channels during product evaluation are mainly characterised by customer-driven initiatives, for example, information search on the internet (including online product reviews), WOM and eWOM from peers, family and virtual communities, in-store merchant or sales staff interactions, and previous brand experience.

A further 33% of the MC is characterised by organisation or advertiser-led initiatives through TTL campaigns. Court *et al.* (2009:8) advise that marketers’ MC activities must consider how potential consumers arrive at purchase or use decisions, actively engaging target audiences in pull MC that is customer-driven, thereby influencing their information touchpoints and eventual decision-making. Exhibit 2-8 illustrates the percentage prevalence of various MC touchpoints throughout the consumer decision-making process, from awareness (initial interest), to evaluation to adoption, as put forward by Court *et al.* (2009:8).

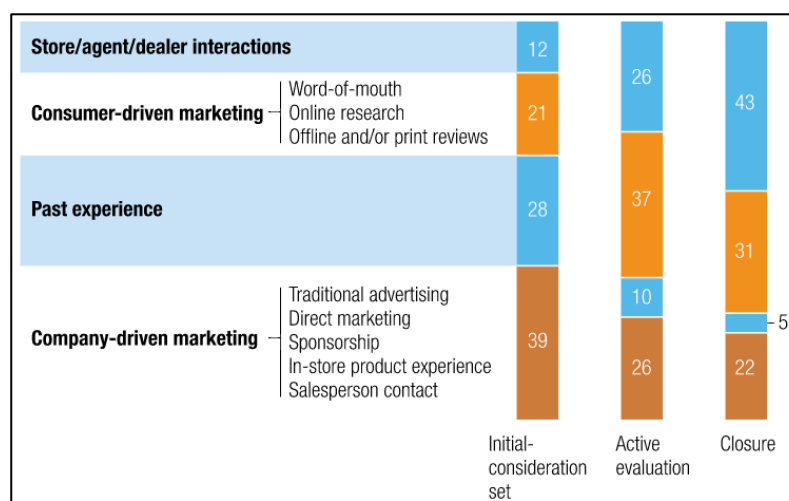


Exhibit 2-8: Consumer Decision Journey and Influential MC Touchpoints

Source: Court *et al.* (2009:8)

From Exhibit 2-8, at the awareness stage, 39% of MC is company-driven through traditional advertising, direct marketing, sponsorships, in-store product or service demonstrations, and engagement with sales staff (Court *et al.*, 2009:8). A consumer's past brand experience accounts for 28% of the information gathered to influence the initial consideration set, with 21% of it being consumer-driven marketing through information search and interpersonal interactions both online and offline (Court *et al.*, 2009:8). Enquiries made by potential consumers as they interact with merchants, accounts for the remaining 12% of all touchpoints. At the affective stage where active product evaluation takes place, 26% of MC is through merchant interactions, 37% via customer-driven marketing initiatives, 10% through evaluating previous brand experience, and 26% through company-driven marketing activities (Court *et al.*, 2009:8). At the behavioural stage, consumers rely heavily on merchant interactions, increasing by 17% from the affective stage, consumer-driven marketing initiatives, past experience, and company-driven marketing activities reliance drop by 6%, 5% and 4% respectively, from the previous evaluation phase (Court *et al.*, 2009:8).

2.6 Building Effective Communication

According to Mulwa and Ndeti (2013:4), firms' or marketing communicators' advertising messages conveyed via mass media (print and broadcast), must engage the target market's cognitive abilities. Marketing communications must therefore possess staying power which induces attention and long-term memory. As such, firms must consider the selection of media channels that can best have an impact on consumer choice. For consumers to select and process MC, firms should encompass both "sensory and life experiences" into their messages (Mulwa & Ndeti, 2013:5). These two components allow for the consumer to identify with the advertised product, service or brand, thereby creating a mental association that the consumer can relate to. To avoid marketing messages being ignored, IMC tools must be recognisable and interrelated not to conflict with the consumer's memory and mental associations (Mulwa & Ndeti, 2013:5).

Crafting a strong IMC plan entails identifying the requisite target audience who will receive the message, how the message will be sent, selection of the media channel to be used, and obtaining the desired response (Mulwa & Ndeti, 2013:5). In the case of this study, the essential response is adoption, which may be paralleled to a purchase made, resultant of influencing the consumer's decision-making process. Upon designing a marketing programme, Kotler (2002:269) asserts that a firm must consider the position that the target audience occupies within the buyer readiness stages during the purchase decision-making process. According to Rogers (2003) and Kotler (2002:269), these stages include: Awareness, Knowledge, Liking, Preference, Conviction, and Purchase. MC primarily serves the purpose of moving the consumer from one stage to the next, by influencing their behaviour towards purchase. The marketing communicator begins with creating awareness and building knowledge structures about the brand or service in question, using MC to "attract, hold, interest, arouse desire and obtain" (Kotler, 2002:269).

In building MC via advertising and promotions, the firm must address the message's content, structure and format (Schiffman *et al.*, 2010:300). Within the context, the message must possess an appeal that is able to evoke the required response from the consumer market. In this study, the focus is on the convenience of monetary

transactions, thus a rational appeal is recommended within MC strategy. Schiffman *et al.* (2010) characterise rational appeal as that which relates to the target market's individual or self-interest, with the message content depicting the use of a service to meet consumer expectations, by delivering the desired benefits. This appeal squarely focuses on showcasing a service's quality, economy, utilitarian value, convenience, and cutting-edge performance (Mulwa and Ndeti, 2013:5), by way of striking the consumer's cognitive ability.

Media selection also plays a key role when considering MC, primarily between the use of either personal or non-personal channels. According to Kotler (2002:560), personal communications channels are intimate as they allow for direct feedback from the consumer to be gathered and evaluated. Using personal influence is largely effective for marketing services that are a high risk (Kotler, 2002:560), and require high-involvement, such as m-payments.

2.7 Conclusion

The chapter has defined IMC, and exhaustively discussed the following MC: advertising, direct marketing, personal selling, sales promotion, public relations, interactive marketing, word-of-mouth and events/experiences, and their respective channels or MC media. This was followed by a literature review of the media channels preferred by the youth to receive MC. The chapter concludes by presenting literature on the role of MC on innovation adoption, and how effective communications are developed by advertisers and brand sponsors.

The following chapter presents literature regarding the different forms of m-payments technology available in the country as offered by major players in the financial service industry. This is followed by a discussion of the current status of the m-payments sector in RSA. The youth are characterised, to include their use behaviour as pertains m-payments. The chapter shall also present literature on the various theoretical models used to determine technology adoption, and conclude with detailing the conceptual framework that guided the study.

CHAPTER THREE: MOBILE PAYMENTS

3.1 Introduction

This chapter provides a definition of m-payments and delves into the various offerings of m-payment systems, ranging from m-banking, NFC payments, QR code payments, and BLE payments. A description of the current m-payments environment in RSA is presented, to showcase the usage of m-payments among the youth and the common transactions carried out using the payment platform.

3.2 Mobile Payments Defined

M-payments are described as “any electronic payment transactions whereby mobile communication protocols combined with mobile devices are utilised to initiate, authorise and confirm an exchange of financial value in return for goods and services” (Au & Kauffman, 2008:141). Mobile devices for the purpose of this study include mobile phones (feature and smartphones) and tablets, while mobile communications protocols or infrastructure include SMS, USSD, Universal Mobile Telecommunications System (UMTS), NFC, BLE, Java, and Radio Frequency Identification (RFID), all of which are technology standards that facilitate device and platform interoperability (Au & Kauffman, 2008:141-142; Du, 2013:351; Kufandirimbwa, Zanamwe, Hapanyengwi & Kabanda, 2013:92; Liebana-Cabanillas *et al.*, 2013:312). According to Oliveira, Thomas, Baptista and Campos (2016:404), remote payments which are flexible and not location-based, are facilitated by SMS, USSD and UMTS, while proximity payments that are location based and can only be consumed at the POS, are facilitated by NFC, BLE, RFID and Java (for QR codes). Remote payments do not require the user to be in direct contact with the merchant’s POS.

As a three-party transactional process among the customer (user), merchant and financial institution, m-payments, whether remote or proximity, have enabled users to limit the need for physical or paper money, affording an agile, convenient and efficient transaction environment, where the consumer and merchant enjoy substantial operation time reduction with well-defined gains in productivity (Oliveira *et al.*, 2016:404-406; Liebana-Cabanillas, Munoz-Leiva & Sanchez-Fernandez, 2017:3-4). The common functionalities of m-payments include mobile ticketing, mobile parking, cash remittance, mobile POS, mobile order, m-banking, mobile delivery and mobile couponing (Liebana-Cabanillas *et al.*, 2017:5; O’kane, 2013a:6; Du, 2013:352).

The various forms of m-payments are discussed in the following subsections.

3.2.1 Mobile Banking

Mobile banking (m-banking) is one of the key forms of m-payments. It is characterised as a service offering by a commercial bank, mobile telecommunications company, or a microfinance institution to carry out financial and

non-financial transactions using a mobile phone or tablet (Glavee-Geo, Shaikh, & Karjaluoto, 2017:1091). Mobile financial transactions include fund transfers, cash remittances and verification of cash deposits, while non-financial transactions include checking account balances and receiving transaction notifications, general account management, personal identification number (PIN) change and cheque book request (Tan & Lau, 2016:19). As a virtual banking channel, m-banking enables the user to make transfers and other transactions remotely and conveniently, with its benefits including ubiquity, flexibility, user personalisation, and dissemination (Glavee-Geo *et al.*, 2017:1092; Wang, Lin & Luarn, 2006:160). Akturan and Tezcan (2012:7) and Chigada and Hirschfelder (2017:3) add that m-banking is convenient for users as banking services can be accessed round the clock with limited effort, time and cost implications.

Claasen (2013: para 3), Thakur (2014:631), Moser (2015:164) and Glavee-Geo *et al.* (2017:1092) acknowledge that the use of m-banking is largely in its early stages and even its wide adoption in well established markets is relatively low. However, m-banking as a payment platform has been leveraged by financial service providers to etch out new niche customer segments (Claasen, 2013: para 5; Glavee-Geo *et al.*, 2017:1093). The use of m-banking has been proliferated by the development of third generation (3G) network architecture that uses UMTS, and even more advanced mobile broadband technologies, that have set a secure platform for the fast expansion of m-commerce at large (Tan & Lau, 2016:19). The authors further state that m-banking is the most popular m-payment medium to effect financial and non-financial transactions because it is ubiquitous, interactive, flexible and readily accessible. M-banking is further touted to be a formidable marketing medium for commercial bank retailers to engage with their account holders (Cheah, Teo, Sim, Oon & Tan, 2011:150; Tan & Lau, 2016:19).

M-banking in RSA is adjudged to be a key interface between financial service providers and the untapped market segments such as the underbanked, unbanked and particularly, low-income groups, extending practical cash transfer, savings, and investment functions (Chigada & Hirschfelder, 2017:2). According to Chigada and Hirschfelder (2017:2), the platform simplifies banking by integrating individuals into the banking system, giving them more control over their money and related transactions. All the major commercial banks in the country have a m-banking application that can be installed and used by their account holders (Capitec Bank, 2017: para 1; SBSA, 2017d: para 1; FNB, 2017e: para 1; Nedbank, 2017a: para 1; ABSA, 2017a: para 1) without them incurring any data costs from mobile network operators (Venktess, 2017: para 1-3).

Exhibit 3-1 is an illustration of Capitec Bank's m-banking application offering:

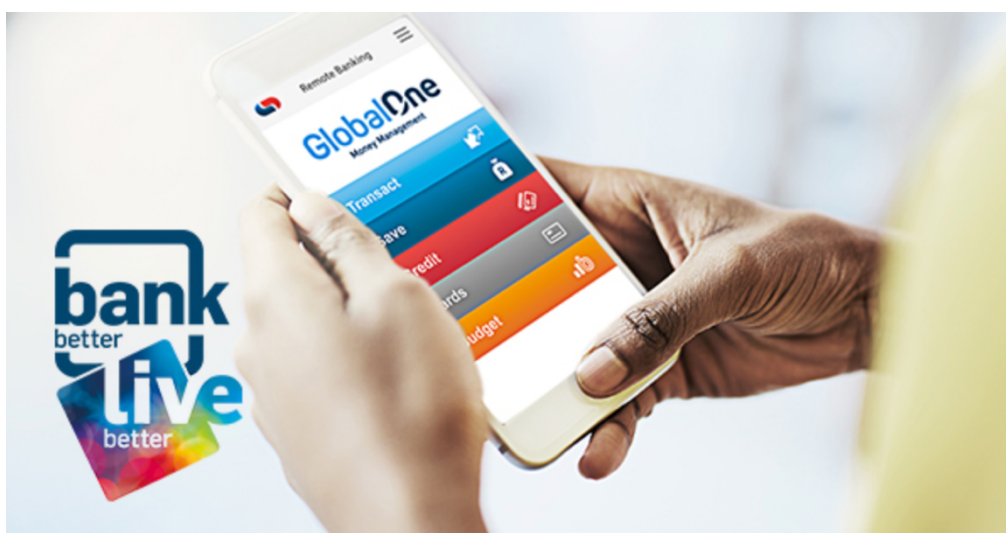


Exhibit 3-1: Capitec Bank’s M-Banking Application

Source: Capitec Bank (2017)

The common services offered through m-banking apps that are available in RSA are summarised in Table 3-1.

Table 3-1: M-Banking Financial and Non-Financial Transactions in RSA

Financial Transactions	Non-Financial Transactions
P2P payments and transfers	View account balances
Bank account cash transfers	Obtain stamped e-statements
Prepaid utility bills (Eskom tokens and Telkom vouchers)	Savings and investment account creation and management
Mobile airtime, data and SMS bundle purchases	View personal credit rating
Debit or bank order management	Stop lost or stolen debit and credit cards
Credit card facility transfers	Update card limits for ATM uses
View transaction and payments history	Budgeting tools for money management
Pay cable TV subscriptions	View and obtain tax interest e-certificate
Pay traffic fines	Loan calculations and applications
Pay TV licenses	Store mobile coupons
Lottery ticket purchases	Insurance application and claims

Adapted: Capitec Bank (2017), SBSA (2017d), FNB (2017e), ABSA (2017b) and Nedbank (2017a)

3.2.2 Mobile Wallets

Rana (2017:46) defines mobile wallet (m-wallet) as “an open system payment instrument that can be used for purchasing goods and services including financial services, and also allows customers to withdraw cash at automated teller machines (ATM) or merchant outlets”. M-wallets are services often offered in conjunction with a commercial bank and several intermediaries, including payment gateways, mobile network operators, partner retail outlet networks, and banks themselves (Rana, 2017:46). For instance, the discontinued MTN Mobile Money and Vodacom’s M-Pesa are good examples of m-wallet offerings in RSA (van Zyl, 2016: para 10). M-wallet applications are either installed on mobile devices or embedded within a user’s subscriber identification module (SIM) card as an extension application. The application serves to store and transfer cash in a digital format (SBSA, 2017a: para 2); a user is required to preload or deposit sums of money into their m-wallet, which in turn can be used for utility bill payments, mobile airtime and data recharge, shopping, and can even be withdrawn (Rana, 2017:46).

FNB’s m-banking offering, eWallet, enables an FNB account holder to virtually create and store cash values from his or her cheque account, making money accessible to a selected recipient with a valid local cellular number through FNB’s network of ATMs across the country, FNB’s m-banking app and online banking platform (FNB, 2015:1). The application also offers proximity P2P transactions where two or more users who are close to each other can transact utilising location-based information; this service is dubbed FNB GEO Payments (FNB, 2015:10). It should be noted that all remittance transactions conducted on the FNB eWallet platform attract a flat surcharge of ZAR 10.95 for amounts totalling a maximum of ZAR 3,000 per day (FNB, 2017c: para 4). The mobile service restricts users to hold a maximum of ZAR 5,000, which can either be sent to peers within the FNB banking network or outside via mobile device or online, and money can be withdrawn or received at any FNB ATM and various partner retail outlets’ POS terminals (FNB, 2017c: para 4).

Nedbank Money is another offering that comes in the form of an application that can be accessed via Google Play Store or Apple’s App Store (Nedbank, 2017b: para 1). Once installed, a user is able to purchase prepaid mobile airtime, data and SMS bundles, prepaid Eskom electricity tokens, Lotto and Powerball lottery tickets, and perform local and cross-border P2P cash transfers to linked bank accounts and personal cellular numbers (Nedbank, 2017b: para 4). Nedbank Money also has the capability to virtually link the user’s credit card for e-payments, allow the user to manage debit orders remotely, alter or set ATM and m-banking withdrawal limits, and provide visualisations on a user’s financial habits (Nedbank, 2017b: para 4).

Some commercial banks have partnered with key retail merchants in the country to offer quick and easy online payments through customers’ mobile devices, to pay for goods and services within m-banking apps or USSD codes delivered by means of SMS. For instance, FNB through its POS terminal offering, Cell Pay Point, has partnered with Ster Kinekor and Mango Airlines to enable customers to remotely pay for movie and air travel tickets respectively (FNB, 2017a: para 1). FNB’s Cell Pay Point is available at merchant outlets or retail stores and at selected online checkout pages (FNB, 2017b: para 1); it functions by sending a user a USSD code (or a one-time PIN - OTP) that is entered on their phone to prompt a transaction. The transaction is completed when the user’s FNB cheque or credit account is debited, and payment reflects on the merchant’s side (PayGate, 2017:1).

SBSA also have a similar payment service called Instant Money which offers a safe and reliable service to send money across the country, to any user with a mobile phone number (SBSA, 2017a: para 2). The sender is required to produce their identification (ID), provide the receiver's mobile phone number, select a four-digit PIN at the POS terminal, and send the PIN to the receiver, who in turn enters the PIN at an ATM or at a POS counter to collect sent money (Spar, 2017: para 3-4). Users can transfer cash via their network of ATMs, or remotely via SBSA's m-banking application and online banking module or at retail partner outlets, without necessarily being an SBSA account holder (SBSA, 2017a: para 2). Instant Money retail partner network includes major retailers in RSA such as Makro, Spar, Builders Warehouse, Game (Massmart Stores), Cambridge and Choppies (SBSA, 2017a: para 4). Exhibit 3-2 below illustrates SBSA's Instant Money available at Spar.

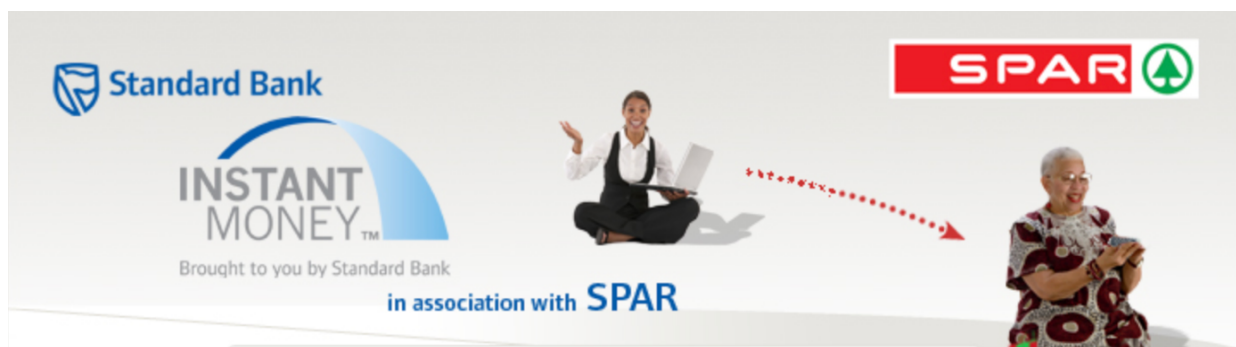


Exhibit 3-2: SBSA's Instant Money

Source: SBSA (2017a)

3.2.3 Near Field Communications

Near Field Communications (NFC) is a form of contactless payments that involves the use of a communication protocol via ultra-short-range radio waves technology, where two compatible devices (a chip and a reader) are brought together in close proximity (usually less than four centimetres) to relay encrypted data to complete a transaction (Du, 2013:351; Sang Un Chae & Hedman, 2015:30). As such, Liebana-Cabanillas *et al.* (2017:11) consider NFC to be the 'mobile credit card'. NFC has been and continues to be integrated into smart mobile devices by having NFC chips embedded in them, allowing users to explore m-commerce payment options available at various merchant outlets. Mobile phone manufacturers such as Apple, Nokia, Samsung and Research in Motion (makers of the Blackberry brand) among others, and mobile operating system manufacturer Google, have embedded NFC chips in their newer releases of smart devices and developed applications (such as Apple Pay, Samsung Pay and Android Pay – formerly Google Wallet) that make use of the technology (Du, 2013:351; AMEX Digital Solutions, 2016:2; Samsung, 2017: para 1).

The service works by tapping an enabled smart device onto a POS terminal that reads payment information via the NFC medium to complete a consumer to business (C2B) transaction (Du, 2013:352). NFC technology essentially enable the user to link his or her credit or debit card details with the mobile device, negating the need to carry around or remove their physical card from their wallet in the event of making payments (Bandeira,

2017:8). As a form of contactless payments, NFC provides a quick, convenient and secure environment for the user and merchant at a POS terminal, because an NFC chip is embedded with several layers of security just as a credit or debit card with a PIN (FNB, 2017f: para 3). Retail banking service providers, mobile phone manufacturers and mobile operating system and application developers and retailers have partnered with payment service infrastructure providers such as MasterCard and VISA in facilitating NFC payments via PayPass and payWave POS terminals, respectively (Du, 2013:352; MasterCard, 2017: para 1; Nedbank MasterPass, 2017: para 2; SBSA, 2017b: para 1; VISA, 2017: para 1-3). Beyond processing payments, mobile NFC is used for P2P transfers using services such as PayPal, and as a means to receive and redeem virtual mobile coupons as opposed to a consumer producing paper clippings at a POS (Du, 2013:352).

Exhibit 3-3 depicts VISA's NFC POS terminal:

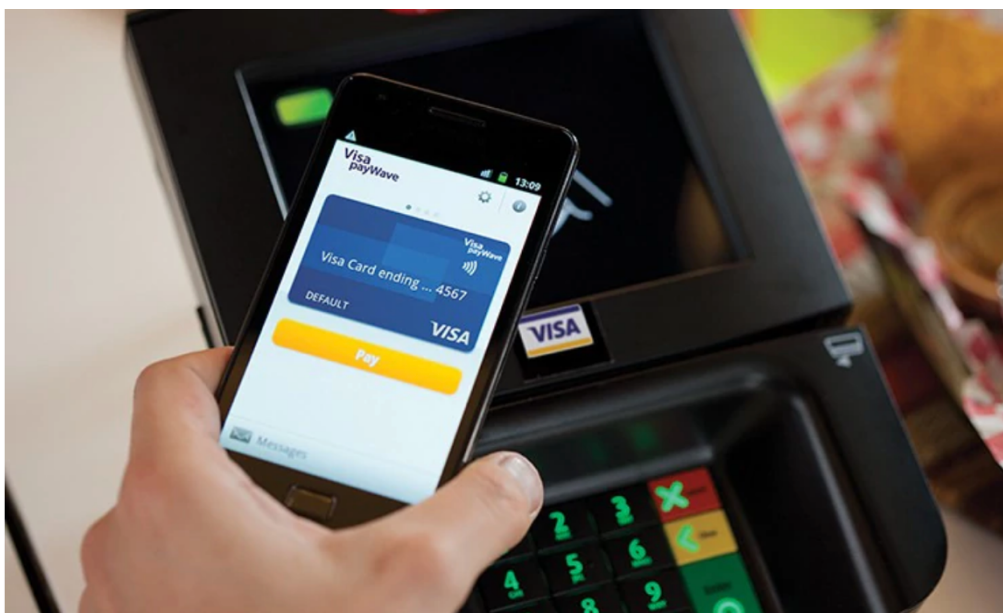


Exhibit 3-3: VISA payWave POS Terminal

Source: VISA (2017)

In Asia, Europe and North America, some of the common m-payments done using NFC as a medium include public transportation tickets, restaurants and grocery outlet payments, retail stores payments, vending machines and government services payments (Bandeira, 2017:8). In RSA, FNB's mobile NFC service (FNB Pay), is available at large retail outlets including Engen, Mr Price, Pick n Pay, Domino's, Shell, McDonalds, KFC and Vida e Caffé (FNB, 2017d: para 3). It should be noted that within the country, contactless payments are limited to a maximum of only ZAR 200 per transaction, without the need for the user to input a PIN (ABSA, 2017b: para 1). Exhibit 3-4 illustrates the FNB Pay payment offering.

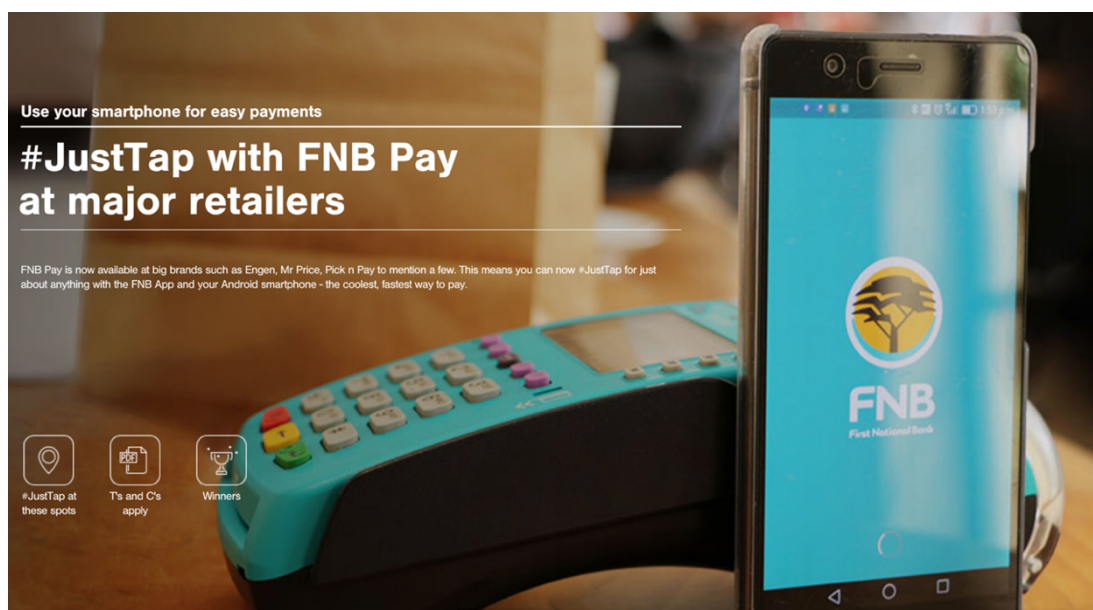


Exhibit 3.4: FNB Pay NFC Payment Offering

Source: FNB (2017d)

According to Malinga (2017: para 8), FNB's credit card department head, Gareth Rimmington, has reported that NFC payments frequency appreciated by approximately 67% in January 2017 from an average of 1.5 taps in May 2015, to 2.5 taps per month for their subscribed customers. As much as this is an improvement over the specified period, FNB acknowledges that the adoption of contactless payment in RSA is slow because several potential customers are sceptical of the new payment mode; user education may be the key to unlocking the untapped contactless payments market (Malinga, 2017: para 9).

3.2.4 Quick Response Code Payments

A QR code is an add-on to a merchant's or retailer's existing electronic POS system, incorporating a code onto a paper bill that is printed at the till; the customer then simply scans it using an enabled smartphone QR code app that remotely processes the payment (Zapper, 2017b: para 2). Once the m-payment app is open on the smart device, a customer scans the QR code, enters the amount required, and authorises payment through a PIN (SBSA, 2017c: para 1). Upon completion of payment, both the merchant and customer receive instant notifications either on the m-payment app or via SMS to confirm payment success (Zapper, 2017b: para 2). It should be noted that QR code mobile apps allow for the user to link his or her credit or debit card that is provided by any commercial bank, hence the usage of QR code payments is not limited to certain financial service providers (SBSA, 2017c: para 1).

Exhibit 3-5 depicts SBSA's SnapScan QR code payment service.

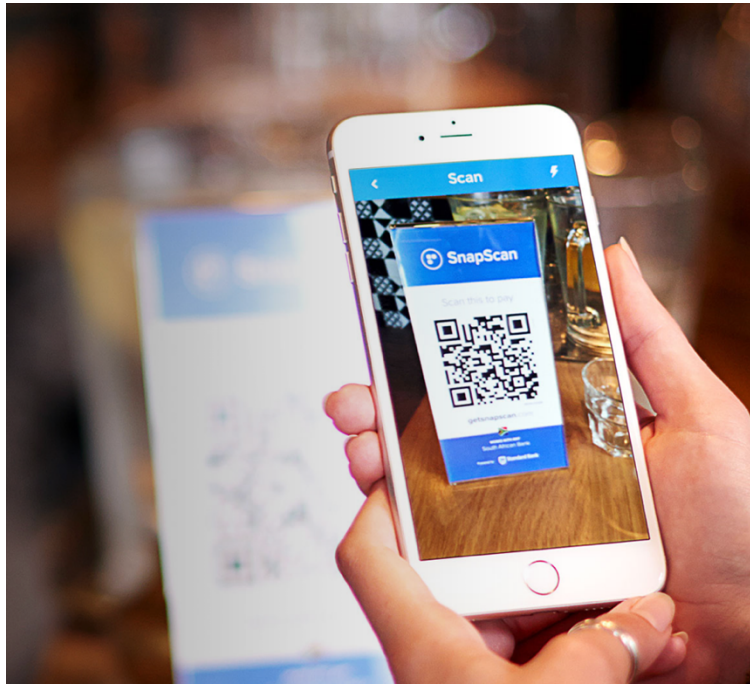


Exhibit 3-5: SnapScan QR Code Payment

Source: SnapScan (2017a)

The common areas of application for QR code payments in RSA include bars or pubs and restaurants, coffee shops, public parking tickets, mobile ticketing, door-to-door deliveries, local fresh produce markets, e-payments on websites at checkout, donations, utility bills, and SMS or e-mail invoices with an embedded code (SnapScan, 2017a: para 2; Zapper, 2017c: para 1). QR code payments service provider Zapper, has created an opportunity for e-commerce websites to incorporate QR codes through plugins, giving customers a hassle-free and convenient experience in completing payments, because the process does not require the customer to register if their user profile is already signed-in to the website (Zapper, 2017a: para 1-3). As for mobile ticketing, the use of QR codes on smartphones has made it possible to migrate the physical ticket to a virtual format, and as such, they are used in mobile ticketing within the event management industry and public transportation sector including bus, rail and air (Bandeira, 2017:8-15). In the hospitality industry, Zapper has introduced Zapper for Restaurants (refer to Exhibit 3-6), an innovative approach whereby patrons dining at a single table are able to split the bill and pay separately for their share of the bill from their own smartphones, through generated QR codes on till slips (Zapper, 2017b: para 2). On the other hand, Zapper (2017d: para 3) indicates that firms can easily incorporate QR codes into their social MC campaigns as it works seamlessly with media channels such as print, posters (bills), OOH media, websites, social media, e-mail, television, and in direct marketing and personal selling initiatives.



Exhibit 3-6: Embedded QR Code on a Restaurant Slip

Source: Zapper (2017c)

Some of the major brands in RSA that have enabled QR code payments include FlySafair, Dischem, Future Life, Mr Price, DSTV, SABC (TV Licences), Burger King, Engen, Vida è Cafe, OneDayOnly.co.za and National Council of SPCAs, among others (SnapScan, 2017a: para 3; Zapper, 2017b: para 2).

As much as QR code payments have a number of benefits for both consumers and merchants, Bandeira (2017:11) states that using this mode of payment is rather cumbersome and inconvenient as there are several steps that need to be followed to initiate and complete a single transaction. SBSA through its QR code payments brand SnapScan, has revolutionised the offering to incorporate another contactless payment method by utilising Bluetooth 4.0 technology (SnapScan, 2017b: para 1).

This is discussed in the following subsection.

3.2.5 Bluetooth Low Energy (Bluetooth Beacon Payments)

Bluetooth Low Energy (BLE) beacons are wireless broadcasting devices that transmit signals in the form of static and dynamic information such as identification data and geo-spatial data respectively, which are received by any Bluetooth 4.0 peripheral device within the specified signal range, usually ten metres (Bandeira, 2017:5). When using this form of m-payments, users are simply required to have the relevant mobile application open in their compatible smart device, to receive Bluetooth broadcast signals from the corresponding beacon device hosting a similar payment platform to process a payment (Han & Ding, 2017:2).

In RSA, Nedbank has internally tested this payment technology using a beacon-driven smartphone application, proprietarily known as Accolades, to create a link between consumers and merchants in-store (Let's Talk Payments, 2015: para 2). Conceptually, Accolades is touted to provide a product catalogue for the customer in-store, allowing him or her to select products that they require, load them onto an in-app mobile cart, and check them out at the POS terminal without having to queue (Boden, 2015: para 1). Once at the POS, the mobile app facilitates a seamless and secure payment transaction using debit or credit card data transmitted from a smartphone to the beacon (Let's Talk Payments, 2015: para 2).

Snapscan is also another BLE payment medium offered by SBSA and available to use with any RSA commercial bank (SnapScan, 2017b: para 1). It is an augmentation to the initial SnapScan protocol that only incorporated the use of QR Codes and a secure PIN for each transaction (BusinessTech, 2015: para 1-2). Users are able to use their Bluetooth 4.0 enabled devices to complete transactions at POS that have a SnapBeacon. In addition, the beacons are able to geo-locate where signed-up customers are in close proximity, essentially in-store (Mybroadband, 2015: para 3). When a user wants to make payment, they can simply access their SnapScan mobile app on their iPhone or Android smartphone and select “pay here” on the app, without having to physically go to the POS terminal or beacon to process payments (BusinessTech, 2015: para 1-6).

Exhibit 3-7 is a representation of SnapScan:

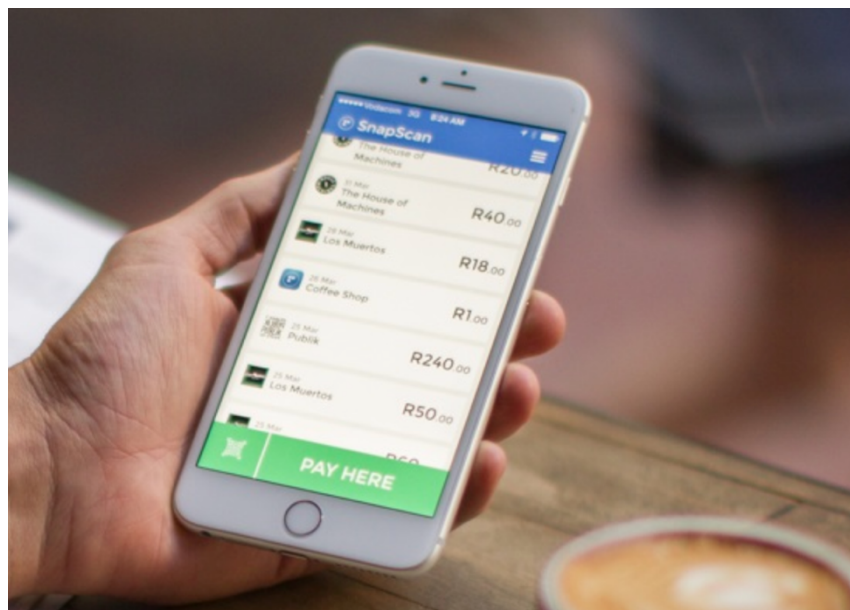


Exhibit 3-7: SnapScan BLE Payment

Source: Mybroadband (2015)

The common application areas of BLE payments in RSA include bars and restaurants, coffee shops, public parking tickets, local fresh produce markets, e-payments on websites at check-out pages, and charitable donations (SnapScan, 2017b: para 1).

3.3 South Africa's Payments Landscape

Payments in RSA over the past decade have incorporated technology within the provision of financial services in an effort to financially include and integrate the masses. According to The Banking Association of South Africa (BASA) (2014:8), financial inclusion (FI) revolves around “improving the range, quality and availability of financial services and products to the unserved, underserved and financially excluded”. FI is hinged upon the principles of access, usage, quality, choice, affordability, consumer financial education, simplicity, innovation and diversification (FinMark Trust, 2015:1; BASA, 2014:8). Schwab and Sala-i-Martin (2017:269) report that the availability of financial service, their affordability, ease of access to loan facilities and the reliability of commercial banks in RSA, are all on a downward trend, registering scores of 50%, 41%, 39% and 55% respectively. The WEF through its annual global competitive index (GCI) of 2017-2018, ranks RSA as 44th in terms of financial market development in the world, and fourth in SSA behind Guinea (29th), Rwanda (34th) and Mauritius (41st); and 54th in the world in terms of technological readiness, occupying the top spot in SSA (Schwab & Sala-i-Martin, 2017:330-331).

In terms of financial technology (FinTech) and digital payments, the Ernst and Young (EY) FinTech Adoption Index 2017 takes into account the application of digital payments in the following five areas: money transfer (P2P) and e-payments, insurance, savings and investment, financial planning, and borrowing (Chen, 2017:14). EY's 2017 study reveals that P2P and e-payments (in the form of online foreign exchange, cross-border remittances, online banking, money transfers, and m-payments at POSs) lead the way in FinTech adoption globally, with a rate of 50% (an increase of 32% from figures reported in 2015), followed by insurance at 24%, savings and investments at 20%, and borrowing and financial planning both registering 10% adoption rates respectively (EY, 2017a:3). The EY FinTech Adoption Index 2017 has ranked South Africa's insurance sector as the fourth (4th) most adoptive in the world behind similar sectors in India, the United Kingdom (UK) and China in descending order (EY, 2017a:4). In this respect, insurance companies in RSA have had an increase in consumer on-demand insurance products that are situation and/or location-based, offering instant online or mobile C2B payment solutions to prospective clientele (EY, 2017b:7). The global average rate of digital payments integration currently stands at 33%, in comparison to RSA's reported figure of 35%, where 58% of the financially included in the country are at ease using digital payments either online or via mobile, and 36% completely do not use the platform (Chen, 2017:12).

Exhibit 3-8 illustrates RSA's FinTech adoption status in comparison to other major financial markets in the world, plotted against stages of innovation adoption curve.

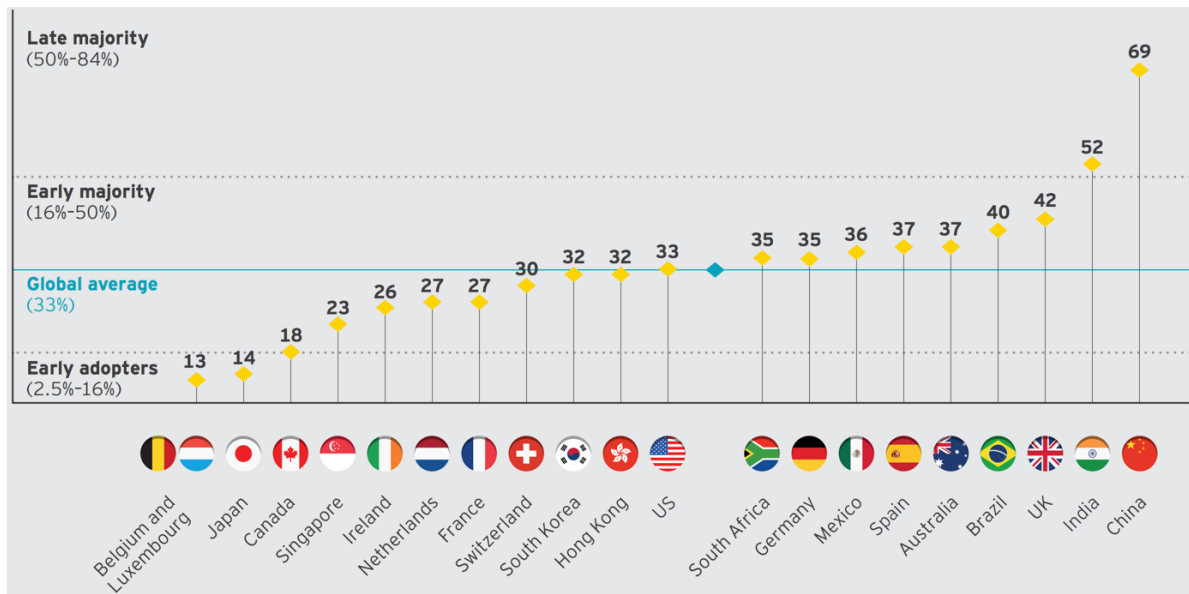


Exhibit 3-8: Global Consumer FinTech Adoption Rates in 2017

Source: Chen (2017:12)

From Exhibit 3-8, RSA (which is a country with a rising middle-class population) is seen to occupy the early majority stage of consumer FinTech adoption, two points above the global average (a stage at which consumers accept innovation change more rapidly than the average) (EY, 2017a:1; Chen, 2017:11-12). Countries such as China and India are at the forefront of digital payments adoption because of an enabling regulatory environment, favourable internet service penetration, above average consumer tech-literacy and awareness of FinTech solutions, and affordable smartphones (Chen, 2017:12).

3.3.1 Commercial Bank Branch and ATM Distribution

The distribution of branches and ATMs of the five main commercial banks in RSA as reported by BASA (2014:6) and BusinessTech (2017: para 5) in June 2014 and June 2017 respectively, has revealed an 18% decrease in the number of banking outlets available in RSA as ATMs have increased by 4% (refer to Table 3-2). The reduction of banking halls in the four year period is attributed to banking operators wanting to firstly tame operational and staff costs, and secondly to embark on shifting the majority of customer transactions from manual to digital or automated channels (Tarrant, 2016:para 5). Tarrant (2016: para 5-6) adds that the same trend is being witnessed in the UK and USA and, while financial institutions are continuously incentivising their clientele to employ e-channels on banking and payment transactions, the youth market is growing less interested in visiting physical banking halls to conduct transactions.

Table 3-2: Number of Bank Branches and ATMs in RSA between 2014 and 2017

Bank	June 2014		June 2017		Percentage change	
	Branches	ATMs	Branches	ATMs	Branches	ATMs
ABSA	892	10 000	774	8 885	-13%	-11%
Capitec	500	2 168	796	4 024	59%	86%
FNB	775	4 969	676	4 641	-13%	-7%
Nedbank	2 272	2 716	786	4 052	-65%	49%
Standard Bank	705	8 100	1 211	7 410	72%	-9%

Source: BASA (2014:6) and BusinessTech (2017)

It takes the average South African 16 minutes to get to any particular destination using public transport (FinMark Trust, 2015:3). The study by FinMark Trust also reveals that an individual takes 28 minutes and 10 seconds to reach the closest ATM, 34 minutes and 10 seconds to access the nearest brick-and-mortar banking hall, 37 minutes and 20 seconds to reach a social grant identification point, and 42 minutes and 50 seconds to get to an insurance branch.

3.3.2 Payments Behaviour

FinMark Trust (2017:47) indicates that as of September 2017, 77% of the population in RSA is said to possess a formal transactional bank account (including South African Social Security Agency – SASSA social grant holders), with a significant quota of the banked population evidently not being able to access the full value of FI. As much as the FI rate was indicated to be at 89% in 2016, a single point below the government’s 2030 National Development Plan (Abrahams, 2017:632), ‘cash is king’ in RSA, and accounts for 52% of total transactions value, against 85% reported globally (van Zyl, 2017: para 9). Physical money such as bank notes and coins, is still widely considered to be the primary means of conducting financial transactions across the country, in spite of the fact that there remains a high potential for risk in an environment where the crime rate is quite high, and the majority have limited access to credit facilities due to the requirements imposed by lenders on borrowers (FinMark Trust, 2017:47).

Empirical evidence shows that a preponderance of m-banking users in RSA reside in urban settings and are formally employed with a higher income and better formal education in comparison to those not employing the m-payment platform (Rouse & Verhoef, 2017:5). A deficiency of trust and awareness of m-banking as a payments and money management aid have been identified as key hinderences to its expansive uptake, hence mass education on the use and benefits of the platform is required (Rouse & Verhoef, 2017:5). That notwithstanding, Fly (2017: para 1) reveals that out of nine surveyed countries, (the others being India, Australia, the UK, Saudi Arabia, Germany, France, the United Arab Emirates and Italy), South African consumers mostly prefer to use m-banking

as a medium to conduct required remote banking services. Approximately 30% of consumers in the country would rather use an m-banking app to contact their financial service provider, in comparison to 18% who will physically visit a banking hall (Fly, 2017: para 2). Customer experience is the most important factor for local customers wanting to employ virtual banking services, because they require problem resolution at the first point of contact, as opposed to being kept on hold on the telephone by customer service representatives, and even being referred to a banking hall to resolve transaction issues (Fly, 2017: para 3-5).

A 2017 study revealed that 46% of South Africans have engaged in online payments, especially in the form of electronic shopping (e-shopping) and, of this figure, 54% are male and 46% are female (Effective Measure, 2017b:2-5). The majority of the e-shopping activity emanates from the Gauteng province, with a 43% share, followed by the Eastern Cape with 23%, and KwaZulu-Natal contributing only 14% of the total online shopping figures (Effective Measure, 2017b:5). Empirical evidence shows that individuals engaged in e-payments are predominantly high income earners employed on a full-time basis, and that 35% of them have a household income of at least ZAR 30,000 a month (Effective Measure, 2017b:7). In fact, Chigada and Hirschfelder (2017:4) state that the engagement intensity in e-payments, either online or mobile, is directly linked to a user's earning capacity, where people who earn more will transact more, and those who earn less will transact less.

It is reported that e-commerce activities in the country are dominated by baby boomers (individuals aged 50 years and above), accounting for 45% of all e-shoppers, while the youth (individuals aged between 15 to 34 years) collectively account for 23% (Effective Measure, 2017b:5). A breakdown of the youth's representation in the e-commerce population is depicted in Figure 3-1:

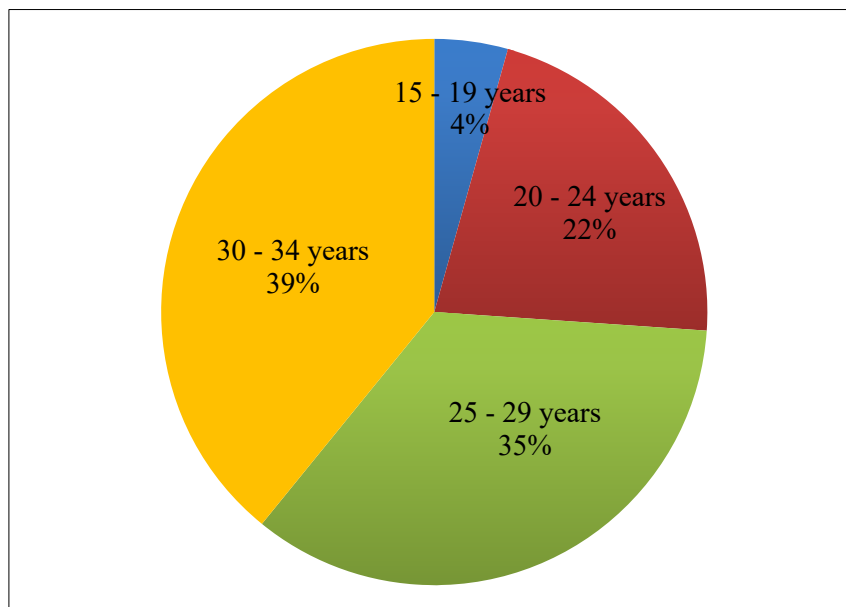


Figure 3-1: Youth E-Shoppers in RSA (2017)

Adapted: Effective Measure (2017b)

From Figure 3.1, it is evidenced that millennials account for 96% of all the youth engaged in e-commerce, while Generation Z take up only 4% of the online shopping consumer category. The skew in the distribution is attributed to the fact that Generation Z widely have limited to no income to make online payments, coupled with the fact that they are largely unemployed scholars or students who are dependent on their parents, guardians and older siblings for financial support (Effective Measure, 2017b:7).

Computers, including laptops and desktops, are the most preferred devices to conduct e-payments on retailer websites, with a share of 65%, while smartphones and tablets have a share of 27% and 9% respectively (Effective Measure, 2017b:13). However, Albertyn-Burton and Scheepers (2017:267) state that 80.2% of South African consumers access the internet through their smartphones, with a further 19.8% accessing the World Wide Web through computers. With user experience being the area of contention between online shopping and preferred device for internet access, content developers, companies and marketers are focusing on enhancing the e-commerce experience on the mobile platform, as it is the most widely available and accessible device in RSA (Albertyn-Burton & Scheepers, 2017:267).

Effective Measure (2017a:8) has found that approximately 33% of South Africans do not use their mobile device for any form of purchases. It is indicated that 47% of purchases revolve around mobile airtime or credit and data purchases, 25% remotely procure mobile applications and make further purchases within these installed applications, and a combined 20% use mobile phones to purchase events and travel tickets (Effective Measure, 2017a:8). Figure 3-2 gives a breakdown of the purchase categories in RSA in 2017.

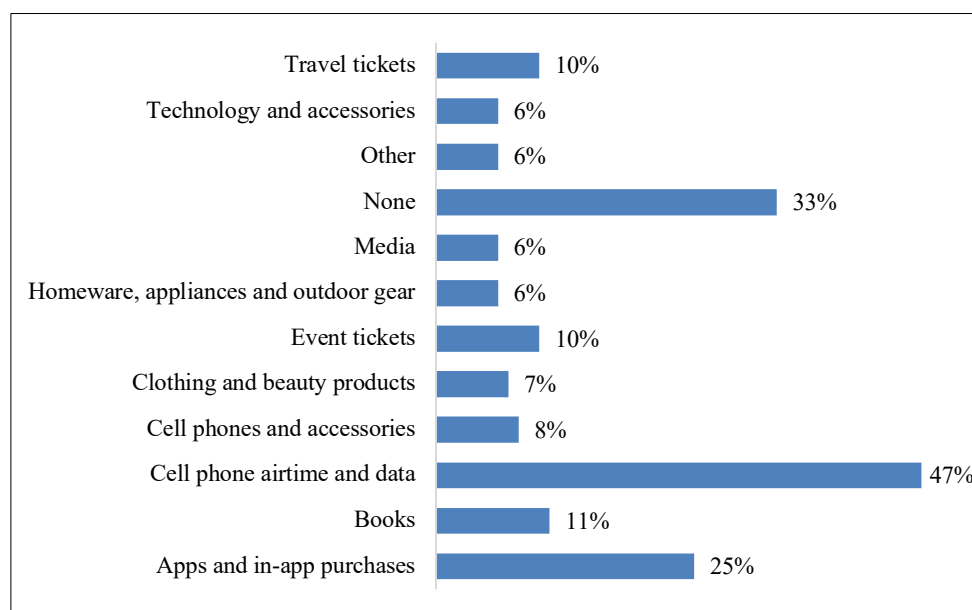


Figure 3.2: Mobile Purchases in RSA in 2017

Adapted: Effective Measure (2017a: 8)

3.4 The Youth Characterised

The youth are individuals born between 1980 and 2000 (Weber, 2017:517), an era summed up as being one that had several world events that brought about socio-economic shifts, including massive technological assimilation into the generation's very being (Moreno *et al.*, 2017:135). This subgroup of the general population is the most educated and tech-savvy, given that they have been raised within the information era, characterised by the advent of technology and the use of technological media as part and parcel of this generation's lives on a daily basis, that has enabled them to process information five times faster than baby boomers (Weber, 2017:517; Hajiyev, 2017:3; Muda, Mohd & Hassan, 2016:292). Youth aged between 17 and 37 years currently make up a large portion of the total world population (Moreno *et al.*, 2017:135), with reported figures indicating that the subset of youth aged between 18 and 24 already accounts for 16% of the global population (Citi Foundation & Ipsos, 2017:3; Population Reference Bureau, 2017:2). The summation of the youth as a full subset of the global population accounts to approximately 25% (Bilgihan, 2016:103).

The youth is said to be the most conversant and skilled when it comes to e-commerce and its subset platforms, either mobile or online, and its applications in electronic shopping (e-shopping) (Muda *et al.*, 2016:293). Technology use and continuous adaptation to the same, has been entrenched in the youth's livelihoods, shaping their culture, value, beliefs, social experiences and motivations (Hajiyev, 2017:3). This dynamic paradigm shift has led the youth to develop shared consumer attitudes and behaviour, with them being more aware about what motivates their needs and expectations (Moreno *et al.*, 2017:135). They have sizeable spending power, that has and continues to be an interesting and relevant focal point for consumer behavioural research for manufacturers, retailers, service providers and marketers alike (Smith, 2011:492; Bilgihan, 2016:103; Moreno *et al.*, 2017:141). It is further reported that the youth's consumption is expected to represent an estimated 50% of the total global spend by 2017 (Orozpe, 2014: para 3). According to Weber (2017:517), the youth are growing into the current workforce, and as the largest single subgroup of the consumer population, they are continuously amassing wealth, and quickly gaining increased purchasing power.

Having been born and grown up in the digital age, the youth possess a shared usage pattern of social media (within its various platforms), communication media consumption, mobile and computer devices use, internet use, and leisure time spend among others (Omar, Hassan, Sallehuddin & Abdullah, 2016:54). More specifically, with regard to university students (the main focus of this study), Moreno *et al.* (2017:136-137) identifies them to be the most digitally active and astute generation subset, as they are constantly interlinked to one another via digital media. This alludes to the supposition that their use of digital payments is aligned with its application in effecting virtual transactions. In fact, Bilgihan (2016:104-109) states that in e-commerce, the youth largely seek utilitarian benefits when it comes to the use and features of a digital platform such as a website's or a mobile application's user interface. Mimouni-Chaabane and Volle (2010:34) characterise utilitarian benefits as those that are purely instrumental, functional, and cognitive, solely purposed to provide user value by extending a means to an end. This customer segment may not completely overlook hedonic benefits, such as aesthetic design and enjoyment, but prefer to have a total experience in the consumption of a digital platform, where it functions and accomplishes tasks effectively and efficiently as expected (Bilgihan, 2016:104).

According to Moreno *et al.* (2017:141-142), a sizeable portion of the youth's purchases tend to occur on digital platforms either online or mobile, compelling retailers and financial service providers to seek solutions that will connect with them and constantly monitor their buyer behaviour so as to extend offerings that are progressively relevant and appealing to them, in alignment with current trends. However, it should be noted that the youth have a great sense of individualism and wanting to be unique; therefore, companies and marketers must make the effort to personalise offerings, messaging (through various MC channels), brand experiences and post-purchase/use services (Moreno *et al.*, 2017:142). Chadwick Martin Bailey (2016:11) add that the youth should not be taken to represent a homogenous market by marketers and B2C companies, but that they should rather segment the already diverse generational target audience and effect measures of prioritisation and customisation, to appeal to the most valuable customer profiles within the segment through a tailored and engaging approach to product development and messaging.

3.4.1 Youth and Payments

Chen (2017:16) observes that age is a strong determinant of FinTech adoption among consumers or users. Chen (2017:16) indicates that the adoption of innovative payment solutions is most common among youth aged between 25 and 34 years, especially at the initial stages of their professional career. Other reasons that are cited by Chen (2017:16) for high adoption for this age group include their ease of use of the internet and mobile technology (essentially their tech-savvy nature) and their need to access a broad range of financial solutions that are in tandem with milestone achievements in life (for instance completion of tertiary education, commencing fulltime jobs, entering home ownership and starting their families). Youth consumers aged 18 to 34 years, are further observed to not develop robust relationships with existing or established financial service providers as they exhibit the lowest likelihood to specify preference for established providers as an obstacle to employing innovative payment solutions (Chen, 2017:16). This can be taken to mean that the youth are more willing to explore breakthrough digital payment solutions from new service providers and switch from existing ones. Therefore, m-payments channels offered by new FinTech operators such as those described in this chapter stand a high chance of being adopted by this customer segment. Figure 3-3 below showcases the global adoption of digital payments across several age groups.

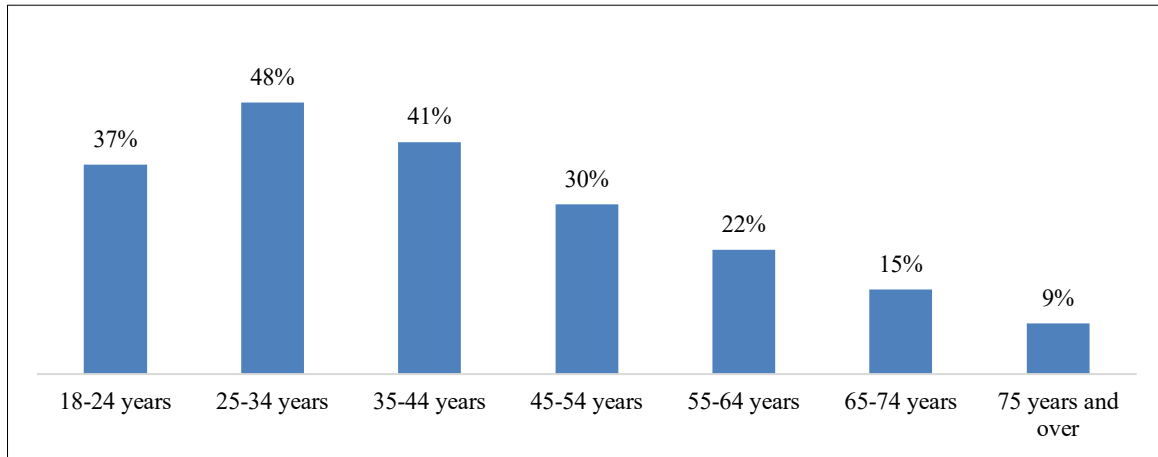


Figure 3-3: Global Adoption Rate of Digital Payments Across Age Brackets (2017-2018)

Adapted: Chen (2017:16)

A 2016 research initiative carried out by Chadwick Martin Bailey (2016:4-5) on American youth aged between 21 and 30 years revealed that individuals in this segment possess fewer assets and earn less personal income in comparison to baby boomers (who earn 38.9% more). In addition, 81% of youth are employed full-time, 7% on a part-time basis, another 7% are students, and 5% are unemployed. It is reported that 66% of this population is single, while 31% are either married or cohabiting with a significant other, and 3% are either divorced or separated. 30% of the youth are indicated not to be able to live without a banking or financial management mobile app installed on their mobile devices, coming second after Facebook with 43%, while instant messaging apps such as WhatsApp come in at third with 29% (Chadwick Martin Bailey, 2016:8). This underlines the fact that millennials utilise m-payment apps just as much as instant messaging apps. In their study, Chadwick Martin Bailey (2016:15) reported that 13.2% of the millennials cannot remember the last time they stepped into a banking hall to conduct a financial transaction. Furthermore, one of the key requirements majority of Generation Y consumers expect from financial service providers is low fees, from transaction surcharges, monthly maintenance, and data when employing remote and proximity m-payments. This alludes to the fact that the youth are price sensitive and would prefer to pay the bare minimum to manage their money and related financial transactions.

It is expected that the frequency of cashless payments among the youth is likely to increase in the near future, as 28.6% of the sampled Generation Y population believe that physical cash will be rendered redundant (Chadwick Martin Bailey, 2016:11). In a similar study in Vietnam, the youth are indicated to use m-payments because of the platform's convenience, in that it saves time and energy by negating the need to physically access POP – as such, the youth consider this mode of payment to be innovative and trendy (Dinh, Nguyen & Nguyen, 2018:1-2). This possibly points towards the youth's increasing preference for cashless transactions in the near future, with convenience being the cornerstone of this evolution in a traditionally cash-based payments or transaction environment.

In RSA, Effective Measure (2017a:7) has identified a handful of common transactions executed through m-payments and has earmarked remote banking via mobile (m-banking) as the most utilised transaction followed by utility bill payments.

Figure 3-4 showcases these mobile transactions:

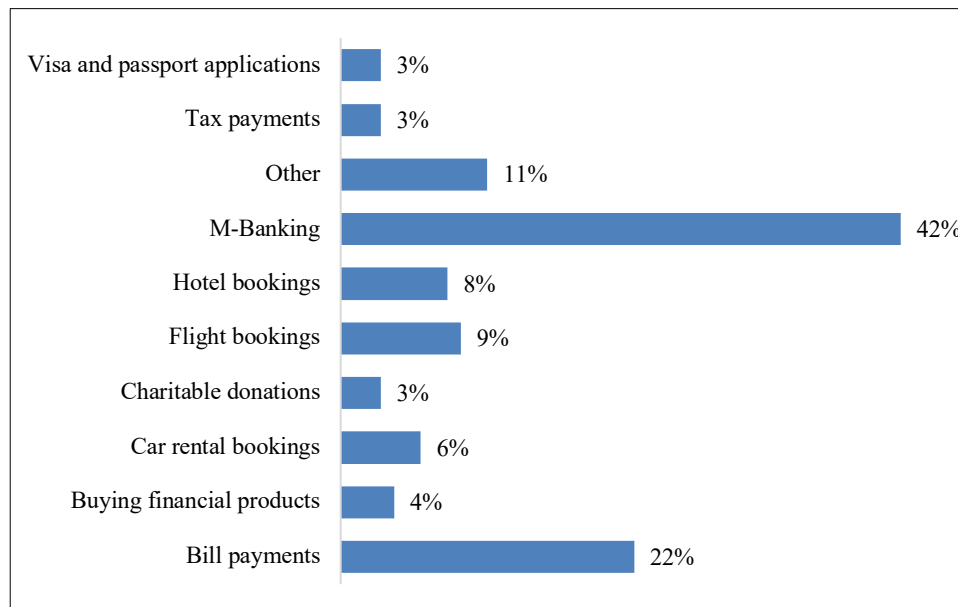


Figure 3-4: Key Mobile Transactions in RSA in 2017

Adapted: Effective Measure (2017a: 7)

Chadwick Martin Bailey (2016:25) assert that in order for financial service providers and marketers to drive up adoption of m-payments among the youth, it is essential for their messaging to be geared towards positively impacting financial education and confidence, especially for high-value consumers within the customer segment. That being said, the messaging approach for each youth sub-segment must be carefully curated to match their needs, and further develop a relationship with them through continuous engagement. In addition, Dinh *et al.* (2018:2) state that an effective and dynamic IMC strategy is ideal for changing inherent youth perceptions and attitudes, and for motivating the adoption of m-payments. For instance, they assert that m-payments marketers and service providers need to place emphasis on the use of tech-savvy imagery in their MC, and that they need to constantly update various youth consumer touch points that are in line with current trends that appeal to the youth so as to effectively communicate with this market segment. The authors go on to indicate that IMC strategy should aim to improve the youth's m-payments experience whereby the messaging efforts are centred upon developing user trustworthiness and reliability, lowering service use perceived complexity and assuring information safety and privacy.

3.5 Conclusion

This chapter has provided literature regarding the current situation within the m-payments sector in RSA, including m-payments services available. It has also given an in-depth analysis of how the youth are characterised in relation to their payments behaviour and purchase patterns.

The following chapter presents literature regarding various technological innovation adoption theories, and a detailed description of the conceptual framework used in this study.

CHAPTER FOUR: TECHNOLOGY ADOPTION THEORIES

4.1 Introduction

This chapter presents a discussion on various technological innovation adoption theories that have guided a number of studies within the study area. The theoretical models that are detailed include DOI, TAM, TPB, TRA, UTAUT and UTAUT2. The chapter also provides information regarding the conceptual framework and the underlining assumptions that guide this study. In addition, the study's hypotheses are outlined.

4.2 Technological Innovation Acceptance Models

Within the last decade, studies in the field of innovation acceptance and adoption have underpinned their research using a number of theoretical models including: DOI, TAM, TPB, TRA, UTAUT and UTAUT2. These models have been tried and tested within the context of Western, Middle-Eastern, and Asian environments, to predict technological innovation acceptance. The following subsections provide an overview of these theoretical models and narrow down to the one selected to guide the study at hand.

4.2.1 Diffusion of Innovation (DOI)

The DOI also termed as Innovation Diffusion Theory (IDT), is a model developed upon the foundation of sociology as a discipline to predict human behaviour towards modern technology, especially in a corporate setting (Rogers, 2003:419). The model has five adopter stages, with the first comprising of very few innovators who are ideally technology enthusiasts willing to venture, and try new technology on trial basis (Kotler & Keller, 2016:476). The other four stages include early adopters, early majority, late majority, and laggards (Dass & Pal, 2011:6). According to Kotler and Keller (2016:477), at early adopter and early majority stages, more and more individuals adopt an innovation until it reaches its peak, when adoption tapers over time and fewer and fewer non-adopters exist to take up the innovation. Early adopters include price insensitive opinion leaders, while early majority are practical individuals who adopt upon verifying benefits of adoption. The late majority comprise price sensitive individuals who are sceptical and risk averse, while laggards are traditional and oppose technological change and are the last to adopt a technology within a social system. Previous research on online banking adoption guided by DOI has shown that one's age, education level, profession and level of income, are key variables that distinguish between early users and late or non-users of e-payments (Dass & Pal, 2011:6). Dass and Pal (2011:6) essentially point out that innovation adoption is dependent on an individual's socio-economic standing, personality, and communication patterns.

Figure 4-1 is a representation of the DOI.

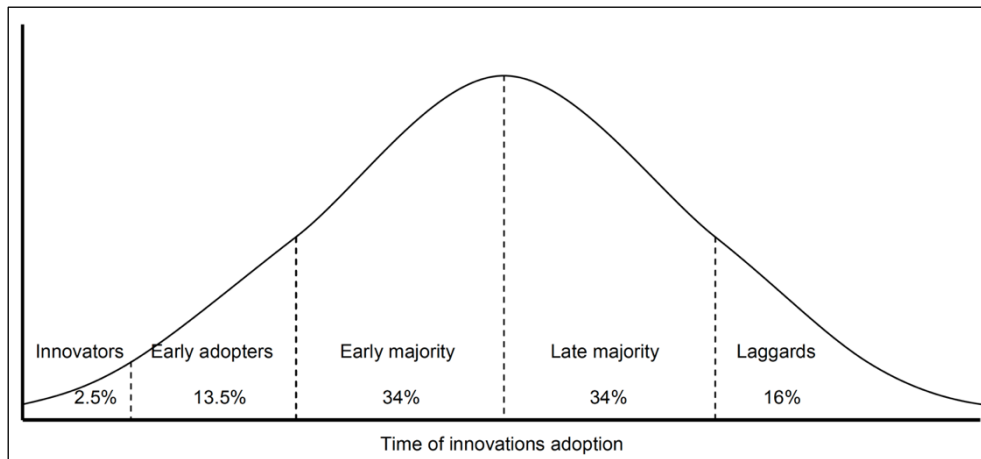


Figure 4-3: Diffusion of Innovation Theory

Adapted: Rogers (2003:11-12) and Kotler and Keller (2016:477)

4.2.2 Theory of Reasoned Action (TRA)

Similar to DOI, TRA is a construct that borrows from the field of sociology to explain human behaviour towards technology acceptance (Venkatesh *et al.*, 2003). The TRA upholds that actual user behaviour is underpinned by their BI, with the intention affected by the user's subjective norm and attitude towards behaviour (Tan, Ooi, Chong & Hew, 2014:294). Al-Qiesi (2009:11) mentions that, it is an assumption within the model that potential users of a technological innovation are rational and will make reference to information at their disposal in a structured manner to act desirably, evaluating the implications of their actions prior to engaging in behaviour. Additionally, the author states that within the TRA, BI to engage in behaviour is an outcome of the attitude concerning performance of the behaviour (and how it is valued) and subjective norms. However, Ajzen and Fishbein (2004:433) state that the model possesses discriminant validity depending on the type of study it is applied to predict technology acceptance. Figure 4-2 showcases the variables encapsulated within the TRA model.

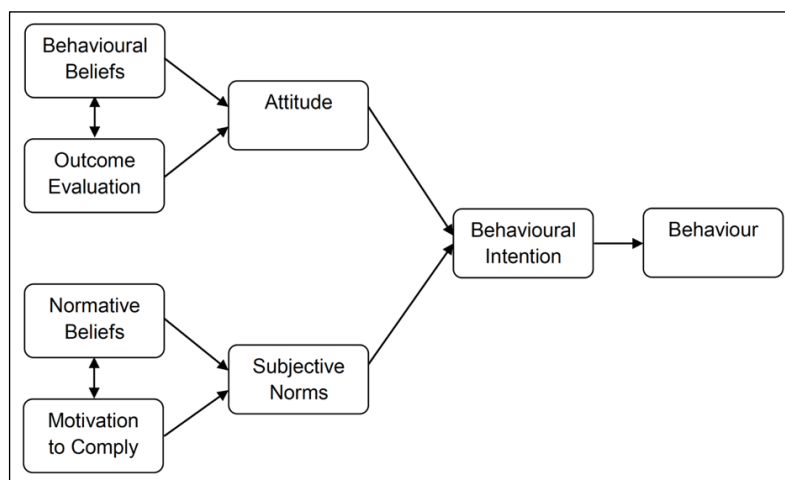


Figure 4-2: Theory of Reasoned Action

Adapted: Fishbein and Ajzen (1981:253-313)

4.2.3 Theory of Planned Behaviour

The model has been utilised in determining human behaviour in relation to information technology acceptance and usage. According to Tan *et al.* (2014:295), TPB is an extension of the TRA, as the model appends the variable of perceived behavioural control (PBC) to address cognitive and situational resources and opportunities required by a user to complete an assigned task. The perceived behavioural control variable is viewed as a concept of a user's self-efficacy, linked with their judgement of how best to perform a task through a course of steps within a given situation (Ajzen, 1991:184). The scholar adds that user behaviour herein is adjudged to be influenced by their inherent confidence in their ability to perform a task. Dass and Pal (2011:6) cite that TPB requires extensively complex and bespoke operationalisations depending on the research area to which it is applied.

Figure 4-3 is an illustration of the TPB.

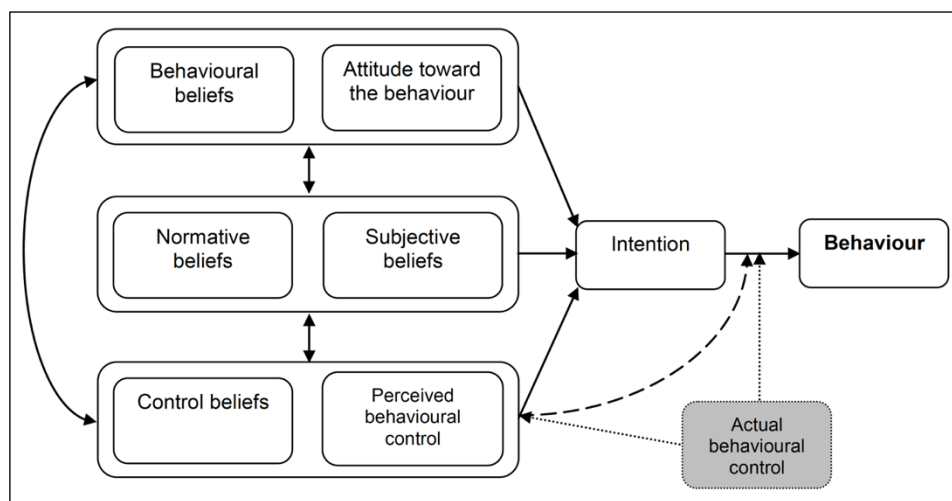


Figure 4-3: Theory of Planned Behaviour

Adapted: Ajzen (1991:182) and Al-Qeisi (2009:16)

4.2.4 Technology Acceptance Model (TAM)

TAM upholds that an individual's adoption of a technological innovation is predicated by their intention to use the innovation, which is alternatively defined by the individual's inherent beliefs about the innovation (Dass & Pal, 2011:5). These cognitive beliefs in the TAM include PEOU and PU, and are integral in elucidating the variance in innovation adoption intention. PEOU describes the degree to which the prospective user believes that utilising the innovation will be free of effort, while PU is the degree to which the user believes that utilising the innovation will enhance the performance of the assigned task (Tan *et al.*, 2014:295). Dass and Pal (2011:5) and Tan *et al.* (2014:294) indicate that TAM, a derivative of TRA, is one of the most used models among information systems researchers because it is said to be quite simple with fewer variables in comparison to other models. TAM has also been applied in research work involving e-commerce, e-banking, 3G and m-commerce (Chong, Chan & Ooi, 2012:36). However, TAM possesses a couple of drawbacks. It does not really address everyday life innovation adoption, but rather puts emphasis on work-related environments; in addition, the model is capable of

describing up to 40% of its variance, thus making it unsuitable for consumer m-payments (Venkatesh & Morris, 2000).

Figure 4-4 showcases TAM.

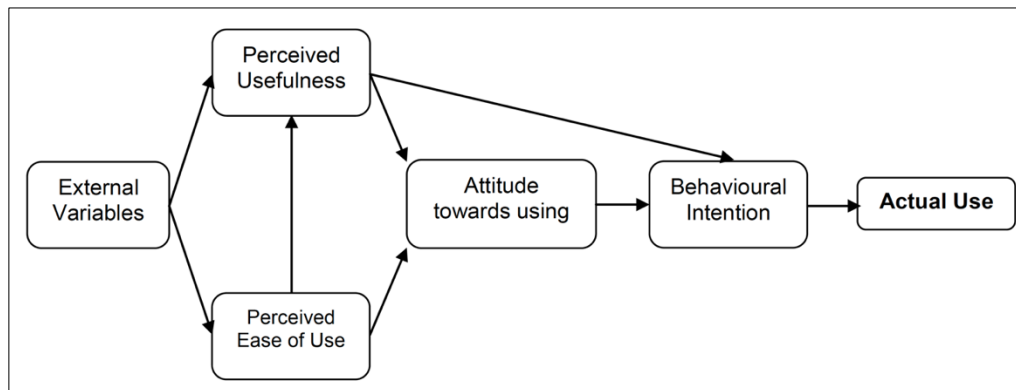


Figure 4-4: Technology Acceptance Model

Adapted: Davis and Venkatesh (1996:20)

4.2.5 Unified Technology Acceptance and Usage Theory

Developed by Venkatesh *et al.* (2003), the UTAUT is stated to be an aggregated theoretical model combining eight constructs previously used in information systems behaviour research (Albashrawi & Motiwalla, 2017:1; Slade, Dwivedi, Piercy & Williams 2015:862; Al-Qeisi & Al-Abdallah, 2013:76). The constructs include: DOI (Rogers, 2003), TRA (Fishbein & Ajzen, 1981), TPB (Ajzen, 1991), TAM (Davis & Venkatesh, 1996), Motivational Model (MM) (Davis, Bagozzi & Warshaw, 1992), TAM and TPB (Taylor & Todd, 1995), Model of PC Utilisation (Thompson, Higgins & Howell, 1991), and Social Cognitive Theory (SCT) (Compeau & Higgins, 1995). The UTAUT hypothesises that the sub-constructs of performance expectancy (PE), effort expectancy (EE) and SI influence BI, with BI and FC affecting UB. The effects of PE, EE, SI and FC are further moderated in varying combinations by gender, age, experience and voluntariness of use (Venkatesh *et al.*, 2003:447; Slade *et al.*, 2015:862). According to Albashrawi and Motiwalla (2017:1-2), UTAUT focuses on addressing use behaviour of a technological innovation founded upon a user's expectations of the system's general productivity, societal impact, possession of adequate resources, and knowledge, all of which are factors external to the user. A merit of the technology acceptance model is that it is predominantly employed by quantitative researchers to comprehend and determine technology behaviour at an individual user level (Albashrawi & Motiwalla, 2017:2; Slade *et al.*, 2015:862). UTAUT has been extensively used in areas concerning m-payments, m-banking adoption and online banking (Albashrawi & Motiwalla, 2017; Slade *et al.*, 2015; Al-Qeisi & Al-Abdallah, 2013).

Figure 4-5 is a depiction of the UTAUT.

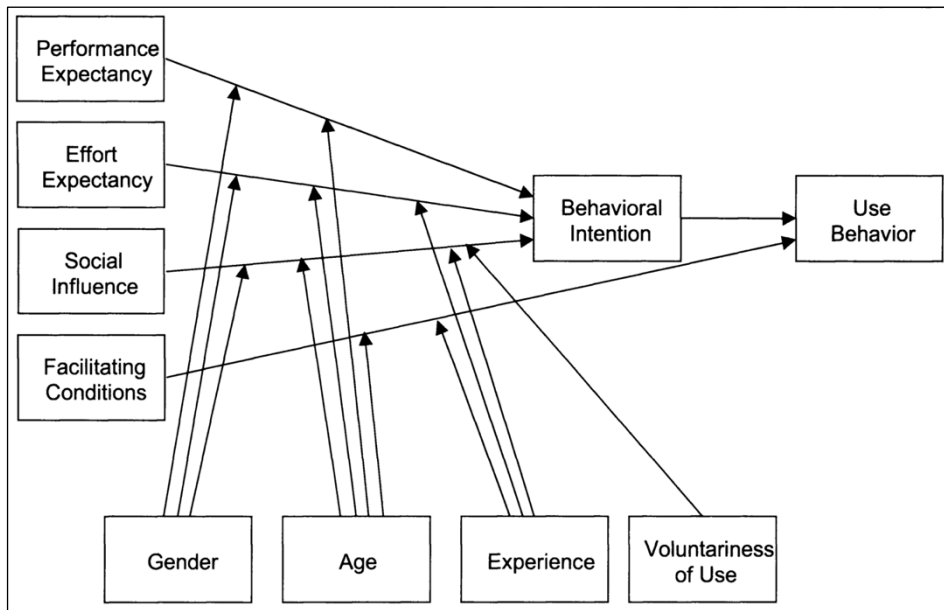


Figure 4-5: The Unified Theory of Acceptance and Use of Technology

Source: Venkatesh *et al.* (2003:447)

4.2.6 Unified Technology Acceptance and Usage Theory 2

The UTAUT2 is an extension of UTAUT, incorporating three sub-constructs; these are hedonic motivation, PV, and habit, that affect BI given varying combinations of moderating variables including age, gender and experience, excluding voluntariness of use as enshrined in UTAUT (Venkatesh *et al.*, 2012:160). According to Slade, Williams and Dwivedi (2013:10), UTAUT was initially conceptualised to determine technology acceptance within an organisational setting among employees; however, its extension to UTAUT2 enables the model to have a good fit to consumer level technology acceptance measurement, thereby significantly refining the explained variance in BI and UB from 56% to 74%, and from 40% to 52% respectively. Over the last five years, the UTAUT2 has been used to determine user behaviour in mobile technologies in government (Baabdullah, Dwivedi & Williams, 2014), m-payments (Koenig-Lewis, Marquet, Palmer & Zhao, 2015; Oliveira *et al.*, 2016) and m-banking (Alalwan, Dwivedi, Rana & Algharabat, 2018). Figure 1-1 in Chapter One illustrates the UTAUT2.

4.3 The Conceptual Framework

The conceptual framework (refer to Figure 4-7) that guides this study, borrows a number of sub-constructs from UTAUT2, because the latter, through empirical evidence has shown model applicability in m-commerce research, with superior explained variance on use behaviour. The variables of PE and EE are combined to form FR, which revolves around the perceived uncertainty, where m-payments systems may be unable to match the expected performance or task completion outcome. In addition, the conceptual model excludes hedonic motivation, based on the assumption that the use of m-payments is a rational approach by the user to perform a sensitive and high-

involvement task in the form of monetary transactions, that is assumed to be driven by a utilitarian motive that limits impulse and fun. Habit is the second variable having an impact on BI and UB to be excluded; this is because this study envisaged having non-users or potential users of m-payments as part of the respondents, thereby warranting the variable's exclusion. In the same manner, the moderating effect of experience on FC, and the relationship between BI and UB, is omitted. The study focused on observing m-payments use behaviour at a single point in time, disregarding prior use. The current study somewhat disregards age captured in the UTAUT2 as the youth, who are at the centre of the study, and are viewed as a singular age set, without having a multiple age groups within the population subset.

The conceptual framework (Figure 4-6) upholds that use behaviour is largely dependent on factors, resources and knowledge external to the user, in the form of FR, SI and FC, with an exception of PV, all of which are influenced by CP through marketer and consumer-driven MC to impact BI. FC and PV effect on BI is moderated by gender, with FC having a direct impact on UB. CP further moderates the effect between BI on UB.

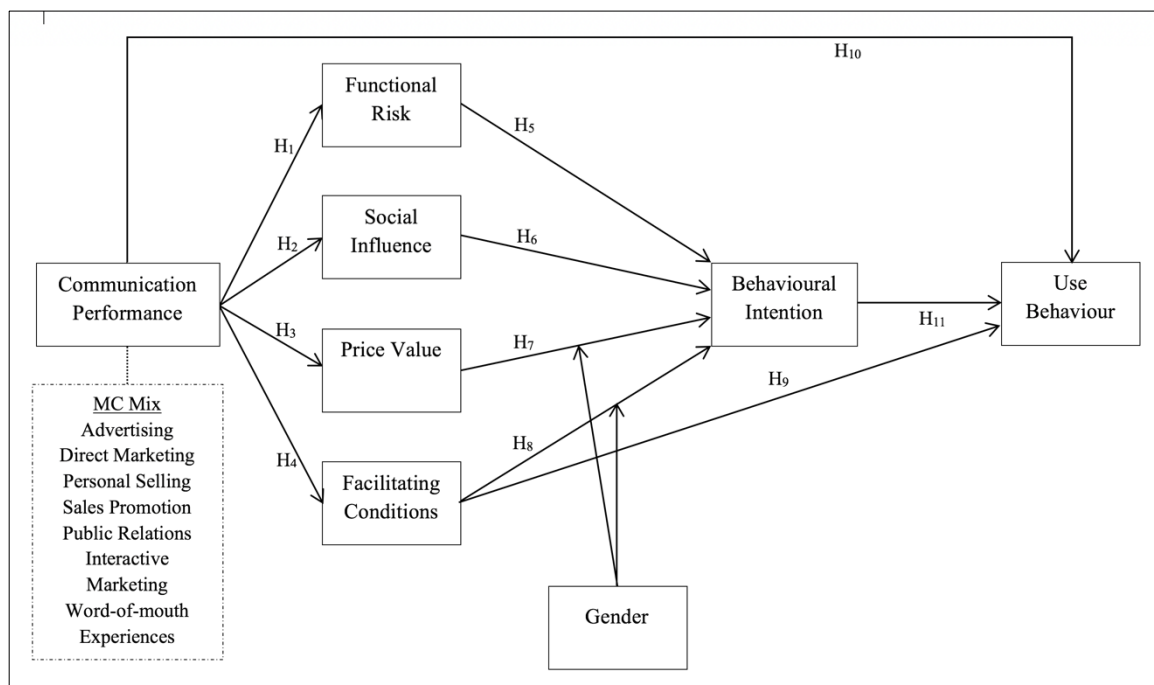


Figure 4-6: The Conceptual Framework

Source: Author

The sub-constructs within the conceptual framework in Figure 4-6 are detailed in the sub sections that follow.

4.3.1 Communication Performance

In the light of innovation adoption, Laukkanen *et al.* (2009:112) assert that the communication process is paramount, to progress and to comprehend social change, including revolutions caused by a particular innovation.

CP, also referred to as communicability, signifies the ease with which benefits of an innovation can be exhibited to potential and/or current users; the higher the CP, the lower the resistance to its adoption (Laukkanen *et al.*, 2009:112). The authors add that CP is dual-faceted, with one facet revolving around the degree of company or marketer control, and the other revolving around the kind of target audience contact. Rogers (2003:205-206) and Court *et al.* (2009:8) state that at the initial stage of innovation adoption, MC is often company or marketer-driven and quite impersonal, during which mass media channels such as advertising and promotions are employed for information and awareness creation purposes, around an innovation. At later stages of the diffusion process and as increasingly more people within the social structure take up an innovation, MC shifts and becomes consumer-driven and quite personal, where MC tools such as WOM, interactive marketing, and mobile marketing are utilised (Rogers, 2003:205-206; Court *et al.*, 2009:8). In the context of this study, MC is envisaged to be effective in providing information to potential m-payments users in terms of their functionality, use requirements and related cost implications. Therefore, it is hypothesised that:

H₁: The impact of CP on FR will be positive.

H₂: The impact of CP on SI will be positive.

H₃: The impact of CP on PV will be positive.

H₄: The impact of CP on FC will be positive.

H₁₀: The impact of CP on UB will be positive.

4.3.2 Functional Risk

FR in this study has enveloped both PE and EE due to empirical evidence presented by Tobbin and Kuwornu (2011:66-67) revealing that the two constructs as embedded in the UTAUT2 model, are highly correlated. PE is described as the extent to which a consumer perceives that using an innovation will assist him or her to accomplish the required task as expected (Maruping, Bala, Venkatesh & Brown, 2017:626). EE, on the other hand, refers to the level of ease linked with using the innovation (Maruping *et al.*, 2017:626). Therefore, the operational definition of FR in this study is the perceived performance and usability uncertainty that an innovation may fail to work and deliver the initially prescribed outcome(s). Chen (2013: 416) more specifically characterises FR as the user perception associated with the ability to employ the m-payment platform to carry out P2P or M2M transactions effectively and with little effort, from start to finish.

As m-payments are intangible, they are perceived to possess functional risk in the mind of a user because potential users may be unable to assess the platform's general functionality (Yang & Zhang, 2009:263-264). Yang and Zhang (2009:264) add that FR manifests itself among potential users of m-payments, when the issue of ubiquity and the quality of mobile networks or internet services arise, where performance and usability of the service may be hindered to operate reliably and be available at any location and at any time. Akturan and Tezcan (2012:454) state that attitudes upheld by the youth demographic aged between 18 and 25 years with regards to the adoption

of m-banking and online banking solutions, is often negatively impacted by the presence of inherent perceived FR. It is upon service providers or marketers to demonstrate to potential users how innovative payment services are advantageous, and to enable them to accomplish financial transactions and related tasks effectively and effortlessly, so as to positively impact the users' attitude towards BI by minimising perceived FR. Therefore, it is hypothesised that:

H₅: The impact of FR on BI will be positive.

4.3.3 Social Influence

SI is characterised as the degree to which an individual upholds the perception of family, friends, peers, colleagues, and opinion leaders, in relation to the BI to use and adopt a technology (Chong *et al.*, 2012:37). SI is stated to be a manifestation of interactions with others within and outside one's social circle (Raman & Don, 2013:158) and is also resultant from messaging received via MC, such as WOM, thereby shaping an individual's perception of an innovation (Court, Elzinger, Mulder & Vetvik, 2009:231; Püschel, Mazzon & Hernandez, 2010:10). SI is also termed as subjective norm, whereby its effects are ascribed to a form of obligatory compliance for example in a situation where the old technology is being phased out to migrate use to a newer one (Amoroso & Magnier-Watanabe, 2012:101), especially at the early stages of experience (Alalwan *et al.*, 2018:128). By way of contrast, Amoroso and Magnier-Watanabe (2012:101-102) state that SI may come voluntarily from an individual, with the need to internally identify with peers or influencers who may be using an innovation, leading to positive perception and eventual adoption. The authors also identify that age has an impact on the need to affiliate or identify with peers, in the sense that older individuals are likely to place more importance on SI, with this influence reducing with experience.

According to Kaplan and Haenlein (2010:61) and Needham (2008:61), social media is used by marketers to engage potential adopters of innovations within various virtual social networks, availing a platform to exert social influence on participants' use behaviour, especially among the youth demographic. Social media networks have revolutionised how the youth receive and process information. The constant interactivity and hyper-communication incites heightened social interaction through continuous access to, and exchange of, information and their sources, to increase the technological competency of certain innovations among engaged members (Omar *et al.*, 2016:56-57). Therefore, it is hypothesised that:

H₆: The impact of SI on BI will be positive.

4.3.4 Price Value

This refers to potential m-payments users' cognitive trade-off between perceived benefits of utilising the payment service and the cost implications of actually utilising it (Venkatesh *et al.*, 2012:161). Baptista and Oliveira (2015:421) cite that PV factors include mobile broadband and data costs, the cost of smart mobile devices,

transactions costs and related service maintenance costs. If the PV is favourable, then it may have a positive impact on the BI to take up m-payments (Oliveira *et al.*, 2016:407). Due to varying social roles, females are quite interdependent, cooperative and consider several sources of information to facilitate decision-making, while males are independent, competitive and arrive at decisions on the basis of information selectivity, and a heuristic approach of trial-and-error (Deaux & Kite, 1987; Venkatesh *et al.*, 2012:163). As such, females are more likely to consider all cost implications when purchasing goods and services, and are more price conscious than their male counterparts. However, Venkatesh *et al.* (2012:163) state that males attach a higher PV on technological innovations in comparison to females because they are predisposed to toy with technologies. Therefore, it is hypothesised that:

H₇: The impact of price value on behavioural intention will be positive and moderated by gender, such that it will be stronger for females.

4.3.5 Facilitating Conditions

According to Martins *et al.* (2014:4), FC involves the perception upheld by a user regarding the prerequisite resources and service provider support (either informational, institutional or technical) required and availed so as to promote the use of m-payments. Albashrawi and Motiwalla (2017:4) indicate that FC for m-banking use may include, among other things, customer service support, peer assistance, sufficient resources, and system knowledge, all of which may avail a solid base for positive BI and m-banking usage. Baptista and Oliveira (2015:421) elaborate that the use of m-banking requires the user to possess a certain skillset, for instance using a smartphone or tablet, being able to connect to the internet, downloading and installing m-banking applications and knowledge on mobile network operators and their services' security. The authors add that a potential m-banking user with access to online m-banking tutorials and video demonstrations, or chatbots available on banks' websites, stands a better chance of intending to use the m-payment platform.

Venkatesh *et al.* (2012:162), and Morris, Venkatesh, and Ackerman (2005:71-72) put forward that the youth because of their heightened cognitive and memory capabilities, will find it easy to process new and/or complex knowledge regarding the use of a technological innovation and, as such, they will place less emphasis on support services, in comparison to older generations. According to Venkatesh *et al.* (2012:162), and Venkatesh and Morris (2000:131), females often rely on FC when deciding the intention to use an innovation, placing greater importance on external support to lower the effort required to operate the innovation to accomplish tasks, while males will spend a significant amount of time and effort to surmount innovation use constraints to achieve similar tasks without requiring support.

Therefore, it is hypothesised that:

H₈: The impact of facilitating conditions on behavioural intention will be positive and moderated by gender, such that it will be stronger for females.

H₉: The impact of facilitating conditions on use behaviour will be positive.

4.3.6 Gender

Gender in this study is assumed to have a moderating effect on FC and PV. Liébana-Cabanillas *et al.* (2017:11) state that males have traditionally possess a heightened tendency to engage in e-commerce in its various forms (online or mobile), compared to females, whereby men will make planned electronic or technology purchases and women will make impulse purchases on food, drinks and houseware. Men are indicated to be more innovative and receptive, and to exhibit a more optimistic attitude toward utilising technologies, in comparison to the opposite sex (Liu, Zhao; Chau & Tang, 2015:478; Venkatesh & Morris, 2000:121; Lee, Cho, Xu & Fairhurst, 2010:50). Several authors have found the moderating effect of gender present on the BI to use mobile chat applications (Nysveen, Pedersen & Thorbjørnsen, 2015:335), NFC m-payments (Tan *et al.*, 2014:304), mobile couponing (Liu *et al.*, 2015:486-487) and m-payments (Musa, Khan & AlShare, 2015:676).

4.3.7 Behavioural Intention

Amoroso and Magnier-Watanabe (2012:102) describe BI to be the measure of strength of a potential technology user's intention to carry out a desired behaviour, which is then linked to predict actual use behaviour of a technology. According to Mulwa and Ndeti (2013:5) MC channels are used to influence the consumer decision-making process from awareness of an offering, to actual purchase, or use, or, in this case adoption. This is echoed by Court *et al.* (2009:8), Saxena (2009:160-161) and Kotler and Keller (2016:585) whereby MC is aimed to move a potential consumer within the MC response hierarchy from the cognitive stage, through to the affective stage and finally to the behavioural stage, that concludes with innovation adoption and repeated use. As such, the study upholds the effect of BI on UB to be moderated by the impact of CP with effective MC that is either service provider or user-driven. Therefore, it is hypothesised that:

H₁₁: BI will have a significant positive influence on use behaviour.

4.7 Conclusion

Theoretical frameworks as used in the area of technological innovation adoption and use behaviour are presented in this chapter, leading to the conceptual framework that is used to guide the study at hand. The constructs embedded within the conceptual framework, (CP, FR, SI, PV, FC, gender and BI) are discussed, and their corresponding hypotheses presented. The following chapter details the research design and methodology applied to the study.

CHAPTER FIVE: RESEARCH METHODOLOGY

5.1 Introduction

The research design and methodology chapter elucidates the techniques used within the study to empirically determine the interrelationship between communication performance and the adopted variables used to establish technology adoption, and use behaviour of m-payments. The chapter describes various research designs and the corresponding research approaches, then narrows down to the methodology selected by providing literary justification, and elaborating its appropriateness to the current study. Details regarding the population under study and the study sites are provided, with the sampling technique employed also explained. Information regarding the survey instrument and its design is presented, showcasing the literary sources of the survey items and their applicability to the study. The chapter wraps up with a discussion of the measures of data control, data analysis techniques (both descriptive and inferential statistical analysis) and the study's ethical consideration.

5.2 Research Philosophies

According to Al-Qeisi (2009:185), Atiku (2014:114), Wilson (2014:8) and Saunders, Lewis and Thornhill (2016:132), research philosophies involve various beliefs, perspectives and assumptions about chosen enquiry that provide a framework to dictate the research design, research strategies, and methods of investigating and developing object or construct knowledge. Abbott (1998:167-168) asserts that there must be an appropriate link between key assumptions and beliefs for a theoretical framework to demystify a phenomenon of interest, including the underlying processes to develop these assumptions, and the philosophical viewpoint needed to address these processes. Therefore, as a researcher, it is integral for one to have firm grasp on research philosophy as it is primal to their research approach in terms of clarifying the adopted design, and how evidence therein is gathered and interpreted (Wilson, 2014:8-9). Three major branches of research philosophy exist, namely: Epistemology, Ontology and Axiology. They are explained in the subsections that follow:

5.2.1 Epistemology

Epistemology pertains to making assumptions or beliefs about knowledge whereby the assumption made by a researcher determines the outcome and nature of contribution made to a body of knowledge (Saunders *et al.*, 2016:151). The authors add that the philosophy is guided by how the researcher knows what he alludes to know, what is adjudged to be acceptable, valid and legitimate knowledge, and how he can communicate this knowledge to others. Wilson (2014:9) simplifies this definition by stating that epistemology concerns itself with the nature of knowledge and how our surroundings are conceived.

Under this philosophy, positivism is an approach that objectively investigates a phenomenon in a detached manner from those involved in a research study (Wilson, 2014:9). Positivism takes a naturalist view to work with an observable social phenomenon to produce generalisations that set precedent and become law-like (Saunders *et al.*, 2016:151).

Interpretivism as a second philosophical approach under epistemology, is subjective in nature, placing emphasis on human behaviour in organisational settings, where it is upheld that humans are different to physical phenomena, in that humans are able to develop meanings or individual interpretations of phenomena out of lived experiences and cultural artefacts (Saunders *et al.*, 2016:151). In an interpretivist approach, the researcher is attached or immersed with those involved in the study, gaining deep insight about the phenomena being investigated by probing those involved (Wilson, 2014:10).

Pragmatism is the final epistemological approach that is neither positivist nor interpretivist, but rather takes cognisance of the social and physical world, with researchers focusing on the research problem in terms of ‘what’ and ‘how’ (Wilson, 2014:11). The author adds that emphasis is placed on the research problem and questions as the focal point of an investigation, that uses a mixed methods social enquiry approach to best develop the highest degree of significant insight into a study. In such an approach, a researcher may choose to administer a questionnaire to a company’s customers and follow this up with in-depth interviews with key sales staff.

5.2.2 Ontology

Ontology as a research philosophy encompasses the nature of the world and reality, and how human beings perceive the social world – with researcher-made assumptions determining the objects and phenomena to make their research the epicentre, and the investigative approach the researcher will take on them (Wilson, 2014:11; Saunders *et al.*, 2016:151). Subjectivism as an alternative view on ontology upholds that social phenomena are based on the social actors’ motivation and social interactions, whereby the researcher seeks to comprehend their subjective beliefs and attitudes that make them react (Wilson, 2014:11). For instance, a researcher may investigate management perceptions towards a specific phenomenon, taking into account every manager’s in-depth feedback based on each respective participant’s experience, perspective, and interactions within their managerial capacities.

Objectivism is an alternative view on ontology, which upholds that social phenomena are founded on external and independent realities that are beyond the social actors’ reach and control (Wilson, 2014:11; Saunders *et al.*, 2016:151).

5.2.3 Axiology

According to Saunders *et al.* (2016:151), axiology “refers to the role of values and ethics within the research process, which incorporates questions about how researchers deal with their own values and also those of research

participants.” In a nutshell, it is concerned with the researcher’s perception and values as they are independent of the research object or phenomena; as such, the researcher has an ‘outside looking in’ approach to research (Wilson, 2014:12). A second approach to axiology involves the researcher being part of the research phenomena, observing and perceiving the phenomena in a subjective manner, where his or her values are bonded within the research process (Aldawod & Day, 2017:17).

5.2.4 Summary of Research Philosophies

Figure 5-1 showcases the research methodology honeycomb (Wilson, 2014:7), highlighting the key elements of research and research methodology, namely, “research philosophy, research approach, research strategy, research design, data collection and data analysis techniques”. These elements and their layout in the research methodology honeycomb, represent that a researcher’s thought process is not ineluctably linear as depicted in longstanding research methodology models such as the research ‘onion’ by Saunders *et al.* (2016:124). Hence elements in the honeycomb are presented to show contribution to research methodology as a whole, as opposed to a series of steps that need to be logically followed (Wilson, 2014:8).

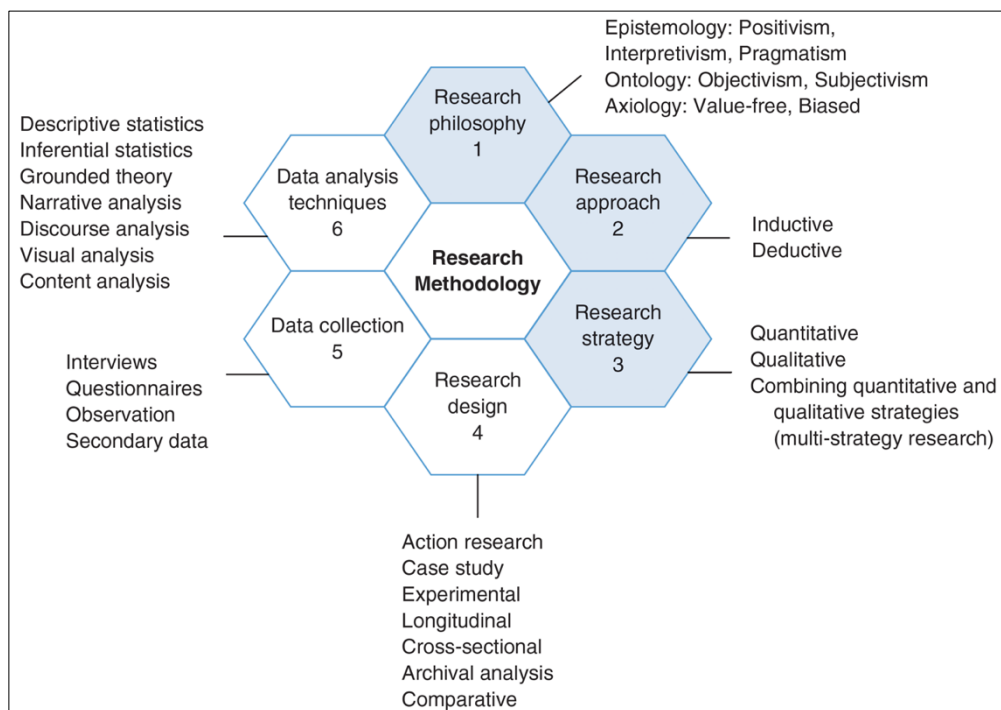


Figure 5-1: The Research Methodology Honeycomb

Source: Wilson (2014:8)

The research methodology honeycomb clearly illustrates the link between each constituent element.

5.2.5 Selected Research Philosophy

The study at hand has adopted positivism, a branch of epistemology which is deemed appropriate for conducting an exhaustive investigation among the seven constructs that are linked with the research initiative. Positivism entails the verification of theory via hypothesis testing, using a quantitative survey as the ideal mode of research. According to Haig (2013:8), this philosophy pays attention to what is observed, and considers theory as the key instrument that provides a blueprint to align claims regarding observables. In this case, the study uses a survey approach to understand the effect of IMC on the youth's adoption of m-payments services using questionnaire surveys to capture behaviour and attitudes regarding the effect of communication performance on the adoption of the payment solution. This approach is best suited to meet research needs and goals of the study, as it takes an objective perspective in viewing the phenomena in question, where the yielded findings are true and reality is comprehended from a single point of view.

The subsections above detailed research philosophy, while the following sections and subsections provide detailed descriptions of the other research methodology elements used to guide this study's research efforts.

5.3 Research Approach and Strategy

A researcher's approach to theory development is founded upon the reasoning he or she adopts and uses in a study (Saunders *et al.*, 2016:144). Research approach is branched into two main ideologies, inductive approach and deductive approach. Wilson (2014:12) defines an inductive research approach as "a theory-building process, starting with observations of specific instances, and seeking to establish generalisation about the phenomenon under investigation". The approach seeks to draw observations through research and possibly add on to the body of knowledge with new theory. Saunders *et al.* (2016:151) and Ketokivi and Mantere (2010:319) add to this by explaining that within inductive reasoning, a researcher identifies a logic argument gap between conclusion and observation, the result of which is determined to be supported by the researcher's observations. Inductive research often commences by the researcher collecting qualitative data to investigate a phenomenon, so as to develop theory in the shape of a conceptual framework (Saunders *et al.*, 2016:145).

Wilson (2014:12) states that a deductive research approach has it that a research initiative commences with and gets to apply existing theory to a phenomenon, without necessarily developing a new framework. He further indicates that when using this approach, a researcher will develop a research assumption or hypothesis underpinned by the existing theory, then come up with a strategy to quantitatively test the hypothesis. Deductive reasoning comes in place when a conclusion is logically drawn from a set of assumptions, with the conclusion proven to be true when they align with the assumptions (Saunders *et al.*, 2016:145).

Abductive reasoning is the final research approach that sets off with observing a 'surprising fact', which is a conclusion rather than a research assumption, from which a set of possible assumptions is determined and considered as (almost) sufficient to describe the conclusion (Saunders *et al.*, 2016:144). Saunders *et al.* (2016:145) add that when a researcher investigates a phenomenon based on this approach, the data collection process is meant

to unearth themes and characterise patterns so as to develop or rework existing theory, which the researcher consequently tests via additional data collection.

Table 5-1 is a summary comparing and contrasting these three research approaches.

Table 5.1: Research Approaches Characterised

	Deduction	Induction	Abduction
Logic	In a deductive inference, when the premises are true, the conclusion must also be true	In an inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory

Source: Saunders *et al.* (2016:146)

This study adopted a deductive approach, drawing from UTAUT2 and CP that were conceptualised by Venkatesh *et al.* (2012) and Laukkanen *et al.* (2009) respectively, attributing some of their key properties to the adoption of m-payments, and linking the verification of these theories through the testing of hypotheses. Quantitative data is also used to draw statistical descriptions and inferences to identify causal relationships regarding the phenomena investigated in the study. Findings from the study are further intended to be generalised.

5.4 Research Design

Research design has been defined as a systematic plan comprising assumptions and techniques that guide the collection, measurement and processing of research data in pursuit of answering research questions in a study (Al-Qeisi, 2009:230, Sekaran & Bougie, 2016:95). The research design is primarily a blueprint detailing the procedure or processes that research follows. The various research design strategies used in social research include: exploratory, experiment, observation, case study, grounded theory, action research, survey research, archival research and mixed methods (Vogt & Johnson, 2011:134; Babbie, 2014:238; Cooper & Schindler, 2014:129;

Sekaran & Bougie, 2016:96-99; Yin, 2012:4; Schwandt, 2007:131; Saunders *et al.*, 2016:150). Survey research which is pertinent to this study is discussed in the following subsection.

5.4.1 Survey Research

Vogt and Johnson (2011:390) define a survey as a research design that draws a sample of respondents from a larger population to study them through interviews or questionnaires, so as to make inferences and generalisations about the population at large. A survey allows for a system to be put in place to gather both quantitative and qualitative data from and about a population of interest so as to describe or compare the population's knowledge, behaviour, and attitudes, as regards a particular phenomenon (Sekaran & Bougie, 2016:96).

As a descriptive research strategy, survey research is often applied in business and social science research (Sekaran & Bougie, 2016:96; Babbie, 2014:261). Babbie (2014:262) elucidates that surveys usually employ questionnaires as a data collection tool to elicit respondent information that is in turn analysed – questionnaires may be structured with close-ended items that are purely geared towards quantitative analysis, or unstructured with open-ended items that allow for qualitative analysis. Survey research may take the form of a cross-sectional study (one-time) or longitudinal study; in the first, data is collected at a particular point in time, whereas the second involves gathering data more than once (Atiku, 2014:131). Cross-sectional studies are best suited for academic research settings as they are inexpensive and less time-consuming in comparison to longitudinal studies which are used to observe and measure behavioural or attitudinal changes over time in a corporate setting (Sekaran & Bougie, 2016:97).

This study embraced the use of a survey research design to unearth the influence of IMC on the use of m-payments among the youth in KwaZulu-Natal. The choice of a cross-sectional survey design was ideal for the study because it is feasible and not time-consuming, considering that the timeframe and financial resources were limited. Survey research provides primary data that is relatively accurate and unbiased, making it an effective research design. Survey research is ideal to obtain quantitative data which is appropriate to test the hypotheses set out in the study. These hypotheses are drawn from a theoretical framework on technology adoption that guides the study, to adequately meet research objectives and questions set in Chapter One of the study.

5.5 Population and Sampling

Babbie (2014:206) defines a population as a theoretically assigned aggregation of the elements within a study; an element on the other hand, is a single unit of the population which is chosen in a sample. The study population in effect, is the aggregation of elements from which the sample is selected (Babbie, 2014:207). Vogt and Johnson (2011:293) add that sampling allows a researcher to draw from and generalise about a population, whereby a sample is a representative portion of the target population or population of interest within a study.

Key to the study are the youth, individuals classified as being between 15 and 34 years of age (Statistics South Africa, 2011). In 2017, the youth population in RSA, that is, individuals aged 15 to 34 years, was reported to be approximately 20,690,550, with Generation Y individuals accounting for 75.1% of the population and Generation Z individuals accounting for the remaining 24.9% (PopulationPyramid, 2017: para 1). Statistics South Africa (Stats SA) (2017: para 4) reports that 12.1% of the youth are enrolled in tertiary education or have achieved in tertiary qualification, totalling approximately 2,503,556 individuals in total. The youth in KZN further account for 10.7% of this sub-population, that is, an estimate of 267,880 individuals (Stats SA, 2017: para 4). This study's target population comprises university students who are between the ages of 18 and 34 years, drawn from the institutions of UKZN, DUT and MUT. All three institutions have campuses situated in urban and peri-urban locations across eThekweni District and uMgungundlovu District within the Province of KZN. UKZN has five campuses, DUT has seven campuses (Durban University of Technology, 2015), with a total student population of 45,579 and approximately 23,000, respectively (UKZN, 2015a; UKZN, 2015b; SA Study, 2015). On the other hand, MUT has a registered student population of 11,066 located in one campus (MUT, 2015:9). The summated student population of these three institutions stands at 79,645.

This study focuses on the youth because, according to Davis (1999:86), university students are ideal gatekeepers with regards to technology diffusion for the rest of society. The United Nations Children's Fund (UNICEF) puts forward that among the youth aged between 15 and 24 years in SA, 72% of them own or have fulltime access to mobile devices (Sambira, 2013:19), and it adds that university students are synonymous with access to and use of mobile devices and technology in their daily lives, to the extent of performing remote financial transactions via mobile. Compellingly, Beger and Sinha (2012:4) found South African youth, especially Generation Z individuals, to be the initial adopters of mobile innovations, as the mobile penetration rate of this age-set was reported to be approximately 75%.

5.5.1 Sampling

A sample is a subset of a population, comprising elements selected from it (Sekaran & Bougie, 2016:237). The process of sampling allows the researcher to choose a required quality and quantity of elements from the population in order to conduct a study, to comprehend the population's characteristics and to enable conclusions to be drawn, and generalisations made about the population at large (Sekaran & Bougie, 2016:239). In sampling, a number of considerations are taken into account to ensure that the process is done logically and correctly. According to Sekaran and Bougie (2016:240-241), these considerations include: firstly, defining the target population in terms of geographical boundaries, time, and most importantly, the elements or units themselves. Secondly, the sample frame must be defined, giving a tangible representation of the total elements of the target population from which a sample is to be extracted. Thirdly, the appropriate sampling design is determined depending on the degree of representativeness and the need for greater generalisability, sample frame availability, time, and resources available to the researcher. Fourthly, the appropriate sample size is determined dependent on the intended research objective, preferred confidence interval, the extent of variability or expected error in the

population, time and resource constraints, and the general size of the population of interest. Sampling may be broadly broken down into two categories, namely, probability sampling and nonprobability sampling. These will be discussed in detail in the following subsections:

5.5.1.1 Probability Sampling

Also referred to as representative sampling, probability sampling ensures that every element from a finite population has an equal and known chance of being considered or included in the sample (Everitt & Skrondal, 2010:340; Saunders *et al.*, 2016:276). Probability sampling assists in overcoming conscious and unconscious sampling bias challenges by affording each element a nonzero chance of sample inclusion (Babbie, 2014:235). Ideally, the random selection of elements is a key characteristic of probability sampling. However, it is acknowledged by scholars that even the most intricately selected sample will seldom produce absolute representation, with a certain degree of sampling error being quite common. The four key probability sampling methods include: simple random sampling, systematic random sampling, stratified random sampling and cluster sampling (Babbie, 2014:220-235; Yin, 2016:95; Sekaran & Bougie, 2016:242-246; Vogt & Johnson, 2011:382-383; Marsden & Wright, 2010:110).

5.5.1.2 Non-probability Sampling

Nonprobability sampling as a sampling design has been defined as one that selects elements from the target population as part of the sample group without the elements possessing an attached likelihood to their selection (Babbie, 2014:199; Sekaran & Bougie, 2016:247). Often, sample selection in nonprobability sampling is dependent on the subjects' availability and the researcher's time and resources (Babbie, 2014:199). As such, studies employing this research design yield results that are seldom generalisable nor representative of the entire population. However, Sekaran and Bougie (2016:247) assert that some nonprobability techniques are more dependable than others. That notwithstanding, Vogt and Johnson (2011:256) state that it is impossible to estimate the sampling variability in nonprobability sampling, while the testing of statistical significance is likely to yield misleading or unreliable results. The types of techniques used in nonprobability sampling are described as follows:

- **Convenience Sampling**

Convenience sampling selects research participants on the basis of their availability, accessibility, and ability to obtain their consent, especially under unusual circumstances (Vogt & Johnson, 2011:76; Yin, 2016:334). This sampling technique is synonymous with exploratory research design, as it can assist in getting data in a fast and efficient manner (Sekaran & Bougie, 2016:247).

- **Purposive Sampling**

Also referred to as judgement or availability sampling, purposive sampling involves sampling on the basis of a researcher-specified set of criteria, selecting samples that can provide the required information, because they are the gatekeepers, or they fit a certain desired description (Sekaran & Bougie, 2016:248). This nonprobability

sampling technique is considered to be the only one capable of reasonably using statistical procedures such as those employed in random sampling (Vogt & Johnson, 2011:192), allowing for representativeness and generalisation for research findings. Vogt and Johnson (2011:193) add that purposive sampling's use is recommended when generating a probability sample is difficult, or when it is not feasible.

- Snowball Sampling

Snowball sampling is also referred to as volunteer sampling, and entails recruiting research respondents on a volunteer or self-selection basis (Saunders *et al.*, 2016:303). The authors add that it is often used in cases where the researcher is challenged in terms of identifying and recruiting elements from the required target population. The researcher initially makes contact with and recruits a unit or two from the population and asks them to identify and recruit others, until there are no more units left, or the required sample threshold is met. Alternatively, the researcher may publicise his or her need for a unique sample through ads, and then recruit respondents from those who respond (Saunders *et al.*, 2016:303).

- Quota Sampling

This is a nonprobability sampling technique that possesses a superficial similarity to stratified sampling (Vogt & Johnson, 2011:317), where elements are selected, based upon a researcher's predetermined characteristics in order for the sample to attain equitable and proportionate distribution of characteristics presumed to exist within the population (Babbie, 2014:201). Sample units are selected after the researcher weights elements having the desired different characteristics within different quotas, then weights the quotas proportionately to the total population (Sekaran & Bougie, 2016:248). Babbie (2014:201) and Sekaran and Bougie (2016:249) add that quota sampling attempts to ensure sufficient representativeness albeit with selection bias challenges.

Table 5-2 presents a summary of the advantages and disadvantages of the various probability and nonprobability sampling techniques discussed in this chapter.

Table 5-2: Sampling Techniques Characterised

	Technique	Merits	Demerits
Probability sampling	Simple random	Comprehensible Good generalisability	Difficult sample frame construction Costly Low precision Representativeness not assured
	Systematic	Improved representativeness No need for sampling frame Simpler to implement than simple random sampling	Prone to systematic biases Representativeness may be lowered
	Stratified random	Precise Most accurate probability sampling technique Inclusivity of all population subsets Subset comparisons made possible	Stratification variables are hard to define Impractical when several strata are identified Each stratum requires sampling frame Time-consuming Costly
	Cluster	Simple implementation Cost-effective Suited for non-uniform populations	Inaccurate Poor reliability and efficiency owing to subset homogeneity within clusters Complex computation and interpretation of results
Nonprobability sampling	Convenience	Inexpensive Convenient Not time-consuming Suited for piloting	Selection bias Not generalisable Inappropriate for both causal and descriptive studies
	Purposive	Inexpensive Convenient Not time-consuming	Questionable generalisation of findings
	Snowball	Rare characteristics can be estimated	Time-intensive Questionable generalisation of findings
	Quota	Ensures minority participation in a study Possibility of sample control for required characteristics	Selection biases Representativeness not quite assured

Adapted: Sekaran and Bougie (2016:249)

5.5.1.3 Selected Sampling Design and Technique

In the context of this study, nonprobability sampling was opted for, utilising quota sampling technique to ensure proportionate sample representation from respondents based in all three higher education institutions of choice. Beyond being a time and cost-effective sampling technique, quota sampling has been effectively used in a study by Teoh, Chong, Lin and Chua (2013), which investigated electronic payment adoption, a study similar to the current one.

Given the total sample size requirement for the study that was guided by the total student population, samples were effectively apportioned according to each institution's population share in the total population. The weighting considerations are presented in Table 5-3.

Table 5-3: Quota Sampling Distribution Consideration

	Student Population	Weight
UKZN	45 579	0,6
DUT	23 000	0,3
MUT	11 066	0,1
Total	79 645	1
*Sample distribution ratio is 6:3:1		

5.5.1.4 Sample Size

This refers to the number of respondents chosen for inclusion into the study in order to extract data from them. Vogt and Johnson (2011:347) indicate that a larger sample size is preferred as it lowers the standard errors. According to Babbie (2014:212-213), Sekaran and Bougie (2016:259) and Maylor and Blackmon (2005:198), sample size selection is dependent on the level of confidence or confidence interval required in one's study to provide adequately generalisable data that may be in line with that of the target population as a whole. Maylor and Blackmon (2005:199), Wilson (2014:201-202) and Sekaran and Bougie (2016:259) have summarised sample size selection to be dependent on the following factors:

- Total population and its variability
- Required confidence interval
- Desired degree of accuracy
- Number of independent variables to be studied
- Statistical operations to be carried out
- Comparative sample sizes of other similar studies

According to Pallant (2011:183), in studies employing CFA, the recommended sample size should contain at least 150 cases. Vogt and Johnson (2011:348) also indicate that for multiple regression to be conducted, a study must have a minimum of 50 cases in addition to eight cases recorded for each independent variable; that is, $50 + 8N$; where N represents the number of independent variables. In the case of this study, the recommended minimum sample size would be 98 cases. On the other hand, similar studies concerned with internet and mobile banking and mobile payments have employed sample sizes as follows: 320 (Raman & Don, 2013:159), 336 (Hamid & Cheng, 2013:29), 264 (Teo & Noyes, 2014:55), 249 (Martins *et al.*, 2014:6) and 251 (Laukkanen *et al.*, 2009:115). The average sample size for these select studies amounts to 256 cases.

According to Saunders *et al.* (2016:283) the formula used to determine the required sample size in a non-probability sampling design is indicated as follows:

$$n^a = \frac{n \times 100}{re\%}$$

Where: n^a = determined sample size; n = estimated minimum sample size; $re\%$ estimated response rate.

The estimated sample size was determined by averaging the recommended sample size requirements required to conduct CFA (150 cases) and the mean sample size of similar studies in the research area (256 cases), yielding an estimated value of 203 minimum cases. Additionally, similar studies (refer to Table 6-1) have averaged a response rate of 53%. Therefore, the absolute sample size to be used in this study was determined to effectively include 383 cases, given that all the requirements for sample size selection were met. Utilising quota sampling, the cases were split in the ratio 6:3:1, with UKZN, DUT and MUT each contributing 230, 115, and 38 respondents respectively, to the total sample size (refer to Table 5-3).

5.6 Data Collection Methods

Data collection is a key process within the research design of a study or research initiative (Sekaran & Bougie, 2016:111). It entails obtaining or gathering data from either first hand, second-hand or third-hand sources (Yin, 2016:160). Data collection methods are broadly branched into two, namely, primary methods (that are concerned with first-hand evidence) and secondary methods (that are concerned with second-hand and third-hand evidence). These data collection methods and their related tools are discussed in the following sections:

5.6.1 Primary Methods

Primary data or primary evidence is characterised as that which is gathered first-hand by the researcher for the purpose of a given study, without the data being filtered down or recorded by some other party other than the researcher alone (Yin, 2016:160; Sekaran & Bougie, 2016:38). Sekaran and Bougie (2016:395) further elaborate that primary data is used to obtain findings regarding a study's variables of interest, to allow for subsequent analysis to unearth possible solutions for the research problems. The data collection tools used to obtain primary data include interviews, focus groups, observation and questionnaires (Saunders *et al.*, 2016:388; Babbie, 2014:329; Sekaran & Bougie, 2016:394; Yin, 2016:151).

Out of the various primary data collection techniques listed above, the study employed questionnaires, because similar studies in the area of behavioural perception have used the data collection tool. According to Al-Qeisi (2009:189) and Saunders *et al.* (2009:368), questionnaires are able to capture respondents' perceptions and assist in determining cause and effect relationships between or among variables, using quantitative data analysis techniques.

The following subsection details questionnaires as a primary data collection method as used in the study.

5.6.1.1 Questionnaires

Vogt and Johnson (2011:316) define a questionnaire as a self-report data collection tool that includes a series of written questions or items to which research participants respond. Questionnaires can be used to elicit data that is ideal for both qualitative and quantitative analysis, especially in survey research designs (Babbie, 2014:262). They contain open-ended and/or close-ended items or questions; whereby open-ended items require the respondent to provide their own answer, while close-ended items require the respondent to select an answer from those predetermined by the researcher (Babbie, 2014:262-263). Close-ended items instil a form of structure to survey research with standardised responses that make it easy to process and analyse quantitatively (Wilson, 2014:148; Babbie, 2014:263).

Questionnaires may be distinguished by the mode of administration used by the researcher, either personally, via mail, or electronically (online) (Sekaran & Bougie, 2016:143). Personally administered questionnaires are ideal when the research initiative is confined to a local area and the researcher and his or her team go around soliciting respondents to take part in the survey. Mail administered questionnaires are sent to the prospective research participant via post, and self-administered by the respondent. These questionnaires are often used in business research. However, with the advent of mobile technology and the internet, they are being used less and less often. Finally, electronic or online questionnaires are distributed to several respondents by posting a URL on a website, blog or social media. Online survey development packages assist in the design and administration of these questionnaires; however, it is up to the researcher to obtain a mailing list to send questionnaires to intended respondents.

Table 5-4 distinguishes the merits and demerits of these three formats of questionnaires:

Table 5-4: Merits and Demerits of Questionnaire Formats

Questionnaire	Merits	Demerits
Personally administered	<ul style="list-style-type: none"> • Rapport can be developed to motivate respondents • Doubts may be clarified • Quite cost-effective if group sampling is done • High response rate 	<ul style="list-style-type: none"> • Time intensive
Mail administered	<ul style="list-style-type: none"> • Anonymity of respondents is guaranteed • Wide geographic reach • Adequate time for participants to respond • Convenient for researcher 	<ul style="list-style-type: none"> • Low response rate • No clarification of doubts raised by respondents • Labour intensive, needs constant follow-up for non-respondents
Online or electronically administered	<ul style="list-style-type: none"> • Simple administration • Inexpensive • Adequate time for participants to respond • Very convenient 	<ul style="list-style-type: none"> • Respondents must be computer literate • Respondents must have access to computers or mobile handsets • Low response rate • Need for a sample frame

Adapted: Sekaran and Bougie (2016:143)

5.6.2 Secondary Methods

Secondary data is that which has been collected by others and presented in the form of company archives, journals, academic research papers, newspaper publications, published and unpublished literary works, industry-specific expert blogs, interviews, corporate websites, and the world wide web (Sekaran & Bougie, 2016:37). Yin (2016:159-160) refers to secondary data as being second-hand evidence, which is a constructed account of happenings from another source's perspective, that reflects a relativist instead of a realist approach. Secondary data may be collected in the form of desk research and interviews (Sekaran & Bougie, 2016:37). However, this study is only concerned with obtaining quantitative first-hand data, using a primary data collection technique; hence, secondary data is not applied.

5.6.3 Selected Research Instrument

The researcher chose to use personally administered questionnaires as the preferred data collection instrument to obtain primary data regarding the youth's perception of the adoption of m-payments. A questionnaire was best suited as it is able to capture perceptual views at a particular moment in time after which inferences can be rendered using quantitative analytical measures (Galliers, 1992; Al-Qeisi, 2009:189). Saunders *et al.* (2009:368) further indicate that a survey creates an avenue for researchers to examine and illuminate on existing relationships between variables, primarily as far as cause-and-effect relationships are concerned. Personally administered questionnaires were also opted for because they are cost-effective, they enable favourable response rates from research participants, and the personal interaction works to inspire respondent cooperation and participation in the study.

The personal administration of the survey is also ideal for this study, as respondents who would ordinarily be inaccessible via other data collection methods, are reached. For instance, electronically administered surveys could not be used in this study because it was difficult to obtain a mailing list of all the students emanating from the three universities included in the study. Personally visiting and conducting field research within various campuses of these institutions, however, made it possible to access the required research participants efficiently.

5.6.3.1 Survey Design

In designing a questionnaire, Cooper and Schindler (2014:301-302) indicate that great care must be taken to ensure that the question or item ordering is logical, the wording of scale items is appropriate, the attached introduction and instructions are clear, and the survey items' overall presentation is of good quality. These considerations encourage the accurate provision of responses and the completion of questionnaires, and discourage participants from not responding to certain survey items. In relation to the wording of scale items, the questionnaire designed for this study attempted to avoid leading, loaded or biased questions, and difficult vocabulary and sensitively worded questions. Additionally, the participants needed not to have to rely on memory and recall in responding, as prescribed by Cooper and Schindler (2014:304). The preface of the questionnaire contained an introductory letter that clearly described the study's objectives and communicated to the respondents that participation in the study was voluntary and confidential.

The questionnaire utilised in this study (see Appendix A) contained items adapted from a number of studies and scholarly articles within the area of technology adoption and marketing communications, therefore standardising the survey instrument. Using items from prior studies ensures that one's survey instrument will exhibit internal reliability, convergent and discriminant validity (Koenig-Lewis, Palmer & Moll, 2010:418). The structured responses in the survey were based on a five-point Likert scale, offering fairly straightforward alternatives with linked instructions. Everitt and Skrondal (2010:252) and Cooper and Schindler (2014:278) define a Likert scale as a summated rating scale used in studies that involve attitudes and behaviour, whereby the predetermined alternative responses are scored and graded according to the degree of agreement or attitudinal favourableness, relevant to the statement described in the scale item.

Saunders *et al.* (2016:457) state that Likert-scales are best used in rating questions or statements, and are ideal in collating opinion data. In this study specifically, the rating questions or statements included in the questionnaire, adopted a Likert-style rating that was based on a five-point rating scale, requiring the research participants to disagree or agree with the statements. The responses to the rating questions are presented in a straight line format in accordance to a respondent's likelihood to process information and map their judgement, from two extreme separate points of disagreement to disagreement (Dillman, Smyth & Christian, 2014:134; Saunders *et al.*, 2016:457). As such, a balanced rating scale with responses gravitating around an explicit neutral point of opinion was used, that is, 'Strongly disagree, Disagree, Neutral, Agree and Strongly agree' (Saunders *et al.*, 2016:458-459). As the most popular variation of the summated rating scale, it is simple and fast to construct, more reliable and provides a larger volume of data in comparison to other scales (Cooper & Schindler, 2014:278). The Likert scale provides a means for realising interval measurement quality (Jeran & Završnik, 2013:208).

In the context of this study, the Likert scale was deemed appropriate because it has proved to be effective in empirically evaluating attitude toward phenomena, consumer perceptions and behaviour (Leedy & Ormrod, 2005:183; Wilson, 2014:253). The study adopted a five-point Likert scale, with pre-coded responses indicated from one to five, depending on the degree of agreement with the statements in the questionnaire. The survey instrument contained a total of 30 scale items, excluding questions regarding the sample's demographic profile. The breakdown of the questionnaire is as follows:

- Section A – concerned with obtaining demographic data from the research respondents for statistical purposes. Nominal scales were used for analysis of data in this section.
- Section B – concerned with obtaining research participant's responses regarding their awareness of and prior experience with m-payments services available in the country. Nominal scales were once again used for analysis.
- Section C – concerned with obtaining responses on the research participant's attitudinal perceptions regarding the use of m-payments. Responses to these items were treated as interval data.
- Section D – concerned with the respondents' perception on the effectiveness of marketing communications of m-payment service operators. Interval data was used for the responses.
- Section E – concerned with assessing the use behaviour of m-payments services. Responses to this item were treated as ordinal data.

Scale items included in Sections C and E were largely adopted from scholarly work by Venkatesh *et al.* (2012:178) that gave rise to UTAUT2, a theory used to measure consumer acceptance and use of technological innovations. The scale items adopted to measure CP in Section D were sourced from Laukkanen *et al.* (2009), where their initial application was to gauge customers' perceptions of a commercial bank's communication performance to counter functional and psychological resistance to using e-banking. The items used to measure use behaviour and its corresponding responses were adopted from a study by Martins *et al.* (2014), where internet banking adoption was determined by usage behaviour, denoted by various frequencies of use.

Table 5-5 outlines the constructs used in the questionnaire together with their literary sources:

Table 5-5: Primary Data Collection Tools Characterised

Construct	Source
Communication Performance	Laukkanen <i>et al.</i> (2009:116)
Functional Risk	Venkatesh <i>et al.</i> (2012:178) and Martins <i>et al.</i> (2014:11)
Social Influence	Venkatesh <i>et al.</i> (2012:178)
Facilitating Conditions	Venkatesh <i>et al.</i> (2012:178)
Price Value	Venkatesh <i>et al.</i> (2012:178)
Behavioural Intention	Venkatesh <i>et al.</i> (2012:178)
Use Behaviour	Im <i>et al.</i> (2011:5) and Martins <i>et al.</i> (2014:11)

5.6.3.2 Pilot Testing

The survey instrument underwent pilot testing before embarking on the main survey. Everitt and Skronidal (2010:326) describe a pilot study or pilot survey as “a small scale investigation carried out before the main study, primarily to gain information and to identify problems relevant to the survey...”. It is performed as a precursor to the full-blown quantitative survey so as to improve the survey instrument’s reliability and validity, consequently allowing the researcher to modify survey items to the respondents’ suitability. Wilson (2014:166) adds that pilot testing allows for the researcher to ensure construct validity through pretesting the questionnaire and confirming that it ideally measures what it is intended to measure. According to Cooper and Schindler (2014:85), it is carried out to uncover the flaws inherent in the design of the questionnaire by generating substitute data that can be used in probability sample selection.

The pilot testing phase of this study was conducted in August 2016, with the questionnaire being distributed to fifteen students at UKZN’s Westville Campus and two post-doctorate academic staff members at the same location. The pilot sample was requested to fill in the questionnaire and further provide feedback regarding the survey design and wording of items therein. During this phase of the study, feedback revealed that there was no need to group the youth into several age sets as captured by the demographic profile section of the questionnaire, because the target participants were viewed to be a singular age grouping. A second item in Section B of the questionnaire regarding the duration of experience the respondents had with m-payments was excluded because experience was not a required variable in determining m-payments use – the target respondents included both current and potential users. It was also deemed appropriate to make the actual questionnaire fit into a maximum of two-pages as opposed to the initial three pages, so as to encourage respondent participation. Overall, the feedback received informed the changes incorporated into the final questionnaire that was administered to the research participants. The following subsection discusses the administration of the survey.

5.6.3.3 Survey Administration

The actual survey was conducted between 15 March 2017 and 8 August 2017, with personally administered questionnaires distributed across the Durban and Pietermaritzburg-based campuses of UKZN, MUT and DUT.

The survey administration exercise distributed 383 questionnaires to research participants within lecture halls, on-campus cafeterias, and student residences. Individual respondents were recruited on the basis of their availability and willingness to participate in the survey. At specific lecture hall, lecturers were contacted in advance to request their permission to grant access to their students to participate in the survey at the end of their lectures. On the other hand, respondents in student residence buildings were approached at common areas and recruited into the study. Further recruitment of research participants occurred in designated university cafeterias where students sitting in groups were approached, thereby minimising the time spent on distributing questionnaires to single individuals.

The purpose of the exercise was clearly communicated to the respondents before handing them out. Attached to each questionnaire was an introduction, an informed consent letter, a confidentiality clause, and a consent form that was to be signed by each participant, to signify his/her approval for participation. The use of personally administered questionnaires made it convenient to collect responses immediately upon completion and also encouraged participation, leading to a favourable response rate and fully completed surveys.

However, the drawbacks of personally administering the questionnaires included the high expenses incurred in travelling from one campus to the other and getting access to groups of students in lecture halls during or after lectures. In addition to this, there were several student protests prior to, and at the time of conducting this survey, leading to disruption of campus activities and consequent lack of access to students to participate in the study, thereby prolonging the data collection phase by over four months.

5.7 Data Analysis

Cooper and Schindler (2014:374) state that data analysis appertains to the explicit reduction of the collected data and aggregating it into a convenient and workable size, to enable the development of summaries and drawing of patterns from the data via statistical approaches. In social science, studies such as the study at hand, Frankfort-Nachmias, Nachmias and DeWaard (2015) indicate that statistical methods of analysis are appropriate for quantitative data. At the conclusion of the field survey, completed surveys were coded and captured on IBM Statistics Version 25, to allow for statistical operations to be performed. Both descriptive and inferential statistical measures were utilised.

The subsections that follow detail the quantitative analysis techniques applied in this study.

5.7.1 Descriptive Analysis

Descriptive statistical measures are utilised to illustrate the “centre, spread and shape of distributions” and are key preliminary measures to describe occurrences (Cooper & Schindler, 2014:398). Descriptive data, also known as nominal data, are meant to tally the quantity of occurrences within each variable category, with these categories

required to be unambiguous and discrete (Saunders *et al.*, 2016:500). Tools used in descriptive analysis come in handy when analysing a sample's categorical or demographic data. This is done through the use of frequency distribution tables to depict the total count of occurrences and cumulative percentages of various variable categories (Atiku, 2014:159; Sekaran & Bougie, 2016:288). Sekaran and Bougie (2016:288) add that descriptive data can be further visually presented in the form of bar graphs, pie-charts, or histograms.

The mean is a measure of central tendency for a continuous variable (Everitt & Skrondal, 2014:274) used in the study, and is calculated as follows:

$$\bar{X} = \frac{\sum \chi}{n}$$

Where: \bar{X} = mean; \sum = summation; χ = each occurrence; and n = total number of occurrences.

Standard deviation is another descriptive analysis method for testing dispersion, denoting the degree of variation that is spread around the mean value, for a variable comprising numerical data (Saunders *et al.*, 2016:730), and is calculated by obtaining a positive square root of their variance (Sekaran & Bougie, 2016:289). Standard deviation is calculated using the formula indicated below:

$$\alpha = \sqrt{\frac{\sum f(\chi - \bar{X})^2}{\sum f}}$$

Where: α = standard deviation; f = frequency of each class; χ = midpoint of each data class; \bar{X} = mean of each class; and \sum = summation.

5.7.2 Inferential Analysis

Inferential statistics entail the estimation of a population's values and the process of verifying statistical assumptions or hypotheses (Cooper & Schindler, 2014:430). This form of statistical operations focuses on drawing conclusions regarding a population based upon the observations made on its sampled units (Everitt & Skrondal, 2011:217). Parametric and nonparametric tests are used to check for statistical significance during hypothesis testing in inferential analysis (Saunders *et al.*, 2016:440). Parametric tests are performed using interval and ratio data and when the sample distribution is normal, while nonparametric tests are performed using nominal and ordinal data, and when the sample is not normally distributed. This study made use of parametric statistics with the aid of IBM Statistics Version 25 and Amos 23 to run multiple linear regression analysis, CFA and SEM. These data analysis techniques are detailed in the following subsections.

5.7.2.1 Standard Multiple Linear Regression

Saunders *et al.* (2016:660) describe multiple regression as “a statistical tool used to develop a self-weighting estimating equation that predicts values for a dependent variable (DV), from the values of independent variables

(IV); and controls confounding variables to better evaluate the contribution of other variables, and tests and explains a causal theory.” According to Pallant (2016:246), each independent variable is measured on the basis of its predictive strength beyond that projected by all other IVs onto a DV. The coefficient of multiple determination (R^2) obtained in this parametric test, denotes the extent of the goodness of fit of the yielded multiple regression equation (Saunders *et al.*, 2016:549-550). If the yielded R^2 value (for instance 0.5) is multiplied by 100, it can be interpreted to mean that the regression equation explains, or is a predictor of 50% of the variation in the DV.

The assumptions of multiple regression analysis, according to Pallant (2016:249-250) and Saunders *et al.* (2016:548-549) include the following:

- Sample size – ideally, a large sample is required for generalisability of results; as such, it is suggested that the sample size be a minimum of: $n > 50 + 8m$, where m = the number of IVs.
- Multicollinearity and singularity – this concerns the relationships among IVs whereby in the existence of multicollinearity, IVs are highly correlated with a coefficient reading of 0.9 and beyond. In the case of singularity, one IV is in essence a combination of IVs. A poor regression model is generated in the presence of multicollinearity and singularity.
- Outliers – all variables to be analysed either independent or dependent must not have residual values greater than 3.3 or less than -3.3. Such extreme scores are quite sensitive to producing a successful regression model (Tabachnick & Fidell, 2013:128).
- Normality, linearity, homoscedasticity, independence of residuals – these are various elements of the scores’ distribution and the type of primal relationship between obtained and predicted DVs. They can be verified via the residuals scatterplot, with normality requiring residuals to be normally distributed, linearity requiring residuals to possess straight-line relationships, and homoscedasticity requiring the variance of residuals to be similar for all predicted scores.

In the study, multiple regression analysis was used to determine the influence of communication performance as an IV on BI as a DV, with the mediating effect of FR, SI, PV and FC. The underlying assumptions of multiple regression were further adhered to.

5.7.2.2 Student’s t Test

Also known as the Independent Samples t Test, the Student’s t test is a parametric test that “compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different” (Kent State University, 2018: para 1). According to Everitt and Skrondal (2010:420), it is a significance test to assess hypotheses regarding population means, with the assumption that the two populations have a normal distribution – extremely skewed distributions jeopardise the validity of the test. Kent State University (2018: para 3) asserts that data subjected to the Student’s t test must have no outliers, and must possess homogeneity of variances to avoid producing inaccurate p values. The variables of interest required to conduct this parametric test include an independent or grouping variable with nominal or ordinal data, and a

dependent variable with continuous or interval data (Kent State University, 2018: para 2-3). As indicated by Everitt and Skrondal (2010:420) and Kent State University (2018: para 6), the Independent Samples t test is calculated using the following formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where: \bar{x}_1 and \bar{x}_2 = means of samples n_1 and n_2 obtained from each population, and s_p = approximated common variance, which is denoted by;

$$s_p = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

Where: s_1 and s_2 = standard deviation of samples n_1 and n_2 .

The Student's t Test is used in this study to assess whether there is a statistical significance regarding the difference of male and female perceptions of PV and FC, literature and assumptions uphold that they are stronger in females.

5.7.2.3 Exploratory Factor Analysis

EFA is a test for finding patterns among variables (or factors) so as to establish if there is a fundamental combination of original factors outlining the original structure, by determining what contributes to the variance in a measure (Cooper & Schindler, 2014:657). According to Pallant (2016:314), it is used in the initial stages of a study to assess or explore the interrelationships among a set of factors in a structure. Ullman (2006:37) adds that EFA serves to reveal the real number of variables and their analogous construct items within the survey instrument. EFA works as a measure of the survey instrument's content validity, that is, "the extent to which it provides adequate coverage of the investigative questions guiding the study" (Cooper & Schindler, 2014:257). According to Pallant (2016:319) and Hadi, Abdullah and Sentosa (2016:216-217), the common decision rules used to assess EFA and the number of factors include:

- Kaiser's criterion – Also known as the eigenvalue rule, where the eigenvalue of a variable translates to the amount of total variance of a measure explained by the variable. The rule of thumb is that variables with a value of ≥ 1.0 or factors explaining 70-80% of total variance are retained for further analysis.
- Bartlett's Test of Sphericity – This measures the strength of the factors' relationship by way of multivariate normality of the set of variables. A significant value of < 0.05 denotes that the factors do not give an identity matrix and are multivariate normal, and ideal for additional analysis.

Principal axis factoring (PAF) was chosen as the ideal method for conducting EFA in the study because it is adjudged to be well suited for social and behavioural science research initiatives (Warner, 2013:784-785). PAF is

considered to be a mathematically complex yet convenient approach to EFA that aims to comprehend the common variance in a measure, using a small set of latent variables (Warner, 2013:785).

EFA was utilised in the study to determine the relationship of the variables used and further provide a criteria for the variables to be considered for further testing via CFA.

5.7.2.4 Confirmatory Factor Analysis

Everitt and Skrondal (2011:161) define CFA as “a procedure that postulates that the correlations or covariances between a set of observed variables, arise from the relationship of these variables, to a small number of underlying, unknown, and unobservable latent variables... The model contains regression coefficients or factor loadings of the observed variables on the latent variables.” Brown (2013:257) refers to CFA as a latent variable measurement model for determining the number and shape of latent variables accounting for the variation and covariation among observed indicators.

In order to estimate a CFA result, a measurement model (MM) needs to be identified on the basis of known information (such as the variances and covariances within the input matrix) and an individualised set of estimated values linked to each parameter in the MM, to include the factor loadings and correlations (Brown, 2013:261). Essentially, in CFA the researcher seeks to provide a model that will interpret and detail hypothetically tested data with few parameters, and establish whether the data with a factorial structure, is well coordinated (Hu & Bentler, 2009:12; Alavifar, Karimimalayer & Anuar, 2012:328). In order to assess the factorial structure of a MM, model fitting tests are applied (Alavifar *et al.*, 2012:327). These are explained in the subsection that follows.

- Goodness-of-Fit Indices

In factor analysis, the MM developed has goodness-of-fit indices (GFI) that describe how efficiently the model estimates parameters such as factor loadings, factor correlations, error covariances, and how the model can replicate the sample data’s observed relationships (Brown, 2013:263). The author adds that these indices also inform the degree to which model-implied relationships duplicate relationships present in the sample data. Some of the GFIs used in this study include:

- Chi-squared statistic (χ^2 or T) – an absolute fit index that assesses the degree of discrepancy between the sample matrix and the fitted covariance matrix (Hu & Bentler, 2009:2; Newsom, 2017:1).
- Degrees of freedom (df) – assesses the inconsistency between the sample and covariance matrix (Hu & Bentler, 2009:16).
- Normed chi-square (CMIN or χ^2/df ratio) – an absolute fit index that is obtained by dividing χ^2 by df; the recommended coefficient is < 5 (Atiku, 2014:213; Newsom, 2017:1).
- Comparative fit index (CFI) – a noncentrality-based index that assesses model fitness by drawing comparisons from chi-square values of the MM and the baseline model (Hooper, Coughlan & Mullen, 2008:55; Newsom, 2017:2). The CFI value is recommended to be ≥ 0.90 (Alalwan *et al.*, 2018:132).

- Incremental fit index (IFI) – a relative fit index that compares the chi-square value ratios for the tested model, to the baseline model (Newsom, 2017:2). The IFI value is recommended to be ≥ 0.90 (Hu & Bentler, 2009:17; Newsom, 2017:2).
- Root mean square error of approximation (RMSEA) – a noncentrality-based index that assesses how well the MM is matched to the population covariance matrix (Katou & Budhwar, 2010:32; Newsom, 2017:2). The RMSEA value is recommended to be between 0.05 and 0.08 to exhibit fit approximation (Hooper, 2007:54; Mimouni-Chaabane & Volle, 2010:34).

It is recommended to use at least four GFIs when reporting model fit because a single index used on its own presents a weakness by not being able to guarantee theoretical sense or correctness of one's model despite having an acceptable value (Stephanie, 2017: para 4). Therefore, several model fit indices used must point toward a similar general conclusion for model acceptance. Once an MM is accepted, it can be subjected to structural modelling.

5.7.2.5 Structural Equation Modelling

SEM is defined as a statistical operation “used to test complex relationships between observed (measured) and unobserved (latent) variables, and the relationships between two or more latent variables” (Little, 2013:203). It is an effective measure to examine models that are path analytic and encompass mediating variables, including a number of constructs with several items therein (Atiku, 2014:163). SEM is a powerful multivariate analysis technique that spawns from multiple regression analysis, and enables researchers to measure the direct and indirect effects, and to perform model testing using several latent variables (Alavifar *et al.*, 2012:326). Each latent variable is determined by several indicators, and one or several measured variables with several indicators, by simultaneously using a number of regression equations (Alavifar *et al.*, 2012:326).

According to Blokland, Mosing, Verweij & Medland (2013:204), path diagrams in structural models give a graphical representation of the model in question. They add that these paths can be denoted as mathematical equations for easier interpretation. Evertitt and Skronidal (2011:416) indicate that the condensed form of a structural equation model is attained by solving for latent variables, in terms of measured variables to give the following formula:

$$y = (I - B)^{-1}\Gamma x + (I - B)^{-1}\zeta$$

Where: y = vector of observed variables; B = parameter matrix governing relations among measured variables; Γ = the regression parameter matrix ruling the regressions of measured and latent variables; ζ = vector of random disturbance.

According to Alavifar *et al.* (2012:326), SEM commences with a hypothesis or assumption as causal model, essentially in the form of a conceptual framework, whereby the framework and concepts therein are operationalised so as to allow testing of their relationships. The causal model is then measured against collected

sample data to indicate model fit. SEM is indicated to be an effective tool for the extension of a theory or for testing hypotheses within a theory (Alavifar *et al.*, 2012:327).

SEM was used in this study to extend the theory of UTAUT2 by making an addition of CP to hypothetically test the causal relationships of variables therein.

5.8 Reliability and Validity

Reliability is the extent to which a survey tool is able to reproduce similar results consistently in a manner that is devoid of random or unstable variability (Everitt & Skrondal, 2011:365; Cooper & Schindler, 2014:260). Cronbach's alpha coefficient test is utilised to ensure that the survey instrument possesses the required degree of internal consistency for all the scale items (Alalwan *et al.*, 2018:130). As a rule of thumb, the recommended coefficient value should be ≥ 0.7 for all constructs within the survey instrument to be deemed to have an acceptable level of internal consistency (Wu & Wang, 2005:724; Alalwan *et al.*, 2018:130). In this study, reliability was assessed using Cronbach's alpha coefficient test, ensuring that the recommended coefficient value was met.

Validity refers to the ability of the survey instrument to measure what it is intended to measure, and ideally represent the reality of what is measured (Saunders *et al.*, 2016:450). In the context of the questionnaire designed for and used in this study, content and construct validity are key. Content validity points towards the survey instrument's ability to comprehensively cover the research questions (Saunders *et al.*, 2016:450), which is ensured by presenting relevant literature that guides survey design (Cooper & Schindler, 2014:257). As previously stated, survey items in this study were adopted from preceding studies in technology adoption, especially those utilising UTAUT2 as a baseline theoretical framework. On the other hand, construct validity is concerned with the survey instrument's ability to identify the constructs or scale items (for example behavioural or attitudinal scales) being measured in a study (Cooper & Schindler, 2014:257; Saunders *et al.*, 2016:451). This can be ensured using convergent-discriminant techniques and exploratory and confirmatory factor analyses (Cooper & Schindler, 2014:257). In this study, convergent-discriminant validity was assessed using the significance of all factor loadings and the average variance extracted (AVE) for each construct, with the AVE required to be $> .5$, so as to support convergent validity (Mimouni-Chaabane & Volle, 2010:34). Discriminant validity of the MM is assessed using maximum shared square variance (MSV) and average squared variance (ASV), where the AVE value should be greater than MSV and ASV values, to support discriminant validity (Mimouni-Chaabane & Volle, 2010:34; Hair, Black, Babin & Anderson, 2010).

5.9 Ethical Consideration

The implementation of this study followed the strict guidelines stipulated by UKZN's Humanities and Social Science Research Ethics Committee (HSSREC) so as to ensure the study's authenticity and credibility. In order to embark on the research, an ethical clearance application was submitted together with gatekeeper's letters

obtained from DUT, MUT and UKZN, granting permission for the study to be conducted at these institutions. The HSSREC issued an approval letter on 28 September 2016 (protocol reference number HSS/0857/016D), authorising the commencement of the field survey (Refer to Appendix L). In the course of the field research, the following ethical considerations were adhered to:

- Permission to collect data at various institutions was sought from the relevant parties as evidenced by issued gatekeeper's letters.
- All respondents who took part in the study did so at their own free will, as indicated in the informed consent forms they duly signed.
- The anonymity of research respondents was ensured, and their identity and responses kept confidential.
- The surveys were administered within campuses during reasonable operating hours.
- Data gathered in the study is guaranteed to be left under the care of UKZN's School of Management, Information Technology and Governance for the next five years as stipulated by the HSSRC.
- All the cited sources of secondary data used in the study are well referenced to avoid plagiarism.

5.10 Conclusion

This chapter has presented a detailed description of the research paradigms, their appropriate application, and included their strengths and weaknesses. This was followed by a characterisation of various research approaches and strategies, and research design. A survey research design was selected to provide a blueprint for the study. The choice of a survey design is supported by several preceding studies in technological innovations adoption where samples have been obtained to draw quantitative data. The population selected in this study was comprehensively described, including their appropriateness to this study; it has been found by scholars that the youth are the best demographic to adopt new technologies due to their tech-savvy nature. Various sampling techniques were detailed, and the one chosen for this study was quota sampling, because it was best suited to proportionately include various groups drawn from the three institutions of higher learning in KZN. The design of the survey instrument was also described, with the considerations taken into designing the questionnaire and administering it, presented as well. This was followed by a presentation of the descriptive and inferential data analysis techniques used in the study. The chapter then described the ethical considerations observed in the study. The following chapter delves into the analysis and presentation of the sample data.

CHAPTER SIX: DATA ANALYSIS AND PRESENTATION OF RESULTS

6.1 Introduction

This chapter gives a detailed description of data gathered from the survey that was carried out and analysed using IBM SPSS Statistics Version 25 and Amos Version 23.0. As prescribed by research objectives outlined in the first chapter, the study's findings are presented in a similar logical order. The descriptive data in this chapter is presented in the form of frequency tables, pie charts, and bar graphs, and inferential data is presented in the form of tabulations. Inferential statistical techniques utilised in this study include binomial testing, multiple linear regression, Student's t test, EFA and CFA. Research objective four (iv) is tested using SEM through Amos Version 23 so as to determine causal paths analysis of the variables within the conceptual framework.

6.2 Survey Response Rate

At the initial stages of the research, the study envisaged to recruit a total of 383 respondents given the sample size computations applied in quantitative research. The survey, which was conducted between 15 March 2017 and 8 August 2017, successfully obtained fully completed questionnaires from 279 respondents (N=279), denoting a response rate of 72.8%. This response rate is deemed to be sufficient to qualify the study for data analysis given that the required survey threshold needed to run statistical operations in the study was met.

Table 6-1 provides sample size and response rates achieved in peer reviewed and accepted studies in the research area.

Table 6-1: Sample Size and Response Rates of Related Studies

Author	Study	N	*RR (%)
Al-Qeisi and Al-Abdallah (2014)	Website design and usage behaviour: An application of the UTAUT model for internet banking in UK	316	79%
Baptista and Oliveira (2015)	Understanding mobile banking: The Unified Theory of Acceptance And Use of Technology combines with cultural moderators	252	21%
Oliveira <i>et al.</i> (2016)	Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology	203	26%
Alalwan <i>et al.</i> (2017)	Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust	343	72%
Alalwan <i>et al.</i> (2018)	Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk	348	70%

*RR - Response rate; N – Sample size

The sample sizes used in similar studies regarding the adoption of internet banking and m-banking as presented in Table 6-1 indicate a range of 203 to 348 respondents for the selected studies. This serves as a benchmark for

the current study to accept the sample size considered in this study. Additionally, the response rate of this study is within the acceptable range, allowing for statistical testing to be carried out.

6.3 Demographic Profile of Research Sample

Findings presented in this section of the chapter are purely for statistical purposes as pertains to the demographic composition of the research respondents. Respondents targeted and identified for the study were largely university students in Durban and Pietermaritzburg, aged between 18 and 34 years. The sample included both males and females drawn from all races.

Findings on the sample's demographic profile are presented in the following subsections.

6.3.1 Gender

The gender distribution of the respondents was as follows: 50.9% males and 49.1% females, pointing to a fairly distributed respondent base.

6.3.2 Race

The white and coloured subgroups were poorly represented in the study, accounting for 1.1% and 0.7% of the total sample respectively. Figure 6-1 provides an overview of the research participants' race representation (n=279):

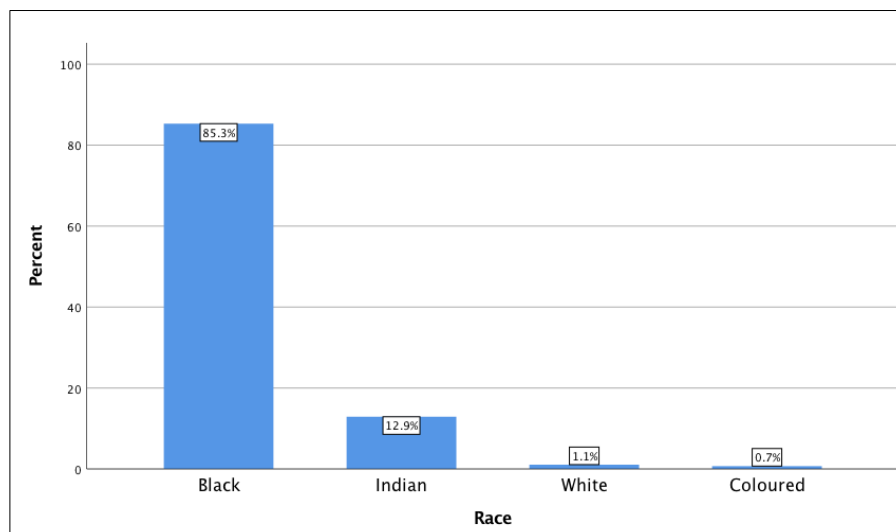


Figure 6-1: Sample's Racial Profile

6.3.3 Education Level

The survey sought information regarding the respondents' highest level of education. It was determined that the majority of those sampled are youth taking up undergraduate studies across all institutions of higher learning included in the study. Undergraduates represent 76% of the sample, while Diploma, Bachelor's Degree, Postgraduate Honours, Masters and Doctorate degree holders accounted for 37%, 20%, 4%, 3% and 3% respectively.

6.3.4 Employment Status

The majority of the respondents (89.2%) reported that they did not have any form of employment. It is further reported that 6.8% are employed on part-time basis, and only 3.9% are employed on a fulltime basis.

6.3.5 Net Earnings

A breakdown of the findings regarding the net earnings of the respondents is provided in Table 6-2 below.

Table 6-2: Respondents' Net Monthly Earnings Frequency Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	217	77.8	77.8	77.8
	Less than R 2,500	35	12.5	12.5	90.3
	Between R 2,501-5,000	12	4.3	4.3	94.6
	Between R 5,001-7,500	2	.7	.7	95.3
	Greater than R 7,500	13	4.7	4.7	100.0
	Total	279	100.0	100.0	

6.4 Mobile Payments Awareness (Research Objective 2)

As outlined in Chapter One, the second objective of the study was to establish the level of awareness of m-payments services offered within the country. Within the survey instrument, a number of available payment services were listed, allowing for the respondents to select a single option, signifying the one they are most familiar with. In addition to this, a second survey item sought to inquire whether the research participants had previously

engaged forms of m-payments to perform any transactions. Descriptive results showcasing the finding of the respondents' awareness are presented below.

6.4.1 Most Familiar M-payments Service

Results reveal FNB's service eWallet to be the most familiar form of m-payments among the research participants. This is followed by Standard Bank's Instant Money and ABSA Bank's CashSend. Figure 6-2 provides details regarding the familiarity of payment services (in percentages) (n=279).

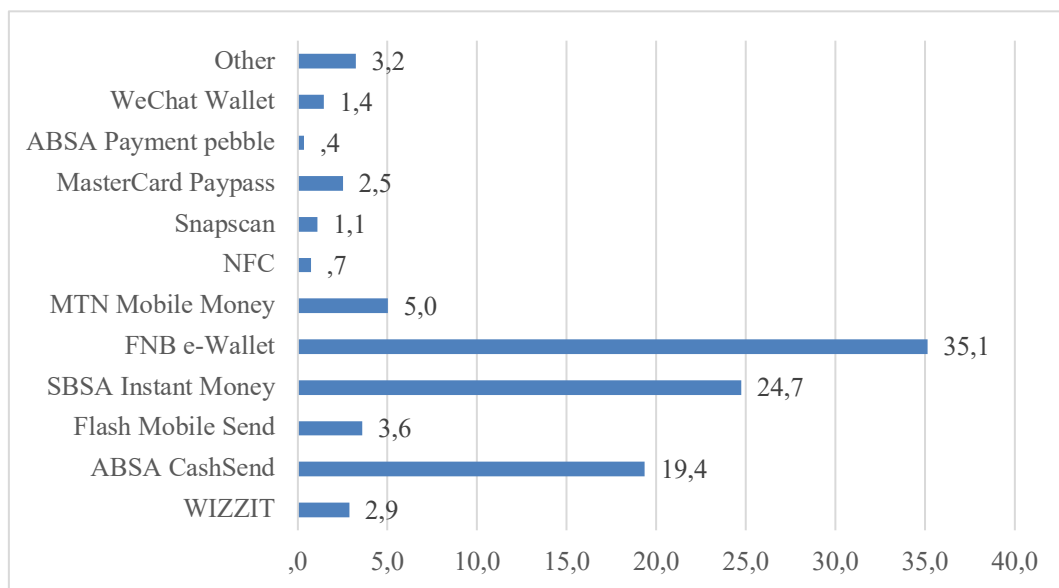


Figure 6-2: Knowledge of M-Payment Services

All other forms of m-payments offered in the country cumulatively accounted for 20.8%, with 3.2% of the figure categorised under 'Other'. M-payment solutions under this category included PayPal's mobile application and sBux (a USSD based solution offered by the National Student Financial Aid Scheme that allows students to access their student loan allowances and remotely pay for books, food and accommodation). Therefore, significant numbers indicated that the respondents are most familiar with FNB eWallet (98, 35.1%), Instant Money (69, 24.7%) and CashSend (54, 19.4%), $\chi^2(11) = 486.634, p < .0005$.

6.4.2 Experience in Using M-payments

The study found that a large proportion of the research respondents had already engaged m-payments to carry out transactions. Respondents reported to have used the service totalled 206, and the ones who had never used it made up a total of 73. The result yielded shows that a significant proportion of the respondents, 73.8%, indicated that they have used mobile payments to perform transactions, $p < .0005$.

6.5 Descriptive Statistics of Model Constructs

Literature presented in Chapter Three detailed the various constructs that influence the adoption of m-payments as enshrined within the conceptual framework. These constructs include FR, SI, PV, FC, CP, BI and UB. The following subsections exhibit the descriptive statistics of research participants' responses (n=279). Appendix C is a summary of the descriptive data herein.

6.5.1 Functional Risk

FR1: I find m-payments useful in my daily life

There is significant agreement that respondents find m-payments useful in their daily lives with results indicated as (M=3.83, SD=1.195), $t(278) = 11.622$, $p < .0005$.

FR2: Using m-payments will enable me to accomplish cash transfers quicker

There is significant agreement that using m-payments will enable the respondents to accomplish cash transfers quicker, with yielded results indicated as (M=4.00, SD=1.155), $t(278) = 14.407$, $p < .0005$.

FR3: Using m-payments increases my productivity

There is significant agreement that the respondents' use of m-payments increases their productivity, as the yielded results are indicated as (M=3.63, SD=1.176), $t(278) = 9.008$, $p < .0005$.

FR4: Learning how to use m-payments is easy for me

There is significant agreement that learning how to use m-payments is simple for the respondents, with yielded results indicated as (M=3.90, SD=1.123), $t(277) = 13.355$, $p < .0005$.

FR5: My interactions with m-payments is clear and understandable

There is significant agreement that the respondents find their interactions with m-payments to be clear and understandable, as the yielded results are indicated as (M=3.83, SD=1.089), $t(278) = 12.689$, $p < .0005$.

FR6: I find m-payments easy to use

There is significant agreement that the respondents find m-payments easy to use, as the yielded results are indicated as (M=3.94, SD=1.117), $t(278) = 13.989$, $p < .0005$.

FR7: It is easy to become skilful at using m-payments

There is significant agreement with the respondents that it is indeed easy to become skilful at using m-payments, with yielded results indicated as (M=3.76, SD=1.113), $t(278) = 11.457$, $p < .0005$.

The mean scores for the subscale items used to capture FR are summarised in Figure 6-3.

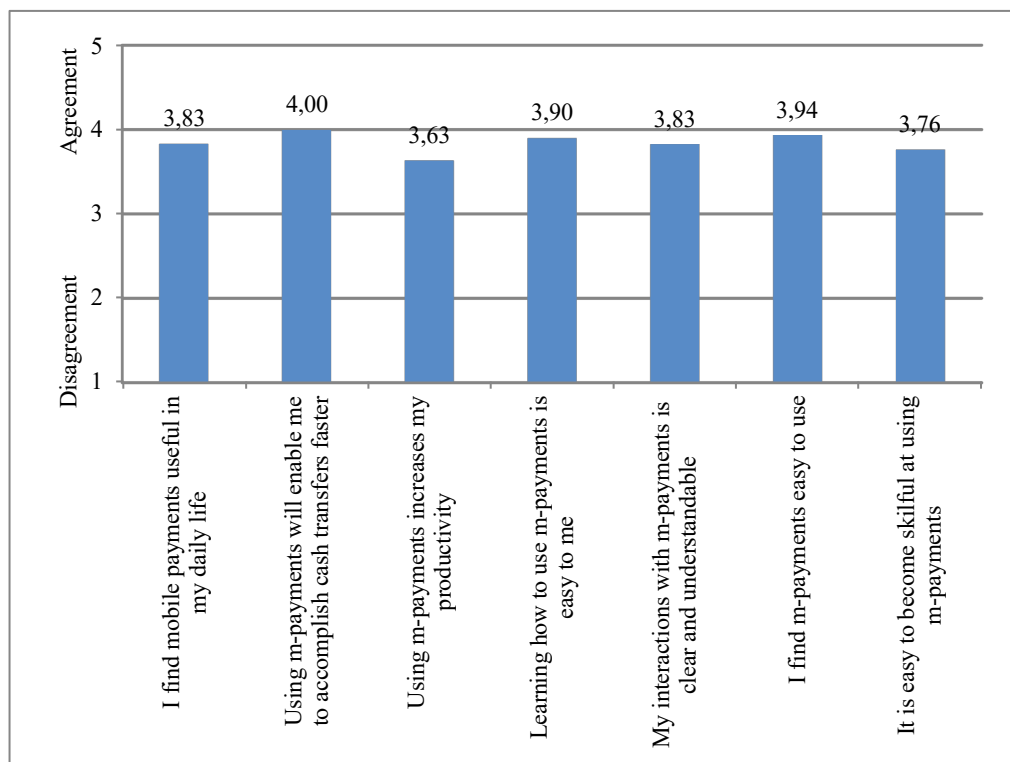


Figure 6-3: Mean Scores of Functional Risk Scale Items

6.5.2 Social Influence

SI1: People who are important to me think that I should use m-payments.

There is significant agreement that the respondents perceive people they consider important, to think that they should utilise m-payments, with results indicated as (M=3.33, SD=1.263), $t(277) = 4.416, p < .0005$.

SI2: People who influence my behaviour think that I should use m-payments.

There is significant agreement that the research participants perceive that people who influence their personal behaviour think that they should use m-payments, with yielded results indicated as (M=3.28, SD=1.176), $t(278) = 4.021, p < .0005$.

SI3: People whose opinions I value, prefer that I should use m-payments.

There is significant agreement that the respondents whose opinions they value, prefer that they use m-payments, as the yielded results are indicated as (M=3.37, SD=1.210), $t(278) = 5.097, p < .0005$.

The mean scores for the subscale items used to capture SI are summarised in Figure 6-4.

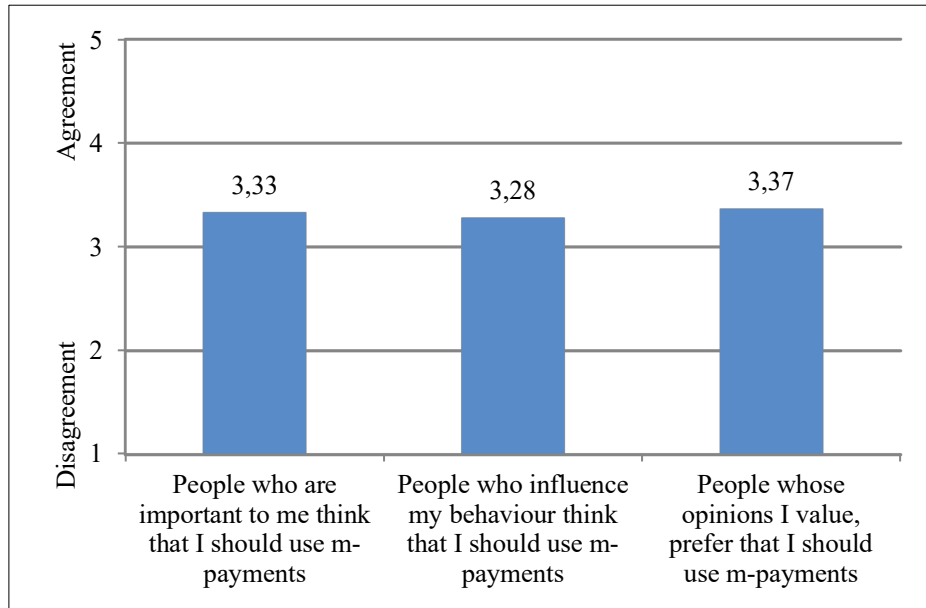


Figure 6-4: Mean Scores of Social Influence Scale Items

6.5.3 Price Value

PV1: M-payments are reasonably priced.

There is significant agreement that the respondents find m-payments to be reasonably priced, with results showing that ($M=3.61$, $SD=1.182$), $t(278) = 8.663$, $p < .0005$.

PV2: M-payments is good value for money.

There is significant agreement that m-payments provide good value for money, with yielded results indicated as ($M=3.67$, $SD=1.083$), $t(278) = 10.283$, $p < .0005$.

PV3: At the current price, m-payments provide good value.

There is significant agreement that at the current price, the respondents believe that m-payments provide a good value, as the yielded results are indicated as ($M=3.62$, $SD=1.122$), $t(278) = 9.234$, $p < .0005$.

With 278 valid cases, the mean scores for the subscale items used to capture PV are summarised in Figure 6-5.

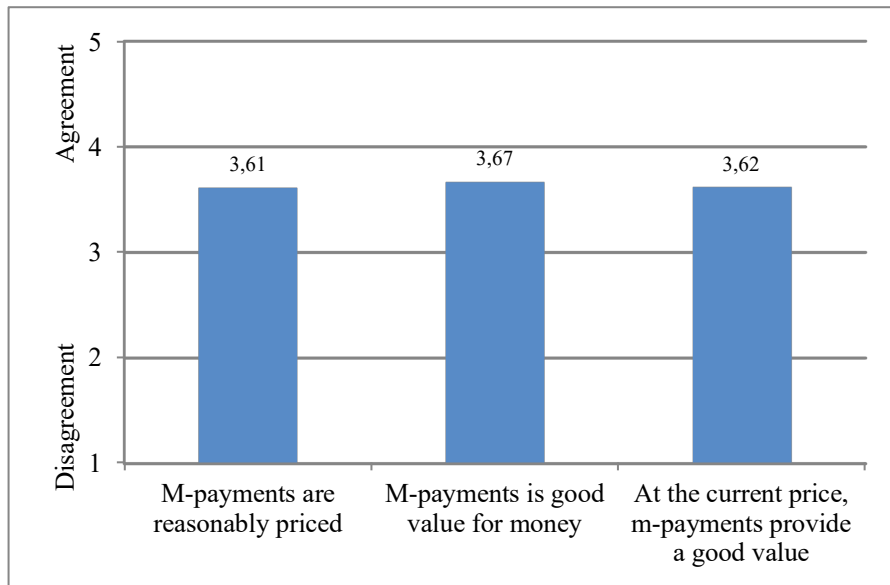


Figure 6-5: Mean Scores of Price Value Scale Items

6.5.4 Facilitating Conditions

FC1: I have the necessary resources to use m-payments.

There is significant agreement that the respondents possess the necessary resources to use m-payments, with results indicated as ($M=3.75$, $SD=1.206$), $t(278) = 10.374$, $p<.0005$.

FC2: I have the knowledge to use m-payments.

There is significant agreement that the research participants possess the knowledge to use m-payments, with yielded results indicated as ($M=3.85$, $SD=1.150$), $t(278) = 12.338$, $p<.0005$.

FC3: M-payments are compatible with other technologies I use.

There is significant agreement that the respondents believe that m-payments are compatible with other technologies they use, as the yielded results are indicated as ($M=3.80$, $SD=1.136$), $t(278) = 11.752$, $p<.0005$.

FC4: I can get help from others when I have difficulties in using m-payments.

There is significant agreement that they can receive help from others when they experience difficulties in using m-payments, as the yielded results indicate ($M=3.84$, $SD=1.089$), $t(278) = 12.863$, $p<.0005$.

The mean scores ($n=278$), for the subscale items used to capture FC are summarised in Figure 6-6.

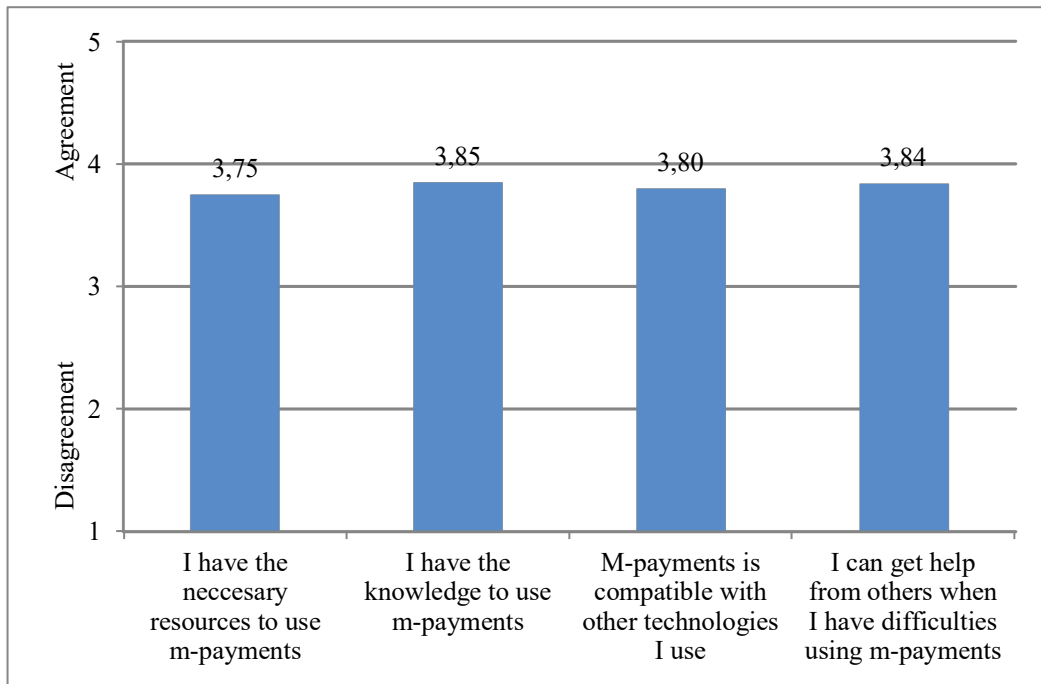


Figure 6-6: Mean Scores of Facilitating Conditions Scale Items

6.5.5 Behavioural Intention

BI1: I intend to continue using m-payments.

There is significant agreement that the respondents intend to continue using m-payments, with results showing as (M=3.72, SD=1.159), $t(277) = 10.349$, $p < .0005$.

BI2: I will always try to use m-payments in my daily life.

There is significant agreement that respondents will always try to use m-payments in their daily lives, with yielded results indicated as (M=3.57, SD=1.170), $t(278) = 8.138$, $p < .0005$.

BI3: I plan to continue using m-payments frequently.

There is significant agreement that respondents plan on continuing to use m-payments frequently, as the yielded results are indicated as (M=3.63, SD=1.192), $t(278) = 8.893$, $p < .0005$.

With 278 valid cases, the mean scores for the subscale items used to capture BI are summarised in Figure 6-7.

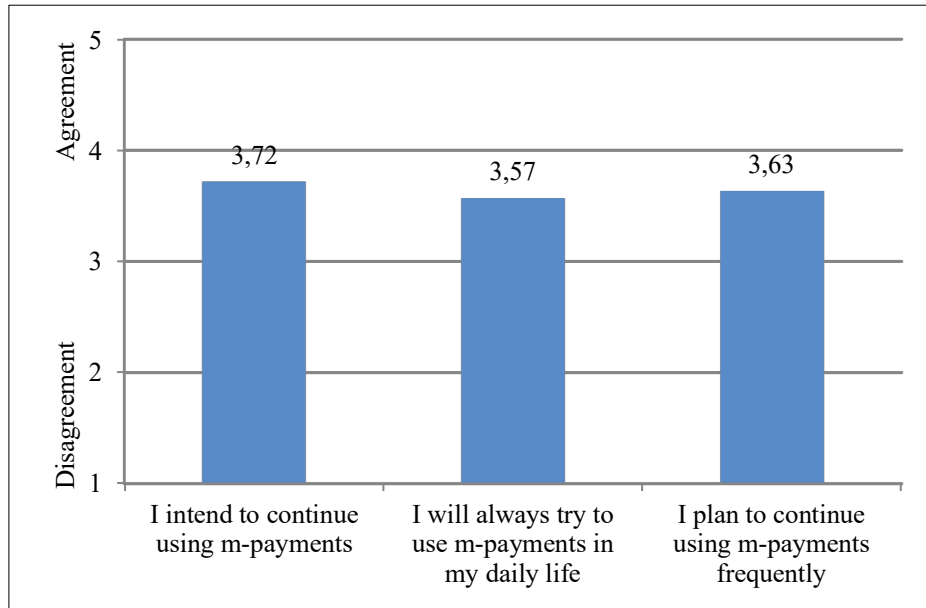


Figure 6-7: Mean Scores of Behavioural Intention Scale Items

6.5.6 Communication Performance

CP1: In my opinion, there is enough information available about m-payments services.

There is significant agreement that through MC, there is enough information available about m-payments services, with results indicated as (M=3.35, SD=1.231), $t(278) = 4.764$, $p < .0005$.

CP2: I feel that service providers have guided me enough related to m-payments.

There is significant agreement that that service providers have guided them enough regarding m-payments through MC, with yielded results indicated as (M=3.45, SD=1.183), $t(278) = 6.326$, $p < .0005$.

CP3: I feel that when needed, I will get enough guidance from service providers related to m-payments.

There is significant agreement that through MC, respondents feel that when needed, they will get enough guidance related to m-payments, from service providers, as the yielded results are indicated as (M=3.62, SD=1.077), $t(277) = 9.633$, $p < .0005$.

With 278 valid cases, the mean scores for the subscale items used to capture CP are summarised in Figure 6-8.

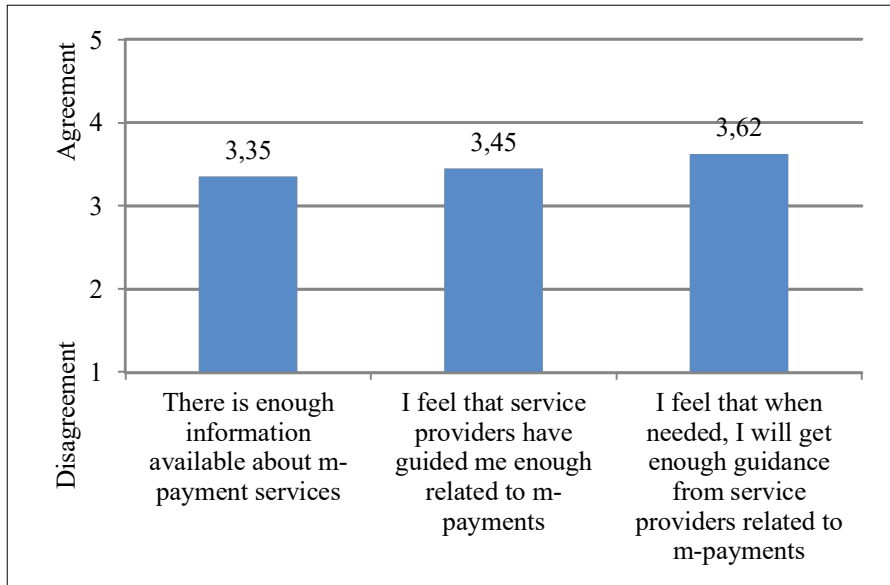


Figure 6-8: Mean Scores of Communication Performance Scale Items

6.5.7 Use Behaviour

UB: What is your actual frequency of use of m-payments?

To yield this result, a binomial test was conducted. This is a nonparametric measure used to make inferences regarding the likelihood of success, with the result yielded being the test statistic of the observed number of successes (B) (Everitt & Skrondal, 2011:48). The formula for calculating the binomial test statistic is as follows:

$$z = \frac{B - np_0}{[np_0(1 - p_0)]^{\frac{1}{2}}}$$

Where p = probability of a success, p_0 = hypothesised p value, and B = observed number of successes.

The binomial test showed that a significant proportion of the respondents (.85) use m-payments monthly at most, $p < .0005$. Table 6-3 shows the results of the binomial test.

Table 6-3: Binomial Test

		Category	N	Observed Prop,	Test Prop.	Asymp. Sig. (2-tailed)
What is your actual frequency of use of Mobile Payments	Group 1	<= 5	235	.85	.50	.000 ^a
	Group 2	> 5	43	.15		
	Total		278	1.00		

a. Based on Z Approximation.

Table 6.3 indicates that 85% of the respondents use m-payments once a month at most. Frequency tables further reveal that 30.5% of the respondents use m-payments monthly, while 20.1% of them use the service once in three months. It was found that 13.3% of the sampled respondents have never used the payment platform. Figure 6-9 illustrates the use behaviour of the research participants (n=278).

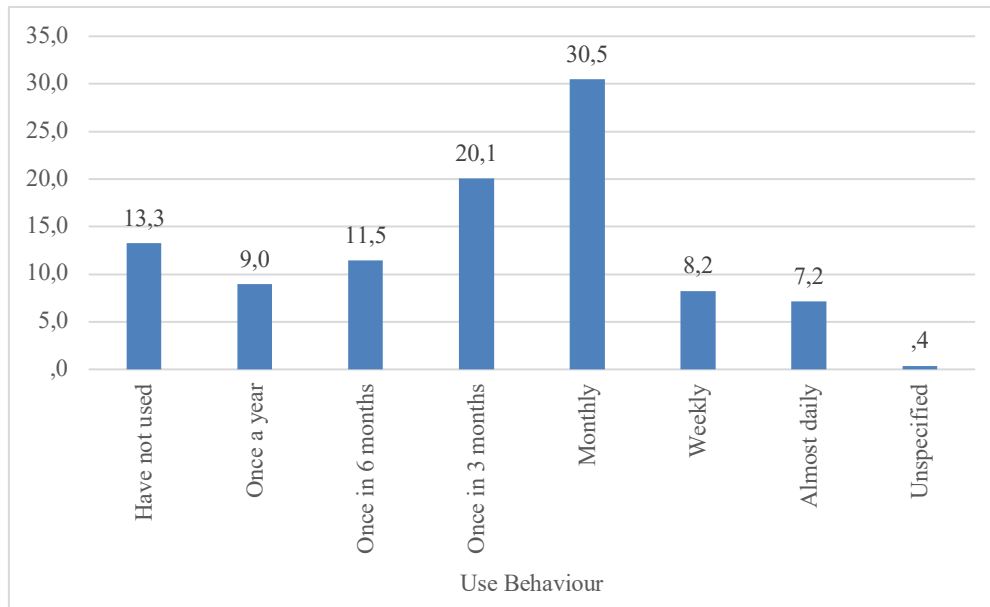


Figure 6-9: Cumulative Percentages of Use Behaviour Categories

6.6 Reliability Assessment

Reliability assessment was carried out on the survey instrument to ensure that there was sufficient inter-item consistency, in order to render the viable to capture and measure the constructs within the conceptual framework. In this case, Cronbach's coefficient alpha was used to test the inter-item consistency within each of the six constructs (FR, SI, FC, PV, CP and BI), to ensure construct validity of the survey instrument and the goodness of data at the pilot phase of the study. Sekaran and Bougie (2016:289) further state that Cronbach's coefficient alpha as a measure, determines how well scale items within each construct are positively correlated to each other. As a rule of thumb, reliability coefficients less than 0.60 are adjudged to be poor, those around the 0.7 range are considered to be acceptable, while coefficients above 0.8 are determined to be good (Sekaran & Bougie, 2016:290).

The coefficient measures obtained in this study are listed in Table 6-4.

Table 6-4: Reliability Tests

Reliability Statistics		
	Cronbach's Alpha	N of Items
Communication Performance	0.790	3
Functional Risk	0.906	7
Social Influence	0.874	3
Facilitating Conditions	0.812	4
Price Value	0.875	3
Behavioural Intention	0.881	3

From Table 6.5, FR, SI, FC, PV and BI are considered to have a good reliability, with CP having a satisfactory reading. Therefore, the questionnaire is adjudged to have good inter-item consistency and goodness of data overall.

6.7 Data Screening

As a procedural requirement, it is ideal to conduct prior analysis on the research instrument's scale items to screen and assess multivariate assumptions. In this regard, multiple regression and residual analysis was carried out using IBM SPSS Statistic Version 25 to ensure that the assumptions of normality, homoscedasticity, linearity and collinearity, are not violated. Additionally, the preliminary testing ensured that there was accuracy in data entry and missing values and outliers are identified.

The results of this pre-analysis revealed that there was less than 1% of missing data, which was replaced with the generated sample median value. An assessment of the univariate and multivariate variables was performed by employing residual analysis, and one outlier was reported to have a residual beyond the acceptable value of 3.0. Additionally, a multivariate outlier (case 235) was identified by way of case wise diagnostics. A second test of regression analysis was performed for the independent variables (CP, FR, SI, FC, PV and BI) against the dependent variable (UB) without the detected outlier, and the generated R^2 value slightly improved when the outlier was excluded from the model in comparison to when it was included. Table 6-5 illustrates the two separate models' regression results.

Table 6-5: Outlier Screening

Model Summary		
Sample	n=279	Without case 235 (n=278)
R ²	0.189	0.210

Given that the R² value was better upon conducting the screening analysis, it was decided to delete case 235, resulting in the new sample size of 278 observations within the study.

Normality was further evaluated via descriptive analysis. The yielded skewness output showed the requisite normality level, that is, +1 to -1, as indicated by Al-Qeisi (2009:243), thus negating the need for transformation to be undertaken. Residual analysis was also done employing the normality P-P plot to assess the regression standardised residuals (Pallant, 2016:277). The P-P plot illustrated in Figure 6-10 revealed that there was sufficient normality, with standardised predicted values and standardised residuals forming a straight line. As such, it was suggested that there were no major deviations from normality.

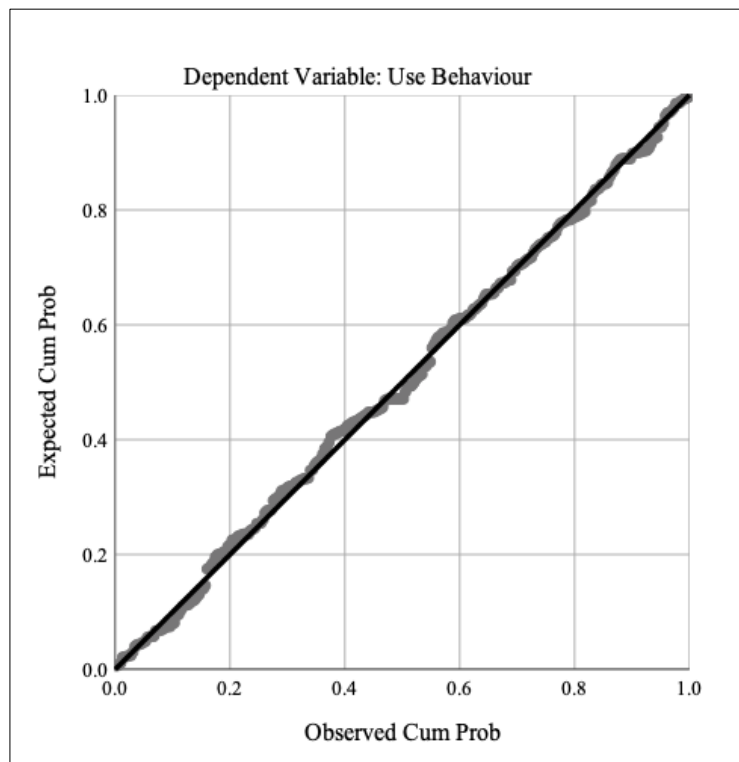


Figure 6-10: Normal P-P Plot of Regression Standardised Residual

The assumptions of linearity and homoscedasticity were evaluated by observing the residual scatter plot of the sample. Assessment of the plot revealed that the bands assumed a linear pattern, thereby indicating that the relationships between UB and the independent variables were linear, confirming the assumption of linearity

(Saunders *et al.*, 2016:549). This further confirmed the assumption of homoscedasticity within the sample, revealing that the variances between the independent variables and the dependent variable were constant or equal (Everitt & Skrondal, 2010:458).

The final assumption of collinearity or multicollinearity, one that stipulates that there should be no presence of correlations between two or more independent variables, was checked. According to Saunders *et al.* (2016:549), the rule of thumb asserts that high correlations, often 0.90 and over, indicate the presence of collinearity. The correlations were checked and no bivariate relationship yielded high correlations. Pallant (2016 (2016:276) and Saunders *et al.* (2016:549) further state that collinearity can also be diagnosed by checking the tolerance coefficient and variance inflation factor (VIF) values. The rule of thumb indicates that if the tolerance coefficient is less than 0.10, it signifies collinearity, likewise, if the VIF value is above 10.0, it would indicate multicollinearity. Table 6-6 below provides the yielded collinearity statistics of the sample.

Table 6-6: Tolerance and VIF Distribution of Independent Variables

Collinearity Statistics ^a		
	Tolerance	VIF
(Constant)		
Communication Performance	0.570	1.782
Functional Risk	0.496	2.050
Social Influence	0.547	1.851
Facilitating Conditions	0.517	1.961
Price Value	0.378	2.695
Behavioural Intention	0.360	2.811
a. Dependent Variable: Use Behaviour		

The collinearity values presented in Table 6-6 above exhibit that all tolerance coefficients were above the recommended value of 0.10. The yielded VIF values also show that all the variables were below 10.0. Therefore, all the independent variables were retained in the regression model, as the multicollinearity assumption was not violated. With the plausibility test being completed, the hypotheses formulated in Chapter One of the study were then subjected to inferential tests, which include, multiple regression analysis, Student's t Test, EFA, CFA and SEM.

6.8 Multiple Regression Analysis

Standardised multiple regression analysis in the study was used to define the interrelationship among the items within two or more sub constructs of a model (Sekaran & Bougie, 2016:315). This analysis allows for the determination of how well items within the two sub constructs predict a desired outcome. Multiple regression analysis was carried out given a significance level of $p < 0.0005$ to determine correlation between CP and FR, SI, FC and PV separately, with $n=277$. The yielded results are presented as follows:

H₁: The impact of CP on FR will be positive.

CP accounts for 20.9% (adjusted $R^2=0.209$) of the variance in FR, $F(1, 277) = 74.461$, $p < 0.0005$. Therefore, CP is a significant predictor of FR, $\beta = 0.463$, $p < 0.0005$.

H₂: The impact of communication performance on social influence will be positive.

CP accounts for 24.5% (adjusted $R^2=.245$) of the variance in SI, $F(1, 277) = 91.253$, $p < 0.0005$. Therefore, CP is a significant predictor of SI, $\beta = 0.554$, $p < 0.0005$.

H₃: The impact of CP on FC will be positive.

CP accounts for 25.7% (adjusted $R^2=.257$) of the variance in FC, $F(1, 277) = 97.401$, $p < 0.0005$. Therefore, CP is a significant predictor of FC, $\beta = 0.478$, $p < 0.0005$.

H₄: The impact of CP on PV will be positive.

CP accounts for 35.2% (adjusted $R^2=0.352$) of the variance in FC, $F(1, 277) = 151.991$, $p < 0.0005$. Therefore, CP is a significant predictor of PV, $\beta = .615$, $p < 0.0005$.

Further regression analysis was performed with a significant level of $p < 0.0005$ to determine correlation between FR and BI, and SI and BI. This included an analysis of the relationship between FC and BI which was moderated by gender, and the relationship between PV and BI with gender as a moderator as well. The yielded results are presented as follows:

H₅: The impact of FR on BI will be positive.

FR accounts for 41.0% (adjusted $R^2=0.410$) of the variance in BI, $F(1, 277) = 194.300$, $p < 0.0005$. Therefore, FR is a significant predictor of BI, $\beta = .730$, $p < 0.0005$.

H₆: The impact of SI on BI will be positive.

SI accounts for 37.8% (adjusted $R^2=0.378$) of the variance in BI, $F(1, 277) = 170.277$, $p < 0.0005$. Therefore, SI is a significant predictor of BI, $\beta = .598$, $p < 0.0005$.

H₇: The impact of FC on BI will be positive and moderated by gender, such that it will be stronger for females.

FC accounts for 37.0% (adjusted $R^2=0.370$) of the variance in BI, $F(1, 277) = 164.612$, $p < 0.0005$. Therefore, FC is a significant predictor of BI, $\beta = 0.702$, $p < 0.0005$. The regression equation for this relationship is:

$$BI = 0.966 + (0.702 * FC)$$

Further analysis on gender's moderating or interaction effect on the correlation between FC and BI was done. The interaction of gender in the relationship reveals that the change in the R^2 value is close to 0%, which is a negligible percentage increase in the variation explained by the addition of gender as a moderator. As such, the yielded R^2 value is not significant ($p=0.995$), therefore it is concluded that gender is not a moderator of the correlation between FC and BI. The regression equation for this model is indicated as follows:

$$BI = 0.985 + (0.702 * FC) - (0.013 * Gender) + (0.001 * Gender_x_FC)$$

H₈: The impact of PV on BI will be positive and moderated by gender, such that it will be stronger for males.

PV accounts for 51.6% (adjusted $R^2=.516$) of the variance in BI, $F(1, 277) = 297.445$, $p < 0.0005$. Therefore, PV is a significant predictor of BI, $\beta = 0.751$, $p < 0.0005$. The regression equation for this relationship is:

$$BI = 0.914 + (0.751 * PV)$$

Additional analysis on gender's interaction effect on the correlation between PV and BI was performed. The interaction of gender in the relationship reveals that the change in the R^2 value is close to 0%, which is a negligible percentage increase in the variation explained by the addition of gender as a moderator. As such, the yielded R^2 value is not significant ($p=0.995$), therefore it is concluded that gender is not a moderator of the correlation between PV and BI. The regression equation for this model is indicated as follows:

$$BI = 0.379 + (0.903 * PV) + (0.348 * Gender) - (0.098 * Gender_x_PV)$$

Hence, results indicate that while PV has a positive effect on BI, gender is not a moderator of the effect between BI and UB.

H₉: BI will have a significant positive influence on UB and moderated by CP.

BI accounts for only 13.8% (adjusted $R^2=.138$) of the variance in UB, $F(1, 276) = 45.356$, $p < 0.0005$. Therefore, BI is a significant predictor of UB, $\beta = 0.613$, $p < 0.0005$. The regression equation for this relationship is:

$$UB = 1.761 + (0.613 * BI)$$

Further analysis on the moderating or interaction effect of CP on the relationship between BI and UB was carried out. The interaction of CP in the relationship reveals that the change in the R^2 value is close to 0%, which is a negligible percentage increase in the variation explained by the addition of CP as a moderator. As such, the yielded R^2 value is not significant ($p=0.995$); therefore, it is concluded that CP does not moderate the relationship between BI and UB. The regression equation for this model is indicated as follows:

$$UB = 2.184 + (0.333 * BI) - (0.055 * CP) + (0.059 * CP_x_BI)$$

Hence, results show that while BI has a positive effect on UB, CP is not a moderator of the effect between BI and UB.

6.9 Student's t Test

The Student's t Test was used in the study to assess whether there is a statistical significance regarding the difference of male and female perceptions on PV and FC. The parametric test's rules of thumb regarding normal distribution, homogeneity of variances, and outliers, were adhered to in order to allow for the test to be conducted. A confidence level of 95% was used. With regard to PV, the results were as follows:

PV1: There was no significant difference in the mean scores of males and females regarding the perception that m-payments are reasonably priced; ($t_{276.397} = -0.814, p > 0.05$).

PV2: There was no significant difference in the mean scores of males and females regarding the perception that m-payments are a good value for money; ($t_{274.458} = -0.847, p > 0.05$).

PV3: There was no significant difference in the mean scores of males and females regarding the perception that at the current price, m-payments provide a good value; ($t_{275.146} = -0.219, p > 0.05$).

Table 6-7 summarises the results above. Therefore, it has been found that there is no significant statistical difference between males and females in the perception of price value. As such, the decision rule is to accept the null hypothesis and reject the alternate hypothesis that states: PV is stronger for females.

Table 6-7: Price Value Student's t Test Results

	Result	Decision
PV1	$t_{276.397} = -0.814, p > 0.05$	Reject alternate hypothesis
PV3	$t_{274.458} = -0.847, p > 0.05$	Reject alternate hypothesis
PV3	$t_{275.146} = -0.219, p > 0.05$	Reject alternate hypothesis

With regard to FC, the results were as follows:

FC1: There was no significant difference in the mean scores of males and females regarding the perception that the respondents have the necessary resources to use m-payments; ($t_{276.266} = -1.332, p > 0.05$).

FC2: There was no significant difference in the mean scores of males and females regarding the perception that the respondents have the knowledge to use m-payments; ($t_{276.299} = -0.481, p > 0.05$).

FC3: There was no significant difference in the mean scores of males and females regarding the respondents' perception that m-payments are compatible with other technologies they use; ($t_{276.395} = -.684, p > 0.05$).

FC4: There was no significant difference in the mean scores of males and females regarding the perception that the respondents can acquire help from others when they have difficulties in using m-payments; ($t_{276.951} = -.120, p > 0.05$).

Table 6-8 summarises the results above. Therefore, it has been found that there is no significant statistical difference between males and females in the perception of price value. As such the decision rule is to accept the null hypothesis and reject the alternate hypothesis that states: FC is stronger for females.

Table 6-8: Facilitating Conditions Student's t Test Results

	Result	Decision
FC1	$t_{276.266} = -1.332, p > 0.05$	Reject alternate hypothesis
FC2	$t_{276.299} = -.481, p > 0.05$	Reject alternate hypothesis
FC3	$t_{276.395} = -.684, p > 0.05$	Reject alternate hypothesis
FC4	$t_{276.951} = -.120, p > 0.05$	Reject alternate hypothesis

The complete results for the Student's t test are displayed in Appendix E.

6.10 Exploratory Factor Analysis

EFA was applied in the study to distinguish the actual number of variables and associated scale item in the questionnaire. The analysis technique was also used as a means to validate the survey instrument, using the guidelines put forward by Pallant (2016:319). Twenty items from the IVs constructs were put through factor analysis using IBM SPSS Statistics Version 25. Assessment of the correlation matrix revealed that all the factors or variables had a coefficient of 0.3 and above. The generated Kaiser-Meyer-Olkin value was 0.913 which is in the 'superb' range, exceeding Kaiser's criterion recommended value of 0.6 (Kaiser, 1974:35; Hadi *et al.*, 2016:216). In addition, the Bartlett's Test of Sphericity acquired statistical significance ($p < 0.000$), thereby backing the factorability of the variables within the correlation matrix (Bartlett, 1954:297).

The promax method was used for factor rotation in the study. Promax rotation is an oblique rotation method that upholds that factors within a set of variables are correlated, and accounts for this correlation in factor transformation, producing pattern and structure matrices to analyse items and factors (Finch, 2006:41). Promax rotation produces a set of reduced factor loadings with a simplistic factor structure (in comparison to other rotation techniques), especially in studies where latent variables are exceedingly correlated. In this case, FR was

considered to have highly correlated latent items because it is taken to be a combination of two variables (EE and PE), as depicted in other technology adoption studies. This, therefore, guided the use of this factor transformation method.

The pattern matrix (refer to Table 6-9) was investigated, and it depicted the expected underlying structure for the set of variables used in the study, to determine the BI to use m-payments. The pattern matrix had five factors, including FR, SI, FC, CP and PV, with associated pattern loadings, which are regression coefficients of each item of the factors (Hadi *et al.*, 2016:218). The authors add that the pattern matrix assists in assessing convergent validity, whereby high factor loadings items converge towards a shared theme. The structure matrix (refer to Table 6.8) on the other hand, is used to confirm discriminant validity, showing factor loadings that indicate the relationship between each scale item and each variable (Hadi *et al.*, 2016:218). The structure matrix was investigated and showed high factor loadings.

The assessment of factor loadings of both the pattern and structure matrices revealed a pattern of correlation of all the five components or factors. These are: FR, SI, FC, CP and PV, with all five converging towards similar constructs. As such, these correlations are proof that the study has acceptable convergent and discriminant validities.

6.11 Confirmatory Factor Analysis

According to Al-Qeisi (2009:244) the assessment of a measurement model (MM) can be done using CFA. In CFA, the precise number of factors inside a set of variables and the factor each variable will load on, are already predetermined prior to computations being done. As such, CFA serves to confirm or reject the predetermined variables within a model. It assesses the fit of a conceptual model by means of detecting unidimensionality issues therein. Using the statistical analysis software Amos version 23.0, the MM (conceptual framework) was assessed by inputting all the linked variables illustrated in Figure 4.7. The MM generated using CFA depicts the measured variables in rectangular figures with labels that correspond to the various variables' statements as coded in the questionnaire, while the latent variables are depicted in oval figures. Double-headed connectors denote covariance between scales or constructs. Single-headed connectors denote a causal path between a scale and an indicator. Figure 6.10 illustrates the path diagram of the MM.

The procedure of MM assessment firstly requires the use of CFA to obtain an idea of model fit and secondly, making adjustments to improve the fit. If the model fit meets the required standards, reliability and validity measures are calculated on the constructs of the MM. In this case, improvements to the generated MM were achieved by dropping FC4, the fourth scale item within the FC sub construct, that is, 'I can get help from others when I have difficulties in using m-payments'.

The following subsections detail the considerations taken when carrying out model assessment in CFA, to include model fit measures and reliability and validity.

6.11.1 Model Fit Indices

There are a set of criteria that have to be met in order to determine the model fit within the study. The first one is the chi-square value and the degree of freedom, abbreviated as χ^2 / df . The chi-square value (χ^2) assesses the tested model's general fit, while the degrees of freedom (df) assess the inconsistency between the sample and covariance matrix (Hu & Bentler, 2009:16). In this case, the generated χ^2 is divided by df, with the convention precluding that the yielded coefficient must be less than 5 (Atiku, 2014:213).

Table 6-9: Pattern and Structure Matrix for PAF with Promax Rotation

	Pattern Matrix ^a					Structure Matrix				
	1	2	Factor 3	4	5	1	2	Factor 3	4	5
FR1	.845					.849		.602	.490	.561
FR2	.827					.814		.629	.506	.589
FR5	.825					.794		.599	.475	.567
FR4	.725					.786	.511	.411	.387	.505
FR6	.712					.759	.436	.439	.381	.441
FR3	.630	.303				.723	.428	.538	.554	.581
FR7	.552					.647	.501	.371	.367	.439
SI1		.778				.504	.856	.429	.516	.555
SI2		.720				.407	.794	.390	.478	.538
SI3		.704				.410	.786	.390	.478	.541
FC2			.916			.554	.337	.883	.502	.549
FC3			.711			.513	.302	.732	.483	.477
FC1			.675			.461	.372	.704	.382	.484
FC4			.304			.491	.421	.547	.527	.459
CP3				.799		.426	.416	.458	.770	.477
CP1				.789		.373	.363	.387	.742	.495
CP2				.660		.421	.434	.426	.724	.543
PV2					.873	.614	.550	.567	.593	.897
PV3					.718	.548	.556	.556	.566	.814
PV1					.625	.551	.536	.509	.631	.785

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalisation.^a a. Rotation converged in 7 iterations.

Another measure is Bentler’s comparative fit index (CFI), a form of incremental fit indices, that measures model fitness by drawing comparisons from chi-square values of the MM and the null or baseline model (Hooper *et al.*, 2008:55). The yielded CFI value is pegged to be between 0.0 and 1.0, with the recommended coefficient value to be greater than 0.9, prior to regarding a model to be of good fit (Bentler & Bonett, 1980:600).

Bollen’s incremental fit index, denoted as IFI or Δ_2 , is a relative fit index that also compares the chi-square value for the tested model, to the baseline model (Newsom, 2017:2). The IFI is calculated by using both the measured and baseline models’ chi-square value ratios, considering their df (Omar, Ramly, Alam & Nazri, 2015:151). The yielded IFI value ranges between 0 and 1.0, with a figure greater than 0.90 to 0.95, recommended depending on some authors (Hu & Bentler, 2009:17; Newsom, 2017:2).

The final measure of model fit is root mean square error of approximation (RMSEA), which is a noncentrality-based index, a parameter that upholds that the chi-square fit is underpinned on the baseline hypothesis being true, that is, $\chi^2 = 0$ (Newsom, 2017:2). The RMSEA considers a chi-square value equivalent to the df for the tested model as bearing a perfect fit, rather than the chi-square equalling 0. Therefore, the RMSEA value is obtained by subtracting the df of the tested model from the chi-square ($\chi^2 - df$), and the yielded value adjusted for sample size (Newsom, 2017:2). The generated RMSEA value ranges between 0.05 and 0.1, whereby a value less than .08 is recommended, signifying a fit approximation (Hooper, 2008:54).

The model fit indices for the MM used in this study are outlined in Table 6-10:

Table 6-10: Model Fit Indices (CFA Model)

Model Fit Indices		
	Recommended Value	Actual Value
χ^2 / df	< 5	2.269
CFI	> 0.90	0.939
IFI (Δ_2)	> 0.90	0.940
RMSEA	< 0.08	0.068

The model fit indices results presented in Table 6-9 indicate that all the measures fall within the recommended values, hence rendering the MM to be acceptable and possessing a good fit.

6.11.2 Reliability and Validity

Once the model fit is assessed, the MM is subjected to tests regarding construct reliability (CR), convergent validity, and discriminant validity (Essmui, Berma, Shahadan, Ramlee & Mohd, 2014:182). The tested model’s CR obtained via Cronbach’s alpha coefficient value is showcased in Table 6.9 for the six latent variables, with all

values being larger than 0.7. As such, the model and the measures therein exhibit a satisfactory degree of internal consistency (Sekaran & Bougie, 2016:290).

Each of the factor loadings, their composite reliability (also abbreviated as CR) and AVE, are used to determine the MM's convergent validity (Essmui *et al.*, 2014:182). It is indicated that loading factors (standard regression coefficients) should be greater than 0.50, for each measure to show acceptable existence of common points of convergence (Hair *et al.*, 2010). As for AVE, it is recommended that the generated coefficient be greater than 0.50 to indicate satisfactory convergence of variables, translating to latent variables having elevated convergent validity (Hair *et al.*, 2010).

Discriminant validity of the MM on the other hand, is measured using MSV and average squared variance (ASV). As a rule of thumb, the generated MSV and ASV values are required to be lesser than the AVE value for each construct to have the recommended discriminant validity (Hair *et al.*, 2010). The conditions to be met for reliability and validity, and for factor loadings, are summarised in Table 6-11 as follows:

Table 6.11: Reliability and Validity Criteria

Measure	Conditions
Reliability	CR > 0.70
Factor loadings	> 0.50
Convergent validity	CR > AVE AVE > 0.50
Discriminant validity	AVE > MSV

Prior to calculating reliability, convergent validity and discriminant validity of the MM, it was imperative that the model had an acceptable fit, requiring some adjustments in the variables through the application of the principle of parsimony. According to Blokland *et al.* (2013:204), the principle of parsimony is used to evaluate model fit, whereby models with less variables are viewed to be preferable, if they exhibit no significant deterioration of fit, that is, when P value is greater than 0.05. Upon assessment, the fourth item in the FC construct (FC4) was dropped because it was insignificant, therefore, giving the MM a better fit. After the deletion of the variable, tests on reliability, convergent validity and discriminant validity of each construct within the MM was done.

Table 6-12 displays the results of these tests.

Table 6.12: Reliability and Validity Results of the Measurement Model

Construct	Item	Factor Loading	Cronbach's Alpha	CR	AVE	MSV	ASV
Communication Performance	CP3	.744	.790	.791	.558	.526	.356
	CP2	.775					
	CP1	.721					
Social Influence	SI1	.881	.874	.876	.702	.501	.321
	SI2	.832					
	SI3	.798					
Price Value	PV1	.813	.875	.877	.704	.669	.456
	PV2	.876					
	PV3	.827					
Behavioural Intention	BI3	.839	.881	.881	.712	.669	.453
	BI2	.852					
	BI1	.841					
Facilitating Conditions	FC2	.861	.812	.821	.607	.480	.342
	FC3	.711					
	FC1	.757					
Functional Risk	FR5	.878	.906	.904	.577	.482	.358
	FR6	.852					
	FR7	.744					
	FR4	.831					
	FR3	.614					
	FR2	.678					
	FR1	.678					

From Table 6-12 above, conditions on construct reliability are met as coefficients for all the constructs are greater than 0.70, with the exhibited values ranging between 0.790 and 0.906. The factor loadings for twenty-two scale items in the MM exhibited standard regression coefficients greater than 0.50, which are significant weights ranging from 0.614 to 0.881. Therefore, the MM has shown satisfactory reliability. Results on convergent validity, on the other hand, reveal that all CR values are greater than AVE values, while all AVE values are greater than 0.50. Generated AVE values range from 0.558 to 0.712. Thereby, convergent validity is shown for all constructs. Yielded results also show AVE values to be greater than MSV, as this holds for all constructs, and as such, discriminant validity of the MM is satisfactory.

6.11.3 The Measurement Model

Figure 6-11 is a depiction of the path diagram of the MM generated by AMOS 23.0.

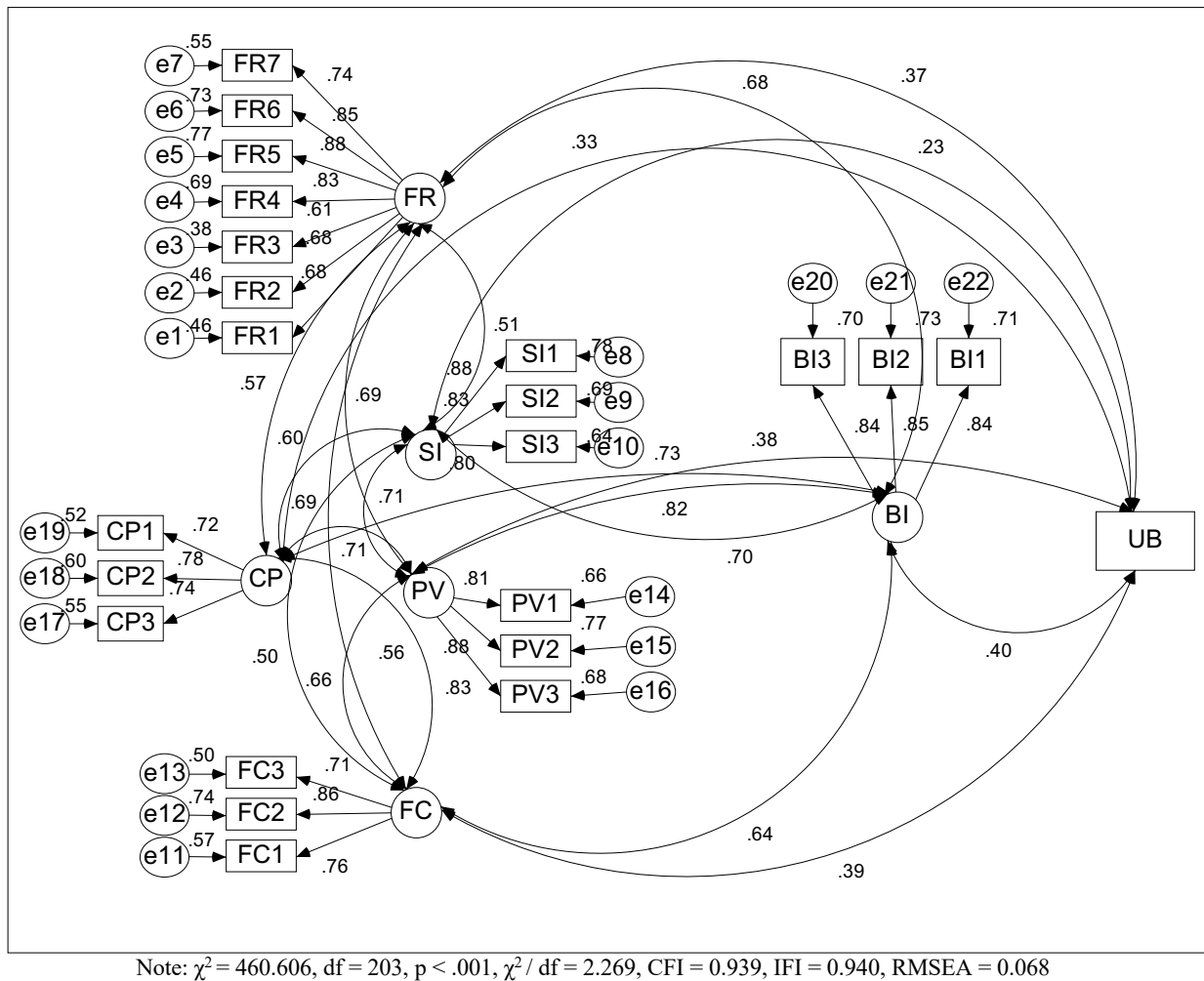


Figure 6-11: The Refined Measurement Model Path Diagram

The results indicate that the standardised regression weights for variable statements linked to each corresponding construct were all significant (Refer to Appendix G).

Given that the model fit, reliability and validity test criteria are met by the assessment of the MM (that is, $\chi^2 = 460.606$, $df = 203$, $\chi^2 / df = 2.269$, $CFI = 0.939$, $IFI = .940$ and $RMSEA = .068$), this allows the model to be subjected to further scrutiny via SEM, which is detailed in the following section.

6.12 Structural Equation Modelling

Following the guidelines put forward by Essmui *et al.* (2014:183), the MM was subjected to measures of reliability, convergent validity and discriminant validity, where all set conditions were met, admitting the model for testing of the path coefficients so as to establish the conceptual framework's theoretically developed relationship to the study. Preliminary structural modelling was conducted, to assess whether all the paths between latent variables and measurement variables were significant, in order to obtain the most parsimonious model.

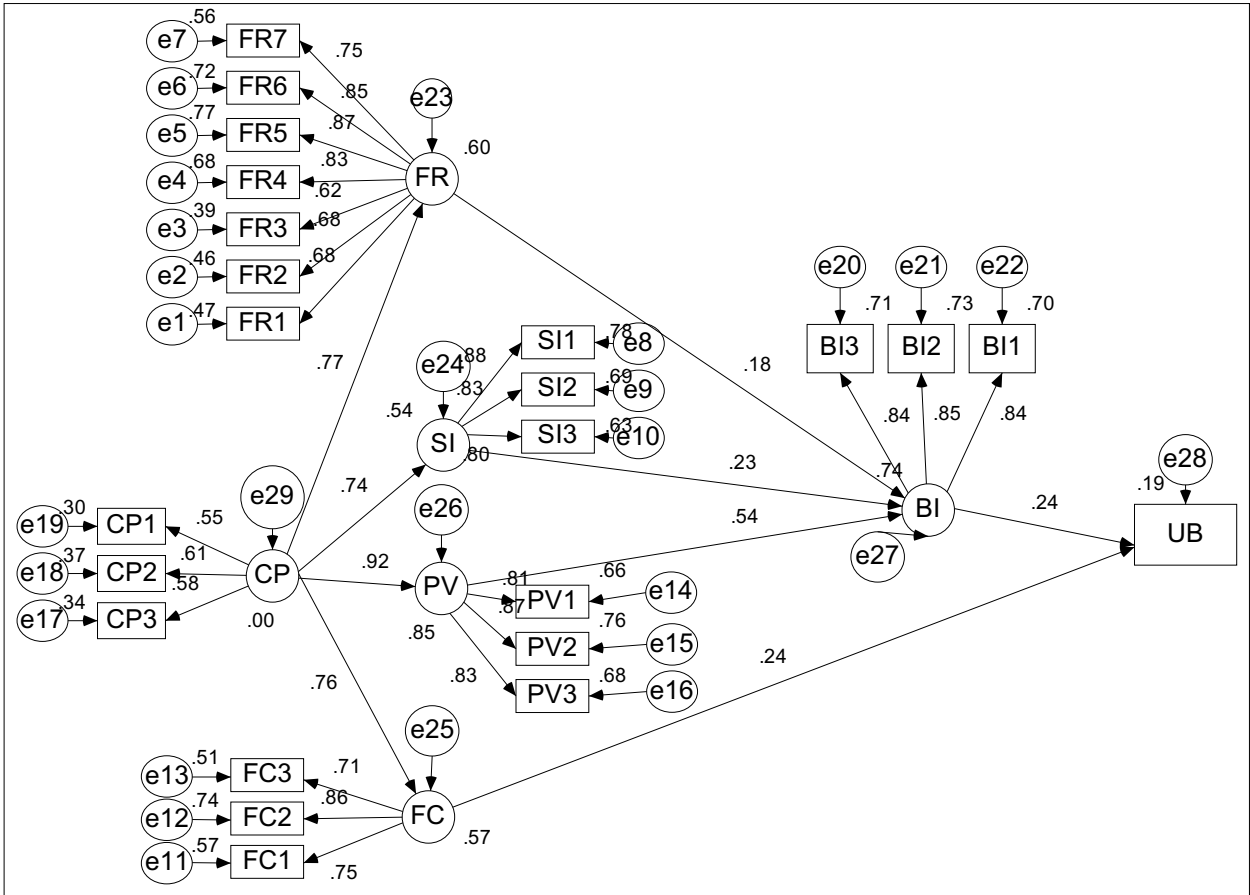
According to Garson (2007:7), a path is considered significant if the critical ratio (CR) for the unstandardised regression weight is greater than (>) 1.96. It was found that the path between BI and FC was insignificant, with FC having no direct or indirect impact in influencing BI to use m-payments. This necessitated the deletion or dropping of this path, a process termed as model trimming by Garson (2007:10). The deletion of this path had the effect of lowering the chi-square value and the chi-square difference, suggesting a stronger structural model with fewer β coefficients, and parsimony. On the other hand, the causal path between UB and CP was also found to be insignificant by assessing the generated P value. It was noted that the four perceived risk variables (FR, SI, FC and PV) and BI, play a complete mediating role in impacting the relationship between UB and CP, signifying a closed path. These results therefore informed further model trimming, which involved the deletion of this path from the structural model.

The adjusted structural model's GFI is depicted in Table 6-13:

Table 6-13: Model Fit Indices (Structural Model)

Model Fit Indices		
Test	Recommended Value	Actual Value
χ^2 / df	< 5	2.333
CFI	> 0.90	.933
IFI (Δ_2)	> 0.90	.934
RMSEA	< 0.08	.076

From the structural model (SEM) illustrated in Figure 6-11, the rectangular shapes signify independent and dependent manifest or observed variables, as the circular shapes signify each observed variables' corresponding latent variable (Atiku, 2014:216). The directional arrows draw on linkages between the latent variables in the SEM and analogous variables to create operational interplays between them. The numerical figures presented alongside latent variables to another in the SEM, are factor loadings known as standardised regression weights (SRW) or estimated standardised coefficients (ESC). The same criteria used for assessing the goodness of fit for the MM are used in the structural model. The observed model fit indices are: $\chi^2 = 494.594$, $df = 212$, $p < .001$, $CMIN = 2.333$, $CFI = .933$, $IFI = .934$, $RMSEA = .069$.



Note: $\chi^2 = 494.594$, $df = 212$, $p < .001$, $\chi^2 / df = 2.333$, CFI = .933, IFI = .934, RMSEA = .069

Figure 6-12: Structural Equation Model Results

The model fit statistics reveal that the structural model possesses adequate fit. With this in mind, majority of the causal paths within the SEM are significant at $p < 0.001$ level, with the exception of BI to FR, UB to BI and UB to FC, which are significant at $p < 0.05$ level. Table 6.13 illustrates the unstandardised regression weights of selected output. The comprehensive output of these results is available in Appendix H.

Table 6-14: Selected Output on Unstandardised Regression Weights

	Estimate	S.E	CR (t-value)	P	Label
FR <--- CP	1.004	.127	7.903	***	par_25
SI <--- CP	1.303	.152	8.566	***	par_18
PV <--- CP	1.402	.152	9.227	***	par_20
FC <--- CP	1.095	.137	8.008	***	par_19
BI <--- FR	.225	.082	2.731	.006	par_21
BI <--- SI	.207	.058	3.567	***	par_22
BI <--- PV	.566	.088	6.457	***	par_23
UB <--- BI	.419	.137	3.060	.002	par_24
UB <--- FC	.463	.156	2.969	.003	par_26

***Correlation is significant at the 0.001 level (2 tailed)

The correlation index for all the factors considered in the SEM was assessed and results show that the squared multiple correlations were satisfactory, with rule of thumb stating that the closer the value is to 0.850, the better the correlation (Gefen, Straub & Boudreau, 2000:44; Omar, 2015:152).

Table 6-15 displays the square multiple correlation estimates for the structural model.

Table 6-15: Selected Squared Multiple Correlations (Default Model)

Path	Estimate (β)
FR <--- CP	.772
SI <--- CP	.735
PV <--- CP	.920
FC <--- CP	.757
BI <--- FR	.183
BI <--- SI	.231
BI <--- PV	.541
UB <--- BI	.244
UB <--- FC	.244

As hypothesised in the conceptual framework, the path from communication performance and financial risk, was statistically significant ($\beta = 0.772$; $t = 7.903$; $p < 0.001$), implying that respondents who are exposed to MC from m-payment providers experience reduced functional risk. The decision rule thereby, is to reject the null hypothesis (H_0) and accept the alternate (H_1) that states: the impact of CP on FR will be positive.

The path from communication performance and social influence also showed statistical significance ($\beta = 0.735$; $t = 8.566$; $p < 0.001$), indicating that MC shared through peers and social circles have a great impact on individual's social influence. Therefore the decision rule is to reject the null hypothesis (H_0) and accept the alternate (H_2) that states: the impact of CP on SI will be positive.

Likewise, the path from communication performance and price value was statistically significant ($\beta = 0.920$; $t = 9.227$; $p < 0.001$), pointing towards the positive impact of MC on respondents' outlook on the potential and/or realised price value of using m-payments. The decision rule thereby, is to reject the null hypothesis (H_0) and accept the alternate (H_3) that states: the impact of CP on PV will be positive.

The path from communication performance and facilitating conditions was statistically significant ($\beta = 0.757$; $t = 8.008$; $p < 0.001$), indicating that MC has a positive effect on the respondents' perception on prerequisite resources and service provider support needed to use m-payments. The decision rule thereby, is to reject the null hypothesis (H_0) and accept the alternate (H_4) that states: the impact of CP on FC will be positive.

Additional analysis reveals that the path from behavioural intention and functional risk was statistically significant ($\beta = 0.185$; $t = 2.731$; $p < 0.005$). This signifies that functional risk has a direct impact on the behavioural intention to use m-payments. The decision rule thereby, is to reject the null hypothesis (H_0) and accept the alternate (H_5) that states: the impact of FR on BI will be positive.

The path from behavioural intention and social influence was statistically significant ($\beta = 0.231$; $t = 3.567$; $p < 0.001$), This indicates that social influence has a direct impact on the behavioural intention to use m-payments. Therefore, the decision rule is to reject the null hypothesis (H_0) and accept the alternate (H_6) that states: the impact of SI on BI will be positive.

The path from behavioural intention and price value was statistically significant ($\beta = 0.541$; $t = 6.457$; $p < 0.001$), implying a positive impact of the respondents PV on BI. This indicates that the respondents' consideration of the perceived PV has a direct influence on their intention to use m-payments. The decision rule thereby, is to reject the null hypothesis (H_0) and accept the alternate (H_8) that states: the impact of PV on BI will be positive.

The path from use behaviour and facilitating conditions was statistically significant ($\beta = 0.244$; $t = 2.969$; $p < 0.05$), indicating a direct positive impact of FC on the respondents' use behaviour that is denoted by the frequency of actual use of the payment platform. Therefore, the decision rule is to reject the null hypothesis (H_0) and accept the alternate (H_9) that states: the impact of FC on UB will be positive.

The path from use behaviour and behavioural intention was statistically significant ($\beta = 0.244$; $t = 3.060$; $p < 0.05$), signifying a direct positive impact of BI on respondents' actual use frequency of m-payments. The decision

rule therefore, is to reject the null hypothesis (H_0) and accept the alternate (H_{11}) that states: the impact of BI on UB will be positive.

Overall, the path from CP to PV exhibits the strongest, most direct and most positive relationship between the two latent variables with a factor loading or correlation index of $\beta = .920$, rendering the path as the most prominent in the structural framework.

The conclusive results of the hypotheses tested in the structural model are depicted in Table 6-16 as follows:

Table 6-16: Hypotheses Conclusions

	Hypothesised path	Standardised coefficient (β)	Critical ratio	Results
H ₁	CP - FR	.772	7.903	Supported
H ₂	CP - SI	.735	8.566	Supported
H ₃	CP - FC	.757	8.008	Supported
H ₄	CP - PV	.920	9.227	Supported
H ₅	BI - FR	.185	2.731	Supported
H ₆	BI - SI	.231	3.567	Supported
H ₇	BI - PV	.541	6.457	Supported
H ₈	BI - FC	-	-	Not supported
H ₉	UB - FC	.244	2.969	Supported
H ₁₀	UB - CP	-	-	Not supported
H ₁₁	UB - BI	.244	3.060	Supported

The hypotheses conclusions presented in Table 6.15 above informed the final output of the conceptual framework. Figure 6-13 is a representation of the revised conceptual framework with correlation indices between latent variables.

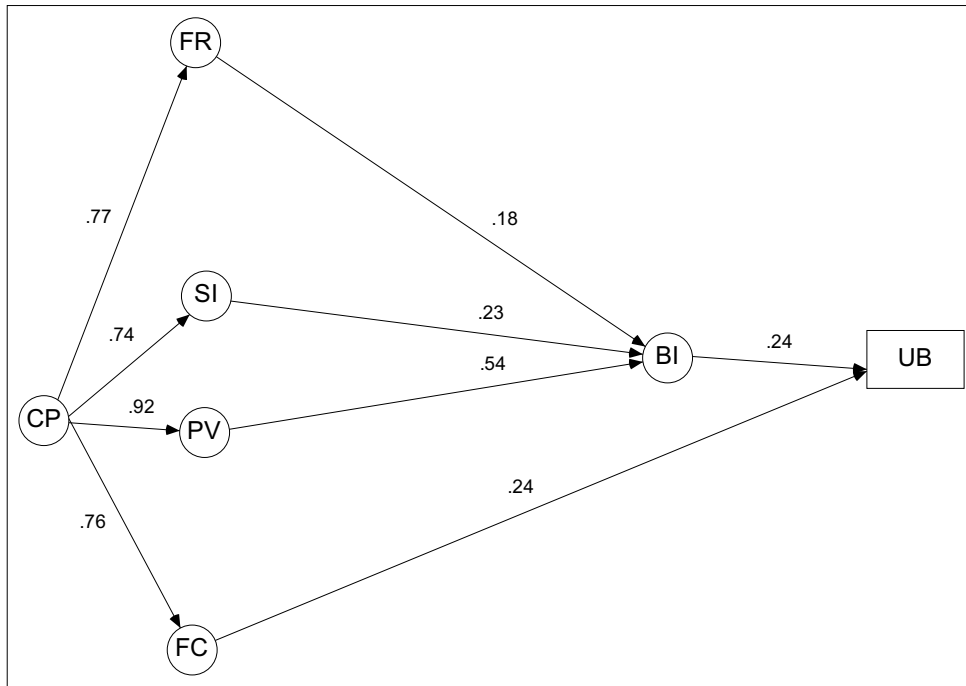


Figure 6-13: Tested Conceptual Framework

In comparison to the initial representation of the conceptual framework, the relationship between FC and BI was dropped because it had no significance, however FC was found to have a direct positive impact on UB. Gender was also dropped as a moderator between PV and BI and FC and BI. The path between CP and UB was insignificant and was dropped, because the respective relationships between FR, SI, PV and FC with BI completely mediated the relationship between CP and UB. There were strong positive relationships between CP and FR, SI, PV and FC respectively, with the relationship between CP and PV being the strongest, explaining 92% of the variance. The relationship between FR and SI, and BI respectively, were found to be weak and positive. The relationship between PV and BI, was found to be moderate and positive, it indeed was the most dominant among the perceived risk measures, explaining 54% of the variance. Structural modelling revealed that CP has a strong indirect positive effect on BI, explaining 81% of the variance. As much as structural modelling found no significance in the relationship between FC and BI, FC showed to have a weak positive relationship with UB, accounting for 24% of the variance. BI explained 24% of the variance in UB.

6.13 Conclusion

The chapter has presented and analysed quantitative data by employing the various data analysis techniques including descriptive analysis and inferential analysis. Descriptive data was first laid out and the demographic data analysed. The descriptive data regarding constructs within the conceptual framework was presented using bar charts, with distribution tables made available in Appendix C. Inferential statistics pertaining to the research

questions and posed hypotheses were analysed using multiple regression, Student's t Test, EFA, CFA and SEM. The results of these analysis techniques are further presented in the appendices section.

The following chapter focuses on interpreting and providing a comprehensive discussion regarding the results yielded in this chapter, and linking them back to the research questions initially posed in Chapter One.

CHAPTER SEVEN: DISCUSSION OF FINDINGS

7.1 Introduction

This chapter provides a deliberation on the study's findings, which were presented in the previous chapter. Findings in this chapter are presented in accordance to the research objectives set out at the beginning of the study, following the logical order prescribed by the research questions and hypotheses, formulated from the problem statement. The purpose of this section of the study is to showcase the extent to which the research objectives have been met by providing the findings linked to the research questions, hypotheses, and assumptions put forward, in relation to the adoption of m-payments among the youth in Kwazulu-Natal.

7.2 Consumer Awareness of M-Payments (Research Objective 1)

The study has revealed that the respondents are generally aware of m-payment services available in RSA, with binomial tests revealing that 85% of the youth have a working experience of at least one form of m-payments services offered in the country. FNB's eWallet, SBSA's Instant Money, and ABSA's CashSend, emerged as the top three most familiar m-payments services (in that order), amassing a total of approximately 80% of responses from the youth sampled in the study. These three payments and remittances solutions are bank initiated services, operated by three of the top four leading commercial banks in the country. A small portion of sampled respondents (3.2%) are aware of NFC based m-payments, while 11.5% are aware of USSD based m-payments in the form of WIZZIT, Flash Mobile Cash, and MTN Mobile Money (discontinued), and only 1.1% are aware of QR code-based m-payments in the form of SnapScan. The respondents do not seem to be aware of any form of Bluetooth enabled payments solutions given an analysis of the responses that were given. However, the general high level of m-payments awareness of the sampled youth may be attributed to their level of formal education and the urban and peri-urban settings in which they reside. Rouse and Verhoef (2017:5) state that these among other factors contribute to an individual's likelihood to use digital payment services.

Chen (2017:12) reveals that the youth make up a majority of the 58% of the South African population reported to be financially included and conversant with the use of digital payments in both online and mobile formats. In addition, it may be assumed that the youth in the country possess above average tech-literacy and awareness of digital financial services, coupled with access to smartphones and internet connectivity. Given the findings of this study, the youth's level of awareness of m-payments in RSA may be an indicator that financial service providers are cognisant of the youth's need for convenience considering their general lack of interest in visiting banking halls to effect transactions.

FinMark Trust (2015:3) found that it takes the average South African 28 minutes and 10 seconds to access the nearest ATM and 34 minutes and 10 seconds to reach the nearest banking hall. The youth, on the other hand, are more concerned with saving time, money and effort required to perform financial transactions. With multiple

regression analysis in the study revealing that FR contributes to 41.0% of the variance in the behavioural intention to use m-payments, this translates to a sizeable need for more convenient cash management alternatives among the youth. Additionally, they demand bespoke customer experiences and remote services that are capable of effectively and efficiently performing desired financial tasks, from cash transfers, balance enquiries, and payments. Therefore, the youth's awareness and use of m-payments should be expected to grow significantly in the near future.

7.3 Youth's Perception of M-Payments Providers' Communication Performance (Research Objective 2)

Structural modelling has revealed that CP has a strong indirect effect on BI to use m-payments. This is in line with the findings of Laukkanen *et al.* (2009:112) and Court *et al.* (2009:8) which state that the benefits of a technological innovation when communicated to the target audience, has the potential to reduce cognitive resistance at the initial stage of adoption. In this regard, m-payments providers in RSA need firstly, to engage in marketing campaigns that reach target audiences with the purpose of raising awareness about their payment platforms. The effect of this as evidenced in the current study, suggests that the youth's perception of the technology adoption constructs, that is, FR, SI, PV and FC, are positively influenced to affect their BI to use m-payments. The individual correlations between these constructs and CP yielded strong positive direct relationships.

The results of the study corroborate the findings of Neudorfer (2004:6) that acknowledge the existence of cognitive resistance in a consumer due to inherent risk factors, leading to information search about a technological innovation via MC, with the intent of reducing risk and heightening adoption. Mulwa and Ndeti (2013:3-4) and Kotler and Keller (2012:478) add that MC has the ability to alter user perceptions by conveying information that engages the user's cognitive ability and develops brand salience and equity by creating awareness, and further generating a desired user response and choice. Likewise, the study has revealed that MC has a strong direct positive effect on the risk factors, to the point of having a strong indirect positive effect on BI to use m-payments, explaining 80% of the variance.

For innovation adoption to commence, marketer-driven or company-led IMC through mass media channels in the form of ATL campaigns, needs to be implemented, placing emphasis on conveying what the service offering is all about so as to lower perceived risk factors. This creates service awareness that has the ability to move the potential user from the cognitive stage to the affective stage of the MC response hierarchy as stated by Jamieson (2006:3), Saxena (2009:161), Hackley and Hackley (2015:78) and Kotler and Keller (2016:585). When the users gain awareness, they develop an interest in the service offering and engage in information search to evaluate the service, its benefits and other alternative offerings, further impacting them by developing their brand knowledge.

Multiple regression analysis in the study yielded that CP has the greatest positive effect on PV, among other perceived risk factors in m-payments adoption. As stated by Bilgihan (2016:104-109), youth audiences mainly

consider utilitarian benefits when evaluating the use and features of mobile applications especially in e-commerce. According to Mimouni-Chaabane and Volle (2010:34), utilitarian benefits are absolutely functional and cognitive in nature, and are driven to provide user value by availing a convenient means to perform a task. In the case of this study, utilitarian value mainly concerns the benefits of monetary savings and convenience, whereby the user of an innovation spends less than an alternative solution, and saves time and effort in accomplishing a certain task. As such, the youth sampled in this study have a strong affinity towards considering PV when it comes to the intention to use and adopt m-payments. MC plays a role in informing the youth about the PV of m-payments, whereby effective communication of this value has a positive effect on influencing BI.

The empirical findings on PV confirm that the youth as a market segment are rational when considering the use of m-payments. The study upholds that the handling of monetary transactions is high-risk and requires high involvement, and the fact that m-payments are remote and digital, brings to the fore the issue of service intangibility. Secondly, transacting via the mobile platform requires users to transmit sensitive personal information in every transaction, further raising inherent perceived risk in the mind of the user. Therefore, the m-payment user is considered to be rational and cognitive in nature within a purchase, payment or funds transfer situation, with the main focus on using the remote payment platform to effectively and efficiently accomplish a monetary transaction as expected and with minimal effort. This finding mirrors the findings of Schiffman *et al.* (2010), Mihart (2012:123), Mulwa and Ndeti (2013:5) and Bilgihan (2016:104).

In addition, m-payments services are perceived to be highly differentiated, and must be automatically learnt, tried (felt and evaluated) and used by a potential user, logically moving them from the cognitive stage (where he/she is made aware of the service), to the affective stage (where he/she evaluates and tries the service), and finally to the behavioural stage (where he/she actively uses the service). Kotler and Keller (2016:585), Schiffman *et al.* (2010) and Mihart (2012:123) acknowledge that consumer behaviour within these three stages of innovation adoption must be rational and cognitive within a purchase situation.

Regarding gender, findings from regression analysis and independent Sample's t test revealed that there is no statistical significance in the difference between how females and males perceive FC when evaluating their BI to use m-payments. This alludes to the fact that the youth as a market segment regardless of gender, possess enhanced cognitive and memory capabilities and a skillset that make it easy for them to process new and/or complex knowledge regarding the use of m-payments, as indicated by Venkatesh *et al.* (2012:162), Morris *et al.* (2005:71-72) and Baptista and Oliveira (2015:421). As such, the study shows that both females and males equally will place less emphasis on external support services and resources (FC) availed by m-payments operators but will assign time and effort to learn and use the service in their own capacity, without needing informational, institutional or technical support. That notwithstanding, potential users of m-payments within this market segment are capable of accessing m-payment providers' websites via their mobile devices to engage online tutorials, video demonstrations and chatbots, to learn how to use m-payments, thereby enhancing their chances of developing UB to use the payment platform.

Similar findings were reflected on the youth's perceived PV, where there was no significant difference between females and males. This indicates that there is no distinction in how the youth view PV, whereas according to

Deaux and Kite (1987) and Venkatesh *et al.* (2012:163), females consider all the cost implications, while males tend to be rather heuristic when it comes to evaluating PV. Venkatesh *et al.* (2012:163) add that males tend to accord higher PV to technological innovations than females, as a result of traditional social functions. The study has found that the youth from both genders are rather homogenous in terms of their perception of PV, with there being no dissimilarities when it comes to using m-payments. The study's assumption put forward at the formative stages regarding monetary transactions not being hedonically motivated and surrounded with consumer perceived risk that limit impulse, is upheld across both genders. The youth are therefore found to collectively attach utilitarian motivation or value when intending to use m-payments. However, Chadwick Martin Bailey (2016:16) acknowledge that the youth as an audience, is quite heterogeneous and insist on segmentation on the basis of individual needs and values via prioritisation and customisation, where tailored approaches in messaging strategies and service offerings are used by service providers and marketers.

7.4 Refined Conceptual Framework (Research Objective 3)

The conceptual framework underwent rigorous inferential testing using multiple regression analysis, EFA, CFA and structural modelling. The results yielded insignificant relationships between FC and BI, CP and UB and the moderating effect of gender on PV and BI, and FC and BI. The resulting conceptual framework is shown in Figure 7-1:

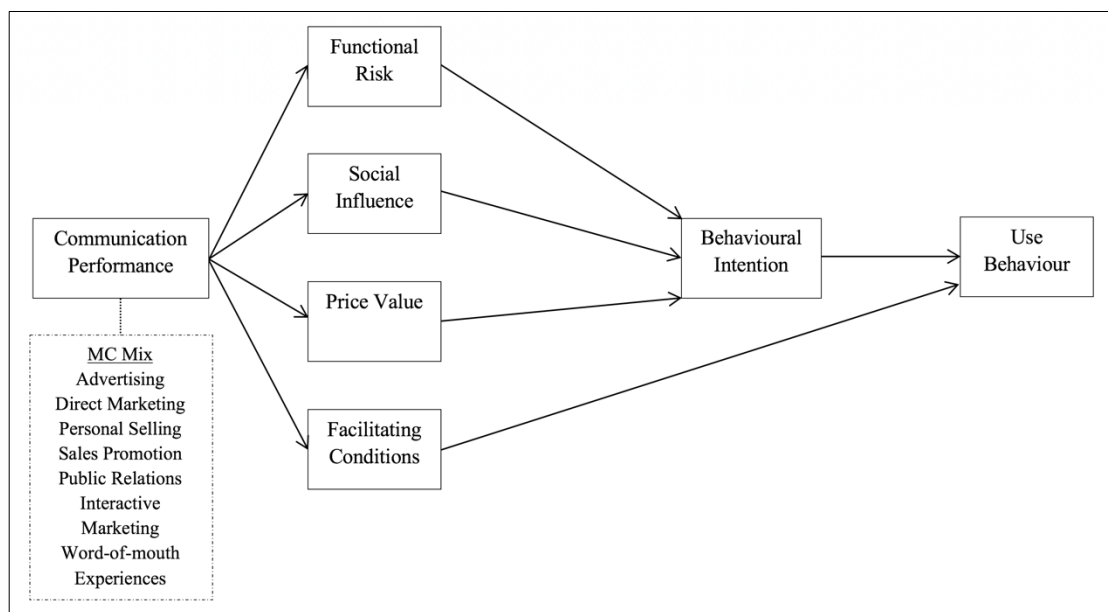


Figure 7-1: Final Results of the Conceptual Framework

In comparison to preceding theoretical models, this study has found that the m-payments users are rational and are intrinsically motivated in a related 'purchase-situation', whereas the UTAUT and UTAUT2 which this study borrows heavily from, have assumed m-payments users to draw hedonistic value from using the innovation.

Additionally, the two theories have embodied gender as a moderating factor. This study has found that gender has no significant effect on the youth's perception of PV and FC as risk factors. Effective MC measured using CP has been found to be quite significant in predicting BI to use m-payments, a dimension that has not been tested in technological innovation adoption in the manner witnessed in this study. Therefore, the empirical findings of this conceptual model may be a stepping stone to gaining deeper understanding of m-payments adoption among the youth in a South African context.

7.5 Conclusion

This chapter has brought the empirical findings of the study into perspective by considering them in relation to the literature presented in Chapter Two, Chapter Three, and Chapter Four. A discussion of the findings was presented in terms of the research objectives identified in Chapter One. The first section details the most effective IMC tools as preferred by the youth and the ideal IMC approach to be used by m-payments providers. The second section presents a discussion on the youth's level of awareness of various m-payments platforms in RSA, to include their overall awareness of the payment service. This is followed by a discussion on the youth's perception of MC with regards to the role it plays in the adoption of m-payments. The following section exhibits the conceptual framework as tested in the study. The chapter concludes with the study's implications. The following chapter presents a discussion of the study's recommendations, implications, suggestions for future research, and limitations.

CHAPTER EIGHT: CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

This chapter presents recommendations arising from the findings of the study. First, recommendations regarding the ideal IMC approach in m-payments marketing are detailed. The second section addresses recommendations regarding the youth's awareness of m-payments and what approaches should be leveraged by service providers. This is followed by a recommendation on the perception of IMC on the adoption of m-payments, where the most significant risk variable influenced by IMC is discussed. The limitations of the study are presented, coupled with areas of future research.

8.2 Ideal IMC Approach for M-Payments

- Recommendation One: Use of rational appeals

IMC campaigns whether ATL, BTL or TTL conveying m-payments information must leverage rational appeal as the focal point for developing user-based brand equity. Rational appeal within MC should aim to target the youth's collective and individual interest, with the message content pinned on showcasing to the audience how m-payments are used and how the platform works to match user expectations, by rendering desired service benefits in an effective and efficient manner. MC messages should further deliver information regarding m-payments' service quality, cost-benefit, utilitarian benefit, and use-case scenario to depict unrivalled service performance and convenience. As such, the IMC should encompass sensory and life experiences that are relatable and recognisable to the youth, so as to assist them in developing a mental association. Such rational messages in IMC campaigns involving m-payments are evidenced to have a positive effect on the youth's cognitive ability. In addition, IMC should aim to 'sell' the total experience in the use of m-payments, where the service's functionality in task performance is part and parcel of the messaging strategy.

- Recommendation Two: Further youth segmentation and differentiated messaging

Targeting of the youth should not be done with a standardised IMC approach and a one-size-fits-all service category offering for the market segment. Marketers and m-payments service providers ought to realise that the age group comprises individuals aged 15 to 34 years. This necessitates the need for further segmentation of the youth because, for instance, Generation Z individuals are essentially learners who are financially dependent, and younger Generation Y are either beginning or completing tertiary education and in search of employment. Older Generation Y individuals may be just starting out their professional careers, while the oldest Generation Y individuals could be settled, married with children and with a number of dependants. Across these four identified youth sub-segments for instance, the youth have very distinct differences in values, lifestyles, motivations, attitudes and behaviours concerning specific brand offerings and service categories. Targeting of the youth by marketers and service providers must disband a one-size-fits-all approach to IMC and service offerings, and separate bespoke niche-based approaches developed, to effectively reach each youth sub-segment based on their

distinct characteristics and experiences. For instance, messaging to the different youth groups can be focused on m-payments' use case scenarios that are appropriate and associated with the lifecycle stage the youth demographic occupy. As such, marketers need to go beyond undifferentiated marketing efforts and demographic factors of youth segmentation, and resort to psychographic and behavioural segmentation measures which will further break down the youth market into smaller subsets based on values, lifestyle, traits, needs and benefits, and user and usage-related factors among others.

8.3 Awareness of M-Payments

As witnessed by the literature presented in the study, the exit of MTN Mobile Money and Vodacom's M-Pesa, both of which were mobile telecommunications network operated USSD-based m-payments and remittances services, is a clear indicator that RSA consumers or m-payment users hold firm the belief that financial services ought to be provided by commercial banks, and not by other business entities. The fact that 77% of the adult population in RSA possesses a transactional bank account, and an estimated 63% of all transactions in the country are carried out using physical cash, limits the opportunity for m-payments operators to exist and provide services outside the formal banking system and transactional habits of South Africans. On the other hand, 33% of all payments in RSA are being carried out via digital platforms in the form of online banking and payments, and these services are facilitated by the commercial banks available in the country. This undoubtedly points towards the supposition that South African would-be users of m-payments place a high degree of trust in the well-established banking system to facilitate their payments and remittances transactions.

- **Recommendation Three: Leveraging commercial banks**

M-payment solutions must leverage commercial banks to off-shoot and market the service to create more awareness and attract users. M-payments service operators that do not have the backing of any of the commercial bank entities, in terms of the latter being the primary or secondary service provider and the linked brand image and associations, may face an uphill task in garnering favourable user awareness and eventual user adoption of their payment service.

- **Recommendation Four: Partnerships with retailers**

For more m-payments awareness and/or increased usage, service providers and marketers need to partner with leading retail brands, chain stores, fast food restaurants, event ticketing firms, and e-shopping platforms that are popular with the youth, and leverage brand associations. For instance, a retail outlet or e-store may have an m-payment solution as a payment alternative at the POS or at checkout respectively.

8.4 Youth Perception of Integrated Marketing Communications on M-Payments Adoption

The research results yielded in the study reveal that CP has a strong impact on the four perceived risk factors of innovation adoption. These are: FR, SI, PV and FC. Given these results, the following recommendation is put forward:

- Recommendation Five: Effective IMC implementation and management literature reveals that MC plays a vital role in inspiring and understanding social change brought about by technological innovations. The current research has showcased the proposed aggregation of a streamlined version of the UTAUT2 model as applicable to an African context, and specifically so using a multidisciplinary approach that combines information technology and marketing management theories, to empirically examine UB in m-payment platforms. The study has evidenced very strong bivariate correlations between CP and FR, SI, PV and FC respectively, with CP cumulatively accounting for over 74% in the variance of these user perceived risk factors. The strong relationship IMC has with these risk factors as verified in this study, has demonstrated its effect in subduing these factors in the minds of the youth when developing behavioural intention to use m-payments. Therefore, it is recommended that m-payment providers and marketers invest in effective and robust IMC strategies at the introductory phase of the solution that will engage the youth's cognitive abilities. Beyond creating awareness, messaging plays an informative role in building user knowledge structures and educating target users on m-payments' functionality, monetary value, use and user requirements, and available support services. Once the users are aware and informed, they migrate to the affective stage where they develop BI intention to use m-payments. Ideally, the study has found that the impact of FR and SI as on BI, and FC on BI to be relatively low. Perhaps this points towards the need for stronger messaging by m-payment providers post the introduction phase with regards to cost implications tied to m-payment transactions, portraying social imagery of these services through influential brand associations, and clearly communicating use and user requirements and available support services for m-payment users. These interventions may subsequently augment the BI required to convert potential and low frequency users to regular users of m-payments, thereby reinforcing usage behaviour.

8.5 Study Implications

The combination of CP measures (to capture IMC effectiveness) and innovation adoption theory has proven to be beneficial in contributing to the body of knowledge in both marketing and information technology fields. This study has revealed the role IMC plays in m-payment adoption – well planned and implemented brand and m-payment service messaging has a strong direct positive impact on all four dimensions of perceived risk, that is, FR, SI, PV and FC. In addition, MC is empirically evidenced to have a strong indirect positive relationship with BI to use m-payments. It has also been found that gender is not a moderator in the adoption of m-payments among the youth. These findings may prove to have beneficial implications to m-payments' marketing management in terms of what message content to incorporate in IMC and the ideal IMC approach (in terms of channel combinations) at the roll-out phase of a m-payments service. Also, the study implies how the youth market should

be segmented beyond demographics, with m-payments providers and marketers needing to use psychographic segmentation tactics that aim to capture diverse youth characteristics pertaining to utilitarian motivation, values, needs and use-case scenarios. This is a divergent approach to how marketers view the youth as a large homogeneous market segment – emphasis should be placed on customising messaging in a way to convey information that engages users cognitively, so as to gain awareness, and to elicit the desired behaviour.

8.6 Limitations and Future Research

The use of quota sampling, which is a nonprobability technique, allows for limited generalisation of sample data, if at all. The use of this sampling method was precipitated by the lack of resources and time to adequately use a probability sampling technique such as stratified sampling. It should be noted that a method such as stratified sampling would require access to sampling frames to include every institutions' student registry information which is difficult to obtain, and in the case of this study, not feasible.

The required absolute minimum sample size set out at the initial stages of the study was not achieved because of a relatively low response rate. A number of respondents completely refused to participate in the study when approached, while others completed less than half of the survey items within the questionnaire. Individual questionnaires that were not adequately filled out or completed (that is, <50%), were disregarded and not considered in the data analysis phase. Additionally, there were limited resources allocated to the data collection phase of the study. This factor coupled with the several unexpected delays to accessing potential respondents, negatively affected the data administration process by lengthening the initially set out timeframe, and subsequently restricted reaching the required number of cases as per the determined sample size. The administration of the survey via personal means also proved to be time-consuming and with a limited reach. Considering the population of interest had well over seventy thousand elements, electronically administered surveys would be appropriate to potentially reach a wider audience and limit participation bias of respondents as witnessed in personally administered surveys. However, ample time must be allocated to the data collection phase of the study, to allow for the respondent threshold to be met, given that the response rate of electronically administered surveys is quite low as indicated by Sekaran and Bougie (2016:143), and experienced by Baptista and Oliveira (2015:423) and Oliveira *et al.* (2016:408) in a similar studies, achieving 21% and 26% response rates respectively.

On the other hand, it should be noted that during the sample size determination and data collection phases of the study, there was no consideration for meeting case quotas for males and females when recruiting respondents. As such, the final sample considered for data analysis had a slightly skewed balance of males (50.9%) over females (49.1%).

A cross-sectional study may not have been ideal to study the effect of IMC on the youth's adoption of m-payments as it is preferable to understand the effect of the exposure to MC regarding m-payments over time, from the first exposure to messages, and then observe the effectiveness of the same on behaviour after several exposures. As

such, a study of this nature may need to explore a longitudinal research design to assess behavioural change of the same sample on two different occasions to fully grasp whether various tools of IMC may have an impact on m-payments adoption. In addition, the study may be extended to incorporate a mixed method approach where a selection of respondents' monetary transaction records are analysed to assess the actual impact of IMC on the use of m-payments.

The fact that gender in the conceptual model was found to have no significant moderating effect on FC and PV, suggests that future research may delve into understanding the moderating effect of specific psychographic factors as they exist within the youth market segment, in impacting the influence of IMC on m-payments adoption.

Literature (Moreno *et al.*, 2017:142; Nielsen, 2015a:13) suggests that that WOM in the form of recommendations, reviews and referrals from an individual's social circles which includes family, friends, peers and colleagues, and opinion leaders, is the most trusted messaging channel for both Generation Y and Generation Z, with a combined trust level of 84%. It should be noted that the youth engage in WOM via a number of media such as face-to-face, mobile (instant messaging applications, SMS and telephony), online social networks (Facebook, Twitter, Instagram and YouTube, among others) and virtual communities. This demonstrates the power of social influence in the adoption of technological innovations where social referral systems may be effective in spearheading adoption among the youth, because of the degree of credibility accorded to WOM. The youth have a high regard for WOM emanating from their family members, friends, peers, social groups and opinion leaders, because they value the perspective of others in the process validation, by assigning credibility and merit to MC linked to products and services. With a preference for MC that are relayed through mobile and online channels, the youth perceived these channels to be trustworthy and credible, as they possess the controlling power to choose as and when to consume media, and the type of content to engage with. Factually, majority of eWOM consumption among the youth occurs via mobile devices, allowing for immediate content creation and message dissemination to wider audiences in the shortest timeframe possible. The pervasive nature of WOM has the ability to ward off psychological barriers, thereby shaping intrinsic consumer and user perceptions, more so when it comes to perceived use of and the utilitarian value of technological innovations. As such, the IMC tool plays a key role in positively impacting m-payments use by readily availing information linked to the innovation, thereby encouraging user satisfaction and user retention rates.

Future research may explore the relationship of WOM as a MC channel and its impact on m-payments use among various youth age subsets in RSA. The study may delve into squarely understanding the effect of mobile-based eWOM on user behaviour whilst employing a longitudinal study approach, to effectively give insight on the impact of this form of marketing communications on potential users and infrequent users of m-payments. For instance, research may be conducted prior to or at the onset of a marketing campaign, and during or after the completion of the campaign, so as to evaluate shifts in user perception and behaviour from the two different points in time. Additionally, the study may unearth which specific perceived risk factors weigh more in the minds of users in determining their behaviour at two different stages of a m-payment's product lifecycle, detailing which one is more influential at each stage. Such a study may further involve administering questionnaires electronically

so as to gather more representative data from wider youth population subsets across the country, leading to more generalisable research outcomes.

8.7 Conclusion

The study presented background literature regarding the state of m-payments in RSA where the usage of m-payments is limited to a select few because of lack of awareness, leading to attitude and behaviour setting among those not utilising the payment platform. As such, the study identified a gap in the user awareness as being the reason behind poor penetration of m-payments. A conceptual model combining CP as a measure of IMC and various measures utilised in UTAUT2 was developed to comprehend m-payments behaviour among the youth in KwaZulu-Natal. The study's results showcased in Chapter Six reveal that IMC does indeed play a role in user awareness and reducing user uncertainties. The objectives set out at the initial stage of the study were met, with the research findings interpreted, and comprehensively discussed in Chapter Seven. This chapter has presented recommendations and areas of future research as pertains to m-payments adoption research based on the findings of the study.

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APPENDIX A: Questionnaire

Section A: Demographic Profile (Please note that questions (i) to (vi) below are purely for statistical purposes)

Please tick your appropriate response

- i. Name of respondent (optional) _____
- ii. Gender Male Female
- iii. Race Black Indian White Coloured
- iv. My highest level of education is:
 - Undergraduate Diploma Bachelor's Degree
 - Honours Masters Doctorate
- v. My employment status is:
 - Unemployed Part-Time Full-Time
- vi. My net earnings per month is:
 - None < R 2,500 R 2,501–5,000
 - R 5,001–7,500 > R 7,500

Section B: Mobile Payments Awareness

- i. Please indicate which form of Mobile Payments service you are most familiar with:
 - WIZZIT CashSend Flash Mobile Cash
 - Instant Money FNB e-Wallet MTN Mobile Money
 - NFC Snapscan PayPass
 - MoPay Payment Pebble mPowa
 - PocketPOS WeChat Wallet Other (please specify) _____
- ii. I have used Mobile Payments to perform transactions:
 - Yes No

Section C: Scale Items

Please tick your appropriate response in the following sections using the rating scale below as a guide:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Functional Risk

1	I find Mobile Payments useful in my daily life	1	2	3	4	5
2	Using Mobile Payments will enable me to accomplish cash transfers quicker	1	2	3	4	5
3	Using Mobile Payments increases my productivity	1	2	3	4	5
4	Learning how to use Mobile Payments is easy for me	1	2	3	4	5
5	My interaction with Mobile Payments is clear and understandable	1	2	3	4	5
6	I find Mobile Payments easy to use	1	2	3	4	5
7	It is easy to become skilful at using Mobile Payments	1	2	3	4	5

Social Influence

8	People who are important to me think that I should use Mobile Payments	1	2	3	4	5
9	People who influence my behaviour think that I should use Mobile Payments	1	2	3	4	5
10	People whose opinions that I value prefer that I should use Mobile Payments	1	2	3	4	5

Facilitating Conditions

11	I have the necessary resources to use Mobile Payments	1	2	3	4	5
12	I have the knowledge to use Mobile Payments	1	2	3	4	5
13	Mobile Payments is compatible with other technologies I use	1	2	3	4	5
14	I can get help from others when I have difficulties in using Mobile Payments	1	2	3	4	5

Price Value

15	Mobile Payments are reasonably priced	1	2	3	4	5
16	Mobile Payments is good value for money	1	2	3	4	5
17	At the current price, Mobile Payments provides a good value	1	2	3	4	5

Behavioural Intention

18	I intend to continue using Mobile Payments	1	2	3	4	5
19	I will always try to use Mobile Payments in my daily life	1	2	3	4	5
20	I plan to continue using Mobile Payments frequently	1	2	3	4	5

Section D: Communication performance

Through available Advertisements and Promotion activities;

21	In my opinion, there is enough information available about Mobile Payments services	1	2	3	4	5
22	I feel that service providers have guided me enough related to Mobile Payments services	1	2	3	4	5
23	I feel that when needed, I will get enough guidance from service providers related to Mobile Payments services	1	2	3	4	5

Section E: Use Behaviour

1: Have not used, 2: Once a year, 3: Once in 6 months, 4: Once in 3 months, 5: Monthly, 6: Weekly, 7: Almost Daily

24	What is your actual frequency of use of Mobile Payments	1	2	3	4	5	6	7
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APPENDIX B: Respondent's Demographic Profile

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	142	50.9	50.9	50.9
	Female	137	49.1	49.1	100.0
	Total	279	100.0	100.0	

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	238	85.3	85.3	85.3
	Indian	36	12.9	12.9	98.2
	White	3	1.1	1.1	99.3
	Coloured	2	.7	.7	100.0
	Total	279	100.0	100.0	

		Highest level of education			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	212	76.0	76.0	76.0
	Diploma	37	13.3	13.3	89.2
	Bachelor's Degree	20	7.2	7.2	96.4
	Honours	4	1.4	1.4	97.8
	Masters	3	1.1	1.1	98.9
	Doctorate	3	1.1	1.1	100.0
	Total	279	100.0	100.0	

Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unemployed	249	89.2	89.2	89.2
	Part-time	19	6.8	6.8	96.1
	Full-time	11	3.9	3.9	100.0
	Total	279	100.0	100.0	

Net earnings per month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	217	77.8	77.8	77.8
	Less than R 2,500	35	12.5	12.5	90.3
	Between R 2,501-5,000	12	4.3	4.3	94.6
	Between R 5,001-7,500	2	.7	.7	95.3
	Greater than R 7,500	13	4.7	4.7	100.0
	Total	279	100.0	100.0	

M-payment service most familiar with

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	WIZZIT	8	2.9	2.9	2.9
	CashSend	54	19.4	19.4	22.2
	Flash Mobile Send	10	3.6	3.6	25.8
	Instant Money	69	24.7	24.7	50.5
	FNB e-Wallet	98	35.1	35.1	85.7

MTN Mobile Money	14	5.0	5.0	90.7
NFC	2	.7	.7	91.4
Snapscan	3	1.1	1.1	92.5
Paypass	7	2.5	2.5	95.0
Payment pebble	1	.4	.4	95.3
WeChat Wallet	4	1.4	1.4	96.8
Other	9	3.2	3.2	100.0
Total	279	100.0	100.0	

Experience in using m-payments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	206	73.8	73.8	73.8
	No	73	26.2	26.2	100.0
	Total	279	100.0	100.0	

APPENDIX C: Descriptive Statistics of Scale Items

Descriptive Statistics (N=279)			
Construct		Mean	SD
Functional Risk			
FR1	I find m-payments useful in my daily life	3.83	1.195
FR2	Using m-payments will enable me to accomplish cash transfers quicker	4.00	1.155
FR3	Using m-payments increases my productivity	3.63	1.176
FR4	Learning how to use m-payments is easy for me	3.90	1.123
FR5	My interaction with m-payments is clear and understandable	3.83	1.089
FR6	I find m-payments easy to use	3.94	1.117
FR7	It is easy to become skilful at using m-payments	3.76	1.113
Social Influence			
SI1	People who are important to me think that I should use m-payments	3.33	1.263
SI2	People who influence my behaviour think that I should use m-payments	3.28	1.176
SI3	People whose opinions that I value prefer that I use m-payments	3.37	1.210
Facilitating Conditions			
FC1	I have the necessary resources to use m-payments	3.75	1.206
FC2	I have the knowledge to use m-payments	3.85	1.150
FC3	M-payments is compatible with the technologies I use	3.80	1.136
FC4	I can get help from others when I have difficulties in using m-payments	3.84	1.089
Price Value			
PV1	M-payments are reasonably priced	3.61	1.182
PV2	M-payments is good value for money	3.67	1.083
PV3	At the current price, m-payments provide good value	3.62	1.122
Behavioural Intention			
BI1	I intend to continue using m-payments	3.72	1.159
BI2	I will always try to use m-payments in my daily life	3.57	1.170
BI3	I plan to continue using m-payments frequently	3.63	1.192
Communication Performance			
CP1	In my opinion, there is enough information available about m-payment services	3.35	1.231
CP2	I feel that service providers have guided me enough related to m-payments	3.45	1.183
CP3	I feel that when needed, I will get enough guidance from service providers on m-payments	3.62	1.077

APPENDIX D: Multiple Regression Results

H₁: The impact of CP on FR will be positive

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.460 ^a	.212	.209	.82411	1.875

a. Predictors: (Constant), CP

b. Dependent Variable: FR

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	50.570	1	50.570	74.461	.000 ^a
Residual	188.125	277	.679		
Total	238.696	278			

a. Predictors: (Constant), CP

b. Dependent Variable: FR

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.339	.182		12.817	.000		
	CP	.436	.051	.460	8.629	.000	1.000	1.000

a. Dependent Variable: FR

H₂: The impact of CP on SI will be positive

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.498 ^a	.248	.245	.94551	1.920

a. Predictors: (Constant), CP

b. Dependent Variable: SI

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	81.578	1	81.578	91.253	.000 ^a
Residual	247.634	277	.894		
Total	329.212	278			

a. Predictors: (Constant), CP

b. Dependent Variable: SI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.402	.209		6.696	.000		
	CP	.554	.058	.498	9.553	.000	1.000	1.000

a. Dependent Variable: SI

H₃: The impact of CP on PV will be positiveModel Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.595 ^a	.354	.352	.81320	1.869

a. Predictors: (Constant), CP

b. Dependent Variable: PV

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	100.510	1	100.510	151.991	.000 ^a
Residual	183.178	277	.661		
Total	283.688	278			

a. Predictors: (Constant), CP

b. Dependent Variable: PV

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.496	.180		8.308	.000		
	CP	.615	.050	.595	12.328	.000	1.000	1.000

a. Dependent Variable: PV

H₄: The impact of CP on FC will be positiveModel Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.510 ^a	.260	.257	.78955	1.762

a. Predictors: (Constant), CP

b. Dependent Variable: FC

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	60.719	1	60.719	97.401	.000 ^a
Residual	172.680	277	.623		
Total	233.399	278			

a. Predictors: (Constant), CP

b. Dependent Variable: FC

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.148	.175		12.287	.000		
CP	.478	.048	.510	9.869	.000	1.000	1.000

a. Dependent Variable: FC

H₅: The impact of FR on BI will be positiveModel Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.642 ^a	.412	.410	.80948	1.783

a. Predictors: (Constant), FR

b. Dependent Variable: BI

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	127.317	1	127.317	194.300	.000 ^a
Residual	181.507	277	.655		
Total	308.824	278			

a. Predictors: (Constant), FR

b. Dependent Variable: BI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.826	.208		3.979	.000		
	FR	.730	.052	.642	13.939	.000	1.000	1.000

a. Dependent Variable: BI

H6: The impact of SI on BI will be positive

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.617 ^a	.381	.378	.83094	1.822

a. Predictors: (Constant), SI

b. Dependent Variable: BI

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	117.569	1	117.569	170.277	.000 ^a
Residual	191.256	277	.690		
Total	308.824	278			

a. Predictors: (Constant), SI

b. Dependent Variable: BI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.653	.160		10.313	.000		
	SI	.598	.046	.617	13.049	.000	1.000	1.000

a. Dependent Variable: BI

H7: The impact of price value on behavioural intention will be positive and moderated by gender, such that it will be stronger for females

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.720 ^a	.518	.516	.73322	.518	297.445	1	277	.000	
2	.720 ^b	.518	.514	.73453	.000	.012	1	276	.913	
3	.721 ^c	.520	.515	.73417	.002	1.264	1	275	.262	2.024

a. Predictors: (Constant), PV

b. Predictors: (Constant), PV, Gender

c. Predictors: (Constant), PV, Gender, Gender_PV

d. Dependent Variable: BI

ANOVA^d

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	159.908	1	159.908	297.445	.000 ^a
	Residual	148.916	277	.538		
	Total	308.824	278			
2	Regression	159.914	2	79.957	148.198	.000 ^b
	Residual	148.910	276	.540		
	Total	308.824	278			
3	Regression	160.596	3	53.532	99.315	.000 ^c
	Residual	148.229	275	.539		
	Total	308.824	278			

a. Predictors: (Constant), PV

b. Predictors: (Constant), PV, Gender

c. Predictors: (Constant), PV, Gender, Gender_PV

d. Dependent Variable: BI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.914	.164		5.567	.000					
	PV	.751	.044	.720	17.247	.000	.720	.720	.720	1.000	1.000
2	(Constant)	.927	.206		4.495	.000					
	PV	.751	.044	.720	17.205	.000	.720	.719	.719	.998	1.002
	Gender	-.010	.088	-.005	-.110	.913	.026	-.007	-.005	.998	1.002
3	(Constant)	.379	.530		.714	.476					
	PV	.903	.142	.865	6.365	.000	.720	.358	.266	.094	10.588
	Gender	.348	.330	.165	1.054	.293	.026	.063	.044	.071	14.073
	Gender PV	-.098	.088	-.233	-1.124	.262	.458	-.068	-.047	.041	24.599

a. Dependent Variable: BI

H₈: The impact of facilitating conditions on behavioural intention will be positive and moderated by gender, such that it will be stronger for females.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.611 ^a	.373	.370	.83625	1.808

a. Predictors: (Constant), FC

b. Dependent Variable: BI

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.115	1	115.115	164.612	.000 ^a
	Residual	193.709	277	.699		
	Total	308.824	278			

a. Predictors: (Constant), FC

b. Dependent Variable: BI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.966	.214		4.507	.000		
	FC	.702	.055	.611	12.830	.000	1.000	1.000

a. Dependent Variable: BI

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	.966	.214		4.507	.000					
	FC	.702	.055	.611	12.830	.000	.611	.611	.611	1.000	1.000
2	(Constant)	.981	.256		3.831	.000					
	FC	.703	.055	.611	12.796	.000	.611	.610	.610	.997	1.003
	Gender	-.010	.100	-.005	-.103	.918	.026	-.006	-.005	.997	1.003
3	(Constant)	.985	.670		1.469	.143					
	FC	.702	.172	.610	4.075	.000	.611	.239	.195	.102	9.821
	Gender	-.013	.431	-.006	-.030	.976	.026	-.002	-.001	.054	18.430
	Gender FC	.001	.110	.002	.007	.995	.360	.000	.000	.035	28.490

a. Dependent Variable: BI

H₁₀: The impact of behavioural intention on use behaviour will be positive and moderated by communication performance.

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.376 ^a	.141	.138	1.599	.141	45.356	1	276	.000	
2	.383 ^b	.147	.141	1.597	.006	1.796	1	275	.181	
3	.385 ^c	.148	.139	1.599	.002	.492	1	274	.484	1.967

a. Predictors: (Constant), BI

b. Predictors: (Constant), BI, CP

c. Predictors: (Constant), BI, CP, CP_BI

d. Dependent Variable: What is your actual frequency of use of Mobile Payments

ANOVA^d

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.015	1	116.015	45.356	.000 ^a
	Residual	705.971	276	2.558		
	Total	821.986	277			
2	Regression	120.596	2	60.298	23.642	.000 ^b
	Residual	701.390	275	2.551		
	Total	821.986	277			
3	Regression	121.852	3	40.617	15.896	.000 ^c
	Residual	700.134	274	2.555		
	Total	821.986	277			

a. Predictors: (Constant), BI

b. Predictors: (Constant), BI, CP

c. Predictors: (Constant), BI, CP, CP_BI

d. Dependent Variable: What is your actual frequency of use of Mobile Payments

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	1.761	.345		5.104	.000					
BI	.613	.091	.376	6.735	.000	.376	.376	.376	1.000	1.000
2 (Constant)	1.524	.387		3.938	.000					
BI	.520	.114	.319	4.557	.000	.376	.265	.254	.634	1.578
CP	.165	.123	.094	1.340	.181	.287	.081	.075	.634	1.578
3 (Constant)	2.184	1.018		2.146	.033					
BI	.333	.291	.204	1.143	.254	.376	.069	.064	.098	10.236
CP	-.055	.338	-.032	-.164	.870	.287	-.010	-.009	.084	11.851
CP BI	.059	.085	.219	.701	.484	.369	.042	.039	.032	31.348

a. Dependent Variable: What is your actual frequency of use of Mobile Payments

APPENDIX E: Student's t Test Results

Price Value Results

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
PV1	Male	142	3.56	1.176	.099
	Female	137	3.67	1.189	.102
PV2	Male	142	3.61	1.051	.088
	Female	137	3.72	1.116	.095
PV3	Male	142	3.61	1.098	.092
	Female	137	3.64	1.150	.098

Facilitating Conditions Results

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
FC1	Male	142	3.65	1.255	.105
	Female	137	3.85	1.150	.098
FC2	Male	142	3.82	1.171	.098
	Female	137	3.88	1.132	.097
FC3	Male	142	3.75	1.131	.095
	Female	137	3.85	1.143	.098
FC4	Male	142	3.83	1.117	.094
	Female	137	3.85	1.063	.091

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means			t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PVI	Equal variances assumed	.038	.845	-.814	277	.417	-.115	.142	-.394	.164
	Equal variances not assumed			-.813	276.397	.417	-.115	.142	-.394	.164
PV2	Equal variances assumed	.039	.843	-.847	277	.397	-.115	.130	-.365	.145
	Equal variances not assumed			-.846	274.458	.398	-.110	.130	-.366	.146
PV3	Equal variances assumed	.213	.645	-.219	277	.827	-.110	.135	-.294	.235
	Equal variances not assumed			-.218	275.146	.827	-.029	.135	-.295	.236

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means			t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FC1	Equal variances assumed	2.349	.127	-1.330	277	.185	-.192	.144	-.476	.092
	Equal variances not assumed			-1.332	276.266	.184	-.192	.144	-.475	.092
FC2	Equal variances assumed	.636	.426	-.481	277	.631	-.066	.138	-.338	.205
	Equal variances not assumed			-.481	276.999	.631	-.066	.138	-.338	.205
FC3	Equal variances assumed	.214	.644	-.684	277	.494	-.093	.136	-.361	.175
	Equal variances not assumed			-.684	276.395	.494	-.093	.136	-.361	.175
FC4	Equal variances assumed	.145	.704	-.120	277	.904	-.016	.131	-.273	.241
	Equal variances not assumed			-.120	276.951	.904	-.016	.131	-.273	.241

APPENDIX F: EFA Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	3576.823
	df	190
	Sig.	.000

	Communalities	
	Initial	Extraction
CP1	.471	.556
CP2	.516	.533
CP3	.509	.600
FR1	.666	.676
FR2	.626	.604
FR3	.481	.483
FR4	.699	.686
FR5	.718	.741
FR6	.718	.706
FR7	.577	.560
SI1	.714	.751
SI2	.683	.645
SI3	.595	.633
PV1	.653	.642
PV2	.700	.809
PV3	.642	.678
FC1	.553	.542
FC2	.620	.780
FC3	.506	.518
FC4	.400	.392
Extraction Method: Principal Axis Factoring.		

Structure Matrix					
	Factor				
	1	2	3	4	5
FR5	.849		.602	.490	.561
FR6	.814		.629	.506	.589
FR4	.794		.599	.475	.567
FR1	.786	.511	.411	.387	.505
FR2	.759	.436	.439	.381	.441
FR7	.723	.428	.538	.554	.581
FR3	.647	.501	.371	.367	.439
SI1	.504	.856	.429	.516	.555
SI2	.407	.794	.390	.478	.538
SI3	.410	.786	.390	.478	.541
FC2	.554	.337	.883	.502	.549
FC1	.513	.302	.732	.483	.477
FC3	.461	.372	.704	.382	.484
FC4	.491	.421	.547	.527	.459
CP3	.426	.416	.458	.770	.477
CP1	.373	.363	.387	.742	.495
CP2	.421	.434	.426	.724	.543
PV2	.614	.550	.567	.593	.897
PV3	.548	.556	.556	.566	.814
PV1	.551	.536	.509	.631	.785
Extraction Method: Principal Axis Factoring.					
Rotation Method: Promax with Kaiser Normalization.					

APPENDIX G: CFA Results

Goodness of Fit Indices

CMIN (χ^2 / df)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	96	460.606	203	.000	2.269
Saturated model	299	.000	0		
Independence model	46	4485.058	253	.000	17.728

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.897	.872	.940	.924	.939
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.068	.059	.076	.000
Independence model	.245	.239	.252	.000

Standard Regression Weights

Path	Estimate
CP3 <--- CP	.744
CP2 <--- CP	.775
CP1 <--- CP	.721
SI1 <--- SI	.881
SI2 <--- SI	.832
SI3 <--- SI	.798
PV1 <--- PV	.813
PV2 <--- PV	.876
PV3 <--- PV	.827
BI3 <--- BI	.839
BI2 <--- BI	.852
BI1 <--- BI	.841
FC2 <--- FC	.861
FC3 <--- FC	.711
FC1 <--- FC	.757
FR5 <--- FR	.878
FR6 <--- FR	.852
FR7 <--- FR	.744
FR4 <--- FR	.831
FR3 <--- FR	.614
FR2 <--- FR	.678
FR1 <--- FR	.678

Squared Multiple Correlations

Path	Estimate
FR <--> CP	.565
CP <--> SI	.599
CP <--> FC	.564
CP <--> PV	.709
CP <--> BI	.725
FR <--> SI	.513
FR <--> FC	.693
FR <--> PV	.694
FR <--> BI	.679
SI <--> FC	.504
SI <--> PV	.708
SI <--> BI	.702
PV <--> FC	.661
BI <--> FC	.640
PV <--> BI	.818
UB <--> CP	.330
UB <--> FR	.374
UB <--> SI	.232
UB <--> FC	.395
UB <--> PV	.383
UB <--> BI	.398
e22 <--> e23	.516
e21 <--> e23	.318
e20 <--> e22	-.139
e21 <--> e22	.240
e20 <--> e21	-.204
e18 <--> e21	-.221
e18 <--> e20	.173

APPENDIX H: SEM Results

Goodness Fit Indices

CMIN (χ^2 / df)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	64	550.110	212	.000	2.595
Saturated model	276	.000	0		
Independence model	23	4485.058	253	.000	17.728

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.877	.854	.921	.905	.920
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.076	.068	.084	.000
Independence model	.245	.239	.252	.000

Regression Weights: (Group number 1 - Default model)

	Path		Estimate	S.E.	C.R.	P	Label	
	S_I	<---	C_P	1.303	.152	8.566	***	par_18
	P_V	<---	C_P	1.402	.152	9.227	***	par_20
	F_R	<---	C_P	1.004	.127	7.903	***	par_25
	F_C	<---	C_P	1.095	.137	8.008	***	par_19
	B_I	<---	F_R	.225	.082	2.731	.006	par_21
	B_I	<---	S_I	.207	.058	3.567	***	par_22
	B_I	<---	P_V	.566	.088	6.457	***	par_23
	FR1	<---	F_R	1.000				
	FR2	<---	F_R	.961	.065	14.882	***	par_1
	FR3	<---	F_R	.894	.079	11.267	***	par_2
	FR4	<---	F_R	1.135	.092	12.289	***	par_3
	FR5	<---	F_R	1.166	.089	13.043	***	par_4
	FR6	<---	F_R	1.156	.092	12.575	***	par_5
	FR7	<---	F_R	1.020	.089	11.417	***	par_6
	CP3	<---	C_P	1.000				
	CP2	<---	C_P	1.149	.116	9.942	***	par_7
	CP1	<---	C_P	1.072	.117	9.162	***	par_8
	BI3	<---	B_I	1.000				
	BI2	<---	B_I	.995	.058	17.046	***	par_9
	BI1	<---	B_I	.968	.058	16.644	***	par_10
	UB	<---	B_I	.419	.137	3.060	.002	par_24
	UB	<---	F_C	.463	.156	2.969	.003	par_26
	FC2	<---	F_C	1.087	.083	13.097	***	par_27
	PV3	<---	P_V	.966	.062	15.540	***	par_28
	PV2	<---	P_V	.986	.059	16.715	***	par_29
	PV1	<---	P_V	1.000				
	SI1	<---	S_I	1.000				
	SI2	<---	S_I	.878	.052	16.752	***	par_30
	SI3	<---	S_I	.865	.055	15.791	***	par_31
	FC3	<---	F_C	.892	.079	11.350	***	par_32
	FC1	<---	F_C	1.000				

***Correlation is significant at the 0.001 level (2 tailed)

Standardized Regression Weights: (Group number 1 - Default model)

Path	Estimate
S_I <--- C_P	.735
P_V <--- C_P	.920
F_R <--- C_P	.772
F_C <--- C_P	.757
B_I <--- F_R	.183
B_I <--- S_I	.231
B_I <--- P_V	.541
FR1 <--- F_R	.684
FR2 <--- F_R	.681
FR3 <--- F_R	.624
FR4 <--- F_R	.826
FR5 <--- F_R	.875
FR6 <--- F_R	.846
FR7 <--- F_R	.749
CP3 <--- C_P	.585
CP2 <--- C_P	.611
CP1 <--- C_P	.548
BI3 <--- B_I	.841
BI2 <--- B_I	.853
BI1 <--- B_I	.838
UB <--- B_I	.244
UB <--- F_C	.244
FC2 <--- F_C	.860
PV3 <--- P_V	.825
PV2 <--- P_V	.873
PV1 <--- P_V	.811
SI1 <--- S_I	.882
SI2 <--- S_I	.831
SI3 <--- S_I	.796
FC3 <--- F_C	.714
FC1 <--- F_C	.754

Standardized Total Effects (Group number 1 - Default model)

Construct	C_P	P_V	S_I	F_R	F_C	B_I
P_V	.920	.000	.000	.000	.000	.000
S_I	.735	.000	.000	.000	.000	.000
F_R	.772	.000	.000	.000	.000	.000
F_C	.757	.000	.000	.000	.000	.000
B_I	.809	.541	.231	.183	.000	.000
FC1	.571	.000	.000	.000	.754	.000
FC2	.651	.000	.000	.000	.860	.000
FC3	.541	.000	.000	.000	.714	.000
UB	.382	.132	.056	.045	.244	.244
BI1	.678	.454	.193	.154	.000	.838
BI2	.690	.461	.197	.156	.000	.853
BI3	.680	.455	.194	.154	.000	.841
CP1	.548	.000	.000	.000	.000	.000
CP2	.611	.000	.000	.000	.000	.000
CP3	.585	.000	.000	.000	.000	.000
PV3	.759	.825	.000	.000	.000	.000
PV2	.803	.873	.000	.000	.000	.000
PV1	.746	.811	.000	.000	.000	.000
SI3	.586	.000	.796	.000	.000	.000
SI2	.611	.000	.831	.000	.000	.000
SI1	.649	.000	.882	.000	.000	.000
FR7	.579	.000	.000	.749	.000	.000
FR6	.653	.000	.000	.846	.000	.000
FR5	.676	.000	.000	.875	.000	.000
FR4	.638	.000	.000	.826	.000	.000
FR3	.482	.000	.000	.624	.000	.000
FR2	.526	.000	.000	.681	.000	.000
FR1	.528	.000	.000	.684	.000	.000

Standardized Direct Effects (Group number 1 - Default model)

Construct	C_P	P_V	S_I	F_R	F_C	B_I
P_V	.920	.000	.000	.000	.000	.000
S_I	.735	.000	.000	.000	.000	.000
F_R	.772	.000	.000	.000	.000	.000
F_C	.757	.000	.000	.000	.000	.000
B_I	.000	.541	.231	.183	.000	.000
FC1	.000	.000	.000	.000	.754	.000
FC2	.000	.000	.000	.000	.860	.000
FC3	.000	.000	.000	.000	.714	.000
UB	.000	.000	.000	.000	.244	.244
BI1	.000	.000	.000	.000	.000	.838
BI2	.000	.000	.000	.000	.000	.853
BI3	.000	.000	.000	.000	.000	.841
CP1	.548	.000	.000	.000	.000	.000
CP2	.611	.000	.000	.000	.000	.000
CP3	.585	.000	.000	.000	.000	.000
PV3	.000	.825	.000	.000	.000	.000
PV2	.000	.873	.000	.000	.000	.000
PV1	.000	.811	.000	.000	.000	.000
SI3	.000	.000	.796	.000	.000	.000
SI2	.000	.000	.831	.000	.000	.000
SI1	.000	.000	.882	.000	.000	.000
FR7	.000	.000	.000	.749	.000	.000
FR6	.000	.000	.000	.846	.000	.000
FR5	.000	.000	.000	.875	.000	.000
FR4	.000	.000	.000	.826	.000	.000
FR3	.000	.000	.000	.624	.000	.000
FR2	.000	.000	.000	.681	.000	.000
FR1	.000	.000	.000	.684	.000	.000

Standardized Indirect Effects (Group number 1 - Default model)

Construct	C_P	P_V	S_I	F_R	F_C	B_I
P_V	.000	.000	.000	.000	.000	.000
S_I	.000	.000	.000	.000	.000	.000
F_R	.000	.000	.000	.000	.000	.000
F_C	.000	.000	.000	.000	.000	.000
B_I	.809	.000	.000	.000	.000	.000
FC1	.571	.000	.000	.000	.000	.000
FC2	.651	.000	.000	.000	.000	.000
FC3	.541	.000	.000	.000	.000	.000
UB	.382	.132	.056	.045	.000	.000
BI1	.678	.454	.193	.154	.000	.000
BI2	.690	.461	.197	.156	.000	.000
BI3	.680	.455	.194	.154	.000	.000
CP1	.000	.000	.000	.000	.000	.000
CP2	.000	.000	.000	.000	.000	.000
CP3	.000	.000	.000	.000	.000	.000
PV3	.759	.000	.000	.000	.000	.000
PV2	.803	.000	.000	.000	.000	.000
PV1	.746	.000	.000	.000	.000	.000
SI3	.586	.000	.000	.000	.000	.000
SI2	.611	.000	.000	.000	.000	.000
SI1	.649	.000	.000	.000	.000	.000
FR7	.579	.000	.000	.000	.000	.000
FR6	.653	.000	.000	.000	.000	.000
FR5	.676	.000	.000	.000	.000	.000
FR4	.638	.000	.000	.000	.000	.000
FR3	.482	.000	.000	.000	.000	.000
FR2	.526	.000	.000	.000	.000	.000
FR1	.528	.000	.000	.000	.000	.000

APPENDIX I: LSM and SEM Segmentation

The LSM is a multi-attribute tool developed by the South African Advertising Research Foundation (SAARF) that enables the segmentation of the South African consumer market based on 29 descriptors that are weighted using principal component analysis and stepwise regression analysis, with a sum of the weights giving a measure (Haupt, 2017: para 1-7). These descriptors are dependent on the consumers' access to services, durable items, and geographic location. The LSM segments the population into 10 groups, numbered from one to ten, with LSM 1 being the lowest ranked market segment and LSM 10 being ranked the highest (The Foschini Group, 2017:154). LSM 7 to LSM 10 have two subgroups (low and high), effectively extending the SAARF LSM measure to have 14 segments SAARF (2012:39). According to SAARF (2012:38), the list of descriptors and their weights as considered in LSM segmentation are as follows:

LSM Descriptors

Descriptor number	Attribute	Weight
1	Hot running water	0.185224
2	Computer	0.311118
3	Electric stove	0.16322
4	No domestic worker	-0.30133
5	Zero on one radio set in household	-0.254
6	In-house flush toilet	0.113306
7	Motor vehicle	0.16731
8	Washing machine	0.149009
9	Refrigerator	0.1134133
10	Vacuum cleaner/floor polisher	0.164736
11	Pay TV subscription (DSTV)	0.12736
12	Dishwasher	0.212562
13	Three or more cellular phones in household	0.184676
14	Two cellular phones in household	0.124007
15	Home security service	0.151623
16	Deep freezer	0.116673
17	Microwave oven	0.126409
18	Rural area	-0.12936
19	House/cluster house/town house	0.113907
20	Digital video disc (DVD)/Blu-ray player	0.09607
21	Tumble dryer	0.166056
22	Home theatre system	0.096072
23	Home landline	0.104531
24	Swimming pool	0.166031
25	In-house tap water	0.123015
26	Built-in kitchen sink	0.132822
27	Television set(s)	0.120814
28	Air conditioner	0.178044
29	Metropolitan dwelling	0.079321

Adapted: SAARF (2012:38)

The table below provides a description of the various LSM groups weighted sum ranges that determine the categorisation of consumers within each LSM.

LSM Category Weightings

LSM Group	Summed Weight*
1	Less than -1.390140
2	-1.390139 to -1.242000
3	-1.242001 to -1.011800
4	-1.011801 to -0.691000
5	-0.691001 to -0.278000
6	-0.278001 to 0.382000
7 (Low)	0.381999 to 0.583000
7 (High)	0.582999 to 0.801000
8 (Low)	0.800999 to 0.977000
8 (High)	0.976999 to 1.169000
9 (Low)	1.168999 to 1.418000
9 (High)	1.417999 to 1.745000
10 (Low)	1.744999 to 2.080000
10 (High)	2.079999 and more
*Add a constant of -0.81052 to allocate respondent LSM	

Adapted: SAARF (2012:39)

The SEM or Establishment Survey (ES) on the other hand, is an alternative segmentation tool developed by Kantar TNS as a more reflective indicator of consumers in RSA (Langschmidt, 2017:31). The measure categorises consumers on the basis of 14 descriptors that revolve around fewer durables and technology (only four), where respondents live, the kind of household structures they reside in, and their surrounding community infrastructure (Langschmidt, 2017:31-32). Similar to the LSM, SEM segments consumers into 10 socio-economic groups, scoring consumers between 0 and 100, where SEM 1 (0-10) represents low socio-economic living and SEM 10 (91-100) represents high socio-economic living (Publisher Research Council and Kantar TNS, 2017:13). However, the SEM is preferred to SAARF's LSM because it places more emphasis on consumers' structural items and less emphasis on consumer household durables and technology, and also because it has fewer descriptors, making it short and user-friendly. According to Langschmidt (2017:32), the descriptors considered in SEM segmentation are listed in the table below.

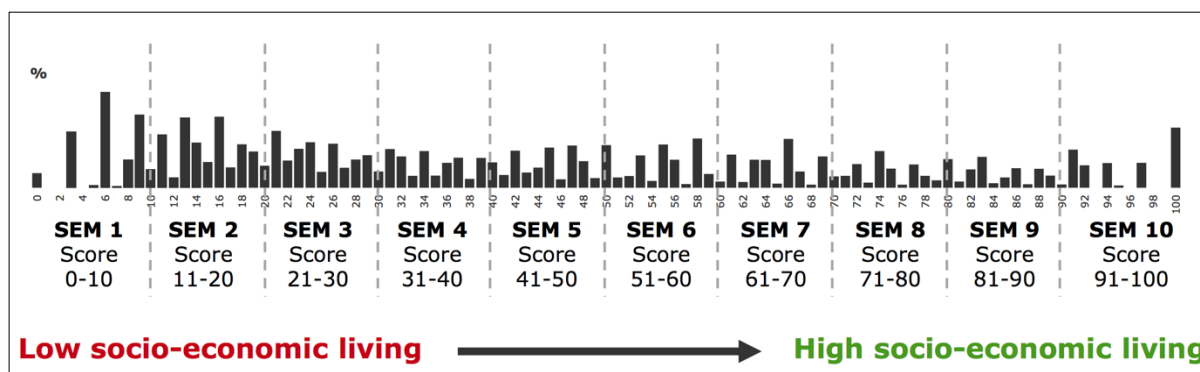
SEM/ES Descriptors

Descriptor number	Attribute
1	Post office nearby
2	Police station nearby
3	Built-in kitchen sink
4	Home security service
5	Motor vehicle
6	Deep freezer (free-standing)
7	Microwave oven
8	Vacuum cleaner/floor polisher
9	Washing machine
10	Floor material
11	Water source
12	Type of toilet
13	Roofing material
14	Number of sleeping rooms

Adapted: Langschmidt (2017:32)

The figure below is a representation of the SEM segmentation scale.

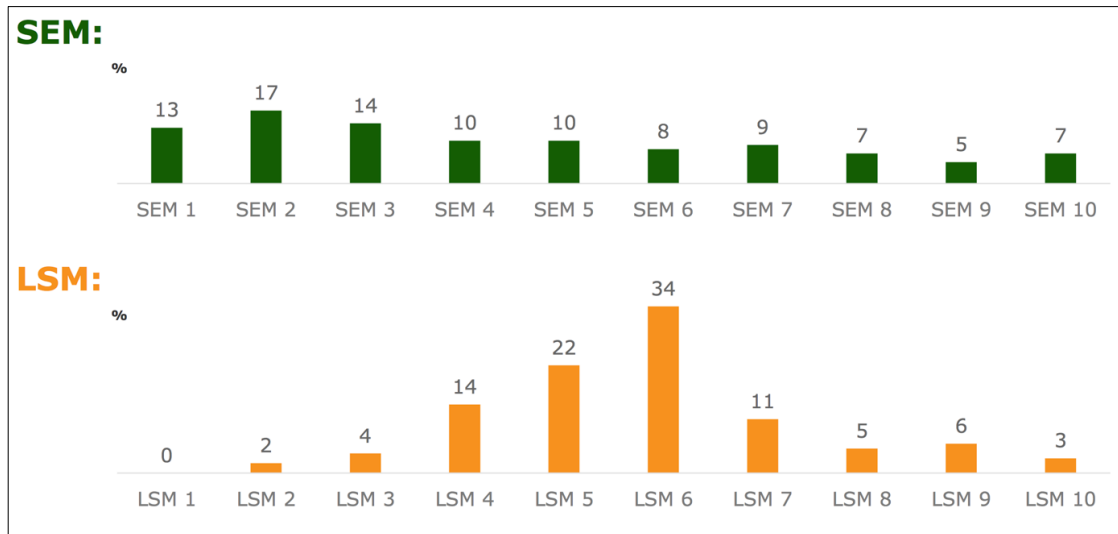
The SEM/ES Continuum



Source: Publisher Research Council and Kantar TNS (2017:13)

The following figure depicts a comparison between the SEM and LSM segmentation tools with the population percentage representation in RSA for each cluster.

SEM versus LSM Population in RSA (July to December 2016)



Source: Publisher Research Council and Kantar TNS (2017:12)

APPENDIX J: Declaration



UNIVERSITY OF KWAZULU-NATAL
SCHOOL OF MANAGEMENT, INFORMATION TECHNOLOGY & GOVERNANCE

1 September 2016

Dear student,

I, Cecil Oloo Jamwa am a PhD (Marketing Management) candidate, at the School of Management, Information & Governance, of the University of KwaZulu-Natal (UKZN). My contact details are: 072 195 5543 and email is jamwac@live.com or 211560456@stu.ukzn.ac.za. My supervisors are Professor J.P. Govender (govendej@ukzn.ac.za) and Dr A. Arbee (arbee@ukzn.ac.za).

You are being invited to consider participating in a study entitled, ‘The influence of marketing communications on youth adoption of m-payments in KwaZulu-Natal’. The aim of this study is:

- i) To determine the most effective media channels to relay m-payments communications to the youth.
- ii) To determine the level of consumer awareness on various m-payments available in the financial services market.
- iii) To determine the youth’s perception of m-payments network operators’ marketing communication performance.
- iv) To develop a conceptual framework to effectively measure marketing communications effectiveness toward m-payments in a South African context.

The study shall be conducted across the campuses of University of KwaZulu-Natal (UKZN), Durban University of Technology (DUT) and Mangosuthu University of Technology (MUT), located in both Durban and Pietermaritzburg areas. The sample size will include a total of 382 students aged between 18 and 35 years, distributed proportionately in accordance to each university’s student population. UKZN, DUT and MUT will contribute 218, 111 and 53 students to the sample respectively. The duration of your participation if you do choose to enrol and remain in the study is expected to be no more than 10 minutes. The study is envisaged to understand the role marketing communications play in sensitising consumers on mobile payment platforms available in the South African market. Upon ascertaining this relationship, payment service providers may better tailor their approach when introducing and promoting the use of these payment services within the province of KwaZulu-Natal.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number: HSS/0857/016D). You have been recruited into the survey by virtue of being

a registered university student at your specific campus. Your participation in this project is voluntary. You may decline to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, Information Technology and Governance, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisors (contact details above), or the UKZN Humanities and Social Sciences Research Ethics Committee at the contact details below:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

APPENDIX K: Participant Consent



University of KwaZulu-Natal
School of Management Information Technology & Governance
Graduate School of Business

PhD (Marketing Management) Research Project: The influence of marketing communications on youth adoption of m-payments in KwaZulu-Natal

Researcher: CECIL JAMWA 071 295 5543

Supervisors: PROF. JEEVARATHNAM GOOVENDER & DR. ARADHNA ARBEE

Research Office: MS P XIMBA 031-2603587

CONSENT

I _____ (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Signature of Participant

Date

This page is to be retained by researcher

APPENDIX L: Ethical Clearance



28 September 2016

Mr Cecil Oloo Jamwa (211560456)
School of Management, IT & Governance
Westville Campus

Dear Mr Jamwa,

Protocol reference number: HSS/0857/016D

Project title: The influence of marketing communications on youth adoption of m-payments in KwaZulu-Natal

Full Approval – Expedited Application

With regards to your response received on 29 August 2016 to our letter of 01 July 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

cc Supervisor: Professor Jeeva Govender & Dr Aradhna Arbee
cc Academic Leader Research: Professor Brian McArthur
cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

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Website: www.ukzn.ac.za

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APPENDIX M: Language Editing Certificate

Mrs Radhika Singh

(F.T.C.L), FELLOWSHIP, TRINITY COLLEGE OF MUSIC, LONDON, (SPEECH AND DRAMA)

LANGUAGE EDITING OF PhD THESIS

Mr CO Jamwa

Student Number: 211560456

Title: THE INFLUENCE OF MARKETING COMMUNICATIONS ON THE YOUTH'S ADOPTION OF M-PAYMENTS IN KWAZULU-NATAL

University of Kwa-Zulu Natal

This is to certify that I have edited the PhD thesis for Mr CO Jamwa, for tenses, syntax, vocabulary, spelling, sense, and all other aspects of language editing. I have also checked the formatting and alignment to the best of my ability.

Corrections are marked on the proposal, and need to be corrected:

1. Keep to the present tense when you are speaking about the thesis at the moment and its value. However, if you are referring to the research carried out, past tense is acceptable. If you discuss its effect in the future, future tense is acceptable.
2. t test is generally 't', not T.
3. I checked some of :
 - a. Table of Contents – Numbering needs correction on Pages viii and x.
 - b. List of Figures
 - c. List of Tables – Numbering to be corrected on Page xivCross-check Page Numbers from a, b, c, above with Thesis Page Numbers.
4. Be consistent with the use of RSA, or South Africa (SA). I used SA throughout as you first mentioned South Africa (SA), on Page iv.
5. The word 'posit' on Page 3 has been used too often, too frequently. I suggest you substitute it with its synonyms and I have replaced it a few times with its synonyms, but you may choose whatever synonym you feel applies best to the context.
6. Cross-check your Bibliography for correct spelling of authors' names and for dates, in the text, for example, on Page 4, 1.6, (Liebana-Cabanillas *et al*, 2014) has a different year in the Bibliography. This mistake is repeated.
7. Instead of *et al*, all authors' names should be mentioned when they are being mentioned for the first time in the text. This applies to (Liebana-Cabanillas *et al*, 2014) and all others being mentioned for the first time in the text.
8. Avoid use of / e.g. 'service/technology. Use one word or join the 2 word with 'and' or 'or'.
9. Type the introduction to any Table or Figure above the drawing itself, on a new line, or the next page, whichever is applicable, instead of on the previous page. It allows for continuity, for example, Page 15 overflowing onto Page 16. (Avoid Widows and Orphans).
10. References to publications over 10 years are not recommended.
11. In the Bibliography, all authors' names should be mentioned in full, avoid *et al*.
12. It is advisable not to end a sentence with authors' names, and then start the next sentence with the same authors' names, as they are lying in juxtaposition. It is better to start the first sentence with the authors' names, and join the two sentences with 'and they also state', as I

have corrected on Page 28, Paragraph 2, and wherever else this mistake has been made. If there are different Page numbers, adjust it as best as you can. Try to mention the authors' names once only and then join the two sentences as I have done also on Page 40, last paragraph, and on other pages, wherever applicable.

13. Check: (Shimp, 1993) on Page 44.
14. Use either 'm-payments' (Page 192), or 'Mobile Payments' (Page 88), and on other pages. Standardise throughout.
15. Check alignment in Column 1 on both sides on Pages 211, 213, and 214.
16. Use full names for first usgae, then acronyms in brackets. Thereafter, you can use acronyms. For example, SBSA, FNB, ABSA, PwC. What exactly is Stats SA?

Disclaimer:

Final decisions rest with the student as to which suggestions to implement.
No review of the final document was requested before submission.



Mrs R Singh
Language Editor
30th June 2018