Factors affecting consumer adoption of mobile payments in South Africa

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ABSTRACT

Mobile phone ownership and mobile phone use is prolific in South Africa which enjoys more than 100% mobile penetration. Whilst mobile payments, the cashless-payments for goods and services using mobile devices, have been successful in similar economies, the rate of adoption in South Africa is low. South Africa has a large unbanked population and mobile payments have been seen as getting the unbanked access to the financial world. This study identifies and assesses the factors affecting the adoption of mobile payments by consumers in South Africa. For this qualitative study, industry experts were interviewed to answer the five research questions. Data was also collected from a focus group of ordinary consumers.

What was found was that the specific needs of consumers for mobile payments are the ease of use and the need to have a wide distribution network of merchants that accept mobile payments. The cost of a mobile payment transaction was considered reasonable and fair. Other findings include the need to educate consumers to bring about a change in their behaviour to get these consumers to adopt mobile payments as a payment culture. Mobile payments will gain greater acceptance if there is a wide network of merchants that accept this form of payment. The best way to incentivise merchants is to highlight to them the risks of carrying cash and the immediate benefit of having a cash outflow from the business, on cash withdrawal transactions. It is also advisable to get community, religious and tribal leaders to act as agents for the mobile payment products and to recommend the products to their communities to increase mobile payment adoption.

MNOs, banks and 3rd party providers need to understand the specific needs of consumers and they should build products that suit customers' needs. Through consumer education, mobile payment adoption can be increased as consumers gain trust and confidence that the technology works.

DECLARATION

I, Riaz Mahomed Randeree, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Riaz Mahomed Randeree

Signed at …Johannesburg…………

On the …………………………….. day of ………………………… 2011

DEDICATION

To my parents, my brother, my sister, my wife and my daughters, Zahra and Maryam, for their love, support and sacrifices made to help me achieve this.

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I wish to express sincere thanks and appreciation to:

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TABLE OF CONTENTS

ABSTRACT .... **II**

DECLARATION .... **III**

DEDICATION .... **IV**

ACKNOWLEDGEMENTS .... **V**

LIST OF TABLES .... **X**

LIST OF FIGURES .... **XI**

CHAPTER 1: INTRODUCTION **1**

1.1 PURPOSE OF THE STUDY 1
1.2 CONTEXT OF THE STUDY 1
1.3 PROBLEM STATEMENT 2
1.3.1 MAIN PROBLEM 2
1.4 SIGNIFICANCE OF THE STUDY 3
1.5 DELIMITATIONS OF THE STUDY 3
1.6 DEFINITION OF TERMS 4
1.7 ASSUMPTIONS 6

CHAPTER 2: LITERATURE REVIEW **7**

2.1. INTRODUCTION 7
2.2. BACKGROUND DISCUSSION 8
2.3. ADVANTAGES OF MOBILE PAYMENTS 10
2.4. DISADVANTAGES OF MOBILE PAYMENTS 11
2.5. CONSUMER ADOPTION MODELS 11
2.5.1 TECHNOLOGY ACCEPTANCE MODEL 12
2.5.2 UNIFIED THEORY OF ACCEPTANCE MODEL AND USE OF TECHNOLOGY 14
2.5.3 DIFFUSION OF INNOVATIONS THEORY 14
2.6. FACTORS AFFECTING CONSUMER ADOPTION OF MOBILE PAYMENT SYSTEMS .. 16
2.6.1 RELATIVE ADVANTAGE OF MOBILE PAYMENT SYSTEMS 16
2.6.2 COMPLEXITY 16
2.6.3 COMPATIBILITY 17
2.6.4 COSTS 17
2.6.5 CRITICAL MASS 18
2.6.6 SECURITY AND TRUST 19
2.6.7 USE SITUATION 19
2.6.8 SOCIAL INFLUENCE 20

2.7. Conclusion of Literature Review 20
2.7.1 Research Question 1: 21
2.7.2 Research Question 2: 21
2.7.3 Research Question 3: 21
2.7.4 Research Question 4: 21
2.7.5 Research Question 5: 21

CHAPTER 3: RESEARCH METHODOLOGY 22

3.1 Research methodology / paradigm 22
3.2 Research Design 23
3.3 Population and sample 23
3.3.1 Population 23
3.3.2 Sample and sampling method 23
3.4 The research instrument 24
3.5 Procedure for data collection 25
3.6 Data analysis and interpretation 25
3.7 Limitations of the study 26
3.8 Validity and reliability 26
3.8.1 External validity 26
3.8.2 Internal validity 27
3.8.3 Reliability 27

CHAPTER 4: PRESENTATION OF RESULTS 28

4.1 Introduction 28
4.2 Demographic profile of respondents 28
4.2.1 Interview sample characteristics 29
4.2.2 Focus Group sample characteristics 30
4.3 Interview Results pertaining to Research Question 1 30
4.3.1 Question 1 Results 31
4.3.2 Question 2 Results 33
4.3.3 Question 3 Results 39
4.3.4 Question 4 Results 43
4.3.5 Conclusion 47
4.4 Interview Results pertaining to Research Question 2 47
4.5 Interview Results pertaining to Research Question 3 50
4.5.1 Question 6 Results 51
4.5.2 Question 7 Results 52
4.5.3 Question 8 Results 54
4.5.4 Conclusion 56
4.6 Interview Results pertaining to Research Question 4 57
4.6.1 Question 9 Results 57
4.6.2 Question 10 Results 60
4.6.3 Conclusion 63
4.7 Interview Results pertaining to Research Question 5 63
4.8 Focus Group Results 66
4.9 Summary of the results 68

CHAPTER 5: DISCUSSION OF THE RESULTS........................71

5.1 INTRODUCTION 71
5.2 DEMOGRAPHIC PROFILE OF RESPONDENTS 71
5.3 DISCUSSION PERTAINING TO RESEARCH QUESTION 1 72
5.4 DISCUSSION PERTAINING TO RESEARCH QUESTION 2 74
5.5 DISCUSSION PERTAINING TO RESEARCH QUESTION 3 74
5.6 DISCUSSION PERTAINING TO RESEARCH QUESTION 4 75
5.7 DISCUSSION PERTAINING TO RESEARCH QUESTION 5 76
5.8 CONCLUSION 77

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS......78

6.1 INTRODUCTION 78
6.2 CONCLUSIONS OF THE STUDY 78
6.3 RECOMMENDATIONS 79
6.4 SUGGESTIONS FOR FURTHER RESEARCH 81

REFERENCES 82

APPENDIX A...85

LETTER TO RESPONDENTS 85

APPENDIX B...86

ACTUAL RESEARCH INSTRUMENT - EXPERT INTERVIEW QUESTIONS 86

APPENDIX C - TRANSCRIPTS..87

RESPONDENT 1: BANK A - CHANNEL MANAGER 87
RESPONDENT 2: BANK B - PRODUCT MANAGER MOBILE MONEY.............................. 89
RESPONDENT 3: BANK C – SENIOR EXECUTIVE 93
RESPONDENT 4: JV – SENIOR EXECUTIVE 96
RESPONDENT 5: JV – PRODUCT MANAGER 100
RESPONDENT 6: MNO A – SENIOR PRODUCT MANAGER 103
RESPONDENT 7: MNO B – SENIOR PRODUCT MANAGER 105
RESPONDENT 8: MNO C – PRODUCT MANAGER 108
RESPONDENT 9: 3RD PARTY PROVIDER A – SENIOR EXECUTIVE 110
RESPONDENT 10: 3RD PARTY PROVIDER B – SENIOR EXECUTIVE 116
FOCUS GROUP TRANSCRIPT.. 121

APPENDIX D **124**

LIST OF TABLES

Table 1: Interview Respondents 24

Table 2: Interview Sample distribution by designation and gender 29

Table 3: Interview Sample distribution by race and gender 29

Table 4: Interview Sample distribution by designation and race 30

Table 5: Focus Group Sample distribution by race and gender 30

Table 6: Mobile payment definition 31

Table 7: Factors affecting mobile payment adoption in South Africa 33

Table 8: Addressing mobile payment adoption issues in South Africa 39

Table 9: Consumer needs regarding mobile payments in South Africa.... 43

Table 10: Transaction cost a barrier.. 48

Table 11: Benefit to company of widespread adoption 51

Table 12: Adoption rates amongst the various LSM groups...................... 52

Table 13: Impact of different payment cultures on mobile payments 54

Table 14: How to effect rapid adoption of mobile payments...................... 57

Table 15: Incentives for merchants 60

Table 16: Use of social influence.. 63

Table 17: Consistency matrix.. 124

LIST OF FIGURES

Figure 1: Framework of factors impacting the mobile payment services market 10

Figure 2: Extension of the Technology Acceptance Model – TAM2 13

Figure 3: Unified Theory of Acceptance Model and Use of Technology ... 14

Figure 4: Diffusion of Innovations 15

CHAPTER 1: INTRODUCTION

1.1 Purpose of the study

The purpose of this research is to identify and assess the factors affecting the widespread acceptance and adoption of mobile payments by consumers in South Africa. This report will establish whether and why the use of mobile payments is low, given the high level of mobile phone penetration in South Africa.

1.2 Context of the study

Mobile phone ownership and mobile phone use is prolific in South Africa with the total number of SIM (Subscriber Identity Module) cards active at 50.2 million at the end of March 2010 (Vecchiatto 2010). According to Lehohla (2009), the population of South Africa is estimated to be around 49.3 million with those aged 10 and over estimated at 39.1 million. There are a variety of reasons for the more than 100% penetration levels (Cellular-News 2009; Vecchiatto 2010); the primary one being that people may subscribe to more than one MNO (Mobile Network Operator), and may choose to swap their SIM card to one of another MNO when calling someone that uses that MNO. This allows them to have lower call charges, avoiding the Interconnect rate or the rate when switching from one MNO to another.

A recent study by the non-profit organisation, Mobile Money for the Unbanked (MMU) has found that getting customers to use mobile payments is more difficult than getting them to sign up (Krugel, Davidson, Tellez, Desai, Solin, Zerzan et al. 2010). Their view is that this is the next major challenge that this industry needs to overcome. Mobile payment refers to the range of payments initiated or confirmed using a mobile phone (Weber and Darbellay 2010). Mobile banking, on the other hand, refers to the range of services in which a banking activity is involved (Weber and Darbellay 2010). Mobile banking has a more stringent regulation and falls under financial market regulations as it involves a financial operation linked to a bank account.

The top four banks in South Africa have introduced mobile banking as well as some form of mobile payment. ABSA has introduced CashSend, a means of using a mobile phone to send money to a recipient. The recipient receives an SMS with the transaction details and is able to draw cash out from an ATM without any service charges. FNB has a similar service called “Send Money”, while Standard bank offers MiMoney (Hahn, Newton and Sharma 2010). These are examples of bank-led offerings.

Safaricom, an MNO in Kenya, has been extremely successful with M-PESA, utilising agents that allow recipients of money transfers to draw cash out at the agent’s store. Given the success that Safaricom has enjoyed, Vodacom South Africa has recently introduced a version of M-PESA (Francis 2010). In South Africa, a joint venture between MTN and Standard bank has given rise to a mobile banking offering with an associated MAESTRO debit card. These are examples of MNO-led offerings (Hahn et al. 2010).

Mobile payments have been seen as getting the unbanked access to the financial world. South Africa has around 16 million unbanked citizens who conduct financial transactions daily using cash. Companies such as WIZZIT and Pocit have been in operation in South Africa since 2004 and 2008 respectively with the intention of giving the unbanked the ability to perform affordable transactions (ITNewsAfrica 2008). These third-party led offerings allow consumers to pay for rent, buy prepaid electricity, buy prepaid airtime for mobile phones and send money to relatives.

1.3 Problem statement

1.3.1 Main problem

To identify and assess the factors affecting the adoption of mobile payments by consumers in South Africa.

1.4 Significance of the study

Consumer adoption of mobile payments is a key issue and we need to ask whether mobile payments will be used by their intended users. The study fills a gap in that the factors influencing the slow adoption of mobile payments are not well defined and documented. Prior studies conducted in other countries suggest an interest in mobile payment applications (Mallat 2007). However, more research is needed to examine the South African specific factors that influence consumer adoption of mobile payments.

The study will provide guidance to MNOs, banks and third-party providers to build products that suit customers' needs. The findings will provide insights into areas where consumers see mobile payments as most applicable, and will hopefully facilitate strategic decision making by MNOs, banks and the third-party providers.

This study contributes to existing technology adoption research.

1.5 Delimitations of the study

This study will only include mobile payments as defined in section 1.2. This includes payments conducted using mobile technologies such as SMS (Short Message Service), Wireless Application Protocol (WAP) and Unstructured Supplementary Service Data (USSD). The Near Field Communication (NFC) technology which has been trialed in a few countries, with the exception of South Africa, will be excluded from this study (Chidembo 2009).

Furthermore, mobile banking as defined in section 1.2 will be excluded from this study.

1.6 Definition of terms

- A2P - Application to Person
- AFSP - Authorised Financial Services Provider
- ARPU - Average Revenue Per User
- ATM - Automatic Teller Machine
- DOI – Diffusion of Innovations theory
- FICA – Financial Intelligence Centre Act
- FMCG – Fast Moving Consumer Goods
- GPRS - General Packet Radio Service
- ICASA - Independent Communications Authority of South Africa
- IN – Intelligent Network
- ITU - International Telecommunications Union
- KYC – Know Your Customer
- LSM - Living Standards Measure
- MNO - Mobile Network Operator
- MNP - Mobile Number Portability
- MO - Mobile Originated (message)
- MT - Mobile Terminated (message)
- MVNO - Mobile Virtual Network Operator
- NFC - Near Field Communication - A short range connection for communicating between devices

- OTA - Over The Air
- OTP - One-Time Password
- P2A - Person to Application (also referred to as person to content and mobile to application)
- P2P - Peer to Peer (also referred to as person to person)
- PASA - Payments Association of South Africa
- PCI DSS - Payment Card Industry Data Security Standards
- POS – Point-of-sale
- RICA - Regulation of Interception and provision of Communication-related information Act
- SIM - Subscriber Identity Module
- Smart Phone - These handsets have advanced capabilities and allow users to add applications to their phones. They usually have a QWERTY keypad and include 3G and Wifi capabilities
- SMS - Short Messaging Service - These are text only messages that can be sent to mobile phones from the Internet or from other mobile devices. All GSM phones are SMS capable
- TAM – Technology Acceptance Model
- USSD - Unstructured Supplementary Service Data - Works on all existing GSM phones. Provides session-based communication, enabling a variety of applications
- UTAUT – Unified Theory of Acceptance model and Use of Technology
- VAS - Value-Added Services
- WAE - Wireless Application Environment

- WAP - Wireless Application Protocol
- WASP Wireless Application Service Provider
- WIG - Wireless Internet Gateway
- WLAN - Wireless Local Area Network
- WML - Wireless Mark-up Language
- XHTML - Extensible Hypertext Mark-up Language

1.7 Assumptions

The following assumptions have been made regarding this study:

- The sample will be able to freely share their views on the factors affecting mobile payments. Lack of knowledge will negatively affect the credibility of this study
- Respondents have a suitable understanding of English to be able to clearly articulate answers to questions
- The total number of respondents will be sufficient to gain adequate data

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Mobile payments are the cashless-payments for goods and services using mobile phones or devices. Mobile payment solutions can be implemented using a variety of communications protocols, namely, SMS, USSD, WAP or WIG. Mobile payment solutions can also depend on applications residing on the mobile device. Another definition of mobile payments is the use of a mobile device (such as a mobile phone, smart phone or personal digital assistant) to pay for goods, services and bills by taking advantage of wireless and other communication technologies (Dahlberg, Mallat, Ondrus and Zmijewska 2008). Mallat (2007) similarly defined mobile payments as the use of a mobile device to conduct payment transactions in which funds are transferred from payer to receiver either directly or via an intermediary. Mehra (2010) adds that the payer employs mobile communication techniques in conjunction with mobile devices for initiation, authorisation or realisation of payment. Schüffel (2002) defines a mobile payment as a transaction of money authorised electronically via a mobile device, and a payment that can be initiated via a mobile device. He provides another characteristic of a mobile payment in that it occurs via the network of a mobile operator and does not require the Internet as an underlying technology.

Mobile devices can be used in a variety of payment scenarios, including payment for digital content (e.g. ringtones or games), movie tickets, parking fees, transport fares, at vending machines (often called unmanned point-of-sale (POS) terminals) and manned POS terminals, and can be broadly classified as consumer-to-consumer, consumer-to-machine, consumer-to-business and consumer-to-online (Mallat 2007; Dahlberg et al. 2008; Pousttchi, Schiessler and Wiedemann 2009; Shin 2009).

Mobile payments are seen as a way to get the unbanked transacting in an economy. It is also a way to perform micropayments of a few rands without incurring a large transaction fee. According to Mallat (2007), mobile payments have been suggested as a solution to facilitate micropayments in mobile commerce, and to provide an alternative for the diminishing use of cash. She has found that existing payment methods such as cash, cheques, credit cards and debit cards carry relatively high transaction costs, making them unsuitable for micropayments (Mallat 2007). Schüffel (2002) believes mobile payments could provide a cheaper means of payment for both vendor and customer, as the transportation cost of cash and insurance cost of cash are higher.

2.2. Background discussion

While mobile payments have been around in South Africa since 2004, a small percentage of users actually use this mode of payment (Borg and Persson 2009). As discovered by Krugel et al. (2010), mobile payment as a form of commerce, faces a major challenge in getting users in emerging markets, such as Thailand, South Africa, Bangladesh and Tanzania, to regularly make use of this mode of payment. On a social level, mobile payments can be thought of as a sort of transformational banking model which has the potential to attract previously unbanked segments of the population by using the existing mobile telecommunication infrastructure (Borg and Persson 2009). Transformational efforts have the potential to formalise previously informal transactions, which will eventually bring the poor into the formal economy (Borg and Persson 2009). According to Finscope (2009, as cited in (Villiers 2010)), there are at least 4.8 million cell phone users in South Africa that are unbanked.

Mallat (2007) has discovered four characteristics that make mobile phones useful for payment purposes. Firstly, the proliferation of mobile telecommunications technology has made mobile phones increasingly common and available to users. Secondly, compared to computers and laptops, mobile phones are closer to the user, which enables the storing of personal information in them and facilitates their use as a payment instrument. Thirdly, most MNO billing systems are already suitable for handling micropayment transactions. Lastly, the success of early mobile content services such as ringtones suggests that consumers are already accustomed to using their mobile devices for payment purposes.

Dahlberg et al. (2008) state that in the early 2000s, mobile payments became popular and have remained so even after the dot-com burst. What they find striking, is that many of the mobile payments efforts have failed. They cite dozens of mobile payment services in Europe that have now been discontinued. To facilitate the development of better mobile payment services, it is important to take lessons from history and by learning what previous studies have discovered about mobile payments, as well as what issues have remained unanswered (Dahlberg et al. 2008). Mallat (2007) agrees that wider adoption of mobile payments has not been as rapid or widespread as expected. She feels that companies may gain a competitive advantage through the offering of mobile payments to their customers, or by becoming a mobile payment service provider themselves. Pousttchi et al. (2009) concludes that widespread mobile payment represents a key enabling factors for the success of other mobile business-to-consumer services and that this could be beneficial for the mobile industry as a whole.

Consumer acceptance is the greatest barrier to mobile payment adoption (Mallat 2007). Consumer adoption behaviour and consumer attitude are therefore two of the key issues. Consumer attitude is formed when the consumer experiences something, evaluates it on the basis of the available information, and according to his or her own perception of it, forms a specific predisposition. This attitude can be assumed to influence consumers in their behaviour, which could be a response that is either favourable or unfavourable (Boshoff and Eden 2001). Pousttchi et al. (2009) have found that the lack of sound business models have prevented mobile payment service providers from offering services to meet consumers' expectations. Business models have been developed from a technology or economic view, but not a comprehensive view.

The power and the interests of the MNOs, banks and third-party payment providers impact how technologies and other resources are orchestrated into mobile payment services, and how these services are offered to, and used by the market. Dahlberg et al. (2008) says that because mobile payment services compete for the attention of customers against physical and electronic payment services, to succeed, value-adds need to be on offer. In addition, the authors feel that mobile payment services are a natural choice to pay for mobile content. A framework of the factors impacting mobile payment services has been modeled by Dahlberg et al. (2008) according to Porter's five forces (Porter 1979) and is illustrated in **Figure 1**.

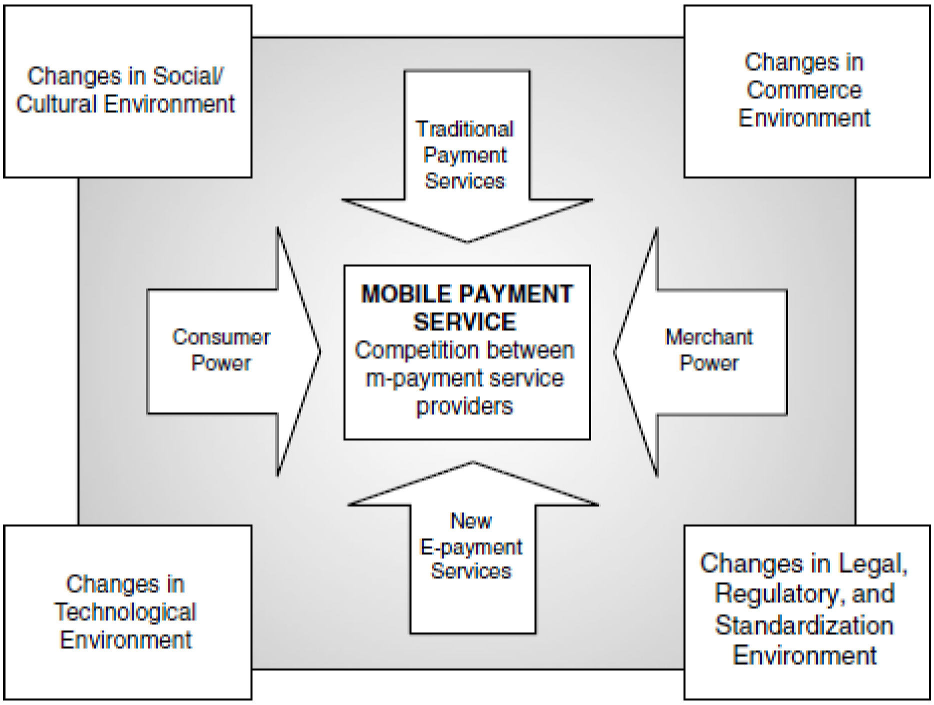

Figure 1: Framework of factors impacting the mobile payment services market

Source: (Dahlberg et al. 2008)

The inner facet of the framework describes the five main competitive forces of the mobile payment services market. The outer facet includes the contingency factors, namely, the technological, social/cultural, commercial and legal/regulatory/standardisation factors.

2.3. Advantages of Mobile Payments

A study by Schüffel (2002) has found that the vast majority of today's mobile devices can be used for conducting mobile payments. Customers are not required to invest in a new device in order to use mobile payment services. Also, mobile payments can be made remotely without the parties being geographically close together. He has also found that mobile payment services provide a means of cashless payments for those people who are not yet eligible for credit cards, or in the case of South Africa, the unbanked masses. Furthermore, consumers would not have to use an automatic teller machine (ATM) any longer and therefore would potentially save time and the related expenses of using the ATM. The use of mobile payments additionally protects the user from fake bank notes and credit/debit card fraud.

2.4. Disadvantages of Mobile Payments

According to a study conducted by Schüffel (2002), consumers dislike the inconvenience of entering a large number of digits on the mobile device to identify themselves or to authorise the transaction. Compared to handing over a bank note or swiping a card, this procedure is still fairly complicated which might lead to a low frequency of usage. Another factor which might hinder the spreading of mobile payments could be the relatively few POS terminals that accept mobile payments (Schüffel 2002). The author goes to state that as mobile payments are directly dependent on the underlying technical infrastructure, transactions cannot be made in the case of a malfunction of any technical layer. He supplies the example of the flat battery on the mobile device, and the customer’s inability to transfer money. Unsurprising, he states that privacy is a major concern of consumers and every time mobile payments are made, records are being produced which potentially allow tracing back monetary streams and the initiators of payments. This can also be an advantage in the case of disputes, in that an electronic paper trail is maintained.

Mallat (2007) has identified limitations in mobile devices such as small keypads, limited transmission speeds, limited device memory and short battery life that diminish the usability of mobile technologies.

2.5. Consumer Adoption Models

Literature devoted to the study of the factors affecting mobile payment systems adoption was developed, applying and extending some existing models such as the Technology Acceptance Model and the Diffusion of Innovations model (Mehra 2010). This section reviews the relevant technology adoption frameworks and summarises the most important features of the models used in technology adoption studies.

2.5.1 Technology Acceptance Model

According to Kim, Mirusmonov and Lee (2010), the technology acceptance model (TAM) is a well-recognised model used to explain adoption behaviour of Information Systems adoption. Adoption behaviour is determined by the intention to utilise a particular system and is, in turn, determined by the perceived usefulness and the perceived ease of use of the system.

The benefit of using the TAM is that it provides a framework by which the effect of external variables on system usage can be assessed (Kim et al. 2010). The researchers were able to adapt the TAM to the mobile payment context, by integrating it with user-centric factors (perceived usefulness and perceived ease of use) and four mobile payment system characteristics (mobility, reachability, compatibility and convenience). In their study, the mobile payment users were further categorised into early and late adopters and the researchers investigated the user-group level behaviour.

The model assumes that Perceived Usefulness (PU) and Perceived Ease of Use (PeU) are the main drivers of technology and that these two user-centric factors determine an individual's intention to adopt a technology (Kim et al. 2010; Mehra 2010).

According to Mehra (2010), TAM is not a suitable model to study customer adoption of mobile payments because it focuses on organisational acceptance of technology and it does not consider the social and economic factors affecting the adoption of mobile payments. In a similar criticism of TAM, (Shin 2009) argues that the TAM may have only a limited ability to explain mobile payment adoption. Firstly and most importantly, the TAM tends to neglect the social context in which a technology is being adopted. For example, the TAM does not consider social influence in the adoption of new technologies. Secondly, the

TAM assumes that there are no barriers to prevent an individual from using a particular system. Thirdly, the TAM tends to assume that there is only a single technology available to users.

In order to address deficiencies in the original model Venkatesh and Davis (2000) proposed an extension to TAM called TAM2, which included the two new factors of social influence and cognitive instrumental processes which they found to significantly influence user acceptance and our understanding of user adoption behaviour. The social influence processes include subjective norm, voluntariness and image, while the cognitive instrumental processes consist of job relevance, output quality and result demonstrability.

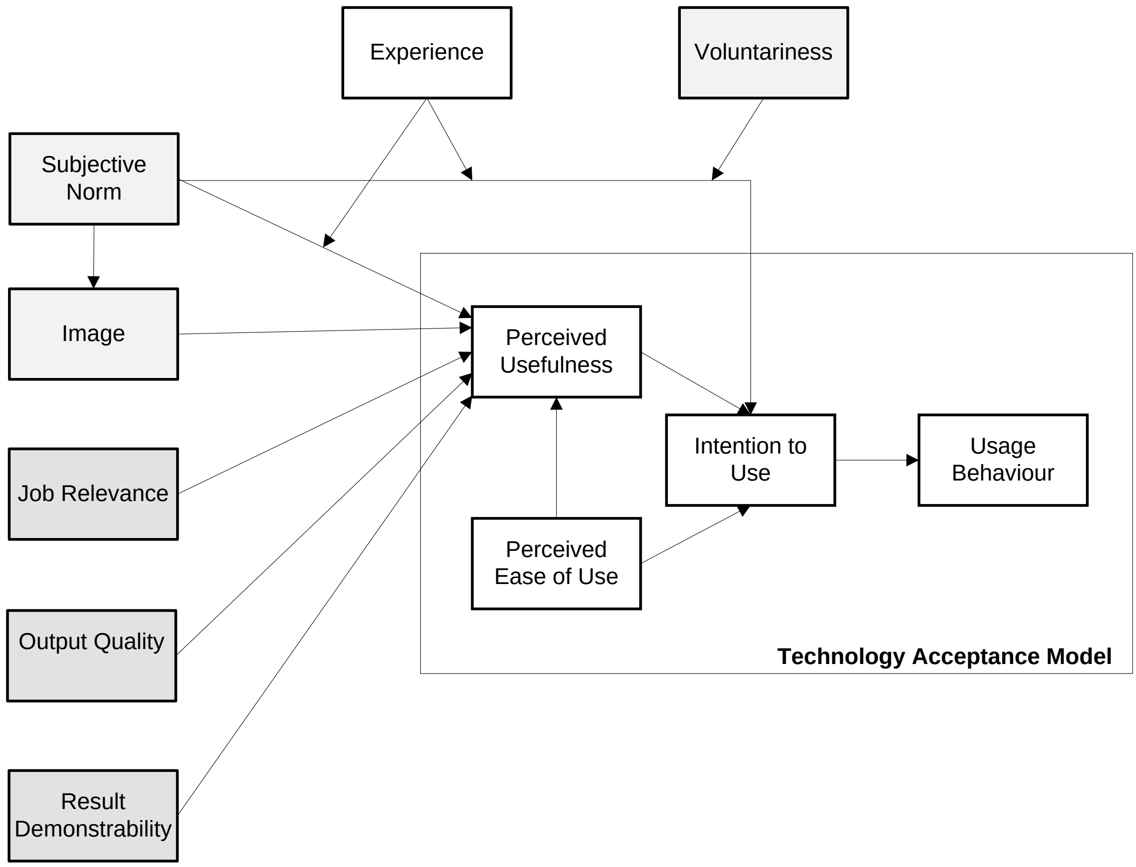

Figure 2: Extension of the Technology Acceptance Model – TAM2

Source: (Venkatesh and Davis 2000)

2.5.2 Unified Theory of Acceptance Model and Use of Technology

An alternative approach to analyse consumer acceptance of new technologies has been proposed by Venkatesh, Morris, Davis and Davis (2003). In the view of its creators, the Unified Theory of Acceptance Model and Use of Technology (UTAUT) helps organisations understand the drivers of technology acceptance in order to proactively design interventions targeting users less inclined to adopt and use the new systems. The model was formulated based on conceptual and empirical similarities across eight well-known technology acceptance models (Koivumäki, Ristola and Kesti 2008). The UTAUT highlights four core determinants of intention and usage: performance expectancy, effort expectancy, social influence and facilitating conditions. One of the strengths of the UTAUT is that it incorporates the role of moderating variables namely, gender, age experience and voluntariness of use.

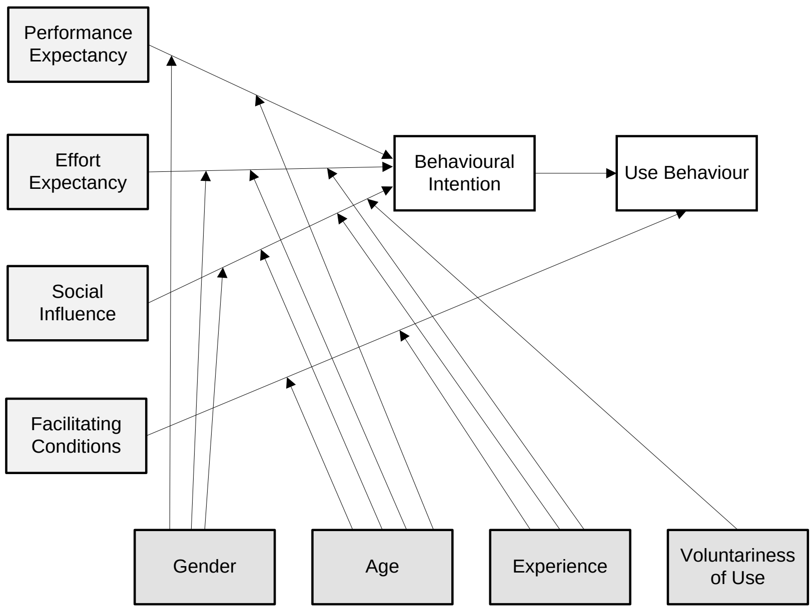

Figure 3: Unified Theory of Acceptance Model and Use of Technology

Source: (Venkatesh et al. 2003)

2.5.3 Diffusion of Innovations Theory

The diffusion of innovations is a multidisciplinary theory and has already been applied to explain the adoption of smart card technologies, mobile commerce and mobile banking (Mallat 2007). The seven core constructs of the diffusion of innovations theory are: relative advantage, ease of use, image, visibility, compatibility, results demonstrability and voluntariness of use (Venkatesh et al. 2003). The Diffusion of Innovations (DOI) was proposed by Everett Rogers (1995 as cited in (Mehra 2010)). According to Mehra (2010), prior studies on mobile payment adoption have found that the adoption of mobile payments was determined by both socio-human and technological factors. He feels DOI should not be used to study mobile payment adoption. His reason is that as DOI assumes that successful diffusion of a technology is determined predominantly by technology characteristics, it may not represent a complete framework suitable to study mobile payment including the socio-human context.

As stated by Mallat (2007), the DOI determines five innovation characteristics that affect adoption: relative advantage, complexity, compatibility, trialability and observability. She believed that of these characteristics, relative advantage, complexity and compatibility provided the most consistent explanation for the adoption of information and mobile adoption research and therefore applied these in her study.

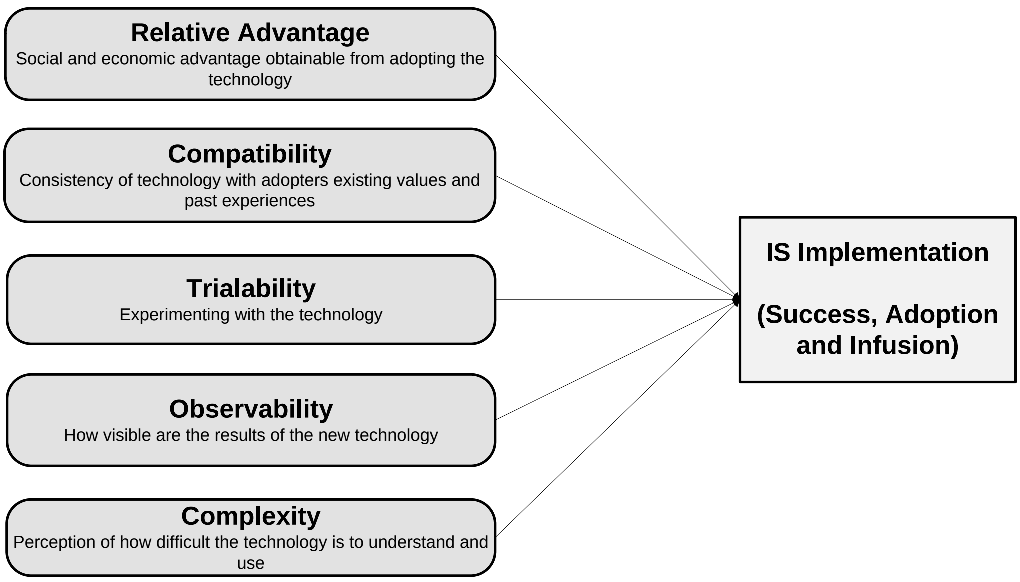

Figure 4: Diffusion of Innovations

Source: (Mehra 2010)

In the opinion of Mallat (2007), compared to the TAM and UTAUT that were developed to predict end-user acceptance of information systems within organisations, the diffusion of innovations theory is more suitable for a study of this type as the subjects are consumers and not organisational users.

Research Question 1:

What are the specific needs of consumers regarding mobile payment adoption?

2.6. Factors affecting consumer adoption of mobile payment systems

The following common adoption factors have been found during the literature review.

2.6.1 Relative advantage of mobile payment systems

Where adoption has been studied in the organisational context, the relative advantage factor has consisted of performance measures such as performance increase, effectiveness and time savings (Mallat 2007). In the mobile payment context, previous studies suggest that one of the key attributes impacting the relative advantage of mobile technologies and services is their independence of time and location (Mallat 2007). The service is always available as it is integrated into the mobile device (Borg and Persson 2009). Mobile payments provide consumers with ubiquitous payment possibilities, timely access to financial assets and an alternative to cash payments. The relative advantage of mobile payments compared with traditional payment instruments includes time and location independent payment possibilities (Schüffel 2002; Mallat 2007).

2.6.2 Complexity

Mallat (2007) defines complexity as the degree to which an innovation is perceived as difficult to understand and use. She cites examples wherein complexity and problems with usability have contributed to the low adoption of a variety of payment systems. She goes on to state that ease of use and convenience has been found to affect consumer adoption of mobile technologies and services. Mallat (2007) argues that mobile payments are expected to increase consumer convenience by reducing the need for coins and cash in small transactions. The Borg and Persson study (2009) found that young people considered existing mobile payment services easy to use, while older people got frustrated and gave up when they encountered technical difficulties. Borg and Persson did note, however, that the security mechanisms such as PIN codes made this complicated and time-consuming.

2.6.3 Compatibility

Mallat (2007) has found that the consumers' ability to integrate mobile payments into their daily life is an important aspect of compatibility. Her study has found that mobile payments are most compatible with micropayments when the alternative payment method would either be cash or coins. The four broad categories her respondents identified as suitable for mobile payments were:

- electronic ticketing such as movies, public transportation, parking fees and concerts
- mobile content and services such as ringtones, games, music and logos
- purchases on vending machines and other forms of unmanned POS
- small value payments such as a chocolate or a newspaper at a POS terminal in a kiosk or shop

She concludes that the compatibility of mobile payments with consumers' purchase transactions and habits is correspondingly expected to impact mobile payment adoption.

2.6.4 Costs

Borg and Persson's study (2009) found that the mobile payment is cheaper in some instances such as when sending money to a distant relative. Especially when weighed off against the possible loss of income when travelling to hand over cash in person, the travel expenses and the risk of robbery. However, consumers need to bear usage costs such as data service and transaction fees when using a mobile payment system. If users do not have these necessary financial resources, they will not adopt or use mobile banking (Zhou, Lu and Wang 2010). In the Mallat study (2007), it was found that the transaction costs of mobile payments are often included in the price of the purchased item. Mallet concluded that it was likely to have a significant impact on mobile payment adoption. Interestingly, her study deviated from the traditional adoption approach as she separated out cost from the relative advantage construct, and in the process she created a new adoption factor.

In a separate study by Mallat and Tuunainen (2005), the authors recommend that the cost of a transaction for consumers should be independent from the payment method. They conclude that costs of the existing mobile payment solutions are still a significant barrier to adoption of mobile payment services by merchants.

Research Question 2:

To what extent is transaction cost a barrier to mobile payment adoption?

Research Question 3:

How do the characteristics of different payment cultures impact the development and success of mobile payment services?

2.6.5 Critical Mass

As mobile payments represent a new payment network in the market, a consumer's decision to adopt the network is significantly affected by the amount of merchants using it, since that amount determines the opportunities for consumers to use the new payment service (Mallat 2007). Mallat concludes that as the subscriber base of mobile payment consumers grows, the value of the payment network increases as new merchants are attracted to join the network. Consumer adoption of mobile payments thus depends on the perceived amount of adopting merchants and other consumers (Mallat 2007). In South Africa, products need to be offered with lower costs and with lower margins in order to be affordable to the majority of the population. This implies that having large volumes is critical to the success of mobile payment systems as well as the acquiring of a critical mass of users (Borg and Persson 2009).

<u>Research Question 4:</u>

What are the appropriate incentives to attract merchants to join existing mobile payment networks?

2.6.6 Security and Trust

Mallat (2007) makes mention of previous studies that have found trust to be a significant determinant influencing customers' willingness to conduct electronic commerce transactions. She also mentions research in which vendors perceive security and trust in mobile payment systems as a significant determinant of mobile commerce success. She goes on to state that consumers' concerns about the privacy and security of mobile payments are commonly related to authentication and confidentiality issues as well as to concerns about secondary use and unauthorised access to payments and user data. Hence, perceived security and trust are expected to impact the adoption of mobile payments (Mallat 2007).

An earlier survey in 2005 found that a majority of merchants and service providers consider mobile devices and networks as reliable for making payments. It also found that 65% of respondents felt that mobile payments were safe in general. The researchers concluded that even though trust and security issues are important prerequisites for mobile payment adoption, they were currently not significant (Mallat and Tuunainen 2005).

2.6.7 Use Situation

The Mallat study (2007) postulated that as mobile payments can be done in a variety of locations and situations, situational factors are expected to impact their adoption. The study later concluded that the advantage of mobile payments is dependent on situational factors such as presence of queues, lack of alternative payment methods, hurry and unanticipated need. In the situation where a person had forgotten his wallet, mobile payments were advantageous and considered as a back-up for existing payment methods. She also concluded that situational factors had the largest corresponding impact on relative advantage as opposed to the other adoption determinants, as it is the relative advantage that reflects the ubiquitous features of mobile payment services that enable reactions to unexpected situational conditions (Mallat 2007).

2.6.8 Social Influence

Venkatesh et al.(2003) define social influence as the degree to which an individual perceives that it is important that others believe he or she should use the new system. Social influence as a direct determinant of behavioural intention is represented as the subjective norm in TAM2 and the image construct in DOI. In other words, social influence is the notion that the individual's behaviour is influenced by the way in which they believe others will view them as a result of having used the technology (Venkatesh et al. 2003). In a study of perceptions towards mobile services, Koivumäki et al. (2008) found social influence to be an extremely strong adoption determinant.

Research Question 5:

How can social influence be used to increase adoption of mobile payments?

2.7. Conclusion of Literature Review

The literature review defines and explains mobile payments. This chapter also evaluates adoption frameworks and proposes a study model for this research report. A review on mobile payments was provided and eight characteristics as the most influential determinants for the adoption of mobile payments were postulated; relative advantage, complexity, compatibility, cost, critical mass, security and trust, use situation and social influence. The following chapters aim to contribute to the existing diffusion theory by offering a detailed understanding of these factors in the mobile payment context and postulating research questions that facilitate the future research of mobile payments.

2.7.1 Research Question 1:

What are the specific needs of consumers regarding mobile payment adoption?

2.7.2 Research Question 2:

To what extent is transaction cost a barrier to mobile payment adoption?

2.7.3 Research Question 3:

How do the characteristics of different payment cultures impact the development and success of mobile payment services?

2.7.4 Research Question 4:

What are the appropriate incentives to attract merchants to join existing mobile payment networks?

2.7.5 Research Question 5:

How can social influence be used to increase adoption of mobile payments?

CHAPTER 3: RESEARCH METHODOLOGY

This section outlines the methodology that was followed to address the research questions. The literature around qualitative research will be discussed, followed by a review of the research design and the research instrument that was used. Issues of data collection and analysis in relation to this study will be provided. A discussion on the validity and reliability of this study will then follow.

3.1 Research methodology / paradigm

This study used a qualitative methodology in order to gather appropriate data to answer the research questions. Qualitative methodology has been defined as the collecting of open-ended emerging data with the intent of developing themes from the data (Cresswell 2003). Due to the conceptual nature of the subject, this research method was best suited to gathering the data required. Qualitative studies help in the understanding of complex psychosocial issues and in the answering of humanistic questions such as 'why?' and 'how?' (Marshall 1996).

Data was collected from subject matter experts through a series of semi-structured interviews with the relevant key stakeholders in the telecommunications and banking industries. Each 'expert' interview was recorded and lasted between 45 and 60 minutes.

Lastly, a focus group consisting of ordinary consumers was conducted to validate the findings of the expert interviews. A focus group is a group interview that allows a researcher to explore what that group of people think about a particular topic (Kalof, Dan and Dietz 2008). The researcher used the data collected from the focus group as a confirmatory step to test the conclusions that were drawn. It was hoped that the discussions of the focus group would lend weight to the findings. The duration of the focus group session was 20 minutes.

The assumptions of honesty and candour from the respondents were taken during this study. The assumptions were appropriate due to the exploratory nature of the research.

3.2 Research Design

The research design was in the form of a simple interpretive study. This format is the most effective means of collecting emotional and factual information.

The disadvantages of this method were the impact of the inexperienced researcher on the process and the confidentiality concerns of the respondents.

3.3 Population and sample

3.3.1 Population

The population for the semi-structured interviews was the experts within the mobile payments industry and includes MNOs, banks and third-party providers. The target population for the focus group was the consumer, who is one of the most important stakeholders in the mobile payments ecosystem.

3.3.2 Sample and sampling method

Major players in the industry were selected because of their knowledge and experience of mobile payments. Interviews were requested by telephone and email. If the required interviewees were unavailable during the interview period, a suitably experienced respondent was requested. It was estimated that the required number of respondents would be found in each company.

Marshall (1996) has explained the reasons why samples in qualitative research tend to be small. Thus for the expert interviews, a sample size of 10 were used to adequately answer the research questions.

A random sample of the consumer population was chosen for the focus group. It was assumed that 5 participants from the South African population would provide enough data to indicate consumer adoption determinants of mobile payments. The group size should be small enough so that all members have an opportunity to speak whilst ensuring that no member dominates the discussion (Kalof et al. 2008).

Respondents from the following companies were interviewed for this research report. The list is sorted according to Company Type and does not correspond to the order in which the interviews were conducted.

Table 1: Interview Respondents

Company	**Company Type**	**Respondent Type**	**Minimum sample**
Absa	Bank	Senior Executive	1
FNB	Bank	Senior Executive	1
Nedbank	Bank	Senior Executive	1
Standard Bank - MTN	Joint Venture Bank and MNO	Senior Executive	2
8ta	MNO	Senior Executive	1
Cell C	MNO	Senior Executive	1
Vodacom	MNO	Senior Executive	1
Pocit	Third-party provider	Senior Executive	1
WIZZIT	Third-party provider	Senior Executive	1

3.4 The research instrument

A semi-structured interview was planned and the letter in Appendix A was sent to all respondents before the planned interview. The actual questions that were asked during the interview can be found in Appendix B. A semi-structured interview depends on a rapport being established between the interviewer and interviewee. This is necessary in order to balance the formal aspects of the interview e.g. the fixed time limit, with the informal conversation consisting of open-ended questions and interviewee narratives and experience (Willig 2008).

The advantages of the semi-structured interview are that it allows for an adaptive quality and for the researcher to explore interesting insights should they arise. The disadvantage is that there may be concerns regarding confidentiality by respondents and a reluctance to share opinions that they deem to be sensitive to their organisation (Willig 2008).

The focus group was a semi-structured session and used the same interview guide as can be found in Appendix B. These open-ended questions encouraged group discussion.

3.5 Procedure for data collection

The interviews were pre-arranged with the proposed respondents in Johannesburg. Interviews took place at the respective corporate offices. This assisted in preserving the business environment and maintaining the formality and the language of business. With the consent of the respondents, all the interviews were recorded and transcribed with hand written notes taken as well. Data was collected on the body language, gestures and enthusiasm of the respondent.

The focus group was led by the interviewer or moderator and the discussion was recorded and transcribed as well.

3.6 Data analysis and interpretation

Willig (2008) has emphasised the importance of having a good method of data analysis. She states that the data collection technique and the method of data analysis are dependent on one another. The conversations were analysed once the audio recordings had been transcribed. A detailed transcription notion was used to expose the subtleties of the communication between the interviewer and interviewee (Willig 2008). The substantive notes taken during the interviews were analysed together with the transcripts. Content analysis was used to organise the large quantities of text into content categories, which are patterns or themes expressed in the text or derived through analysis. With the use of a directed content analysis, existing theory was used to develop the initial coding scheme prior to beginning the data analysis. As the analysis proceeded, additional codes were developed, and the initial coding scheme was revised and refined (Hsieh and Shannon 2005). The initial list of codes, with which the text was grouped and conceptualised, included the adoption factors discussed in the literature review section. Additional codes and concepts were allowed as they emerged in the analysis.

Conclusion and drawing meaning from the data involved compare/contrast analysis and the noting of patterns. This was recorded as analytical notes. The researcher sought verification of these conclusions by re-contacting a selection of the respondents.

3.7 Limitations of the study

This study was reliant upon the availability of a small sample of individuals. The generalisability of the results may be limited due to the sample size, although the size was comparable to prior studies. There was a possibility that interviews could be cancelled by the respondents subsequent to their agreement to contribute to this study. Every effort was made to ensure that the respondents and this researcher honour the interview appointments. The lack of quantitative findings was a limitation to those interested in understanding the degree to which a consumer determinant affects the widespread consumer adoption of mobile payments.

Future research can be conducted to test the adoption factors presented in this report with different methods and larger sample sizes.

3.8 Validity and reliability

3.8.1 External validity

External validity, which refers to the extent to which findings can be generalised to a larger population, can be a challenge in qualitative research due to small sample sizes (Mallat 2007; Kalof et al. 2008). This study generalised the current findings to theory by identifying relevant factors and measures in a systematic way to support the emerging research on mobile payments adoption.

3.8.2 Internal validity

Internal validity ensures the data collection process is uniform throughout. Kalof, Dan and Dietz (2008) state that a study has internal validity when appropriate conclusions are drawn from the data at hand. This study ensured internal validity by replicating, as closely as possible, the interview structure with each interview and focus group.

3.8.3 Reliability

Reliability is the reliability and repeatability of the measuring instrument. Research findings should be consistent and are considered reliable if similar findings are revealed in repeated applications of the research (Kalof et al. 2008). Reliability was assured with an accurate research instrument tested on a trial respondent prior to the interviewees at the nine companies selected. Refinements and clarifications were made to elicit appropriate data from the respondents.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

The purpose of this chapter is to present and describe the results of the research. The demographic profiles of the respondents of the interviews and the focus group are presented highlighting how the actual samples compared to the planned samples. Responses to each question were transcribed, condensed and categorised into themes. Full transcripts are contained in Appendix C.

The responses are presented in a tabular format indicating the frequency with which the particular theme was mentioned by the respondents. In some cases, the total frequency of the themes does not equal the sample size. This is because respondents were allowed more than one response to the posed questions.

The results pertaining to each of the questions posed during the interviews are presented as separate sections. The results of the focus group are presented in its own section. Lastly, the results presented in this chapter are then summarised.

4.2 Demographic profile of respondents

The interview sample was sourced by either calling the company head office, sending an email from the company website or by using the researcher's network to find a suitable respondent. Participation was voluntary and it proved difficult to source the planned sample. Nevertheless, the demographics remained relevant to the study as predominantly middle management to senior executive subjects were used. The respondents are not named but each respondent's designation and company type is recorded. For anonymity and confidentiality reasons, companies are not identified and are represented as either Bank B or MNO A or 3rd Party B, for example.

Similarly, the participant members of the focus group are identified by the letters A, B, C, D and E respectively.

The interviews were conducted between September 2010 and January 2011. Prior to the interviews and focus group, the demographic details of the respondents such as designation, race and gender were captured.

4.2.1 Interview sample characteristics

Table 2: Interview Sample distribution by designation and gender

	Middle Management	Senior Management	Senior Executive	Total
Male	3	2	4	**9**
Female	-	1	-	**1**
Total	**3**	**3**	**4**	**10**

Ninety percent of the sample was male with forty percent being senior executives of their organisation.

Table 3: Interview Sample distribution by race and gender

	Black	Coloured	Asian	White	Total
Male	1	-	3	5	**9**
Female	-	-	-	1	**1**
Total	**1**	**-**	**3**	**6**	**10**

Ten percent of the sample was a black male with sixty percent belonging to the white race group.

Table 4: Interview Sample distribution by designation and race

	Middle Management	Senior Management	Senior Executive	Total
Black	1	-	-	**1**
Coloured	-	-	-	**-**
Asian	1	1	1	**3**
White	1	2	3	**6**
Total	**3**	**3**	**4**	**10**

Whilst every effort was made to secure interviews with senior executives within the organizations, forty percent of the sample was senior executives.

4.2.2 Focus Group sample characteristics

Table 5: Focus Group Sample distribution by race and gender

	Black	Coloured	Asian	White	Total
Male	2	-	1	1	**4**
Female	1	-	-	-	**1**
Total	**3**	**-**	**1**	**1**	**5**

The focus group sample was comprised of individuals randomly selected that were willing to participate in the study. All participants of the focus group were young IT professionals under the age of 30. Twenty percent of the sample was a black female with sixty percent belonging to the black race group.

4.3 Interview Results pertaining to Research Question 1

In order to answer:

> ***What are the specific needs of consumers regarding mobile payment adoption?***

several questions were posed to the respondents during the interviews. Firstly, their definition of a mobile payment was elicited. The researcher then asked the respondents their opinions on the factors affecting mobile payment adoption in South Africa. Respondents were then invited to propose solutions to the issues affecting the adoption of mobile payments. Lastly, respondents were asked to comment on the specific needs of consumers regarding mobile payments. The results to these questions are presented in a tabular format indicating the themes identified during content analysis and the frequency with which the theme was mentioned. Tallies per theme were used to summarise the dominant response to a particular question. The highest number of tallies per question was considered to be the general response to that particular question.

4.3.1 Question 1 Results

This question served to open up the discussion and to identify themes that could be verified through subsequent questions. The results have been summarised in a tabular format below.

Table 6: Mobile payment definition

Mobile payment definition	Frequency
A payment generated from a mobile device that is sent to any other device. The transaction is initiated on a mobile device.	8
Payment initiated on any channel as long as it's authenticated on the mobile device	2

A payment generated from a mobile device that is sent to any other device

A total of eight respondents provided this definition.

- "…any sort of payment generated from a mobile device that is sent to any other device, i.e. the recipient does not necessarily have to be a mobile device. To me, that is the important differentiation. So, it is generated from a mobile device, whether it is to an ATM, whether it is to a person, who can then go to a store and withdraw the cash." (Respondent 1 – BANK A)

- "…the initiator initiates the transaction on the mobile and the recipient receives the transaction, the payment, whatever it might be, on their mobile phone" (Respondent 2 – BANK B)

- "My definition of a mobile payment is a customer using the cell phone to pay a third party but using the cell phone, so when you say mobile, it's transacting from that device, initiated from a cell phone." (Respondent 3 – BANK C)

- "My definition of a mobile payment is being able to make payment using your cell phone as the initiating device" (Respondent 5 – JV)

- "I think that is part of the issue because there are such a broad number of transactions which are considered mobile payments, but I guess that in its basic form, any transaction that's facilitated through a mobile device" (Respondent 6 – MNO A)

- "It's essentially the ability for a consumer to utilise their SIM card to make a payment for any transaction that can be mobile related, so airtime etc, utilities, electricity, water or any other type of service, insurance and normal retail transactions" (Respondent 7 – MNO B)

- "Being able to make payment using your cell phone as the initiating device" (Respondent 8 – MNO C)

- "…my definition would be a payment that's originated from a phone." (Respondent 10 – 3rd Party B)

Payment initiated on any channel as long as it's authenticated on the mobile device

A total of two respondents provided this definition.

- "We say a payment we initiated on any channel, but as long as it's authenticated on the mobile. So our new technology allows the pin of an ATM card or debit card to be entered on the cell phone." (Respondent 4 – JV)

- "I suppose a mobile payment is a payment that has been authorised using a mobile phone. It comes down to the issue of authorisation because the store, from which your money comes, is not on your phone." (Respondent 9 – 3rd Party A)

  "… a mobile payment is one that you authorise on your phone. It need not be initiated from the phone." (Respondent 9 – 3rd Party A)

4.3.2 Question 2 Results

This question served to elicit the respondent's opinion on the factors affecting mobile payment adoption in South Africa, the main subject of this research. The results have been summarised in a tabular format below.

Table 7: Factors affecting mobile payment adoption in South Africa

Factors affecting mobile payment adoption in South Africa	Frequency
Imposing new technology on a population that does not have awareness for the application. **People do not trust the device** to do banking and have security concerns.	5
Well developed banking sector with a vast banking infrastructure	3
People do not really trust banks and open an account just to get paid and then withdraw everything	3
Customer Education as people not "bank literate"	3
Distribution – insufficient areas and insufficient services which allow one to use mobile payment services as a transaction bearer	2
Complexity of the interfaces developed for security, requiring extra passwords, and the building of closed systems	2
No clear direction from regulatory bodies	2
Too many different technologies and too many different phone types	2
Requires you to have a traditional bank account with the associated high cost structures	1

People do not trust the device

A total of 5 respondents expressed their opinion that this factor was the most important one affecting the adoption of mobile payment services.

- "…to throw the new technology into a person's face and say this is solution to the unbanked, is not the right angle" (Respondent 1 – Bank A)

  "How can you take the unbanked person from his house and move him straight to a device? All he does on his phone is send SMS and send a "Please call me", and make a phone call. Now suddenly, you want him to trust the device to do his banking" (Respondent 1 – Bank A)

  "…we don't have that awareness for the application." (Respondent 1 – Bank A)

- "I think another factor is the concern around trust. Will it work? Will I lose my money here? Will the bank give me back my money if I accidentally pay the wrong person? So that ties back into education. Once a guy has transacted successfully, he's more likely to stick with it, so it's getting across that trust barrier." (Respondent 3 – BANK C)

  "Security is another one because I think with all electronic banking, with media stories about people being phished and really horror stories. Now with the cell phone, people think what if somebody steals my cell phone or if I lose my cell phone? Can somebody defraud me? " (Respondent 3 – BANK C)

- "…it's the general awareness about it, so people don't understand that the SIM is extremely secure when it's with you…" (Respondent 7 – MNO B)

- "There's a lot of hesitation with regard to security on mobile money. Because every day you hear about credit card fraud and bank fraud. Even though it's backed by a name like Nedbank, I think there is hesitation to buy into the concept from the user because of security issues." (Respondent 8 – MNO C)

- "A resistance to change. Comfort with cash, comfort with the old ways of doing things. The older generation may have more disposable income, but they tend to be more technology resistant. The younger generation may be more comfortable with the technology but don't have the disposable cash, so you've got this contradiction." (Respondent 10 – 3rd Party B)

Well developed banking sector with a vast banking infrastructure

A total of 3 respondents felt that the well developed banking infrastructure in South Africa negatively affected consumer adoption of mobile payment services.

- "I'll say the biggest hindrance is the fact that South Africa relative to other African countries has the most developed economy and by implication, the most developed banking sector." (Respondent 2 – Bank B)

- "I think that one of the factors that distinguish our economy from many other similar developing economies, is that our first tier banking system is quite sophisticated." (Respondent 6 – MNO A)

- "The South African market has been brought up with a card paradigm so people are very comfortable with cards. There's a very large POS infrastructure, there's a large ATM infrastructure, and even today the market pulls a debit card and ATM card, so it's a means to access the cash, and particularly at that lower end of the market that's something they're comfortable with." (Respondent 10 – 3rd Party B)

People don't trust banks

A total of 3 respondents felt that the lack of consumer trust in banks affected the consumer adoption of mobile payment services.

- "If I put the money into a bank, if I draw R500.00, they steal R5 from me, which is your bank charge."; "…the contractor will open an account just to get paid, and as soon as he gets paid, all the money is out." (Respondent 1 – Bank A)

- “The issue however is that they have not been using the bank accounts as part of their lifestyles. It’s your money in, money out sort of thing.” (Respondent 2 – Bank B)

- “They were beautifully banked, but on pay day all the money just flies out of the ATM and then people work in a cash environment, and just having a mobile channel won’t change that. A banking construct doesn’t work.” (Respondent 9 – 3rd Party A)

Customer Education as people not “bank literate”

A total of 3 respondents said that the lack of adequate consumer education affected the consumer adoption of mobile payment services.

- “The problem comes down to Customer Education.” (Respondent 1 – Bank A)

- “I think one factor that’s most prominent is education. Customers are not able to understand how a payment can actually work from this device.” (Respondent 3 – Bank C)

- “Obviously once you've got that working you’ve got to tell people, so education then comes to the fore.” (Respondent 4 – JV)

Distribution

A total of 2 respondents complained that the poor distribution network of merchants accepting mobile payments negatively affected the consumer adoption of mobile payment services.

- “You don’t have sufficient areas or sufficient services which allow you to use mobile payments as a bearer or transaction bearer.” (Respondent 7 – MNO B)

- “People who reside in a township aren't going to come into an urban area to Nedbank to use M-PESA or swap out M-PESA points for money, so I definitely think ease of use is a barrier to entry at the moment." (Respondent 8 – MNO C)

Complexity of the bank's interfaces

A total of 2 respondents cited the complexity of using the mobile phone to pay for goods and services as another factor. Consumers do not find the services easy to use.

- "…the reason is, because of the complexity of the banks' interfaces that they have developed for security" (Respondent 4 – JV)

  "They've all got at the lower level Mzanzi type accounts. Their cards are all with pins and they only use them to withdraw cash. To use it to migrate to payments, you must have an interface that uses the same logic they use when doing an ATM withdrawal, not come with special passwords and phone this number and do this." (Respondent 4 – JV)

- "The reason why mobile network operators have gone into mobile money is to reduce churn. So they are not thinking about how do we make the greatest mobile payment systems in the world, they're thinking about how do we protect our airtime margins? Which is meant that they have built closed systems." (Respondent 9 – 3rd Party A)

  "They, particularly in the case of the banks, think about incarnating banking stuff through a mobile channel and that doesn't fix most of people's payment problems." (Respondent 9 – 3rd Party A)

No clear direction from regulatory bodies

A total of 2 respondents blamed regulatory bodies for their lack of direction in enforcing standards.

- "There hasn't been necessary clear direction, there've been white papers, some statements and all those type of things from various regulatory bodies, but I think regulators have waited for industry to come up with clear solutions rather than giving clear direction about what they want in certain areas.” (Respondent 6 – MNO A)

- “So regulation is perhaps a problem because it slows down the process of getting into the market, and I sweated on this for a long time. But I don’t think it’s the biggest problem because in our current regulatory environment the banks could make it happen. The networks could make it happen." (Respondent 9 – 3rd Party A)

Too many different technologies

A total of 2 respondents cited the fact that there are too many different technologies and too many different mobile devices, and this affects adoption of mobile payments. Some payment solutions will not work on certain phones.

- “I think in terms of how to use the technology; a lot of banks have different technologies. There’s WAP, there’s USSD, there’s SMS. There might be applications coming now down the line, so when guys are doing their payments they want to understand how to use them. “ (Respondent 3 – BANK C)

  “There are people with really old phones and that’s also another barrier for mobile payments. The handsets need to come to some sort of standardisation where it can be easy for adoption, and obviously handsets need to become cheaper, especially the Smart phones.” (Respondent 3 – BANK C)

- “Everybody’s coming up with a new application or a new wallet to use, but most of them aren’t Visa or Mastercard approved. There are too many technologies out there and there are many different kinds of phones.” (Respondent 5 – JV)

Requires you to have a traditional bank account

One respondent felt that some payment solutions required one to have a traditional bank and this affected the adoption of mobile payments.

- “I think the problem with what they offer, is that it still relies on you having a traditional bank account with the associated high cost structures that are built into the ecosystem.” (Respondent 6 – MNO A)

4.3.3 Question 3 Results

This question served to invite the respondent to provide solutions to the issues affecting mobile payment adoption in South Africa. The results have been summarised in a tabular format below.

Table 8: Addressing mobile payment adoption issues in South Africa

Addressing mobile payment adoption issues in South Africa	Frequency
Customer awareness and customer education	5
Increase distribution	3
Interoperability	2
Lower cost to consumer	1
Cooperation between MNOs and Banks	1
Market your successes	1
Understanding consumer needs	1

Customer awareness and customer education

A total of 5 respondents felt that the way to address the slow adoption of mobile payments was to educate the customer and to make the customer aware of the service.

- “So, don’t sell mobile payments, sell the functionality that says “pay your Telkom account via a mobile phone”. The way we address it to market is totally wrong. Customer awareness and customer education are key for this to be implemented.” (Respondent 1 – BANK A)

- “With education I think the one good way of addressing that, is allowing the customer to experience playing with the technology prior to them getting charged for that transaction, etc, so I would encourage having a trial period. So there you go, you've got a cell phone banking application, you've got 10 days to try it out, play around." (Respondent 3 - BANK C)

- "It all boils down to social issues. Educating people to trust a bank account." (Respondent 5 – JV)

- "There's quite a bit of drive needed from operators and banks as well, to make sure that mobile payments become mainstream." (Respondent 7 – MNO B)

- "It amazes me, everybody knows, even at that lowest end of the market how dangerous cash is, yet people will carry around cash. How do you change that behaviour which is very difficult?" (Respondent 10 – 3rd Party B)

Increase distribution

A total of 3 respondents said that the way to increase adoption of mobile payments was to increase the distribution of merchants accepting mobile payments.

- "We can sign up spaza shops, retailers in the local neighbourhoods to facilitate the withdrawals and the deposits because these guys are cash generating and cash handling anyway, and so in my opinion that would be the best way to go about it." (Respondent 2 – BANK B)

- "…you make sure that every retailer in the country, whether it's the Edcons or the spaza shops got some sort of POS system, you allow them to use their mobile devices to receive payments, so get the distribution right and once people know that the distribution is in order, they'll start using it." (Respondent 7 – MNO B)

- "…the way we are addressing it, is just signing up more and more outlets…" (Respondent 8 – MNO C)

  "You need to have the presence, so if you know that your corner shop is now an M-PESA outlet you would listen next time someone talks about

M-PESA, whereas if it's far out of your reach you're not really going to buy into it." (Respondent 8 – MNO C)

Interoperability

A total of 2 respondents wanted interoperability and open systems in South Africa. They said that would increase adoption of mobile payments.

- "The biggest thing in South Africa is interoperability; you've got to be able to take whatever card use it at any bank's ATM and POS. As soon as you have these closed loop payment environments that require you to put in special interfaces, you can't do it." (Respondent 4 – JV)

- "We learnt from the card example, that things take off when you have interconnect, when you have complete openness of the system. So why don't we start there? When you say innovation must wait for a standard, you never get innovation." (Respondent 9 – 3rd Party A)

  "A few people can agree on an interconnect, on a way of interacting. In our environment there are only four big banks, and actually only two or three of them would need to agree; maybe one network operator, and it will fly." (Respondent 9 – 3rd Party A)

Lower cost to consumer

A single respondent said that the lowering of cost to the consumer would increase the adoption of mobile payments.

- "If possible take as much cost away from the consumers, make your money in other ways. If you're looking for the model that you set up to produce a huge amount of money in and of itself, rather than seeing it as a value add, that you offer to customers which brings you revenue in different ways, then that is maybe a hindrance here as well." (Respondent 6 – MNO A)

Cooperation

A single respondent wanted a greater cooperation between banks and MNOs. He felt that would increase the adoption of mobile payments.

- "If a guy is unbanked and you tell him to open up an account, he is going to first look at the four major banks. Their brands are in your face. They are not going to open up with a network. Network and banks need to work together. That way they can generate mobile payments." (Respondent 1 – BANK A)

  "M-PESA has a partnership with Nedbank. But you don't hear of Nedbank. So it's not a partnership really, it is just that I am using the licence." (Respondent 1 – BANK A)

Market your successes

A single respondent said that by announcing subscriber numbers and marketing successes in that area, an increase in the adoption of mobile payments would occur.

> "With trust and security, I think it's always good to market your successes in an industry. We'll go to the market and say we've got 2.5 million customers using the service, surely it must be fine to use it, otherwise we wouldn't have had such a large uptake in customers. So that speaks to people getting assurance from others." (Respondent 3 –BANK C)

Understanding consumer needs

A single respondent said that the needs of the consumer need to be understood. That is the best way to provide a service to fulfil the needs of the consumer.

- "How do you uncover those needs? And what we've found is, when it comes to doing research at that lower end of the market, using different research companies, using different methodologies, the market tends to give you answers that they think you want to hear, not necessarily what the actual truth is, so it's quite difficult." (Respondent 10 – 3rd Party B)

4.3.4 Question 4 Results

This question served to elicit the respondent's opinion on the specific needs of South African consumers regarding mobile payments adoption. Research Question 1 was posed to the respondents as part of the research instrument. The results have been summarised in a tabular format below.

Table 9: Consumer needs regarding mobile payments in South Africa

Consumer needs regarding mobile payments in South Africa	Frequency
Ease of use	5
Good distribution network	4
Prepaid airtime, prepaid electricity and other essential services	3
Reasonable cost	3
Convenience	3
Remittance	1
Alternative to cash	1
Comfort	1
Trust	1

Ease of use

The most popular response of the needs of consumers regarding mobile payments was ease of use of the mobile payment system. A total of 5 respondents expressed this view.

- "You make it easy for them to do the payment and they get a comfort that the payment has gone through successfully, then you're going to win those battles of getting adoption." (Respondent 3 – BANK C)

- "Quite simply, it is ease of use." (Respondent 4 – JV)

- “That’s it, and it must be easy.” (Respondent 5 – JV)

- “They need, I believe as any consumer, they need something that works, so that it is efficient.” (Respondent 6 – MNO A)

- “But the minute that you have alternatives, those are the things around which consumers optimise and for me the issue of simplicity is really important because the other two, cost, even to some extent convenience don’t address people’s mindsets.” (Respondent 9 – 3rd Party A)

Good distribution network

A total of 4 respondents said that having a wide distribution network of merchants was an important consumer need.

- “They have to be provided at a reasonable rate of distribution.” (Respondent 2 – BANK B)

- “It must be ubiquitous. You can use it anywhere.“ (Respondent 5 – JV)

- “I think what’s needed is a place to keep your money safe, and then cash out easily, and because you’re speaking, in my opinion, to a demographic that doesn’t necessarily move in the mall environment, you need a good network of distribution to be able to enable people to ‘in’ and ‘out’ easily.” (Respondent 6 – MNO A)

- “Unless it’s ubiquitous in terms of its acceptance, you’ve continuously got this chicken and egg scenario.” (Respondent 10 – 3rd Party B)

Prepaid airtime, prepaid electricity and other essential services

A total of 3 respondents said that consumers have a need to pay for essential services such as prepaid airtime and prepaid electricity.

- “With Mobile payments you need to segment the approach; it is not just one size fits all, because your lower income groups will prefer to send money to someone. They will prefer to buy airtime and buy prepaid electricity. Those are their essential services.” (Respondent 1 – BANK A)

- "It needs to cover basic transactions so I would imagine things like payments for electricity, those kinds of things, the stuff that you see people queuing for." (Respondent 6 – MNO A)

- "They're buying electricity, they currently used to do that, buy it via their phone, so the specific needs of the consumer is to just to extend whatever they're currently transacting on via the mobile phone." (Respondent 7 – MNO B)

  "If people know that if I need to buy a taxi ticket or bus ticket, and I can use my phone for it. Once that's up and running, people will do that."

Reasonable cost

A total of 3 respondents felt that consumers need to have a mobile payment service provided at a reasonable cost to the consumer.

- "Financial services, like any other product, have to be provided at a reasonable cost." (Respondent 2 – BANK B)

- "They have needs of convenience, simplicity and cost." (Respondent 9 – 3rd Party A)

- "If I use any other means, electronic, be that mobile or often card, there is a transaction fee, so at the micropayments level you may have a challenge because most entities are in it for commercial gain and to survive. So there will be a transaction charge and at what point does the transaction charge render the value too expensive? (Respondent 10 – 3rd Party B)

Convenience

A total of 3 respondents said that consumers have a need for convenience.

- "They have needs of convenience, simplicity and cost. Those are the things around which consumers optimise. Now you don't have to have all three if there is no alternative. So the taxi system that moves for remittance, that is not convenient, it is not simple. It's not like you can download a brochure and it's not cheap. The alternative is nothing." (Respondent 9 – 3rd Party A)

- "Mobile payments take away the dependency of having to be in a bank or at an ATM or in front of your PC. You now actually can do it wherever you are." (Respondent 3 – BANK C)

- "Again depending on which segment of the market, but at the end of the day, to me it's about convenience. You know I've got this in my pocket all the time and that's why we coined the phrase – my bank in my pocket." (Respondent 10 – 3rd Party B)

  "People want to carry one thing around. They don't want to carry ten things around so I think it is the convenience of it." (Respondent 10 – 3rd Party B)

Remittance

A single respondent felt that consumers have a need to pay remittances to distant relatives.

- "…you have to be able to send money to anyone who doesn't have a bank account, as well as send money home, and by home, I mean to the rural villages." (Respondent 1 – BANK A)

Alternative to cash

A single respondent felt that consumers have a need to not carry cash as a safety precaution.

- "A specific need is to not to carry cash or to have the option to be able to utilise another medium to not carry cash for safety, so it is definitely one of the reasons." (Respondent 8 – MNO C)

Comfort

A single respondent felt that consumers have a need for comfort when it comes to payments.

- "Consumers have a high need for comfort. So in addition to the ones which you can probably objectively evaluate, they have this other need which says this needs to fit into my mental model. I need to feel safe and secure and confident and it must not leave me anxious." (Respondent 9 – 3rd Party A)

Trust

A single respondent felt that consumers have a need to trust the payment system that they are using.

- "In South Africa the trust factor is key, so people have been ripped off too many times, so they need to be able to trust the technology and that involves trusting the brand that's behind it." (Respondent 6 – MNO A)

4.3.5 Conclusion

The conclusion that can be drawn from the in-depth interviews regarding Research Question 1,

> ***What are the specific needs of consumers regarding mobile payment adoption?***

is that the industry experts feel that the most important consumer need is that the service should be easy to use. The next most important consumers' need is that there should be a vast distribution network of merchants that accept mobile payments. The next most important consumers' needs are that basic, everyday services should be available, that transaction costs should be as low as possible and the need for convenience. Comfort, trust, being able to pay remittances, and having an alternative to cash, are the other lower priority needs.

4.4 Interview Results pertaining to Research Question 2

The research question,

To what extent is transaction cost a barrier to mobile payment adoption?

was posed to the respondents. The results to these questions are presented in a tabular format indicating the theme identified during content analysis and the frequency with which the theme was mentioned. The results have been summarised in a tabular format below. Tallies per theme were used to summarise the dominant response to the question. The highest number of tallies was considered to be the general response to the question.

Table 10: Transaction cost a barrier

Transaction cost a barrier	Frequency
Transaction cost a minor barrier	4
Transaction cost not at all a barrier	4
Transaction cost a big barrier	2

Transaction cost as a minor barrier

A total of 4 respondents were of the view that transaction cost was a small barrier to consumer adoption of mobile payment services.

- "It is a barrier, but we need to educate people on the tradeoffs. If someone is going from Alex to Soweto to pay someone R200.00, his return taxi fare could be more than R40.00. Whereas, a mobile payment could have cost R3.00. Therefore in this example, the transaction cost is cheaper. When you take ATM withdrawal costs, the possibility of losing the money, transport costs and time spent, a mobile payment is far cheaper." (Respondent 1 – BANK A)

- "I don't think costs will ever go away. I certainly still do see it as a barrier but not as a big barrier as it used to be." (Respondent 3 – BANK C)

- "Cost sensitivity may prevent people from experimenting. But people are willing to pay for a service and so I think that we chunk on costs too much."(Respondent 9 – 3rd Party A)

- "…so a R2.99 charge is very cheap relative to the alternative, but you've still got the R2.99 charge to send R100.00. Is that bearable? Maybe it is at a R100.00 level but R2.99 to send R20.00, people may start questioning, that's now 15% of the value of the transaction, and perhaps it's that lower end of the market we don't understand enough." (Respondent 10 – 3rd Party B)

Transaction cost not at all a barrier

A total of 4 respondents were of the view that transaction cost was not at all a barrier to consumer adoption of mobile payment services.

- "I actually don't think that's true because anecdotal evidence suggests that people in that market, low income people, don't quite understand the concept of pricing. Their financial literacy is not at a level that informs them what expensive or cheap means in the financial services." (Respondent 2 – BANK B)

- "So I think that the answer is, and I was quite emphatic, it doesn't. Where the purchase that is required is quite high on the priority list of life. Prepaid airtime is a really crucial component for many people, the only way that they know if they've got work for tomorrow is to phone or be phoned." (Respondent 4 – JV)

- "I don't think it's a barrier. You pay to draw money from an ATM, you pay to deposit money. If you paid electronically, you're paying a small transaction fee." (Respondent 5 – JV)

- "A transaction cost is less than a tenth of a bank charge, so it's very cheap, it's a much cheaper form of transacting than a traditional bank, so therefore it should be adopted quicker than a traditional bank, it's easier to get, cheaper, it's right there in your handbag." (Respondent 8 – MNO C)

Transaction cost as a big barrier

A total of 2 respondents were of the view that transaction cost was a big barrier to consumer adoption of mobile payment services.

- "I think it's a huge cost, I think if someone sees R6.00 a transaction; it's just too much money. R6.00 you know represents a loaf of bread for the day, or milk." (Respondent 6 – MNO A)
- "I think it's a huge thing. The fact that costs are so high also impacts the adoption of the service so people are worried about this R5.00 for an off-net transfer because essentially if you look at the lower LSMs, they're not transferring a lot of money and R5.00 for a transfer is a huge percentage of the overall cost." (Respondent 7 – MNO B)

The conclusion that can be drawn from the in-depth interviews regarding Research Question 2 is that transaction cost is not a barrier to mobile payment adoption, as 80% of the respondents considered transaction cost a minor barrier, or no barrier at all to mobile payment adoption. They argue that the cost of the alternative is far greater.

4.5 Interview Results pertaining to Research Question 3

In order to answer:

> ***How do the characteristics of the different payment cultures impact the development and success of mobile payment services?***

several questions were posed to the respondents during the interviews. The first leading question was to ascertain how convinced the respondents were of the success of mobile payments. Next, respondents were asked to elaborate on adoption rates amongst the various LSM groups. Lastly, the research question was posed to the respondents. The results to these questions are presented in a tabular format indicating the theme identified during content analysis and the frequency with which the theme was mentioned. Tallies per theme were used to summarise the dominant response to a particular question. The highest number of tallies per question was considered to be the general response to that particular question.

4.5.1 Question 6 Results

The results have been summarised in a tabular format below.

Table 11: Benefit to company of widespread adoption

Benefit to company of widespread adoption	Frequency
Benefit to company	10
No benefit to company	-

Benefit to company

All the respondents stated that they were convinced that widespread adoption of mobile payments would be beneficial to their company and industry. A selection of responses is listed below.

- "Yes, there needs to be an open system. Just like debit cards, that's where the money is, replacing the card." (Respondent 1 – BANK A)
- "I believe so. Mobile banking is not so much a low income banking revolution as most people want to put it. Mobile banking is in many respects the future of money. Everything is gravitating to the mobile phone." (Respondent 2 – BANK B)
- "Certainly! What's interesting in our space is, banks traditionally used to be the payments people. Now you're getting mobile network operators coming into the banking space." (PA 3 – BANK C)
- "So it's definitely going to benefit us because that is what we do. We are a mobile payments company. We're a transaction switch which allows you to make a debit card transaction." (Respondent 5 – JV)

- "Yes, absolutely. I think it's going to foster competition which is important for the economy and important for the industry." (Respondent 6 – MNO A)

- "Well, only if we are offering it. If Vodacom win completely with M-PESA, we will be out of a job. Because they will be the platform and you can't in the long term have three or four platforms." (Respondent 9 – 3rd Party A)

- "Sure. I mean there's no doubt. Our whole business model is based on it and we were the pioneers in this country in it, but as I say it's not a premium priced product. It's a mass market product and it has to get the mass adoption, so you've got to weigh these things up." (Respondent 10 – 3rd Party B)

4.5.2 Question 7 Results

This question served to elicit the respondent's opinion on mobile payment adoption rates amongst the various LSM groups. The results have been summarised in a tabular format below.

Table 12: Adoption rates amongst the various LSM groups

Adoption rates amongst the various LSM groups	Frequency
Adoption rates unknown	4
Same adoption in the all LSM groups	3
Greater adoption in the lower LSM groups	2
Greater adoption in the higher LSM groups	1

Adoption rates unknown

A total of 4 respondents admitted they were not aware of the adoption rates amongst the various LSM groups.

- "We haven't seen any significant adoption in the lower income market yet..." (Respondent 2 – BANK B)

- “I can’t answer that because we are targeting the LSM that has a debit card…” (Respondent 5 – JV)

- “I don’t have any empirical evidence around this, but my gut feel says that we’re just aiming as an industry at the moment.” (Respondent 6 – MNO A)

- “The adoption, we don't know yet but will definitely be within the lower categories, LSM 1 to 5, because 5 and above you will probably going to be qualifying for a bank account.” (Respondent 8 – MNO C)

Same adoption in the all LSM groups

A total of 3 respondents said that adoption rates are about the same amongst the various LSM groups.

- “From a penetration point of view, I see the same amount of transactions going through for both groups. What we are finding is that your lower income groups use our cash sending service more.” (Respondent 1 – Bank A)

- “So adoption rates I think are going to be driven by the quality of the product, less so than by the LSM” (Respondent 9 – 3rd Party A)

  “So our view is that if you offer the right product you will see greater adoption across all of the LSMs.” (Respondent 9 – 3rd Party A)

- “So I think you’ve got to have different strategies at different segments of the market.” (Respondent 10 – 3rd Party B)

Greater adoption in the lower LSM groups

A total of 2 respondents said that adoption rates are greater in the lower LSM groups.

- “When we started cell phone banking, LSMs 1–6 readily adopted the service compared to the higher LSMs and that’s purely because of access mechanisms. Guys don’t have access to PCs in that lower LSMs, they've got mobile phones, so if you can give them services on the phones that'll prevent them from walking into a branch or walking to an ATM, a few kilometres away, then we have better adoption in that." (Respondent 3 – Bank C)

- "Our experience in terms of adoption of the payments using our product, is particularly high in the upper Mzanzi, lower Autobank, E-type product and that's typically people earning between R5000.00 and R8000.00." (Respondent 4 – JV)

Greater adoption in the higher LSM groups

A single respondent said that adoption rates are greater in the higher LSM groups.

- At the moment it's the higher income, because the guys understand how these things work and they understand there aren't any security concerns. The difference on the lower end is, firstly the cost and secondly the awareness. So I think cost plays a huge factor and at the lower LSM, people are very much unbanked and they're living hand to mouth, so the adoption is quite low because of those reasons." (Respondent 7 – MNO B)

4.5.3 Question 8 Results

This question tried to determine the impact of the different payment cultures on mobile payment adoption in South Africa. The results have been summarised in a tabular format below.

Table 13: Impact of different payment cultures on mobile payments

Impact of different payment cultures on mobile payments	Frequency
Impact of payment cultures significant on mobile payment adoption. It is about changing behaviours of the lower LSM to switch from a cash payment culture and changing behaviours of the middle to high LSM to switch from debit/credit based payment	8

Impact of different payment cultures on mobile payments	Frequency
culture	
Impact of payment cultures not known	2

Impact of payment cultures significant on mobile payment adoption

The majority of respondents, 8 in total, considered the impact of the different payment cultures in South Africa to be significant on mobile payment adoption.

- "The lower end needs to change from cash-based to an alternative. We need to get them to bypass debit/credit cards and go to mobile payments." (Respondent 1 – BANK A)
- "You don't need cash anymore, and that's the biggest challenge we've got into. How do we induce the behavioural changes that will make mobile banking successful? Both from an adoption point of view and from a business point of view. South Africa has very legitimate reasons to effect a behavioural change in our payments and business culture in general, in that we have very high levels of crime, so you'd expect that when people are offered a banking service that takes cash out of the equation, they would adopt that service very quickly because they see the benefits." (Respondent 2 – BANK B)
- "Cash is still a tangible thing. The moment you say I send you money using this wallet product, and it comes to your cell phone, it's not as tangible as having the cash in your hand. However, the guys don't want to keep cash because it's risky for them." (Respondent 3 - BANK C)

  "In the urban areas, credit cards are under threat when it comes to payments. I think in 5–10 years time, the card industry will evolve into Mastercard and Visa being some sort of thing on your handset rather than having a physical tangible card." (Respondent 3 - BANK C)
- "It obviously pays a huge role and I think that it comes back to the trust element and the cost element, so once again if you are working on weekly or daily wages and the amounts are small, you can't afford to

open a bank account and pay the transaction fees." (Respondent 6 – MNO A)

- "The high end is very comfortable pulling out their credit card and swiping for a transaction. The mid-range of the LSM groups use their debit cards because they don't have credit cards. Your social standing and your income bracket etc. has a role in how you adopt different payment mechanisms." (Respondent 7 – MNO B)
- "We actually found there is a desire not to keep cash in the township because there is just as much theft in the townships as there is in the urban areas and wealthy areas. That is actually an incentive for users to use M-PESA, put their money in Nedbank and use it." (Respondent 8 – MNO C)
- "It has a massive impact on it because unless you understand that, you go nowhere." (Respondent 9 – 3rd Party A)
- "Essentially your cash alternative is one issue and the level of sophistication and widespread distribution of card acquiring devices is the other." (Respondent 10- 3rd Party B)

Impact of payment cultures not known

A total of 2 respondents admitted to not knowing the impact that the different payment cultures have on mobile payment adoption.

- "It's a difficult one to answer because there is no specific research." (Respondent 4 – JV)
- "I don't have stats on this one." (Respondent 5 – JV)

4.5.4 Conclusion

The conclusion that can be drawn from the in-depth interviews regarding Research Question 3,

> ***How do the characteristics of the different payment cultures impact the development and success of mobile payment services?***

is that the cash, debit card and credit card payment cultures impact the success of mobile payments because they are so well entrenched in South Africa. A behavioural change on the part of the consumer is needed to adopt mobile payments as a means of payment.

4.6 Interview Results pertaining to Research Question 4

In order to answer:

> ***What are appropriate incentives to attract merchants to join existing mobile payment networks?***

respondents were first invited to provide solutions to effect a rapid adoption of mobile payments in South Africa. Research question 4 was then posed to the respondents. The results to these questions are presented in a tabular format indicating the theme identified during content analysis and the frequency with which the theme was mentioned. Tallies per theme were used to summarise the dominant response to a particular question. The highest number of tallies per question was considered to be the general response to that particular question.

4.6.1 Question 9 Results

Table 14: How to effect rapid adoption of mobile payments

How to effect rapid adoption of mobile payments	Frequency
Technology Standards	3
Simple Solution	3
Reduce cost to merchants and consumers	2
Legislation	2
Distribution and awareness	1
Incentivise Merchants	1

Technology Standards

A total of 3 respondents felt that once technology standards are in place, a rapid consumer adoption of mobile payments will occur.

- "...we need to focus on providing technologies that are easy to use from both the customer and the receiving party's perspective." (Respondent 3 – BANK C)

  "The handsets need to come to some sort of standardisation where it can be easy for adoption, and obviously handsets need to become cheaper, especially the Smart phones." (PA 3 – BANK C)

- "…none of that will work if I haven't got the basic buildings blocks of standards that relate to interoperability working." (Respondent 4 – JV)

- "You need to build open systems." (Respondent 9 – 3rd Party A)

Simple Solution

A total of 3 respondents felt that once a simple solution for consumers is in place, then a rapid consumer adoption of mobile payments will occur.

- "You need to have a simple solution." (Respondent 1 – BANK A)

- "…you've got to have really simple, easy, user-friendly registration" (Respondent 4 – JV)

- "It would be our product. It would be this device, it would be using your phone to actually drive people to get a bank account." (Respondent 5 – JV)

Reduce cost

A total of 2 respondents said that a reduction in transaction cost will effect a rapid consumer adoption of mobile payments.

- “If you can do mobile payments cheaper and provide a better value proposition to those vendors, then you’re likely to speed it up. “ (Respondent 3 – BANK C)

- “One kind of silver bullet. It’s got to be cost.” (Respondent 6 – MNO A)

Legislation

A total of 2 respondents felt that government legislation and government support is needed to effect a rapid consumer adoption of mobile payments.

- “The reality is the governments got to come through with legislation and require banking services offered in the lower income market to be based on mobile banking.” (Respondent 2- BANK B)

- “I think you need government to have the guts to say, if we could get 12 million social grants recipients in this country, now you need that type of thing and the guts to say that’s how we are paying.” (Respondent 10 – 3rd Party B)

Distribution and awareness

A single respondent felt that distribution and awareness needs to be increased to effect a rapid consumer adoption of mobile payments.

- “I think we get the distribution and awareness, if we get those two things right I think we’ve got it.” (Respondent 7 – MNO B)

Incentivise Merchants

A single respondent felt that once merchants are incentivised to accept mobile payments, a rapid consumer adoption of mobile payments would occur.

- I think incentivising merchant, because as soon as you incentivise the merchant, that increases the demand to accept M-PESAs and then your customers will then be incentivised to pay with M-PESAs (Respondent 8 – MNO C)

4.6.2 Question 10 Results

Table 15: Incentives for merchants

Incentives for merchants	Frequency
The merchant receives **cash outflow from his business**. He does not have to pay cash deposit fees	5
Commissions	4
Reduce cost to merchants	3
No new technology needed	1
Increased sales	1
Increased customer base	1

Cash-flow out of his business

A total of 5 respondents considered the fact that mobile payments would result in merchants having a cash outflow from their businesses as a major incentive for merchants to join a mobile payment network. There is no risk to the merchant in terms of securing the cash and the merchants save on cash deposit fees at the banks.

- "The benefit for a merchant is that when he pays out to a customer, he is having cash flow out of his business. He does not have the risk of carry cash on his premises, and he does not have to pay a deposit fee to deposit the cash at a bank." (Respondent 1 – BANK A)

- "…most retailers will want to become mobile banking outlets for one reason, because mobile banking takes cash out of your system. These guys pay huge amounts of money in cash deposit fees on a daily basis. Huge amounts of money to insure their cash when they do the cash-in-transit with the security companies." (Respondent 2 – BANK B)

- "…if you're receiving money via a mobile payment rather than receiving cash, your security concerns are reduced as well…" (Respondent 7 – MNO B)

- "…your shops in your rural areas are more incentivised to take M-PESAs because they too don't have to carry cash." (Respondent 8 – MNO C)

- "If there's not cash on the premises the risk of crime is reduced so point number 1 is the crime issue that's unique to this country. Point number 2 is that the merchant is paying expensive cash deposit fees at the bank the next morning, so there's a cost issue of cash not only a security issue." (Respondent 10 – 3rd Party B)

Commissions

A total of 4 respondents said that paying commissions to merchants would be an appropriate incentive to get merchants to join a mobile payment network.

- "…offer this service and you get a percentage of the price.." (Respondent 1 – BANK A)

- "…if you can keep the transaction and the payments free to the customer or as cheap as possible, then I think what you do is you creative incentives around other things like the selling of airtime and electricity and pay commission to the merchants based on those things." (Respondent 6 – MNO A)

- "…I want R500.00 off my mobile wallet as an example, then there's a commission that you pay with the merchant because he's obviously providing a service." (Respondent 7 – MNO B)

- "…some of the most successful merchant incentives have been around annuity incentives…" (Respondent 9 – 3rd Party A)

Reduce cost to merchants

A total of 3 respondents felt that a reduction in the cost to merchants would be an appropriate incentive for merchants to join a mobile payment network.

- "For merchants to swipe the card there's a cost, to have the device, is a cost, to have the line linked up, there's a cost, so if this can come in cheaper and it works easy enough for customers and merchants, it's sold." (Respondent 3 – BANK C)

- "…if the guy is only doing credit card and if the credit card is 2.5% of the transaction fee then for a small guy, that's a lot. So firstly, the costs will drive the guy to an alternative." (Respondent 7 – MNO B)

- "…the advantage to the merchant is no merchant fee and no cash deposit fee…" (Respondent 10 – 3rd Party B)

No new technology needed

A single respondent felt that not asking the merchant to get any new device or technology would be an incentive for him to join a mobile payment network.

- "I think the most important point is, that you can't require the merchant to have to do anything specific." (Respondent 4 – JV)

Increased sales

A single respondent said that merchants would have an increase in sales and this would be an incentive for merchants to join a mobile payment network.

- If they can start acting as a cash-in and cash-out agent, that could be quite attractive to get feet in and out of the store, particularly the cash-out part of the equation. (Respondent 10 – 3rd Party B)

Increased customer base

A single respondent said that telling merchants that they would increase their customer base would be an incentive for them to join a mobile payment network.

- "If you're a merchant and you open up to this, you're opening up to twenty million debit card holders who can enter their pin legally and the liability is not on the merchant because it's a fully authenticated transaction. (Respondent 5 – JV)

4.6.3 Conclusion

The conclusion that can be drawn from the in-depth interviews regarding Research Question 4,

> ***What are appropriate incentives to attract merchants to join existing mobile payment networks?***

is that the industry experts feel that there are many ways to incentivise merchants to join existing mobile payment networks. The way to entice a merchant would be to explain the benefits to him of having a flow of cash out of his business. This is beneficial to the merchant from a security perspective and saves him cash deposit fees. Experts have also offered commissions to merchants as an incentive to join a mobile payment network.

4.7 Interview Results pertaining to Research Question 5

The research question

> ***How can social influence be used to increase adoption of mobile payments?***

was posed to the respondents. The results to these questions are presented in a tabular format indicating the theme identified during content analysis and the frequency with which the theme was mentioned. The results have been summarised in a tabular format below. Tallies per theme were used to summarise the dominant response to the question. The highest number of tallies was considered to be the general response to the question.

Table 16: Use of social influence

Use of social influence	Frequency
Recommendation through **community, religious and tribal leaders**	4
Demonstration of mobile payment services	3
Recommendation through **word of mouth**	3

Use of social influence	Frequency
Recommendation through **social media**	2

Community, religious and tribal leaders

A total of 4 respondents regarded social influence as important and recommended using community, religious and tribal leaders as spokespeople for the product.

- "You need to get the chiefs in the rural areas, or religious leaders on-board because they are the leaders of those communities." (Respondent 1 – BANK A)
- "You've got to get that chief to give you a blessing, to talk to his people, to sell them certain products and so on." (Respondent 2 – BANK B)
- "WIZZIT is extremely successful because what they've done is, they've gone to the influential people in the rural areas. So if it's a chief of the tribe or if it's the chief of the village or if some guy who owns quite a few shebeens etc, then that guy's quite influential in the community and he becomes a WIZZIT agent." (Respondent 7 – MNO B)
- "The more influential the person, obviously the bigger audience, the more people that are going to listen to that particular person." (Respondent 8 – MNO C)

Demonstration

A total of 3 respondents recommended demonstrating the product.

- "You could also place a person in a taxi for a day and let him educate the hundreds of passengers that travelled in that taxi that day." (Respondent 1 – BANK A)
- "There is a practical environment where I show you that I pay my Easy Pay bills and show you that I'm getting balance enquiries and how easy it is, I'm showing you that I can buy airtime." (Respondent 4 – JV)

- "You've got to go and stand in the queue with people and show the old lady how to use it." (Respondent 5 – JV)

Word of Mouth

A total of 3 respondents felt that the way to increase mobile payment adoption was through word of mouth.

- "I think it'll work even better if a friend recommends it" (Respondent 3 – BANK C)

- "But the power of referral is enormous" (Respondent 9 – 3rd Party A)

  "Everybody has marketing fatigue, but your friend says 'I use this, I'm still alive, I haven't been identity thefted, I haven't been emptied out, come on let me show you'." (Respondent 9 – 3rd Party A)

  "…when a friend says something to you, it's a message that comes through a trusted channel." (Respondent 9 – 3rd Party A)

- "…the growth has been through people talking to other people and clearly the network effect…" (Respondent 10 – 3rd Party B)

  "My domestic has become an agent for us because she liked the product. She's marketed it to all the domestics in the area in which I live, plus her family and that whole social thing works." (Respondent 10 – 3rd Party B)

Social Media

A total of 2 respondents recommended utilising the various social media to spread mobile payment adoption.

- "…set up pilots, get customers to sample the product and then say 'go write your stories on the social blogs' . You will get people that would be interested as long as somebody else has tried it and said it's fine." (Respondent 3 – BANK C)

- “If you can get something that really appeals to those customers from a usability or touch perspective, as well as makes financial sense for them, then the thing is that you can really drive it virally, if you can make it easy for adoption.” (Respondent 6 – MNO A)

The conclusion that can be drawn from the in-depth interviews regarding Research Question 5 is that the most effective way to use social influence to increase mobile payment adoption, is to get community, religious and tribal leaders to act as agents for the product, to recommend the product to increase adoption of mobile payments in those communities.

4.8 Focus Group Results

The focus group was a semi-structured session conducted in January 2011 and used the same interview guide as can be found in Appendix B. These open-ended questions encouraged group discussion. All of the five respondents were IT professionals in the middle to upper LSM groups. These respondents were all under 30 years of age. The following questions were not asked as the researcher felt that the members of the focus group were not equipped to provide answers to them.

Are you convinced that your company/industry can benefit from the widespread adoption of mobile payments?

Please elaborate on any differences in adoption rates amongst the various LSM groups?

How do the characteristics of different payment cultures impact the development and success of mobile payment services?

The results of the focus group explained why the adoption of mobile payments was slow. What was surprising was that none of the members had heard of mobile payments, even though they had been using mobile phones, including SMS and USSD, for more than 10 years each.

Responses to the other questions asked are summarised below.

What in your opinion are the factors affecting mobile payment adoption in South Africa?

As the focus group members were unaware of mobile payments, they provided no responses to the question above. The following questions were then posed and a selection of responses included below.

How do you feel these issues should be addressed?

- "…proper marketing, should be done. Most of the TV advertisements for the telcos don't advertise actually what the product is all about. What they advertise is probably the rates and people don't understand the purpose behind that product…" (Focus group member B)

What are the specific needs of consumers regarding mobile payment adoption?

- "I think the consumers need something that's not time consuming, that's easy to use. If it's complicated to use it, then they won't use it." (Focus Group member B)

To what extent is transaction cost a barrier to mobile payment adoption?

- "…I think it's a reasonable fee." (Focus Group member C)

What is needed to effect a rapid adoption on mobile payment in South Africa?

- "You need the merchant to educate customers about this option, and that way you get people talking about it." (Focus Group member E)

What are the appropriate incentives to attract merchants to join existing mobile payment networks?

- "All dealers must use the same technology." (Focus Group member E)

- "…commission, like the more people that get money from your till, then the more a merchant earns. Also if you say, per transaction that a customer is doing, he gets a certain percentage. " (Focus Group member B)

- "…say to the merchant that he will earn R1.00 out of the transaction fee." (Focus Group member B)

- "…the customer will decide to buy from your business because it can be an easier and convenient way to pay." (Focus Group member D)

How can social influence be used to increase adoption of mobile payments?

- "A lot of young people are using Facebook, these social networking sites, so probably somebody would just drop an update on it like, I've used this cool technology and it was quick, so I would advise you guys to try it, maybe." (Focus Group member A)

- "…have someone on the social network to say 'teach them on how to use that M-PESA', and then show them the benefits to say 'it's like having money on your mobile' and advertise it that way to say 'you can buy anything, you don't have to carry cash in your pocket', because they know they can be pick-pocketed." (Focus Group member E)

Would you use a mobile payment service? If not, why not?

The focus group members were sceptical of this service and eventually conceded that they would use it. Members A, D and E would set a transaction limit of R1000.00. Member E would set a transaction limit of R500.00, while Member B would set a transaction limit of R2000.00.

4.9 Summary of the results

The results for Research Question 1, on the specific needs of consumers for mobile payments, were that the two needs most cited by experts were: the ease of use of the service, and the need to have a wide distribution network of merchants that accept mobile payments. The former need was confirmed by the focus group, who felt that if the mobile payments were complicated to use and time consuming as well, they, and other consumers would not use the service. The need for consumers to be able to buy prepaid airtime, prepaid electricity and other such essential services was identified as the next most important consumer need of a mobile payment system. South African consumers are wary of transaction fees and need to have a mobile payment service provided to them at a low cost or no cost at all. The need for a convenient service is another factor likely to increase mobile payment adoption. Other needs are the ability to pay remittances to distant family members, having an alternate to paying cash, a need for comfort and a need to trust that the mobile payment system works correctly.

The cost of a mobile payment transaction was identified as a possible barrier to adoption of a mobile payment service. The results for Research Question 2, on the extent to which transaction cost is a barrier to adoption revealed that the majority of the experts regarded transaction cost to be, at best, a minor barrier to mobile payment adoption. The cost of the alternative was in most cases more expensive than the transaction cost of a mobile payment. Consumers have a mistaken belief that cash is free, and do not consider ATM withdrawal fees, for instance, when comparing the cost of a mobile payment transaction. The members of the focus group felt that the transaction fees were reasonable and fair.

Research Question 3 looked at the impact of the different payment cultures in South Africa on mobile payment adoption. The results are that at the lower end of the market, cash is most likely used as a means of payment. This is well-entrenched in the minds of that consumer segment and education is needed to bring about a change in that behaviour. The middle and upper end of the market are used to paying with debit and credit cards respectively, which although more secure than cash, are susceptible to fraud. Again, education is needed to bring about a change in their behaviour to get these consumers to adopt mobile payments as a payment culture.

An increase in the number of merchants accepting mobile payments for goods and services will increase the consumer adoption of mobile payments. The results for Research Question 4, on how to incentivise merchants to join a mobile payment network, was educating the merchant of the risks of carrying cash and the immediate benefit to the merchant of having a cash outflow from his business, when customers conducted a withdrawal. This is beneficial to the merchant from a security perspective and he saves on the bank cash deposit fees. The paying of commissions to merchants as an incentive to join a mobile payment network was cited as being an appropriate incentive by both the experts and the focus group.

The results for Research Question 5, on the use of social influence to increase the adoption of mobile payments, is that it would be wise to get community, religious and tribal leaders to act as agents for the product and to recommend the product to increase adoption of mobile payments in those communities. The popularity of online social media, with the youth especially, should be harnessed to spread the adoption of mobile payments amongst the youth. This view was endorsed by both the experts and the focus group.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

The purpose of this chapter is to discuss and explain the results presented in CHAPTER 4: PRESENTATION OF RESULTS within the context of the research. The demographic profile of the respondents is discussed, explaining the differences between the actual sample and planned sample. The results to each of the five research questions are discussed as separate sections. Each section discusses and explains the results with reference to the literature reviewed. Lastly, the results are summarised and concluded.

5.2 Demographic profile of respondents

The demographic details of the respondents were gathered in order to ensure that the outcome of the research was valid and reliable. Ten subjects were interviewed as per the proposed sample. Although only four subjects were senior executives of their respective organisations, the researcher believes that this fact does not affect the validity and reliability of the study. This was due to time constraints and difficulty in getting the potential candidates to participate in the research. The researcher was able to interview three respondents in senior management and three respondents in middle management. The seniority of all ten interview respondents ensured that adequate data was collected during the in-depth interviews. Ten interviews were planned involving the major stakeholders in this industry and ten interviews were conducted.

There were no planned demographic details of the focus group sample, except for the sample size. Five respondents were randomly selected to participate in the focus group. The researcher wanted to choose a random sample of ordinary consumers without paying attention to demographics such as race, gender or LSM group. The five respondents of the focus group sample were IT professionals under the age of thirty. As this sample was unplanned, the researcher believes that this does not affect the validity and reliability of the study.

5.3 Discussion pertaining to Research Question 1

Questions 1-4 of the interview questionnaire served to uncover the specific needs of consumers regarding mobile payment adoption. Themes extracted from the interviews were used to collate the group of specific consumer needs.

The majority of the respondents defined mobile payments as payments initiated on a mobile device that is sent to another device. This definition is in accordance with most of the literature and quite accurate to the definition provide by Schüffel (2002). The fact that other respondents had a different definition of a mobile payment is a cause for concern. Two respondents said that as long as the payment is authenticated on a mobile device, it is regarded as a mobile payment. This latter definition is however contained in Mehra (2010), which also contains the former definition of mobile payments. This researcher feels that a single definition of mobile payments is a starting point and would go a long way to increase adoption of mobile payments. The industry needs to agree on a single definition and then provide solutions to effect mobile payments. That way, consumers would not be confused.

The results on the factors affecting the adoption of mobile payments showed that consumers have a lack of trust in the mobile device and have security concerns on whether a mobile device can perform banking and payments. This is understandable in that we have regions in South Africa where mobile phone coverage is poor or non-existent. South African consumers are used to “dropped” calls and the inability to make a call during high network utilisation. Quality of service issues are a concern to consumers who feel they are being overcharged for bad service. In his study, Schüffel (2002), states that because mobile payments are dependent on the underlying mobile network infrastructure, a malfunction of the technical layer affects the adoption of mobile payments. Respondents have also said they have only one chance to convince consumers to adopt mobile payments. A mobile network failure would prevent the consumer from trying to make the payment again. People would get frustrated and give up once technical difficulties are encountered.

The way to address the mobile payment adoption issues is to have a greater customer awareness of the product. This can be achieved through customer education programmes. The best way to do this is to have a trialability of the product thus allowing the consumer to experiment with the technology. Mallet (2007) has shown trialability to be one of the innovation characteristics that positively affect adoption. The other way to address mobile payment issues is to increase the distribution of merchants or terminals that accept mobile payments. The spread of mobile payments is hindered by the relatively few manned and unmanned POS terminals that accept mobile payments (Schüffel 2002).

The most important consumer need regarding mobile payments is ease of use. Consumers do not want something that is complex to use. It must become technologically boring, so that it can become socially interesting, as one respondent put it. The payment service must be easy to register on and easy to use. The perceived ease of use is one of two main drivers of technology and this user-centric factor determine an individual's intention to adopt a technology (Kim et al. 2010; Mehra 2010). Similarly, the ease of use is one of the core constructs in the DOI theory (Venkatesh et al. 2003). Another critical consumer need is a widespread distribution network of merchants accepting mobile payments. If the consumer lacks avenues or outlets in which to transact using mobile payments, consumer adoption of mobile payments would remain stagnant. The critical mass factor describes how a consumer's decision to adopt is significantly affected by the amount of merchants available, since that amount determines the opportunities for consumers to use the new payment service. Consumer adoption of mobile payments thus depends on the perceived amount of adopting merchants and other consumers. Having large volumes is critical to the success of mobile payment systems as well as the acquiring of a critical mass of users (Mallat 2007; Borg and Persson 2009).

5.4 Discussion pertaining to Research Question 2

The results for Research Question 2 show that transaction cost is not a barrier to mobile payment adoption because the cost of the alternative is greater. South Africans have a perception that cash is free. They do not scrutinise bank statements for ATM withdrawal fees to see how much they are paying. In many instances, it costs the consumer more to withdraw cash from an ATM and then pay with cash. The risk of the cash being stolen or lost is also not foremost in consumers' minds. This is also affirmed in the Borg and Persson's study (2009) which found that mobile payments are cheaper in remittance payments, especially when weighed off against the possible loss of income when travelling to hand over cash in person, the travel expenses and the risk of robbery. Consumers need to be educated on the costs and risks associated with their chosen payment method because in most instances, a mobile payment is far cheaper for them.

5.5 Discussion pertaining to Research Question 3

The results for Research Question 3 show that the different payment cultures in South Africa, i.e. cash, debit card and credit card, have a significant impact on the adoption of mobile payments. These payment cultures are entrenched in South Africa and will require a behavioural change on the part of the consumer. Education of the consumers on the risks of theft and fraud should help to move consumers towards adopting mobile payment services. Most of the respondents see a future where the only mode of payment would be a mobile payment because of the ever-increasing transaction costs in South Africa due to security and fraud. Mallet (2007) found mobile payments an alternative to the diminishing use of cash. She also found cash, cheques, credit cards and debit cards carried a relatively high transaction cost making them unsuitable for micropayments.

5.6 Discussion pertaining to Research Question 4

A large number of merchants accepting mobile payments will lead to the acquiring of a critical mass of users and this is critical to the success of mobile payment systems (Borg and Persson 2009). A critical mass of active users would drive down the cost of transactions. The results for Research Question 4 show that there are six appropriate incentives for merchants to join a mobile payment network. These are:

- The merchant receives cash outflow from his business. The immediate benefits are: that there is a reduce risk of robbery at his business premises and that a merchant does not have to frequently travel to the bank to deposit the cash and risk losing the cash, through theft or negligence

- The merchant is able to be paid commissions on certain transaction types accepted or performed. Though this could be a minute amount per transaction, with large volumes this could be significant

- There is a reduced cost to merchants. The fees that a merchant pays for credit cards and debit cards are higher than the fees a merchant would pay for mobile transactions

- In most cases, no new technology or device is needed at the store. This saves the merchant from having to buy an expensive device to allow for mobile payments. The merchant also saves on the monthly rental fee on having a link to the bank

- Allowing for customers to transact using mobile payments will lead to an increase in sales as customers entering the store to perform a cash-out, are likely to purchase an item from the store

- Allowing for mobile payments will lead to an increase in a merchant’s customer base, as people that are not usually his customers, would enter the store to perform a cash-out, and could lead to them becoming regular customers of that store

However, the cash outflow from the business is the largest benefit to merchants; all that is needed is to convey the message to the merchant. Schüffel (2002) found that for the merchant, the transportation cost of cash and the insurance cost of cash are higher than when accepting mobile payments. In addition, a merchant does not need to travel to a bank to deposit the cash and he avoids the large cash deposit fee that most banks charge.

These incentives need to be proposed to merchants to get them to join an existing mobile payment network. The difficulty faced in the South African informal sector, is that some merchants prefer to operate without the appropriate licences and thereby avoid the tax payments to the Receiver of Revenue. The fact that some merchants have chosen to evade the tax-net, will mean that they would not participate in a mobile payment system because it would increase the likelihood of them being caught and prosecuted.

5.7 Discussion pertaining to Research Question 5

The results for Research Question 5 show that the most effective way to use social influence to increase adoption of mobile payments in South Africa is to get community, religious or tribal leaders to endorse the product. In many instances, the community leader is also the religious leader and also the tribal leader. These people are leaders and their opinion matters to their followers. If they have a high opinion of mobile payments and regard mobile payments as an easy to use, cost effective, trustworthy, safe and a convenient payment method, then a leader using this payment method and telling others about it, would lead to more people within the community adopting this paying method. South Africans across the socio-economic divide hold their leaders in high esteem and would adopt mobile payments if recommended to by their leaders.

Social influence was found to significantly influence user acceptance and user adoption behaviour in Venkatesh and Davis (2000), Venkatesh et al.(2003) and Koivumäki et al.(2008).

5.8 Conclusion

The purpose of this research was to identify and assess the factors affecting the widespread adoption of mobile payments by consumers. Data was collected from ten expert interviews and a focus group. A questionnaire was used as the research instrument to answer the five Research Questions.

The results for Research Question 1, on the specific needs of consumers regarding mobile payments, is that the most important consumer need regarding mobile payments, is the need to have a product that is easy to use.

The results for Research Question 2, on the extent to which transaction cost is a barrier to mobile payment adoption, is that transaction cost is not currently a barrier to adoption with mobile payment transaction costs being lowered in recent years. The cost of the alternative, be it cash, cheque, credit or debit card, is greater in most instances. Therefore, once consumers are educated and informed of how much cheaper mobile payments really are, adoption rates should increase.

The results for Research Question 3, on the impact of the different payment cultures on mobile payment adoption, is that the other payment cultures have a significant impact on mobile payment adoption, as they are well entrenched in South Africa and will require a behavioural change on the part of the consumer.

The results for Research Question 4, on the appropriate incentives for merchants to join a mobile payment network, is that a merchant having a cash outflow from his business, is the most appropriate incentive for a merchant to sign up to an existing mobile payment network.

The results for Research Question 5, on the most effective way to use social influence to increase adoption of mobile payments, is to get community, religious or tribal leaders to endorse mobile payments. This would lead to their followers adopting the product.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The purpose of this chapter is to summarise and conclude the findings of this research. Recommendations are then provided to each of the identified stakeholders of this study. Lastly, suggestions are made for further research.

6.2 Conclusions of the study

Mobile payments have, for the last few years, shown signs of being on the verge of enormous growth in South Africa. But although it may be easy to sign up customers, getting customers to use mobile payments remains a challenge. Thus far, the use of mobile payments is low, given the more than 100% mobile penetration in South Africa.

Strong incentives exist for MNOs to provide a simple, open payments solution to include a new source of revenue to counter falling ARPU and to prevent subscriber churn. To capitalise on this, MNOs must define the role they want to play in the mobile payments channel. MNOs need to work with banks and 3rd party providers to help drive wider adoption of mobile payments. Key to this is agreeing who owns the customer relationship and defining the industry standards necessary for mobile payments to realise its potential. What must be remembered is that this can only come to being when the specific needs of consumers are heard and understood - the most important consumer need regarding mobile payments is the need to have a product that is easy to use.

The transaction costs of mobile payments need to be kept as low as possible, lower than other traditional payment costs for there to be a widespread adoption and continued use of mobile payments. Consumers are unaware that mobile payments are currently cheaper and this message needs to be broadcasted to them.

Whilst the old adage that "cash is king" still holds true in South Africa with the lower LSMs preferring to hold on to cash and pay with cash, a behavioural change across all segments of society is needed to change the mindsets of consumers into utilising cash-less and card-less payments, i.e. utilising mobile payments.

The ongoing success of a mobile payment network is achieved through having a critical mass of merchants and consumers, and hence increased transaction volumes. Merchants need to be made aware of the incentives available to them to join an existing mobile payments network. An increase in merchants accepting mobile payments would lead to an increase in consumers utilising mobile payments and this would lead to a reduction in transaction costs, through economies of scale.

The use of social influence to increase the adoption of mobile payments should not be underrated. Community, religious or tribal leaders should be recruited to endorse mobile payments. This would lead to their followers adopting the product.

6.3 Recommendations

The findings of this study have given rise to the following recommendations:

- MNOs, banks and 3rd party providers need to understand specific needs of consumers and to build products that suit customers' needs
- Consumers need to gain trust and confidence that the technology works. This can be achieved by giving consumers a free trial-period in which to use the mobile payment service
- The transaction costs of mobile payments need to be kept as low as possible for there to be a widespread adoption and continued use of mobile payments

- Consumers and merchants need to be educated and convinced that mobile payments are superior to cash, cheques, credit cards and debit cards

- Merchants should be educated and incentivised to join existing mobile payment networks

- Community, religious and tribal leaders should be recruited to endorse mobile payments

- Social media should be used to raise awareness of mobile payment products

- MNOs, banks and 3rd party providers need to work collaboratively to define the technologies, processes and standards necessary for mobile payments to become a strong viable channel. The basic building blocks of standards that relate to interoperability should be well defined

- Business models on joint ventures between banks and MNOs need to be revised, especially with regards to who owns the customer. Banks should resist the temptation to sign up customers to their competing product over the product of the joint venture

- The lack of after-sales support affects the use of the product. Ensure that customers and merchants have a good support system available when they encounter problems with the service

- Government grants should only be paid to recipients via mobile payments. This would save the taxpayer as well as introduce 12 million users to mobile payments. This would also be the best chance to bring the economically marginalised into the economic mainstream and would give existing mobile payment systems the volumes needed

- Increase marketing efforts by trumpeting the success, security and safety of existing mobile payment systems. Direct marketing using SMS should be used because of its wider reach

- Large FMCG organisations, such as Coca-Cola, supplying retailers and distribution companies, should take a stand to not accept cash anymore and only accept mobile payments. That would force all retailers and distributors, and others in the supply chain, to sign up to mobile payments

6.4 Suggestions for further research

- This study can be conducted with a larger sample size of in-depth interviewees and focus groups
- A mixed method research methodology could be employed to obtain quantitative findings which could determine the degree to which each of the adoption factors affect the adoption of mobile payment services
- Further research is needed to test the adoption factors with the newer technologies such as NFC and to contribute to the theory development in this research area

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APPENDIX A

Letter to Respondents

Dear [Respondent],

I am completing my MBA at the University of Witwatersrand, Johannesburg (Wits). My MBA thesis is on the factors affecting the consumer adoption of mobile payments in South Africa. Towards gathering data on this subject, I would be grateful if I could arrange a one hour interview with you at [respondent's company] to understand your views on this subject. As you are extremely busy, your agreement to contribute to my research is greatly appreciated.

The interview will revolve around assessing your opinions on the rate of mobile payment adoption in South Africa, as well as the current and future direction of mobile payments in general. Confidentiality will be observed throughout the research process and the final report will be for academic purposes only.

I am available to meet with you at a location and time of your convenience.

Thank you for your assistance and cooperation.

Yours sincerely,

Riaz Randeree

Mobile: 084-608-2435

APPENDIX B

Actual Research Instrument - Expert Interview Questions

1. What is your definition of a mobile payment?
2. What in your opinion are the factors affecting mobile payment adoption in South Africa?
3. How do you feel these issues should be addressed?
4. What are the specific needs of consumers regarding mobile payment adoption? *(RQ1)*
5. To what extent is transaction cost a barrier to mobile payment adoption? *(RQ2)*
6. Are you convinced that your company/industry can benefit from the widespread adoption of mobile payments?
7. Please elaborate on any differences in adoption rates amongst the various LSM groups?
8. How do the characteristics of different payment cultures impact the development and success of mobile payment services? *(RQ3)*
9. What is needed to effect a rapid adoption on mobile payment in South Africa?
10. What are the appropriate incentives to attract merchants to join existing mobile payment networks? *(RQ4)*
11. How can social influence be used to increase adoption of mobile payments? *(RQ5)*
12. Would you use a mobile payment service? If not, why not?

APPENDIX C - TRANSCRIPTS

Respondent 1: BANK A - Channel Manager

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 1: I define mobile payment as any sort of payment generated from a mobile device that is sent to any other device, i.e. the recipient does not necessarily have to be a mobile device. To me, that is the important differentiation. So, it is generated from a mobile device, whether it is to an ATM, whether it is to a person, who can then go to a store and withdraw the cash. The actual payment is generated from a mobile device. The flip side of it, you could say that if I send money to a cell phone number, that is a mobile payment to a mobile payment, but it is generated again from a mobile device. If I do it from the internet to a cell phone, is it a mobile payment? That's a bit of a tricky one. What would you think?

Interviewer: Yes, exactly what you said. All long as it is generated from a mobile device.

Respondent 1: Because, if it is generated from the Internet, it is actually an Internet payment. Sometimes you get too much into this cloud, "*it has to be mobile to mobile*". It is not. Sometimes it happens in the European market, where if it is from a cell phone to cell phone then it is mobile payment. It is not, as long as it is generated from a mobile device.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 1: I think firstly I look at adoption in South Africa, mobile penetration has been great. When I was at Vodacom, when we made the 1st million, we were all so excited. Now nearly every South African has 2 or 3 cell phones. Penetration is not the problem. The problem comes down to Customer Education. But before you even get to Customer Education, it comes down to a key factor that we had before: the rural areas with a high black population. So, people do not really trust the banks. You see it in the newspapers. I keep my money under the mattress, that is why I am unbanked. If I put the money into a bank, if I draw R500.00, they steal R5 from me, which is your bank charge. In South Africa, we have structured Stokvels, keeping the money at home versus putting it in a bank. We weren't a banked community as much; 50% of our population do not have any form of bank account. We have Mzanzi and all these accounts coming out, but they haven't really catered for these markets. What happened is the contractor will open an account just to get paid, and as soon as he gets paid, all the money is out.

I think why mobile payments are not successful is: firstly, because we live in a community where we weren't so "bank literate", if I can call it that. Secondly, to throw the new technology into a person's face and say this is solution to the unbanked, is not the right angle. The way this has been positioned, to me, is not the right way. If you look at every organisation, whether it is WIZZIT, whether it the banks, whether it is the 3rd party applications, it is aimed at the unbanked. How can you take the unbanked person from his house and move him straight to a device? All he does on his phone is send SMS and send a "Please call me", and make a phone call. Now suddenly, you want him to trust the device to do his banking. There is a big drive for communication, trust of the device is a major concern, yet it is one of the most secure way elements to do banking from, but it is still a concern. Thirdly, we don't have that awareness for the application. Awareness and customer education is just not there. It stems from a few years back where people were just not bank literate. If I develop mobile banking, it is going to solve all my problems. It is not. There a few steps before that. People now get involved in *inContact*. A lot of people see that as mobile banking. The bank is sending me an SMS. If a SMS comes to a mobile phone from a bank, that is mobile banking. People start trusting that the bank is sending me that information via a cell phone so I can now pay via my cell phone.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 1: As I mentioned, I think we need to take a step back and don't sell a channel, sell the service. So, don't sell mobile payments, sell the functionality that says "pay your Telkom account via a mobile phone". The way we address it to market is totally wrong. Customer awareness and customer education are key for this to be implemented. I think a joint sort of initiative between the networks, the financial institutes and 3rd parties are needed. If you look at a network and let's look at MTN Bank a few years back. They didn't do well and it closed down in South Africa. If a guy is unbanked and you tell him to open up an account, he is going to first look at the four major banks. Their brands are in your face. They are not going to open up with a network. Network and banks need to work together. That way they can generate mobile payments. But obviously it comes to more detail in terms of financial modelling and promotional modelling, so I don't know whether that will ever happen, because you know whose customer is it really, the bank's customer or the network's customer?

Interviewer: One of the reasons for MNO is that they need to get financial approval from a financial regulator so that a collaborative partnership would be the way to go.

Respondent 1: With a collaborative partnership as well, if you look at MTN Bank which had a collaborative partnership with Standard Bank. They partnered the MTN brand with the Standard Bank brand. M-PESA has a partnership with Nedbank. But you don't hear of Nedbank. So it's not a partnership really, it is just that I am using the licence.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 1: If you look at consumer needs in South Africa, it is the fact that you have to be able to send money to anyone who doesn't have a bank account, as well as send money home, and by home, I mean to the rural villages. What happens is that a person will go to a taxi rank and trust someone to send money home and the person will go and sit on the other side (e.g. Lesotho) and wait for the taxi to arrive. It could be difficult to get people to pay their Edgars account via mobile payments. If you look at the lower income groups – the fact that they jump into a taxi on a Saturday to pay their Edgars account, it is an outing. With Mobile payments you need to segment the approach; it is not just one size fits all, because your lower income groups will prefer to send money to someone. They will prefer to buy airtime and buy prepaid electricity. Those are their essential services. But I think the main aim is and the approach we have taken is, let's launch the ability to send money anyone in South Africa. In March 2010, we launched the ability to send money to any destination worldwide.

Interviewer: But that is the thing. I have never seen any advertising on that. I have only seen it on your internet site. I haven't seen it anywhere else.

Respondent 1: Yes, the only adverts you see are FNB.

Interviewer: Vodacom has the M-PESA billboard near Woodmead.

Respondent 1: Is it the right area?

Interviewer: No

Respondent 1: Is it the right media to put your adverts in the Sunday Times newspaper? You and I are going to read it. But we are not going to use it because we already have bank accounts and internet banking. In South Africa we need to target the right medium and to target the right offering to the customer. In 2000 we launched mobile banking, one of the first in the world. In 2005 and 2006 we picked up about 20000 customers and the reason for that was we sold mobile banking, we didn't tell them what you can do within mobile banking. Target the right medium to the right person. We have 11 official languages. Do you see ads in all the languages? Yet our ATMs have all 11 languages.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 1: It is a barrier, but we need to educate people on the tradeoffs. If someone is going from Alex to Soweto to pay someone R200.00, his return taxi fare could be more than R40.00. Whereas, a mobile payment could have cost R3.00. Therefore in this example, the transaction cost is cheaper. When you take ATM withdrawal costs, the possibility of losing the money, transport costs and time spent, a mobile payment is far cheaper. It is a perfect solution for the market out there.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 1: Yes, there needs to be an open system. Just like debit cards, that's where the money is, replacing the card. And the cards can be used at any retailer or ATM. Mobile payments need to be aligned to a standard, just as you have Mastercard and VISA. The standards have to be driven from an organisation like PASA (Payments Association of South Africa), and will be a long journey.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 1: If you look at the lower LSM groups, you are probably touching 5%. From a penetration point of view, I see the same amount of transactions going through for both groups. What we are finding is that your lower income groups use our cash sending service more. The recipient immediately withdraws the money from an ATM. With the other offerings in the market, the money is kept in a wallet.

Europe has a less stringent banking environment. I don't require FICA documents to open a bank account. I just tell them my ID number and get an account and a credit card. Also, the people are used to swiping a credit card to pay for something. And that is how NFC can take off there, because you are transferring the mechanism (of swiping) to a mobile phone. In South Africa, the majority of people are not used to credit cards. So you need to take it step-by-step. First, get them used to mobile payments. Then, get the recipients used to maintaining a wallet and paying from the wallet, while maintain a balance.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 1: The lower end needs to change from cash-based to an alternative. We need to get them to bypass debit/credit cards and go to mobile payments. They first need to trust the technology. They can do a balance enquiry and gain confidence when the return message is received. The next step is to buy prepaid airtime. Once they receive an SMS from the Mobile Company confirming the recharge, they start to trust the technology more. Then they are ready for mobile payments. It is a journey for the customer.

It needs to be simple. For example, to pay an Edgars bill: a page should appear asking for the Edgars account number and the amount. Once you start asking for the beneficiary reference and your reference, you lose the customer. It needs to be one step, quick and easy.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 1: You need to have a simple solution.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 1: The benefit for a merchant is that when he pays out to a customer, he is having cash flow out of his business. He does not have the risk of carry cash on his premises, and he does not have to pay a deposit fee to deposit the cash at a bank. There has to be another benefit: offer this service and you get a percentage of the price.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 1: You need to get the chiefs in the rural areas, or religious leaders on-board because they are the leaders of those communities. You need to hold road shows where you demonstrate the product in the language of the community. You could also place a person in a taxi for a day and let him educate the hundreds of passengers that travelled in that taxi that day.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 1: Yes, I do.

Respondent 2: BANK B - Product Manager Mobile Money

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 2: Mobile banking by definition is a banking transaction that's initiated on a mobile phone or a mobile device. You can't categorise the Shoprite offering in that, they always had these remote payment mechanism where you go to a Shoprite store and deposit money, and the money is wired to a person's phone. It's not necessarily a mobile transaction because you're not initiating it from a mobile phone or mobile device; you're actually going to a brick and mortar store. It's kind of like a decentralised banking service because you're still going into a brick and mortar institution and you're filling in a form, you're capturing your details, your IDs for those FICA requirements and you're initiating a transaction, whereas with mobile banking you could be anywhere on your mobile phone and initiate a transaction through to someone's mobile phone, so the initiator initiates the transaction on the mobile and the recipient receives the transaction, the payment, whatever it might be, on their mobile phone.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 2: I'll say the biggest hindrance is the fact that South Africa relative to other African countries has the most developed economy and by implication, the most developed banking sector. Our banking penetration in South Africa is much higher than anywhere else in Africa and for that reason alone, you know people don't change their habits very easily. People have bank accounts, those that need them at least have them, so since 2004 the financial services charter has required banks to get into the low income market which they've been somewhat hesitant in going in to. We have a lot of people that are not banked in this country but they're quite comfortable carrying on their lives in the usual manner because those unbanked people are in most cases, recipient of transfers that are initiated from the urban centres, so migrant workers in the cities have bank accounts with one of the banks, and then they send money to recipients through the traditional channels you know which have been until recently, your taxi drivers, your buses, your Shoprite money transfers and so on. The recipients were often in the rural areas or in the middle towns, the smaller towns, don't quite have a need for a bank because in those areas, banks aren't adequately represented. It's a mission and a half to maintain a bank account in the rural areas, but in the urban areas where most of the migrant workers will send the money, work and reside, most of them have bank accounts. The issue however is that they have not been using the bank accounts as part of their lifestyles. It's your money in, money out sort of thing. The banks are struggling to come up with not so much revenue models, but in centres to get these people to transact more, because primarily banks make money from transactions and of course the interest they add on monies borrowed and that's quite an issue. So the issue is that South Africa has a very high bank penetration relative to other African countries. I'll give you a very good example, that's why M-PESA worked in Kenya the way it did. I mean the phenomenal success as far as the adoption and the inclusion of the general population is concerned. I wouldn't say it was a success in business terms because I'm aware of what the stats are, but in terms of signing people up for bank accounts, and financial inclusion, those guys were a phenomenal success there. Kenya has about 800 banks branches, about a similar number of ATMs in the entire country. Nedbank alone has 435 branches in South Africa and over 1000 ATMs, so if you took Nedbank into Kenya you would constitute the entire Kenyan financial system, just one bank. So because of that dearth of bank presence in Kenya, it worked very well but you wouldn't say this, because in most urban areas the banks are properly represented.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 2: The question really is how do we bank the 14 or 16 million or so South Africans that are not banked? And this is where mobile banking plays a part. The reason why banks aren't moving into these low income communities, i.e. your rural areas and other poor areas, is because they can't come up with a sustainable revenue model to service those areas. I mean those areas are just not profitable. I was reading an article just recently about ABSA's most recent experience in that market, that they, 90% of the loans, the micro loans that they give out to that market, were not paid. They seriously burnt their fingers in that market and I doubt they'll be going back in there any time soon. They will because everyone understands that that's the new frontier of the banking industry in this country. You've got to come up with a way to bank those people and get them involved, so my involvement with mobile banking is really to try to see how we can provide banking in these areas without deploying the full banking facilities, your brick and mortar stores and so on. So what we are doing is we're providing mobile banking in partnership with retail outlets that are established in these areas anyway. If you look at a poor community like Zola in Soweto for instance, they have in that area about what 7500 spaza shops and so we are trying to regularise those spaza shops, document them, and most of the banks are trying to do the same, although their mobile banking offerings use different models. We can sign up spaza shops, retailers in the local neighbourhoods to facilitate the withdrawals and the deposits because these guys are cash generating and cash handling anyway, and so in my opinion that would be the best way to go about it. I think it's foolhardy for the government to try to force banks as they've done with this financial services charter to get into the markets as a way of reaching their financial inclusion goals and broader economic goals that they've set for the country. The fact is that banks are businesses and they're not going to deploy capital, and nobody at the moment has patient capital. It takes years to build up a market. It takes years to take an initial account holder who makes an initial deposit to be profitable. That person has to be groomed over years until they become a profitable customer to bank, and banks are aware of this and no-one is willing to deploy that capital as patiently as they would, in order to solve the problem, so the issue really is how do we use the current existing commercial infrastructure and in particular the small retailers in these communities to act as proxy banking institutions so that we achieve our distribution in that manner.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 2: Consumers have always had, everybody has a need for financial services, and the question however is, how to make financial services as convenient to the consumer as possible? Financial services, like any other product, have to be provided at a reasonable cost. They have to be provided at a reasonable rate of distribution. They have to be provided at a reasonable rate of consistency. By consistency, I mean the product's got to be in the market. If I open a bank account with Nedbank I expect that Nedbank should set up shop near where I stay, and set it up as constantly as possible, preferably permanently. One of the interventions that the banks have tried to do is to come up with this concept of mobile banks, not in the sense of mobile phone banking, but in the sense of mobile, they're not permanent structures that they build. Some of them are actually truck banks, they put the bank on the truck and the truck you know drives around the neighbourhood, parks there for maybe half a day, moves on to another area. That has worked somewhat and most banks do this around about month-end when people are expecting their social grants. They take these mobile trucks with ATMs inside to local communities, the elderly cash out, the disable cash out, children's grants are cashed out and so on. So that's been one intervention, but the reality is that they're not permanently in that area and that discourages people from the banking service, because remember every account incurs a cost. A good example is the Mzanzi account. You know the banks came up with these Mzanzi account after the financial services charter in 2004 and we are sitting on I think about 5 million Mzanzi accounts across the markets at the moment, but 60-70% of those accounts are dormant, so we haven't changed lifestyles, we haven't changed behaviour, people took out these accounts and signed up for these accounts because they could. They were the cheapest accounts in the market but the realities are the product is not consistently deployed in the market so people aren't using these accounts. They're still taking cash and putting it under their mattresses and in stokvels and in other service mechanisms. The accounts remain largely empty, largely unused.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 2: Conventional wisdom states that the majority of South Africans or poor people don't have bank accounts and those that do, don't use them because of the prohibitive banking fees, i.e. transaction costs. I actually don't think that's true because anecdotal evidence suggests that people in that market, low income people, don't quite understand the concept of pricing. Their financial literacy is not at a level that informs them what expensive or cheap means in the financial services. I used to do interviews with security guards for and ask them, so how much do you think you're paying in banking fees a month, and guys will come up with ridiculous figures, like R5.00 a month, R2.00 a month, R3.00 a month. I mean that's what they think the fees are and quite frankly they don't give a damn. I spoke to a managing director of a mid-sized security firm. His guards earn about R1500 a month and 10% of that they pay in banking fees, but they don't know that they're paying R150.00 to the bank a month because they're just not aware of what the fees are. These guys don't take out statements and like you would, for instance. They don't take out statements and really go through the statements and see how much they're getting charged, so if you ask them, the majority of them would profess ignorance or would give you an answer that is just more or less guess work. So the market isn't so much concerned about fees, the market is more concerned about ease of use and accessibility. In my opinion that's the greatest hindrance. You've got to put these banks there for them to use it. Even the people that have bank accounts, have to travel to an urban centre in order to do a banking transaction and that travel involves an amount not less than R10.00 - R20.00 in most cases. Kliptown has got this urban centre, the CBD that services a community that spans as far as a 30 km radius so people catch taxis into the Kliptown CBD to do their banking, this is what they've always done. They're used to paying that R30.00 for the taxi. They know that on payday they have to travel to the Kliptown CBD to do a cashout at the ATM or over the counter inside a branch and then go about doing their banking. That's why that "money in, money out" trend, two transactions a month continues across the banking sector, because a guy gets paid on Friday, he travels to the Kliptown bank, maybe he sent that money to his wife, his children, they travel to the Kliptown CBD, they perform a full withdrawal of the entire amount, they do their monthly shopping and they take the rest of the money home. So that point and the next payday they're not using the bank because it's just too inconvenient. Banks close at 3:00pm for instance. In the case of informal traders who are increasingly a growing market for banks, because they make cash transactions everyday. Informal traders finish their business around 7:00pm and by that time the banks have closed. The guy makes about R1000.00 a day and he's got a R1000.00 worth of cash on him a day, but he's not going to use the bank because if he deposits his money during the course of the day, he's got to do that between before 3:30pm and that means taking time off from his business, because often these guys are one man businesses. He's got to go to the bank and make a deposit and should he need that money at any given time, say for instance if an opportunity arises during the course of the day, he's got to go back to the bank and withdraw that money and if he uses a bank like Capitec for instance, he's got to do the transaction over SASWITCH and he pays even more money as far as transactions concerned. So I wouldn't say the transaction fees are a hindrance. The biggest hindrance is often the distribution. The banks are just not distributed so evenly across the market.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 2: I believe so. Mobile banking is not so much a low income banking revolution as most people want to put it. Mobile banking is in many respects the future of money. Everything is gravitating to the mobile phone. You'll be able to organise most of your lifestyle needs around your mobile handset and banking is no exception. So what we are involved in, is an evolution of the financial services industry and mobile banking is avant-garde in this instance, so there's a market in there, not just in the lower end of the market but in all the market categories, the upper market middle income market, the lower income market, purely because of its convenience. I think that's the greatest pull but in respect of banking the unbanked, it is the only tool at the moment that presents the financial industry with a sustainable revenue model to provide banking services, because you literally don't need to build banks anymore, you just need to identify credible retail businesses in areas that you want to service, partner with those retail services and turn them into proxy banks to conduct withdrawals and deposits on behalf of the "mother bank", so to speak.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 2: As with any product in the market you have your early adopters, your laggards, then your late adopters. Because of South Africa's economic demography, the earlier adopters have traditionally been the urban people, so the middle town, small town, rural people take their cue from the urban people, so it's my brother in Jo'burg who phones me to tell me about this cool new M-PESA thing. I've seen it on television, I probably have TV down there in the rural Eastern Cape. Another aspect about South Africas society is still pretty much and especially in the African community, it's still pretty much a patriarchal society, so people take their lead from men, so it's your uncle, it's your nephew in the city who works in the city who phones you and tells you, so we don't have to do this Shoprite thing anymore. We don't have to use the taxis anymore. I can give you R1000.00 from the comfort of my cell phone while I'm down there on the mine shift instantly and you can go and cash it out not necessarily at the bank but at a designated retailer in the neighbourhood. So the adoption of mobile services, because it's a technological platform remember, it's often your urban people, especially the young, so we're not even talking middle aged people. We're talking your urban hipsters, your yuppies in the towns, and in the African community most of these guys who now constitute the much vaunted black middle class often come from townships themselves or from peri-urban or marginal rural areas. They find themselves in the cities, are doing well as professionals, so these are the people that are adopting mobile services first of all. We haven't seen any significant adoption in the lower income market yet, and it's kind of like your cell phones for instance. Most people you see, even those in the lower income markets, own Blackberries and 5 years ago they used basic phones but those Smart phones have status associated with them. The basic communication needs are voice and data, SMS and making calls but the reality is, because they aspire to be like the early adopters, they've also bought into that consumer reason, so to speak.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 2: One of our greatest challenges at the moment is that the banking industry has failed to back that payment culture, as you put it. The behaviour is just not changing and I give you a surprising snippet. M-PESA in Kenya has signed up about 10.2 million people, phenomenal adoption. People signed up for M-PESA but only 48% of those people use M-PESA, are active. 48% of those 10.2 million people are active users and those 48% of that 10.2 million people who are active users, only use their M-PESA accounts at an average rate of 2.6 times a month, so it's still your cash in and cash out culture. People are still struggling to get around the idea of cashless payments. The idea that, I'm not going to send you cash anymore, you don't have to go to the bank and cash out over the counter anymore, I can send you R1000.00 and you receive it on your cell phone and keep it on your cell phone, carry it around with you, cash out whatever you want and when you want to. You don't need cash anymore, and that's the biggest challenge we've got into. How do we induce the behavioural changes that will make mobile banking successful? Both from an adoption point of view and from a business point of view. South Africa has very legitimate reasons to effect a behavioural change in our payments and business culture in general, in that we have very high levels of crime, so you'd expect that when people are offered a banking service that takes cash out of the equation, they would adopt that service very quickly because they see the benefits. So the farmer doesn't have to carry bags of cash anymore to his farm. He doesn't have to drive to his local business centre in that remote town in Bloemfontein and carry back with him bags of cash so he can pay his workers at the end of the month. He can just sit down on his laptop or his computer or on his cell phone and pay his 1000 workers. That's a huge benefit for these guys.

In Bangladesh, farmers buy business accounts with Grameen Bank and then they come on board and register their employees for bank accounts using their finger prints and of course IDs. At the end of the month, the farmer calls his workers over and gives them prepaid swipe cards, so he loads that R1500.00 salary into the prepaid card and these guys then carry the cards to the shop to the retail shops to do their shopping, and they can do a cash out at the point of sale, they don't have to deal with the banks anymore, but the workers are struggling to understand that new form of money, that evolution of money, so we don't need cash, I mean what's the catch? I mean so what are we not being taught? There's always a suspicion whenever there are deliveries or interaction with technology. But you've got to understand that our literacy levels in this country aren't always helpful to explaining these new evolutions of banking and money in particular.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 2: We need legislation. So if you're a bank the market is going to be apportioned equally so once there's national legislation in place, you can't give preference to a certain bank to do certain business. In the social grant business for instance, every bank would clamber for an equal share of that business because it's national legislation requiring people to use mobile banking services to access that government service, but from a purely economic point of view, mobile banking constitutes the best chance this country has to bring their economically marginalised people into the economic mainstream, and that often starts with a bank account. The banks are just not going to build an infrastructure in areas that are suspect from a business point of view. The Mzanzi account is a very good example. No one gives a hoot what's happening with those accounts. We opened them because we supposed to open them. People signed up for them, people are not using them, but we're charging people. There are millions of people out there who owe banks money, but of course the banks are never going to recover that money for obvious reasons. You are not going to chase 1.5 million people to recover R10.00 each from them - very impractical. The reality is the governments got to come through with legislation and require banking services offered in the lower income market to be based on mobile banking.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 2: There is an inherent and very strong incentive for merchants to become, for instance, M-PESA outlets. The reason why the sign up of merchants has been slow in this country is because our financial system is very robust. You've got FICA requirements and most of these businesses aren't registered remember, especially in your informal settlements. These are people who turn their homes and their garages into businesses, that usually don't have the necessary documentation and because we have to fulfil these FICA requirements, we need to document these people.

But to answer your question, most retailers will want to become mobile banking outlets for one reason, because mobile banking takes cash out of your system. These guys pay huge amounts of money in cash deposit fees on a daily basis. Huge amounts of money to insure their cash when they do the cash-in-transit with the security companies. The cost associated with handling cash, both inside their stores and outside their stores when they go to cash it, and the inconveniences involved in that, are just enormous.

Most mobile banking transactions in urban areas are cash-in, so it's the suburban housewife putting in money for the housemaid, the housemaids then sends that money, does a mobile transaction to her children in, say Soweto or Ga-Rankuwa or Bela Bela or Thohoyandou. In those areas there are a lot of cash-outs because dependants are cashing out the money and for a shop like Shoprite for instance, it's a godsend, because people are cashing out the money and taking money out of the till, so at the end of the day they have very little cash to bank which is good news for them. They save money on cash deposit fees, they don't necessarily have to transport their money as frequently as they used to anymore to the banking centres. They can actually keep some of this money in the shop because it's manageable, and the risk associated with managing that small cash holding is acceptable to them. So there is a standing inherent incentive for merchants of any shop for that matter. We've had a lot of enquiries from the KFC. They want to take that cash out of the system. They want people to come to their shops and pay for those burgers and pay for those Streetwise 2s with mobile money, and that is something that I'm sure if the necessary and appropriate mobile banking infrastructures put in place, that's something that they're willing to endorse across the board. So most cash generating and most cash handling businesses a standing incentive and they'll always look to incorporate mobile banking services into their businesses.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 2: Grameen Bank has shown that women if properly resourced can be formidable forces in economic change in third world countries. Now, because South Africa is a patriarchal society that doesn't happen easily. When WIZZIT went into certain villages in the KZN and women started opening up WIZZIT accounts, there was an upswing in cases of domestic violence, husbands taking their wives to task for their attempt at financial independence and economic freedom, so to speak, When you start empowering women financially it threatens his stature, his power. Parliament needs to come up with laws that empower women, just get rid of the stigmas that our rural women cannot have bank accounts, can't conduct business without the blessing or consent of their men. In Butterworth, we convened a meeting of chiefs and almost all of them were adamant that they don't want to see ABSA in the area anymore because what ABSA did was they came in targeting women specifically, and so women were opening bank accounts now, they were getting freebies from the bank, R50.00 vouchers to open accounts, you know they're now being empowered to open these, and it just didn't go down very well with the guys and they mobilised themselves around their leadership structures and they kicked out the bank. Rural areas are the domains of traditional leaders, so you've got to get their buy in, and if you don't do that then you are in very big trouble. You've got to identify the local leadership and go through that structure. The MECs in the area in that province often have departmental employees that are in touch with these people on a consistent basis. You also have to work through civic organisations for instance that do humanitarian work in these places. You've got to get that chief to give you a blessing, to talk to his people, to sell them certain products and so on.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 2: I would. I do. With mobile banking whereas I can just sit here on the table pay whatever I want to pay, receive the statements on my phone and that's it, you know and whoever I pay doesn't need to go to the bank themselves, they can just go to an M-PESA outlet and do their cash out there or do their shopping there and go home.

Respondent 3: BANK C – Senior Executive

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 3: My definition of a mobile payment is a customer using the cell phone to pay a third party but using the cell phone, so when you say mobile, it's transacting from that device, initiated from a cell phone.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 3: I think one factor that's most prominent is education. Customers are not able to understand how a payment can actually work from this device. So what you'll find is in the mainstream market you're probably likely to get better adoption when people need to make payments because they don't have access to an online interface, but in the more affluent personal sort of market, customers are used to using the online interface.

I think in terms of how to use the technology, a lot of banks have different technologies. There's WAP, there's USSD, there's SMS. There might be applications coming now down the line, so when guys are doing their payments they want to understand how to use them.

I think another factor is the concern around trust. Will it work? Will I lose my money here? Will the bank give me back my money if I accidentally pay the wrong person? So that ties back into education. Once a guy has transacted successfully, he's more likely to stick with it, so it's getting across that trust barrier.

Security is another one because I think with all electronic banking, with media stories about people being phished and really horror stories. Now with the cell phone, people think what if somebody steals my cell phone or if I lose my cell phone? Can somebody defraud me? Those are typically the factors I see.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 3: With education I think the one good way of addressing that, is allowing the customer to experience playing with the technology prior to them getting charged for that transaction, etc, so I would encourage having a trial period. So there you go, you've got a cell phone banking application, you've got 10 days to try it out, play around. It's all fictitious, if they wanted to set up something to pay an account we could facilitate that. You're more likely to say it's secure, it's safe and the service works. Once you get passed the barrier, I think you can get through.

With trust and security, I think it's always good to market your successes in an industry. We'll go to the market and say we've got 2.5 million customers using the service, surely it must be fine to use it, otherwise we wouldn't have had such a large uptake in customers. So that speaks to people getting assurance from others.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 3: There are regular things that people pay and what banks normally call beneficiaries, which you have to set up on your profile, whether it's mobile, internet, whatever. The one big need is when you're on the move or if you're on holiday or you're not in front of your PC, that's the ideal time for personal or wealth customer to be using a cell phone to make those payments so it's basically doing your banking anytime and anywhere. You can even be overseas for that matter and do it without a PC and it's cheaper.

The other category I'd say is once-off payments and real-time payments. Mobile payments take away the dependency of having to be in a bank or at an ATM or in front of your PC. You now actually can do it wherever you are. We're now starting to see large value going through and transaction volume, and again that comes down to people having to experience how easy it is or convenient it is. If you make it complex for the person, you know the first experience is very critical. You've got to get it right with customers. You make it easy for them to do the payment and they get a comfort that the payment has gone through successfully, then you're going to win those battles of getting adoption.

I think the primary need for people wanting to do mobile payments is they no longer want to be tied down to having to be in front of a desk or having their relationship manager doing it. They want to be able to initiate it. You've seen the Smart phones out there, you can do wondrous things, so mobile payments will become a norm in the future

Interviewer: Are you're saying now with the new Smart phones it should take off?

Respondent 3: Yes with these Smart phones it should take off. A lot of volume still goes through the online interface and it will eventually move to the mobile, once it becomes adopted as a quick, secure, safe and easy to use service. You know people want speed.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 3: Cell phone banking is in a mature stage, costs are not as sensitive as they were say 3 years ago. However, cost is still an issue in the consumer's perspective, especially now with bank charges being compared in the media. Cost is on top of consumer's minds in anything that you do, so in our case, we're currently free, but there's going to be a time when we're going to have to charge for transactions, and I don't see a large drop-off in transaction volume or customers from that. What we've already sold is, that it's convenient to use the service, you can do it basically any time that you want to do it. In certain instances it can be real-time depending on what transaction type you're doing. I don't think costs will ever go away. I certainly still do see it as a barrier but not as a big barrier as it used to be. The mainstream segment might be more cost sensitive than the personal segment that has more disposable cash. When you open an account, they bundle transactions into a pot, so you get 20 transactions free, even though you think it's costing you, it's not because it's free for the first 10 and typically if you do 10 transactions a month, you're going to get all your transactions free anyway, but you will still be paying for the product fee.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 3: Certainly! What's interesting in our space is, banks traditionally used to be the payments people. Now you're getting mobile network operators coming into the banking space. Soon you'll be able to use prepaid value to do things, barter with merchants or suppliers. So mobile will be the future and with technologies like NFCs already being done in the East and in the States etc, it's all about adoption and how mature you are. In South Africa, technology adoption is slow because people are more risk averse. Cell phones were traditionally used for voice and it's starting to swing now.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 3: When we started cell phone banking, LSMs 1–6 readily adopted the service compared to the higher LSMs and that's purely because of access mechanisms. Guys don't have access to PCs in that lower LSMs, they've got mobile phones, so if you can give them services on the phones that'll prevent them from walking into a branch or walking to an ATM, a few kilometres away, then we have better adoption in that. What we've found now, as cell phone banking is starting to mature, we've got a large percentage from the wealth and personal segments starting to adopt the service, because of the convenience factor. Even if you put a charge, it's convenient. Private clients use it because they're on the move and they're not near their PCs, so they can do it on their phones.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 3: Cash is still a tangible thing. The moment you say I send you money using this wallet product, and it comes to your cell phone, it's not as tangible as having the cash in your hand. However, the guys don't want to keep cash because it's risky for them. The moment you start carrying cash, you become a target in those places. I think they want to adopt a service where they can use their phones, because it immediately takes the risk off them and the money goes into the accounts. If they need to get the cash, they can go to the branch.

In the urban areas, credit cards are under threat when it comes to payments. I think in 5–10 years time, the card industry will evolve into Mastercard and Visa being some sort of thing on your handset rather than having a physical tangible card.

People still use their credit cards to pay because we don't have the devices readily available for people to flash their phones by and to make the mobile payment. That means I've got to log on, I've got to have you as a beneficiary, then I can make payment to you. The supplier doesn't know whether he's got the money, because let's say he doesn't have SMS notification on his account, so there's still things that need to be ironed out there in terms of getting it right, but once we get those ecosystems working, you'll see it will definitely change behaviour. The cell phone will become your wallet because now you'll be able to swipe it, or use this to pay a vendor. There will be no need to carry plastics.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 3: I think from an infrastructure perspective, banks need to decide what technologies they want to use in terms of rolling out mobile payments. When you're paying a supplier, they also have to be able to trust that the thing's working properly, so we need to focus on providing technologies that are easy to use from both the customer and the receiving party's perspective.

Cost will be another one, there is a cost involved to have a POS in your shop. If you can do mobile payments cheaper and provide a better value proposition to those vendors, then you're likely to speed it up.

In the future, let's say everything is RFID tagged in a shop and your phone's got a reader on it, so while you're walking out, it adds up everything and debits your account, it's how we set up these environments.

There are people with really old phones and that's also another barrier for mobile payments. The handsets need to come to some sort of standardisation where it can be easy for adoption, and obviously handsets need to become cheaper, especially the Smart phones.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 3: One is providing them a better cost solution, their reluctance is cost when it comes to rolling out the devices. If your customers don't have the right handsets, they won't be able to talk to your device to do the transaction. If Woolworths now wants to get mobile payments going, they're going to have to provide something that's standard and works for all people. The moment you start introducing complexity on the merchant side as well, different phones requiring you to do different things, that's going to be a problem. So I think standardisation is key.

Run a pilot with a few merchants and you have a flat period where it's free, I think cost is the biggest thing. For merchants to swipe the card there's a cost, to have the device, is a cost, to have the line linked up, there's a cost, so if this can come in cheaper and it works easy enough for customers and merchants, it's sold.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 3: I think social influence talks to people having some sort of trust that the service works. Social media now is quite powerful, but it's so important to make sure you have a service that works 100% and works the first time. When we first launched cell phone banking, we had two bearers, SMS and USSD. We didn't market USSD, but in 7 months USSD overtook SMS and that was purely because of word of mouth. People experience the service as quick, good, it did the basics and it worked. Guys got to talking to each other and that was before social media was really taking off though. Banks can be clever about this, they can set up pilots, get customers to sample the product and then say "go write your stories on the social blogs" and see what happens, and you will get people that would be interested. As long as somebody else has tried it and said it's fine. I think it'll work even better if a friend recommends it.

We have tried Trevor Noah on TV ads, flighted for a short period because of the cost implications, but TV is not a big reach, SMS has a big reach, it's direct marketing. You need some sort of visualisation on how the service works, why not show demos of cell phone banking on TVs when people are in the branch queue? You can then register, try it out, see how it's working. But it's always good to have somebody else say that they've done it. It just gets a better traction, than having a bank official explain it to you, because people don't trust banks.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 3: Of course, yes.

Interviewer: Is there anything else you'd like to add?

Respondent 3: I think overall mobile payments adoption in South Africa has been slow because we haven't really punted it in South Africa. Fraud is a problem in banks currently, the moment you put a new service out there, you've got the fraudsters attacking. On the mobile device, the guys haven't yet got smart about this, but it's coming. We have controlled this through limits. If you're doing payments of large value it makes sense to use online banking. Mobile payments are starting to take up but it hasn't been as aggressive as prepaid airtime topup, a necessary commododity. Once all merchants are enabled, it will take off. Standardisation will be critical because the moment you start having different applications for different merchants, it's going to be complicated and costs will probably rise, so it's got to be standard like Visa and Mastercard.

Respondent 4: JV – Senior Executive

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 4: It's quite a difficult question to answer and I say that because a lot of people see a mobile payment as something that's originated from a phone, it's not. It's a combination of components. For example, you make a payment from your phone today, jump onto Internet banking or buy something using premium SMS, those are payments for the phones. We look at it differently. We say a payment we initiated on any channel, but as long as it's authenticated on the mobile. So our new technology allows the pin of an ATM card or debit card to be entered on the cell phone. I might be browsing the web to buy something. When I click to pay, it says "enter cell phone number", it requests my debit card pin to the phone. What is that, e-commerce? An interesting point. No, it's not e- commerce. In fact what we have done, is we've had a new payment type approved at PASA called "authenticated mobile transaction". So for us - anything which sees authentication of a payment, doesn't matter how it's initiated, is a mobile payment.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 4: I think it's funny, you know everybody is going to say it's education, it's wallets, well it's not, it's got to do with a very simple thing. 70% of MTN customers are banked, contrary to what everybody would expect, so the theory is

70% of their customers could use mobile banking or Internet banking to make payments. They don't, and the reason is, because of the complexity of the banks' interfaces that they have developed for security. So the crucial part that we have adopted is, we said we need to produce something that everybody of that 70% uses. They've all got at the lower level Mzanzi type accounts. Their cards are all with pins and they only use them to withdraw cash. To use it to migrate to payments, you must have an interface that uses the same logic they use when doing an ATM withdrawal, not come with special passwords and phone this number and do this. So our new technology that we have released, when I dial that number it comes up and asks me for my card number, expiry date, in one channel, under USSD, for example, and then what it does is switch into a secure environment and asks me for my ATM pin. So I can buy airtime today using my ATM card with my ATM pin, I don't need to have anything fancy. It doesn't require me to go and do anything at my bank branch. So what has been holding back payments is not what everybody will tell you. It's very simply that to date, nobody has been able to do a card with pin properly and that's the part that we are launching now and we think it's the trick to the game and the answer. Obviously once you've got that working you've got to tell people, so education then comes to the fore.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 4: I think that the issue is making sure that payment instruments that customers use today can work, because what's happening is you've got M-PESA and other things being developed that are wallet or mobile-centric, they've still got KYC issues, they've still got all the other problems that the banks have got, all you are doing is making the mobile operator do it. Mobile operators are not equipped to do KYC or FICA. As a RICA agent, I don't have to have done a test, I don't have to be over 21, I don't have to have Matric, I don't have to make photocopies of documents and store them in a particular manner. FICA is a lot more onerous than RICA. So mobile operators are not equipped to do FICA, banks are, so accept that and that bank accounts are the way to go forward, but get bank accounts working. Once bank accounts are working properly in the world of payments, in a true sense of bank accounts, not Internet banking or mobile banking. I'm always reminded that most of the people in this country are poor and you got a guy that's going home, he's got R20.00 bucks left in his pocket, that's all he has left, he doesn't have money to go and put that into a wallet. He goes and buys some tomatoes, potato and a piece of meat for supper, that's it. If you don't have money to put into wallets, so wallets don't work. The other thing that we have seen is on our one system that we run, where you can buy airtime we've got customers doing 8 transactions a month, they are in the low LSMs. The reason they are doing 8 transactions a month is they are only buying on average, let's say R14.00 or R15.00 worth of airtime. Because they don't have money to put into wallets and to spend on large amounts, they are putting what disposable money they've got, that's what they are buying with. I've got R15.00, so let me buy R15.00 worth of airtime because I need some money to pay for my taxi, buy R15.00 because I need to feed my kids today.

Interviewer: What's the fundamental difference between that situation and a Kenya situation. Why does M-PESA work there?

Respondent 4: M-PESA came about from a very different drive in Kenya, that's because the wealth distribution in Kenya is different to South Africa. South Africa is far more of an urbanised economy than Kenya. Kenya is about 10-15% urbanised and the rest rural. So what you have is very large flows of cash from the cities to the rural environments and the way it's been done, is people sending it with taxis and friends and they were losing a lot of money. So as soon as you made it easy for them to send money, that was the initiator, then suddenly people found that they've got a bank account, because that's what it became. In South Africa we've got 70% banked population in the cell phone operators. You've got far more urbanisation too, so we now are technically an urbanised economy.

Interviewer: The other thing, I think is that there is only 400 bank branches in Kenya and that's like, one of our banks has more than that.

Respondent 4: It's 12% bank penetration in Kenya. So there was more of a need and also it was driven by money transfer or money remittance, whereas those drivers didn't exist. There is a far bigger banking penetration and also remittance and transfers are taking place. We have more options and avenues in South Africa. Also a lot of people don't realise that in Kenya, Safaricom had a market share around the 70 %. That dominant position means that your interoperability issues are not a problem. The biggest thing in South Africa is interoperability, you've got to be able to take whatever card use it at any bank's ATM and POS. As soon as you have these closed loop payment environments that require you to put in special interfaces, you can't do it. Standard bank launched, MyMoney, I can't use a MyMoney wallet at Shoprite at a POS device. They don't work, fundamentally different things. So certainly, why must I put money in there when I can't use it everywhere. Whereas if I keep it on my debit card or credit card I can use it anywhere. So the other factor which is part of the parcel is getting the pin to work, the real wording behind that is interoperability, using what people have got today across all channels.

Question 4 (Research Question 1) What are the specific needs of consumers regarding mobile payments?

Respondent 4: Quite simply, it is ease of use.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 4: It's not!

Interviewer: Why do you say that?

Respondent 4: Our biggest worry when we launched easy recharge was we really wanted to get mobile transactions down to as little as possible. Our customers on average are doing 8 transactions a month buying an average of R15.00 airtime. They are all debit card customers paying bank fees of R2.00, R2.30 per transaction. The issue is a more fundamental issue. I don't have the disposable income to have the discretion to say "I'm not going to do the transaction". Turn it around, I'm sitting in a shack, it's late at night, I've run out of airtime and I've got 2 choices, I'm either going to buy airtime or I'm not. I don't have a contract. The other point is I'm sitting in a township environment, I want to buy airtime, I can't buy airtime if I don't have cash. There is no ATM for me to withdraw, so I've got to catch a taxi to go and find cash to buy airtime. So you can look at the coin from either side. If your debit card fee is say R2.00, R2.00 as a percentage of R15.00 average transaction a day is huge. But R2.00 compared to trying to find an ATM or going down to find somebody who is selling scratch cards, then the R2.00 needs to be judged not in terms of the cost of the transaction but, how else can I do the transaction, what is it going to cost me to do it another way?

So I think that the answer is, and I was quite emphatic, it doesn't. Where the purchase that is required is quite high on the priority list of life. Prepaid airtime is a really crucial component for many people, the only way that they know if they've got work for tomorrow is to phone or be phoned.

I know a guy who lives in a 12 bedroom mansion in Constantia, probably the most expensive suburb in Cape Town. He's got to buy prepaid electricity at the local Spar and he talks about times when he is hosting dinner parties and the most important thing isn't that the wine is cold, it is do we have enough electricity to get through dinner tonight? This becomes less of a rich/poor discussion. So if I can get electricity without driving down the road I will pay R10.00, I would pay R10.00 surcharge for that, so there is a gain that goes with it. But on the other side of the coin. I think where price is going to be a barrier is in some of the lower more discretionary type of environments. So maybe a lottery ticket, pay R2.00 for a lottery ticket and pay R2.00 bank fees, might be a problem, might be, I suspect it might not. But I think over time it's going to become an issue. It might be an issue of choice, I'm walking down the road to buy electricity or I can wait till I get home, I might buy it because I can save R2.00 so you know there might be some discretions that come into play.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 4: Yes

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 4: Our experience with mobile payments is contrary to what you would expect. So a large chunk of the people in the relatively high LSMs have got Internet access and tend to be doing Internet banking to make payments, I'm just generalising, I'm not going to any specifics. What you are seeing is a whole bunch of people who don't have ready access to Internet, and bear in mind somebody would say but they can use their phone to browse on the web, well they have to have airtime to do that, they have to have data bundles to do it, so you know there is contradiction that's going on here. Most of us probably do Internet banking at the office, why? Because it's free. So now the average guy, here we've got a security guard on a reasonably salary sitting at the door. She doesn't have access to Internet, she works in a building with it and never faces it, she should want to do it. So that's exactly the type of market that you are going to get taking this up. Our experience in terms of adoption of the payments using our product, is particularly high in the upper Mzanzi, lower Autobank, E-type product and that's typically people earning between R5000.00 and R8000.00. But you have to be specific about the payments. We were talking about buying airtime, you know in the same breath, wealthy guys buying electricity going to have the same problem.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 4: It's a difficult one to answer because there is no specific research. My personal opinion is, in rural environments people don't have many bills to pay. I think what's going to happen is, it's going to become a more urbanised economy. The notion of bills increases dramatically. I mean there is about 560 to 600 million bills a year that float around, I'm talking about valid bills. As people gain access through their employment to a medical aid, everyone thinks that's cool, but actually medical aids bring with them a huge billing issue. Go to the doctor, he does some blood tests, Lancet will send you 20 x R8.95 bills. How do I pay them?

So there's this urban-rural driver and I don't think it's that the adoption issues are about income levels. I think that where we would see mobile payments in particular driving out of is, that R5000.00- R10000.00 income bracket because they don't have access to the things that you and I have. They don't typically want to have debit orders because they don't trust them and also they need the discretion of when to pay. They don't need somebody by mistake hitting them with a big bill. If you've got R500.00 extra on your bill you will be cross, but you can probably take it. They can't, that's the difference between feeding and surviving for the month.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 4: I think the most crucial thing goes back to my point of interoperability. I have a left hand drive motor car which I don't use it as much anymore because most of the places have parking garages geared for people driving on the right. I can't get to the damn parking ticket. In South Africa we drive on the left hand side of the road and everything we do is designed to drive on the left hand side of the road. You may well think driving on the right hand side is much better and safer, but if you do it you are going to get killed. Now payments, is exactly the same thing. If I've got this really cool radical technology and it's little at the moment, it drives up the middle of the road, it's fine. But as soon as you get too big you are going to get killed by the regulator saying "you comply". So in this country, if you want to start a wallet or something like M-PESA, you are going to have to go to central bank for approval, because if you get too big, you threaten our national payments system. But if it can't be used on a convenience component because I have to have this, and I have to have that, I'm not going to use it. Interoperability is really important but part of the interoperability issue is making sure that the standards are written down somewhere that if you go to PASA and I want to now do mobile payments using a debit card, those rules don't exist, it's called an AMT, authenticated mobile transaction. So people can now design payment systems that use instruments at 70% of MTN and Vodacom. I don't have to go and invent the standards. So now I know I drive on the left hand side of the road, I know when I come to a boom I can reach out and get the ticket, so the basic components of making payments is right. Absolutely, on top of that, you've got to get the right products, right pricing and the right marketing and education as well. I'm not arguing that, but none of that will work if I haven't got the basic buildings blocks of standards that relate to interoperability working.

Ease of registration is also important from a customer's perspective. If they've got to go through the hoop to register, you are going to get high drop-offs, so you've got to have really simple, easy, user-friendly registration. Take for example on our e-commerce version. Your first transaction you do, you get registered. You don't go to the bank, I don't need to go and show my ID to someone.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 4: I think the most important point is, that you can't require the merchant to have to do anything specific, "Oh Mr Merchant you need to put new technology that allows you to accept a wallet ". Mr Merchant has credit card and debit cards facilities. Now when you move into the mobile space, what does the merchant have to do on a technical level to be able to accept. Bearing in mind merchants are actually interesting payments. Most people think it's actually receiving the money that's important, it's not, The most important thing is that they know the money is coming. Take one of our life insurers, they spend a lot of money on incentivising somebody to sell you a life policy and what happens is - just because the money wasn't paid, they will shut it and they've lost. It's probably cost them R3000.00 more in money that they have paid away on commission. So for them, they would rather hold it open, get somebody else to collect, receive the money in 30 days. But you would have rather received a message to say "money has been paid, guaranteed", you can continue with the policy cover. So understanding what the merchant's value of receipt is and what they will do with the money are key.

An interesting M-PESA example - If I send a 100 shillings to a rural area and my mom can go fetch it. She gets there and the guy says "I don't have the money", she says "but you got cash". He says "If I give you a hundred shillings, I'm going to get 3 shillings, but I can take that 100 shillings and I can buy 100 shillings worth of mielie meal on which I can make 20 shillings". So understanding what drives different merchants is really important. This gets back to the old story, you have to have instruments that everyone has got, that are generally available, that there is a critical mass, therefore interoperability is the most important.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 4: There is a practical environment where I show you that I pay my Easy Pay bills and show you that I'm getting balance enquiries and how easy it is, I'm showing you that I can buy airtime. I've always bought my daughters airtime using the easy recharge system, they've got bank accounts and the other day I noticed in one of their bank accounts, 5 purchases last month and I said "but I bought you airtime, why have you got purchases?" No, because her school friends wanted airtime. So there is a social interaction. I think it goes further, the next generation of payments really are going to be in the person to person payments. So for example, we've got a system where I can send money to your number and there have been some good indicative marketing approaches that FNB and POCit have done, where they will send you R10.00 and the only way to get it out is to register. But will the user really go to the ATM to bother to get R10.00 out? I don't know, but we've seen that. We did some amazing campaigns in the early days of global money. We said to the customers we will give you R30.00 free airtime if you open a global money account. One day alone we had 800 000 people try and open bank accounts. At the bottom of the "Call Me" SMS is a little marketing message and they send 8 million of those a day, 800 000 people tried to open an account.

Sunlight put a R3.00 airtime voucher for any network inside a soap box and in the shops where they were offering that, Surf and Omo sold no units. So you know there is social influence and there's lots of ways you can do it.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 4: No *(jokingly)*. The answer is: increasingly, and I say that given the fact that we've all got Internet banking, we've all got credit cards and if you think about my own personal discretionary payments. My wife does Internet banking so I don't need to worry about it. I need some cash for paying for parking to get out of the parking garage. Payments' biggest irritation for the user right now is, "do I have a R10.00 note in my wallet to pay at the parking station?", and that it's not crinkled. I've got hundred Rand notes, I can't use them, so you know now you get to a point where the first people to introduce the ability that I can walk up, I don't mind paying R2.00 extra because I didn't have the money on me. If they surcharged me R2.00 and on the phone over there I took my ticket and entered that and it came back and said "please enter your ATM pin", I can do that while sitting finishing my cup of coffee, I'm leaving in 5 minutes so what I do is, do my payment quickly and then I don't have to be rude and say "oh just wait for me I'm going to walk over there", or "can I borrow R10.00 from you". So I think what's going to happen in our day to day lives are going to become more pervasive. Let alone the fact that you might have a contract, you still buy a lot of airtime for other people. I buy airtime for the maid or the gardener. It's not easy to dash down to the ATM or dash down and log onto Internet banking. So the answer is yes, in my life mobile payments will increasingly become important.

Interviewer: Thank you, that's the end of the interview.

Respondent 5: JV – Product Manager

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 5: My definition of a mobile payment is being able to make payment using your cell phone as the initiating device, I suppose, but there are many ways to skin that cat. What payment is it? A wallet on the phone. Do you use WAP to do the payment? Is it logging into a website? In my mind what we're doing now it's actually being able to enter a bank pin on your mobile phone in order to initiate a payment from a bank account, not from a wallet, not from all of those. From a single point and that's it.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 5: One of the biggest is that there are many different kinds of applications. Everybody's coming up with a new application or a new wallet to use, but most of them aren't Visa or Mastercard approved. There are too many technologies out there and there are many different kinds of phones. (On) Older phones you can't make a mobile (payment). There are old phones, there are not enough bank accounts, you know what I mean. If you look at it, most of my population is unbanked, so that's it. You have to bank someone. There are technologies like M-PESA coming now, but M-PESA worked well in Kenya. There were no banks, so M-PESA was great. You could use your phone to get money from a merchant. I don't think it'll be as good here. M-PESA although it is good, the people that drove M-PESA in Kenya were the guys that had a bit of money that needed to bank it, that wanted to bank and now actually do bank. But people here that have a bit of money are already banking and those people drove the people that had, everybody in Kenya then had to have an M-PESA account, no matter how much money you have, unless you wanted to move money to your aunty or your sister, so I don't think M-PESA is going to be that good, but that is a good mobile payment but it's different to what we're doing here, which I'll explain.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 5: It all boils down to social issues. Educating people to trust a bank account. My domestic worker still has her bed on bricks. As much as I tell her there's no tokolosh, she's got her bed on brick, it's education. Trusting banks, not putting it under your pillow. Stokvels and all that kind of stuff, they don't work. Well, they do in some cases.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 5: Ubiquitous, you must be able to use it everywhere. It must be a multi application device like cards were. People wanted to get smart cards too, so you'd have a card that you'd pay your fines, etc. It must be ubiquitous. You can use it anywhere. That's it, and it must be easy. And I'll tell you about our product after you've gone through these questions but that's what they want. You want to go to, it must be as pervasive as cash, which is going to take a long time and a lot of education but that's it. You must be able, at least go to a second tier as I call it store, like not a mom and pop store on the corner of a place in Kliptown. Kliptown's going to be cash based forever, but you know at least a corner store you can be able to use it there, and you can use your mobile phone to initiate a debit card transaction or there's a contact list portion in the card. It's a pay pass thing that can do it, whatever one of these technologies comes through, e.g. Near Field Communication.

Interviewer: It's interesting that you say that you feel that Kliptown, a place like Kliptown, will be cash forever. You don't think we're going to move to a cashless society?

Respondent 5: Never, not in the third world, ever. I come from a cash industry. Years ago I used to work for a company producing note counting and coin sorting equipment, so I've been to all the SBVs, Reserve Bank, all of those kind of things and maybe in your grandchildren's grandchildren it'll be cashless, but this is Africa. Go to Sweden where everybody has a bank account. There, cash is no problem. I don't think people will carry cash. London, everybody's got a bank account unless you're an illegal. But think about it here, with RICA on your cell phone here, they reckon 30% of all of the airtime in this country, but it's a very high percentage of people who are illegals here, that now won't be able to use their phones, but they'll get around RICA and they'll RICA under somebody else's name, but 30% of the population is buying airtime and they're illegals, so 30%, I don't know if it's illegal for my company to take that cash because nobody can prove it, but probably 30% of our revenue come from people who don't have a South African passport. And if you look at that, then they can't get a bank account. If you look at the illegal immigrants in England, they can't get a bank account, but that's a million people. Cash will always be there for some reason or other.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 5: I don't think it's a barrier. You pay to draw money from an ATM, you pay to deposit money. If you paid electronically, you're paying a small transaction fee.

There's the communications, because I mean it can be an SMS that does it. Our system, now it's a debit card transaction payment so it's the R2.30 debit card transaction but then there's also the payment of the SMS, the authorisation and the settlement, so it's not just the margin that the carrier takes, it's actually the communicating. They're fine. I mean there is so much competition in the transaction switching game in this country that you can't charge what you like. You can't, and if it's a debit card based transaction where you enter a pin or a bank issued pin and all the security is in there. It's a non repudiated transaction so all that risk goes to the bank anyway, so if it's a fully fledged Visa/Mastercard Payment Associates of South Africa approved transaction, there is no risk to the consumer. So the fraud goes down, so the transaction amount should be going down, but that reflects to our payments solution.

I'm giving you the airtime example now. They're sitting at home on their couch and they want to buy R5.00 airtime, because people do. Instead of getting up of his couch and walking to the shop, he'll pay a debit card fee of R2.30 to buy R5.00 airtime because it's a saving, that's value to him because he's saving the walk, the taxi fee to go to somewhere so it's a convenient. If you wanted to buy prepaid insurance, prepaid World Call card, you buy services through your mobile phone, not physical stuff, and I think people would do it because it saves them going through some point of presence, a shop, to actually do that transaction. It's a convenience factor. It all depends on how much you're going to do. It's been proven, guys will buy airtime, R5.00 airtime and the debit card fee is R2.30 to R2.50.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 5: Yes, because we actually only do mobile payments. We're a transaction switch so we enable people, you go to a website, we're not just mobile payment. You can also click on a website where it says credit card transactions, you click debit card transaction. You put your mobile phone number in, comes to your phone you put your card details in, sends it off, a message comes back, I mean I'm talking very simply, do you want to buy Computicket tickets for R200.00? Yes. Enter your pin number and it encrypts your ATM pin, your bank issued pin to make that payment. This is very different to anybody that you're going to speak to. It's no third party wallets and all that kind of stuff. So it's definitely going to benefit us because that is what we do. We are a mobile payments company. We're a transaction switch which allows you to make a debit card transaction. A bank will accept your transaction based on that we've linked your pan number on your card, your CVV and your pin to the IMEI of the phone and the ICCID of the SIM. So we are definitely going to benefit because that's what we do.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 5: I can't answer that because we are targeting the LSM that has a debit card, because I think 3% of the card issued base, has credit cards in this country. There are twenty million people that have debit cards. We currently moving to ABSA, Nedbank and FNB but currently there's six million Standard Bank card holders. We debit card holders, so personally which LSM has a debit card? But yes, the middle to lower is also now getting, if the guy is a Paving Company, he doesn't want to pay his guys cash. He's going to get robbed. He makes them all open up a bank account. That's assuming they're not foreign nationals.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 5: I don't have stats on this one. Everybody's got a mobile phone. You go anywhere in Africa, I've travelled all over Africa to all of the countries. I get a nice pair of shoes and a funky looking cell phone, so anything that they can do on there, that looks cool, that helps them look good to their girlfriends or their peers, they will do. I promise you, it's a fashion accessory. The better ring tone you've got on there, the nicest screen. Even if the phone really didn't work because they can't sometimes afford the phone call, as long as when they can't afford the phone call they can do something. And if that guy's got a bank account, he can do a payment quickly for airtime that'll make his girlfriend look cool, he'll do it. If they can, and the technology that we have can be used on any cell phone so it's from the lowest basic phone, as long as you have a 32K SIM card in it that can do the encryption of the transaction to the PCI DSS standards, we're happy.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 5: It would be our product. It would be this device, it would be using your phone to actually drive people to get a bank account. A mate says "hey look, I can buy airtime. I can go into Amazon.com and I can actually buy this book and I can make payment via my debit card. I don't qualify for a good credit card but hey, look at this". I can buy this thing online on my phone. I think that would drive people to getting bank accounts. I'm sure that it would do that, and we would say "all you need is a bank card and you can".

It's being able to use your phone as an authorisation to make a debit card transaction for payment of goods and services. For example you don't even actually need the card anymore so once you've got a merchant that doesn't have money for a till or a credit card machine. The rental's too much, they don't have a big enough stock to pay for that, all they need is a PC that has access to the internet and they can have a little button on there. They can say "he wants a toothbrush and some toothpaste. That comes to R12.95". They can push a button and it can say "enter your mobile number", so the guy says "here's my mobile number". It sends him an SMS to his phone. Do you want to make payment of R12.95 for goods? Yes. Enter your pin number. You don't need a credit card machine anymore. So if a guy's got a debit card he can make purchase at a person, at a merchant. We're not doing this yet, but you'll be able to make purchase at a merchant that doesn't even have a credit card machine, and they can still do a bank transaction based on that he's using his mobile phone to authenticate that transaction.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 5: If you're a merchant and you open up to this, you're opening up to twenty million debit card holders who can enter their pin legally and the liability is not on the merchant because it's a fully authenticated transaction. The merchant isn't liable for fraud. The card issuer is liable because it is a PCI DSS PASA approved transaction. The liability shift falls to the card issuer not to the merchant anymore. It's a non repudiated transaction that that will happen, so it cuts out the fraud completely so. For us, we are transaction switch. The merchant pays us a transaction fee. That's it. So our model is different to that. We're not getting in on all the value added services around it.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 5: There are a lot of guys that do that already, like Vodacom has got their brand soldiers. You've got to go and stand in the queue with people and show the old lady how to use it. My mother standing in a queue for the bus, somebody that looks respectable has got to say "hi you know have you seen this?" But with cell phones, I think that the barrier to entry is a little bit less than introducing a new device.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 5: Yes, but I currently don't because a don't have a Standard Bank debit card and I'm not prepaid so I'm maybe not the market and I've got a credit card, so the upper LSM. I don't have prepaid electricity, I don't have anything prepaid, so in closing I would say that these services, these mobile payments are more for prepaid applications than, if you want to buy something online.

Respondent 6: MNO A – Senior Product Manager

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 6: I think that is part of the issue because there are such a broad number of transactions which are considered mobile payments, but I guess that in its basic form, any transaction that's facilitated through a mobile device.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 6: I think that the mobile operators in South Africa have been slow coming to the party. I think that one of the factors that distinguish our economy from many other similar developing economies, is that our first tier banking system is quite sophisticated. They saw the opportunity a long time ago to start playing in the mobile space, so you can debate whether they're addressing, in fact they aren't addressing the entire population in terms of what they're offering through mobile payments, but they certainly have taken the impetus away from the operators and other players to enter the market, by offering quite a comprehensive range of mobile based payments. I think the problem with what they offer, is that it still relies on you having a traditional bank account with the associated high cost structures that are built into the ecosystem. So there's a mixture of the banking groups having quite an entrenched position. They offer really top class banking from a comparative to any economy worldwide, i.e. developed nations.

The other thing that I think that is a factor is that there was pressure on the banks to provide some kind of solution to the lower end of the population, in terms of coming up with products that could address their needs. They have spoken to customers who are in that group that are not very profitable for them, based on their cost structures, and maybe you've taken away some of the opportunities from the operators. But the operators have been slow and what the operators have offered thus far, I think has been something which relies once again too much on the entrenched models. But if I look at M-PESA, what I'm worried about there is that they've taken something that's worked, that works in another territory or jurisdiction and they've included an element over here in their partnership with Nedbank, which adds quite a lot of cost into the system and I think will deter a large number of South Africans from participating.

The other thing is that from a regulatory perspective, we haven't been all that sorted. I mean I don't think that's necessarily a top reason because other markets have suffered with similar problems, but we have a very regulated environment in South Africa, so it's not like there's a lack of regulation as in some places. There hasn't been necessary clear direction, there've been white papers, some statements and all those type of things from various regulatory bodies, but I think regulators have waited for industry to come up with clear solutions rather than giving clear direction about what they want in certain areas.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 6: I think it will sort itself out in that kind of sense, so it's going to take some time. It will probably follow the kind of internet bubble burst kind of position and say in two or three years time, we will be left with a model that looks quite different to what we have at the moment and there will be casualties along the way. I think that the MTN/Standard Bank kind of joint venture, in my opinion has been a complete disaster, wasted a lot of money, and there it seems to me the problem has really been about who owns the customer, and you've had lots of ego and big corporates looking at each other. The advantages that operators bring to the table, is that they are generally nimble; they're able to move quickly, less regulation. But I think there's been a fear factor in South Africa, so there has been a worry about doing things that might potentially come to bite them in future. How to address them? I don't think that I've seen a proposition yet that really addresses the problem of what the customer really needs completely. I mean you have the range of transactions there, you have all of those types of things, but at a cost level, there's just too much cost that's been asked for customers. I mean if you speak to the banks privately, they'll tell you that they view a certain segment of society as un-bankable. That means that they don't consider that there's enough money available at that kind of level for it to bring any value to them as organisations, to the bank those customers. Those are the customers that I think we should be chasing as mobile operators. So if I speak, I speak from a mobile operator perspective. I would say that our target should not be where I think it is at the moment from what I've seen, which seems to be kind of middle income to low mid income based. I think we need to target a far lower kind of level. We need to chase customers who are going to do one or two transactions a month, maybe three or four. One of the success factors that have been key, I think, in the markets where it has worked is, low cost distribution networks, and once again I don't think we're taking advantage of that completely. So from a mobile operator perspective, you have something which is perfect. You have an intelligent network (IN) which is able to process high volume transactions with very, very good reliability and I mean the number of payment transactions if you include it. If you look at a typical IN, and look at the processes that they need to go through, I mean it's perfect to do banking though, but then you can't charge exorbitant fees, you need to keep those margins low and costs to the consumer low. If possible take as much cost away from the consumers, make your money in other ways. If you're looking for the model that you set up to produce a huge amount of money in and of itself, rather than seeing it as a value add, that you offer to customers which brings you revenue in different ways, then that is maybe a hindrance here as well.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 6: In South Africa the trust factor is key, so people have been ripped off too many times, so they need to be able to trust the technology and that involves trusting the brand that's behind it. So I think with respect to the guys like POCIT and so on, that's been some of the issues that they've faced. You need a recognised brand to stand behind whatever it is that gets offered. They need, I believe as any consumer, they need something that works, so that it is efficient. It needs to cover basic transactions so I would imagine things like payments for electricity, those kinds of things, the stuff that you see people queuing for. A remittance is important in South Africa, because lots of migrant workers, people from rural areas working up here and vice versa, that type of thing, so those kind of basic transactions are required that all the banks offer. I think what's needed is a place to keep your money safe, and then cash out easily, and because you're speaking, in my opinion, to a demographic that doesn't necessarily move in the mall environment, you need a good network of distribution to be able to enable people to 'in' and 'out' easily.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 6: I think it's a huge cost, I think if someone sees R6.00 a transaction; it's just too much money. R6.00 you know represents a loaf of bread for the day, or milk. I really think that if you take a good look at the model, you can do things differently here. Transaction cost is key, it's really, really important. If you look at that low end of the perimeter, if you want to talk in that kind of language, you know people are prepared to pay for things that add value to their lives and even a little bit more. If you look at it as percentage of a person's total spend for the day or for the week or for the month, the transactions costs that I see at the moment are a barrier.

Interviewer: It's interesting if you speak to the bankers, they say that the alternative is to send money via the taxi driver and he can charge up to 20%, so if you're sending R100.00, he takes R20.00 as his fee.

Respondent 6: I understand that, I just don't think that you get critical mass. When I look at the M-PESA numbers being bandied about, I think those numbers are huge, I wish them all the best in the world. I hope that they succeed, but I fear that they won't because I think that they've got one or two things wrong. You are right. People do pay a huge amount of money for remittance and things like that, but then if you look at what's available across the landscape. Look at what Shoprite-Checkers is charging. I mean they've got a very interesting model, I think that's successful, it's driving feet into stores. They're going to bring those costs down, I'm pretty sure of it because it's working for them. There's a lot of money that moves in other different ways as well. There are expensive and cheaper options, but when you want to convert people into taking not just one product from yourself. So if you say remittance is expensive and I hear what you say about the banker's example, then you discount the fact that those people would come to you for more than just remittance I think.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 6: Yes, absolutely. I think it's going to foster competition which is important for the economy and important for the industry. We've got some interesting stuff that we're working with at the moment already, so I'm excited about it, something new.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 6: I don't have any empirical evidence around this, but my gut feel says that we're just aiming as an industry at the moment. The banks are definitely not addressing the lower LSMs. I don't know where the cut off is. I can't tell you honestly. But I just think that their LSM pitch is obviously very different from an operator's. I'll give you this statistic. If you look at the prepaid market in South Africa, there's a very large percentage across all the operators who make less than one call a week. Cost on average around R1.50. They might be receiving calls, or so on, but that gives you an understanding of the kind of amount that they're willing to spend. It's not even a discretionary thing anymore. Communication is seen as a must have kind of in the shopping basket. So if you're looking at R1.50 give or take R2.00 a week that they are able to spend, then I've got to say that the solutions out there are really speaking to that target population. If there's a pyramid in the top end, and we know what kind of percentages there are around the banks' population and we see who aren't banked and that's a vast number of people. Overlay the mobile kind of view on that, then there is an opportunity, but it's not at the R6.00 - R10.00 transaction level, or put R50.00 into the account and you can get it back when you close the account. That just doesn't make sense for that type of customer.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 6: It obviously pays a huge role and I think that it comes back to the trust element and the cost element, so once again if you are working on weekly or daily wages and the amounts are small, you can't afford to open a bank account and pay the transaction fees. There's a whole number of issues relating to literacy, education, ability to operate technology and stuff which also comes into it, so one of the things that I saw as a trend when I was working for ABSA was that we made it more expensive for people to come into a bank and speak to a human being, which means you drive people outside to ATMs. But precisely the people who need the help, are the ones that aren't able to access ATMs and they're the ones that need to pay more, so you drive those customers out of the formal banking sector. The nice thing about mobile payments on almost any device, is that you can make it fairly easy to do for people who have got basic literacy because they're used to SMS and they're used to USSD because they use balance enquiries, they do recharges, they can understand those kind of formulas already. So if you tap into that kind of mechanism, then it's something that you can do. There is an opportunity in the higher LSMs, it's not like I'm discounting that at all, I'm just saying that I think it's been pretty well covered by the banks. So the attempts by some of these guys for instance to get kids or high LSM young people to pay for movies and things like that via their phones, I just wonder if it's the right strategy at the right time at the moment in South Africa.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 6: One kind of silver bullet. It's got to be cost.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 6: I don't know exactly what's been offered via M-PESA at the moment, so I'm not sure what they're offering their merchants on their network. I think there's a combination of things, so if you can keep the transaction and the payments free to the customer or as cheap as possible, then I think what you do is you creative incentives around other things like the selling of airtime and electricity and pay commission to the merchants based on those things. Incentivise them on, instead of them cashing out, to offer some kind of discount on purchases in store. You can work around those type of things. If you can get them to switch customers onto your network, then you can pay connection bonuses, all those type of things to them. I think there's a model over there, there's something in that anyway.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 6: I think that is very powerful and it's in a sense, tapping into the social network trend. It's been around forever. It's just who your real network is and adoption is driven by that. I think the thing is if you can get it working as an ecosystem in a community. It's no good trying to launch something where you have one person in a place the size of Soweto and five or six merchants have it. It needs to become pervasive in a community for the people who live and work there if you can get that. If you can build on those kinds of building blocks, then you can extend it, but it needs to be available where people work and play. Friends are important and I guess at a lower LSM level, people tend to talk more about what works. When you get into the higher LSMs people become more private about their financial affairs and so on, but at the lower levels, people talk about what's the best deal, where to get the best deal, what works, those types of things. If you can get something that really appeals to those customers from a usability or touch perspective, as well as makes financial sense for them, then the thing is that you can really drive it virally, if you can make it easy for adoption. So for instance, if it's about a SIM based device and you can get invites going, or you can send the Application or the pin code to a friend and maybe you become a merchant in a sense, and you take a percentage that kind of thing. That viral thing that you see, perhaps in the Philippines, Indonesia, those types of places. There's definitely a place for it.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 6: Yes absolutely, I currently do.

Respondent 7: MNO B – Senior Product Manager

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 7: It's essentially the ability for a consumer to utilise their SIM card to make a payment for any transaction that can be mobile related, so airtime etc, utilities, electricity, water or any other type of service, insurance and normal retail transactions.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 7: I think firstly it's the general awareness about it, so people don't understand that the SIM is extremely secure when it's with you, so people are not aware that you can use it for that. Secondly it's the distribution. I think that's a very important one. You don't have sufficient areas or sufficient services which allow you to use mobile payments as a bearer or transaction bearer. So the general awareness and distribution for me are two critical things that we need to resolve. I think if you get those two things right then once people become used to it like internet banking, become sort of the mainstream on the higher earner SIMs. You get mobile payments adoption on the lower LSM if those two things are addressed.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 7: I think that they work hand in hand, so for distribution you make sure that every retailer in the country, whether it's the Edcons or the spaza shops got some sort of POS system, you allow them to use their mobile devices to receive payments, so get the distribution right and once people know that the distribution is in order, they'll start using it. It's a matter of doing the hard work, like it took the banks years to get these POS systems and credit card terminals into different retailers. There's quite a bit of drive needed from operators and banks as well, to make sure that mobile payments become mainstream.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 7: I think the specific needs would be to make mobile-enabled their current transactions, so like they're paying for a taxi, they pay for the taxi using their phone. They're buying electricity, they currently used to do that, buy it via their phone, so the specific needs of the consumer is to just to extend whatever they're currently transacting on via the mobile phone. That's it. It's a simple thing I think if you get that right we will see sufficient uptake. I mean I know it's not mobile related but there's a service called Ukash that's taken Europe and the U.S. by storm. In terms of what it does, it "anonymises" cash, so you go on to a retailer and you say you want a Ukash voucher for whatever dollars or euros. You take that voucher and you can go to a host of online services and say redeem that voucher against that, so whether it's like a Netflorist or they're using it quite a bit in terms of gambling. So instead of using your credit card to buy credits for gambling online, they're using a Ukash voucher so you don't have it on your credit card, saying you're doing gambling or porn or whatever. So just like how those models sort of enabled internet payments, the similar sort of things are needed for mobile. Ukash is available here in South Africa but just to gain that awareness that it's available in all Pick-n-Pay outlets. You go to any Pick-n-Pay outlet, you can buy a Ukash voucher and redeem it for a host of different online services locally and abroad, but people don't know about it therefore the adoptions not there, so it's like that with mobile payments. If people know that if I need to buy a taxi ticket or bus ticket, and I can use my phone for it. Once that's up and running, people will do that.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 7: I think it's a huge thing. The fact that costs are so high also impacts the adoption of the service so people are worried about this R5.00 for an off-net transfer because essentially if you look at the lower LSMs, they're not transferring a lot of money and R5.00 for a transfer is a huge percentage of the overall cost. So if you get the transaction fees low, not just for the consumer but for the merchant throughout, then you've got a winner. Currently on credit cards the guys are paying around 2.5% per transaction. It cannot be as high as that when you're doing mobile just because you're reusing an existing device. You don't have the costs of the terminal etc. and the card cost etc., so that should allow you to reduce those costs significantly.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 7: Yes, I think so. As we currently sell prepaid vouchers, this would be a great opportunity for revenue, the potential is there. If the adoption is increased, we are going to benefit for sure.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 7: At the moment it's the higher income, because the guys understand how these things work and they understand there aren't any security concerns. The difference on the lower end is, firstly the cost and secondly the awareness. So I think cost plays a huge factor and at the lower LSM, people are very much unbanked and they're living hand to mouth, so the adoption is quite low because of those reasons. I mean it's a social reason. It's a security reason, and on the higher end side, the guys understand how these things work. They want to use it because it's convenient and they're not very comfortable going into a bank branch to sit in the queue etc.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 7: The high end is very comfortable pulling out their credit card and swiping for a transaction. The mid-range of the LSM groups use their debit cards because they don't have credit cards. Your social standing and your income bracket etc. has a role in how you adopt different payment mechanisms. The adoption of cell phones in the lower end of market is very high, everybody has a cell phone and the value to entry has been reduced because you can get these cell phones pretty cheap, and the cheapest voucher you buy for airtime is R5.00 so the adoption rate there on the value to entry has virtually been taken away. So mobile payments on that level will work very nicely if those values that we spoke about earlier are sort of gone.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 7: I think we get the distribution and awareness, if we get those two things right I think we've got it. Who pays for that drive? Is it the merchant who's going to receive the mobile payment? Is it the operator whose services are going to be used for this? Or is the bearer's going to be used for it? Or is it the actual bank that underwrites all of these things? If it's a mobile transfer, you need a banking licence. So depending on who in that value chain sees the most amount of benefit, they need to decide how do we collectively drive adoption and drive awareness on it. So I think the critical thing that nobody wants to do, is spend on advertising. I don't want to spend money as an operator, as an example, saying I don't want to spend money on this thing to get people to know it, when my value in this entire chain is X and the rest of the guys are going to benefit much more. I think there's a means of collective across the industry to make sure that the awareness is driven. Like any cross industry solution you know. Just depends on where you are in the value chain and how you're going to adopt it.

Interviewer: Don't you need a Banking Licence if you are a mobile operator?

Respondent 7: Well it depends on the type of mobile solution that you do. For example, the mobile MTN one, they're working with Standard Bank because Standard Bank's got the solution. M-PESA is working through Nedbank, so depending on the type of mobile payment solution you're doing and the extent to which you provide services to your customer, then you may need it. So if you're holding a bank account for the guy, then yes, but if you're just facilitating a payment channel, then I don't think you need a banking licence.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 7: I think over the current transaction costs, if the guy is only doing credit card and if the credit card is 2.5% of the transaction fee then for a small guy, that's a lot. So firstly, the costs will drive the guy to an alternative. Secondly, if the money is transferred instantaneously in your account, so there are no delays in terms of actually receiving the cash. Thirdly, cash is dangerous to keep, so if you're receiving money via a mobile payment rather than receiving cash, your security concerns are reduced as well, so there's a host of factors I think will drive merchants to it. And again if the adoption increases, so you've now got a whole subscriber base that has the solution or this capability embedded on their SIM card.

Interviewer: What about giving him some sort of commission, like a percentage of the revenue or profit?

Respondent 7: You can do that if the guy's providing a service like facilitating a withdrawal as an example. So you go into a store and you say I want R500.00 off my mobile wallet as an example, then there's a commission that you pay with the merchant because he's obviously providing a service. But if he's using that just as a payment mechanism, so I'm using my mobile payment solution to buy goods from your store, then you shouldn't be getting a commission. You should be simply paying a service fee for that transaction because I'm making it easier for you to transact with their customer, but if you're providing a service then you are, for sure. The one example, in Namibia, you can pay for your life insurance via your airtime. So what you do is you buy airtime voucher and a certain percentage of that voucher goes towards a life insurance product that you subscribed to. So people are using it for that and in that instance, you're providing a service to the insurance company, so they don't earn a commission but you're reducing their cost of collection substantially.

Interviewer: But is it an automatic deduction every month?

Respondent 7: Whenever you buy a voucher then a certain percentage and there's a minimum voucher a month, I think it's about equivalent of around R100.00 that you buy a voucher for, and I think 10% of that goes towards your life insurance policy. There' are quite a few examples that I've got. So you either pay for a service like I said or you're buying a commodity or something like that.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 7: WIZZIT is extremely successful because what they've done is, they've gone to the influential people in the rural areas. So if it's a chief of the tribe or if it's the chief of the village or if some guy who owns quite a few shebeens etc, then that guy's quite influential in the community and he becomes a WIZZIT agent. Now he then becomes the guy, like on blogging, you've got somebody who writes a blog and because he's cool and everybody aspires to be like him and his blog's very busy, people adopt or believe what he says. So in a similar sort of way, if you get influential people using it and sharing the value of it, then people will adopt it substantially.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 7: Yes, for sure. If it's convenient and I mean I don't go to bank at all. I always use the Internet and that's the way I transact with the bank. But if there's a mobile payment thing, then yes for sure.

Respondent 8: MNO C – Product Manager

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 8: Being able to make payment using your cell phone as the initiating device

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 8: I think mobile payments and mobile money has huge scope just like the mobile data network does in this country. The mobile data network is marked to be the next biggest growth curve of the cellular operators here in South Africa and mobile money as well. So I think the ease of access to the market is not there yet in South Africa. At the moment there is only a quarter of all Vodashops that are registered M-PESA outlets and then all Nedbank branches are registered outlets as well. The reason for that is, the Vodashops are franchises, so we need to get buy-in from the franchisor to actually become an M-PESA dealer. Safaricom took a while to roll out all of their dealers, so the success of the uptake is very dependent on the ease of use. People who reside in a township aren't going to come into an urban area to Nedbank to use M-PESA or swap out M-PESA points for money, so I definitely think ease of use is a barrier to entry at the moment. There is a very big team dedicated to working on this particular project. I think it's definitely going to expand. Also, because of our mobile penetration in this country, we have between 11% and 12% web penetration and of that 12%, in this country we are not used to using our credit card on-line, we are not comfortable with it, we are scared of the security issues. There's a lot of hesitation with regard to security on mobile money. Because every day you hear about credit card fraud and bank fraud. Even though it's backed by a name like Nedbank, I think there is hesitation to buy into the concept from the user because of security issues. I think if we better communicated how secure it was and how the system actually works, it might adopt more users quicker and uptake might be quicker, but it's extremely complex, although it's very easy to use on the end device, it's a complex system (M-PESA) and that's why it took so long operationally to set it up. I think definitely it's been slow to uptake because of the ease of access, it's very easy to use once you have signed up. Once you're a registered M-PESA user, it's very easy - just an SMS to send and receive money and you get a code, you walk into Nedbank and they give you cash. It's very easy to use, it's just that the barriers of entry which is I think a reason why we haven't had such an uptake.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 8: Well the way I think we should address it, and the way we are addressing it, is just signing up more and more outlets, so you need to be a registered outlet and FICA compliant. In South Africa we have a lot more banking legislation than say, Kenya does, and we require a lot more documentation from a registered outlet than Kenyans would. They are just expanding that list everyday and that's definitely the way I think to get it out there. You need to have the presence, so if you know that your corner shop is now an M-PESA outlet you would listen next time someone talks about M-PESA, whereas if it's far out of your reach you're not really going to buy into it.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 8: Definitely the need to not carry large sums of cash. Most of our population can't just do an EFT transfer or write a cheque if they need to put down a payment for rent on a house or car. So I think carrying large sums of cash is not desirable in South Africa and that is a great incentive to buy into something like M-PESA, however it's great for even tiny payments, like R5, the oke on the side of the street, who is selling whatever. It expands across all payment boards. A specific need is to not to carry cash or to have the option to be able to utilise another medium to not carry cash for safety, so it is definitely one of the reasons. M-PESA gives non-banking customers an opportunity to essentially start banking, so if you don't have a bank account you can still sign up for M-PESA, all you need to do is be able to produce your ID book, so you need to be a South African citizen and you essentially go into this big pot of a bank account which is administered and run by Vodacom and Nedbank, so you don't need to earn a certain amount, it's accessible to the entire population which I definitely think is a need, because at the moment you can't, the barrier to entry to open up a bank account at a traditional bank is quite difficult, whereas with M-PESA it is very easy.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 8: A transaction cost is less than a tenth of a bank charge, so it's very cheap, it's a much cheaper form of transacting than a traditional bank, so therefore it should be adopted quicker than a traditional bank, it's easier to get, cheaper, it's right there in your handbag. We have got over 100% mobile penetration in this country, very small web penetrations between 11% and 12%, and most of our population doesn't have bank accounts, so to me, it's a no-brainer.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 8: Yes I definitely think we can. That's why there is a lot of attention on it right now and that's why it's amounted as a very big project. We don’t know what the future holds, the market determines whether or not a product is successful in South Africa. However our South African market is very great in that, they are very open to adopt new technologies very quickly in South Africa. M-PESA would definitely be an incentive for some people to switch over to the Vodacom network, because you need to be on the Vodacom network, however I don't foresee M-PESA being this very strong magnet to take consumers away from MTN and bring them onto the Vodacom network.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 8: So adoption rates, we don't have much statistics on, but we always have a projected market base. The adoption, we don't know yet but will definitely be within the lower categories, LSM 1 to 5, because 5 and above you will probably going to be qualifying for a bank account.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 8: We actually found there is a desire not to keep cash in the township because there is just as much theft in the townships as there is in the urban areas and wealthy areas. That is actually an incentive for users to use M-PESA, put their money in Nedbank and use it. So the barriers of entry of actually signing up for M-PESA is one thing, but once your money is in the bank, how can you use it? Who can you pay it with or who can you pay with M-PESAs instead of actual rands? And the answer is not a lot of people at this point in time and so the desire, the culture, definitely drove the desire to want to use M-PESA, we just now need to facilitate the other end to accept it as a form of payment.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 8: I always believe there's a multi-pronged approach to just take but I think incentivising merchants to accept M-PESAs.

Interviewer: Like a sort of a commission?

Respondent 8: Exactly or you know, no transaction costs. So the moment you take your credit card, 5% of that transaction goes to the bank. Who bears the cost? I don't know, I haven't really thought of it that far, but definitely I think incentivising merchant, because as soon as you incentivise the merchant, that increases the demand to accept M-PESAs and then your customers will then be incentivised to pay with M-PESAs. If a merchant knows that they are paying transaction costs whenever they accept an M-PESA payment, they could say for every time, it's kind of like a cash discount, they could have an M-PESA discount so they are not paying the 5% transaction fee so they can give you a 2% discount on your purchase. I definitely think the power at the moment is with the merchant.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 8: Well definitely, to minimise fraud within the retail stores and we get a lot of credit card fraud, anywhere up to 33% of our gross profit, which is huge, and we have to budget for that. That obviously drives the cost price of a product up in any traditional retailer or online or mobile retailer. So I think definitely the reduction in fraud, because Nedbank is a trusted financial institution. Merchants would actually accept M-PESAs because they know it is safe money, they know they are going to get their money. So I think definitely from a fraud aspect that's a big driver for uptake. Also again, your shops in your rural areas are more incentivised to take M-PESAs because they too don't have to carry cash. So the informal street vendor, if he could accept M-PESAs and just get an SMS and he knows that his money is now safe in Nedbank and not have to take that R50.00 to R100.00 and then worry about hiding it to go in transport or during the day, you know just petty theft, street crime. I think definitely from both aspects, fraud and security, is a big driver.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 8: If someone you admire is using M-PESA you would take them seriously. I suppose it depends on one's span of social influence within the community. The more influential the person, obviously the bigger audience, the more people that are going to listen to that particular person. If that particular person is an advocate of M-PESA just like any sports brand, it disseminates around the community and they all buy in and adopt. So I definitely think that would work. M-PESA is also a great way for employers to pay labourers, especially casual labour that don't have bank accounts. I think there is an incentive from an employee point of view to be registered with M-PESA to get paid and also to get work, because it's easier for your employer to pay you, therefore he will give you more work than over someone who isn't registered with M-PESA because quite easily he can SMS at the end of the day, you get the SMS straight away and he has paid you, there is no money changing hands, and the employer is protected with regards to not having to carry around big sums of cash. So I think there is definitely an incentive there from casual labour, which in South Africa is massive.

For the core people using M-PESA it would definitely be adopted or at least taken a little more seriously. The problem is that mobile payments appeal to the lowest LSM whereas credit card, on-line payments appeal to the higher LSM so it's difficult to get someone with a big social influence to adopt mobile payments and then to be an advocate for it.

And you can pay your domestic worker in M-PESAs if she doesn't have a bank account. So there's a lot of drive, again it's not one approach, it's multi pronged approach, it's got to be the merchant, the employer which incentivises the employee and the customer. I think it will fail if you just focus on the customer.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 8: I am registered for M-PESA and yes I have used it to buy my lunch. But I am very excited to see where it goes; it's either going to be very successful or a big flop.

Respondent 9: 3rd Party Provider A – Senior Executive

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 9: I suppose a mobile payment is a payment that has been authorised using a mobile phone. It comes down to the issue of authorisation because the store, from which your money comes, is not on your phone. Nine hundred thousand times out of a million it's just not there. It's elsewhere stored centrally. So for me, a mobile payment is one that you authorise on your phone. It need not be initiated from the phone. The authorisation is on the phone, but when I think about the payments, I think more broadly about a payment transaction, which could include invoicing. There is a lot of interchange in a transaction and at some point somebody has to say "yes pay this". So it could have been initiated all sorts of other places, but in the process of the transaction a person says "pay". If they do that on a mobile phone I suppose you have got to call that a mobile payment. But I suppose it's where the mobile channel is involved in some form or another, but it need not be on both sides. An additional one would be, if someone authorised a payment on a mobile phone, or if somebody uses their mobile phone number as an identifier to receive a payment. So you take M-PESA for example, you pay a phone number. The person never gets the money onto their phone, so the money never goes onto the phone, but the identifier that the person uses to claim the money, is their phone. And that would also comprise for me, a mobile payment on the received side.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 9: I'm going to talk quite broadly on this, there are very few that are unique to South Africa. The first is that the first people who started experimenting or moving into the mobile payment space, well the first people who did, were service providers. Mobile telephone service providers and they enabled the theft that is called Premium SMS, so that was the first mobile payment and aside from being outrageously expensive it was very convenient. But because of the networks' greed, in my view, that just hit an (obstacle). The cost structure cannot scale for things that have an input cost. It's only digital goods that you can do with it. The next people who started to experiment with this broader category of mobile payments were banks, and their innovation was atrocious. Because all they did was internet banking in a shoe box. It was the same processes just on a tiny screen with a lousy set of interfaces. And it's only been in the last few years that mobile banking has taken off and most of that is still airtime. The reason why I think that mobile banking didn't go further than it has is because it really is, that's what it is. It's mobile banking. It's an alternate service channel. It doesn't actually change the way you transact at all. It's a slightly more pervasive interface, so I'm not convinced it's more convenient. It's only more convenient if you have no other option. So it's more convenient than nothing.

Mobile banking is mobile banking. It hasn't really made it easier to transact. It's made it possible, but not easier. And unless your mental model is one that understands banking and banking instructions which, because we grew up with banked parents and we don't even consciously understand or we subconsciously understand, but people who don't consciously or who don't understand banking model it doesn't resound. And it's a great example. If you compare Capitec and WIZZIT, Capitec have eaten up that bottom market like you can't believe. They have got somewhere between a million and two million current account transactional bankers, not just on the debt side. That didn't go anywhere near mobile. The people are tangible, WIZZIT went completely mobile and when last they were talking about numbers, it was three hundred thousand, but I don't think it has changed much. So unless you change the underlying thing, mobile banking is not going to take you very far. The other people who have experimented in this, let's call it the revolutionising transaction space, because my view is that mobile payments take off when you take an alternate approach, a non-bank approach of a money store that you interact with on a push basis, are the mobile network operators when they have moved into mobile money and really what they have done is, they changed the rules. They said it's not about opening a bank account; it's about facilitating the movement of money. The fact that you have to open a bank account as part of the process is a secondary issue. So they looked at a human problem and they built some tech to enable this great solution to that problem. The big limitation in my view about the network operators is that the reason why they have done this is not pure. The reason why mobile network operators have gone into mobile money is to reduce churn. So they are not thinking about how do we make the greatest mobile payment systems in the world, they're thinking about how do we protect our airtime margins? Which is meant that they have built closed systems. Now M-PESA in Kenya was at once enormously inspiring and enormously problematic. It was inspiring because it demonstrated what mobile money could do. It's the tired poster child of mobile money. But I don't know if you have looked at other mobile payments examples, particularly in Japan. I mean Japan is just so far ahead of anybody else. From that perspective it's a joke when you try and extrapolate that into the real world. Because just because it happens in Japan is meaningless for the rest of the world. Kenya to a large extent is the same. The conditions in my view were so unique there, that it does not represent a roll out recipe and that has been significantly illustrated in the other places where M-PESA went, like Tanzania, Afghanistan, quick as a flash, nothing happened. Why? In Kenya they had Safaricom underlying mobile network, was basically the platform. 85% market share. Anyone could pay just about anyone. So the problem of it being a closed system, for all intents and purposes didn't matter because the closed system covered almost the entire ecosystem. And that is a very, very unusual situation. Elsewhere in Africa, Zain in Tanzania, well it's not 85/15 split or whatever it is, it's different. In other places that is the problem of closed systems and my big view on this is that you must build a system that can cater for everyone. It mustn't punish people for choices that they have made around other services. And that's what Vodacom's M-PESA does here. It punishes you if you have chosen MTN as your mobile network provider. It punishes you Cell C, Virgin, and that is in my view going to be one of the big reasons why it will even limit the adoption of Vodacom users, who have Vodacom users to send to, because they go "yes, I know this could work for that, but my brain is not big enough to deal with multiple processes". So it's just simpler for me to carry on sending money via the taxi because that's the only thing I ever have to do. I think that this is M-PESA's problem. I know you can send to a non-Vodacom user, but it's more expensive and the other person has got to stand on their heads every time to go and get the money. So it's not a great solution. It's been a long story to say that I think that there are two big things in the way of unlocking mobile payments here. The first is a mindset of the people who offer it. They, particularly in the case of the banks, think about incarnating banking stuff through a mobile channel and that doesn't fix most of people's payment problems. And we have seen it, even with Capitec with whom we worked very closely for a while. They were beautifully banked, but on pay day all the money just flies out of the ATM and then people work in a cash environment, and just having a mobile channel won't change that. A banking construct doesn't work. Those people who have started to understand that, have implemented that in a closed system, and in my view it's only when you start to take transaction thinking and apply it to the payments environment, that you will really get big traction by transaction thinking. You think about the context in which a payment exists, for example, when it comes to you and I paying bills, have you ever found that BankServ has let you down and sent the money to the wrong place? No. For all intents and purposes BankServ never fails. The payment, the debit order payment is not the problem. The problem with bills is on your side as a payer fivefold. It's information. Who to pay, what to pay, how much, what for, by when and how. It's an information problem. Once the money has arrived on the other side, the issue of reconciling and putting you in the green again is an information problem. Hey, this money is in my account, who paid it and what's it for. And until you fix the information issues, you're going to be fiddling while Rome is burning. You're not going to fix, you are not going to take payments to the next step. As that applies not just for mobile payments, but for all payments. You need to take a transactional view. So you take for example, even on mobile payments. In this case the actual getting the money from A to B is a problem. But if we take the banking example, let's say we are able to implement a system that eliminates the problem of moving money from A to B. The other problems, the information problems are going to remain. When I send money here, do I really know that the place where I am sending it is connected to the person that I want it to get to. Two years ago we bought a Mom's Taxi because we've got two small kids and I funded it out of my bond, which meant I had an incredible current account balance for a while, and then I pushed it out. It was nerve racking because I was pushing the biggest payment of my life to a code that the bank, my internet banking did not confirm to me, was the right code. So I was reading off a fax, I read it forwards, backwards. I read it to myself in English and Afrikaans, because I was pushing it into a black hole. Two days later they phoned me saying "thank you we have got your money". So the problems of payments are information problems. And it's those two things, it's looking to solve the problem at a transaction level which means you address all of the issues and that means that you will inherently or inevitably take an open approach and when it's open and people can pay anyone, people get in the game, it's why PayPal took off. So the problems that we are looking to address in mobile payments are not just focused around the mobile phone. We are looking at payments in their broadest context and we're saying we're looking at ways of making payments easier, and there are times when involving the mobile phone essentially as an authorisation tool and an information delivery tool is a way that can take it forward.

Now lots of people may have said to you that regulation is a problem. Our regulation is conservative, so you have to get banks involved, that's why M-PESA only launched this year. But I think that that is only a problem to the extent that it creates a line between the people who have sorted out the banking stuff and the people with ideas who could fix it. Because the people with the banking regulations sort it out, have got a banking mindset and the people without a banking mindset don't have a banking licence otherwise they would already have been there. But that's fixable. We fixed it. We've hooked up with Mercantile, they are our banking backend. They take responsibility, they hold the deposits. A bank must hold a deposit. So regulation is perhaps a problem because it slows down the process of getting into the market, and I sweated on this for a long time. But I don't think it's the biggest problem because in our current regulatory environment the banks could make it happen. The networks could make it happen. I suppose the two problems complement each other, that there is a regulatory problem which means its only people inside the circle of trust that can really make things happen and they are not really open minded. Mercantile is, Capitec is a little bit, but there is a limit, up to now there has been a limit to the open mindedness of those with the toys that will allow you to play. But it's really easy to blame regulation. Oh I know I am the victim of regulation. I do think if you get it right here you will get it right almost everywhere in the world, because our regulation is conservative and almost every other place you will go will be a loosening of the system and an opening. If you can do it in a tight place it's easier to then go and do it in an easier place, but I don't think that those are the biggest issue. And you look in other places in the world where the regulation is lighter. Tanzania, Kenya was one, I mean M-PESA would not have flown like that, but regulation you can negotiate over, and you see in places where people have sorted out the regulation they still struggle. That says that regulation isn't the biggest problem; there are other issues that you have to. A regulation is like a ticket to the game. But just because you have a ticket to the game, doesn't mean you are any good.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 9: I've got some answers, but those are answers that may be wrong. I think that the Reserve Bank needs to encourage innovation and that's a very hard thing for a regulator to do. People who work for Reserve Banks never got a bonus for innovation, but they lost bonus for introducing risk. Regulators never get fired for saying "no". So it is a hard thing for a regulator to encourage innovation. But I think that if the regulator did that, that would help and then I think that the extent to which people are able to punch out of their own parochial mindsets of, it's all about me and I need to control this whole thing, the better. The banks to a large extent got it right with Visa and Mastercard because the thing that makes plastic work is not the Nedbank or the Absa stamp; it's the Visa or the Mastercard stamp. And finding ways to work more aggressively together to unlock a market would help. Some of the banks I have spoken to are just "yeah we know that that will come in the future, but for now we want to keep it closed". Like cards used to be closed. But that is so stupid. We learnt from the card example, that things take off when you have interconnect, when you have complete openness of the system. So why don't we start there? When you say innovation must wait for a standard, you never get innovation. Standards bodies are actually like regulators. And good regulators actually follow the market and they tidy it up. They kind of create some broad frameworks for parameters, then they let guys go a little bit ahead and then they tidy up and that's exactly in my view how standards should be. You can start working together long before you've boiled the ocean and set an international standard, because for you to have set an ISO standard you have to know everything that could possibly happen or be reasonably sure that, otherwise your standard won't be sufficient. A few people can agree on an interconnect, on a way of interacting. In our environment there are only four big banks, and actually only two or three of them would need to agree; maybe one network operator, and it will fly. So the International bodies will come, but I think the market should choose who they are, and really what it comes over is that, you know why are Visa and Mastercard the international bodies, because they won the war. So let the winner set the standard instead of set the standard beforehand. I'm more capitalist in that regard, so I would say create a place where more innovation can happen, you know that kind of melting pot of stuff, and then change the mindset and look for ways to cooperate. You do need somebody to hold it altogether, so we, like BankServ, integrates the banks, we as a third party is in that spot of being capable of integrating. The big problem you have with standards is when you're trying to do a thousand point-to-point integrations, because then you have to have a standard because you've got to roll out twenty five of them. But when you've got someone in the middle you say "hey I'm going to talk this language" and it's the person in the middle's responsibility to make sure that everybody works, so if there is translation that needs to happen, if there is other stuff that needs to happen, they will sort that out in the middle and that's really what Visa does. That's what Mastercard does, that's what SASWITCH does. And it's only as those things really mature that they start to enforce very rigorous standards on the outside. But now, you talk to guys who are trying to integrate with the Visa. It's terrible. Visa does not really care, so you need "one ring to bide them all", to quote Lord of the Rings, but it doesn't need to be at a national level. You could have two or three people in the game for a while to see how it goes and out of that will surface either one winner or a standard that you announce them all.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 9: I don't think there is anyone who says, aside from Industry bunnies, "I really want to use this to pay". Consumers don't care about the interface. They will adopt the interface that works for them and all the mobile phone is, is an interface. So consumers needs are not mobile specific, their needs are much more selfish. They have needs of convenience, simplicity and cost. Those are the things around which consumers optimise. Now you don't have to have all three if there is no alternative. So the taxi system that moves for remittance, that is not convenient, it is not simple. It's not like you can download a brochure and it's not cheap. The alternative is nothing. My gardener is a Malawian. It costs him twenty percent to get money to Malawi, especially if he wants rands on the other side. Twenty percent! But the minute that you have alternatives, those are the things around which consumers optimise and for me the issue of simplicity is really important because the other two, cost, even to some extent convenience don't address people's mindsets. Maybe the other dimension that consumers optimise on is comfort or familiarity. And this is one of the biggest challenges that you face when you're trying to introduce a new channel, because there is no doubt that a mobile phone can be more convenient, it can be cheaper and it can be simpler. But that is when it's evaluated on a rational basis. But when you ask people "why do you do this?", and they say "well it's simpler", that answer is almost never on a rational basis. You know I actually broke down all of the steps and I optimised the complexity, I have measured the complexity of each step and I have concluded that this one is simpler by a factor of four. No, it's simpler because it just works for me. It's simpler because it creates the least amount of emotional angst. Which is why so many people are still cash bunnies. I had a guy who worked for me here, a business analyst. He carries a money clip and he loves having cash money in his pocket. Cash is a stupid thing to carry if you evaluate it objectively. It's expensive; it has risk.

Consumers have a high need for comfort. So in addition to the ones which you can probably objectively evaluate, they have this other need which says this needs to fit into my mental model. I need to feel safe and secure and confident and it must not leave me anxious. One of the big reasons why many people are still cash focused is that for them, cash is money. And a balance isn't really money. People have this high need, "where is my money". When it's under the bed I know it, I can look at it. And the minute that you ask people to do something different, you have to think very carefully about how you introduce that in a way that's non-threatening. Now M-PESA was really good in Kenya because this was, they said it's like airtime you can use to buy anything. It's like airtime you can get cash back for. I understand an airtime balance, I don't look under my bed to see airtime, and I see my airtime balance on my phone. If I can see that, OK. And I think that this is one of the biggest issues for tech providers. We've struggled with it; we continue to grapple with it. How do we offer people their need for comfort while asking them to significantly change what they do? Because rationality does not count.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 9: It is a barrier but it's not the only barrier. In fact I don't think it's the first. Let's say M-PESA was free. I still don't think they would take off. Sure more people would use them, but I don't think that they would take off. I don't think that that is the thing that's going to prevent them in my prediction. You may laugh at me, that's going to prevent them from getting their ten million users because that's their goal. Ten million in three years, I'm not the only one who thinks they won't get it but that won't be the thing that prevents it. It will be these other things of, is it comfortable? Does it fit? People pay 10% when they put money in the taxi. Why do they do that? Sometimes, because there is no option. Sometimes because well I know it's expensive but it just works, and so these other things of convenience, simplicity and comfort are things that you need to address for cost. There are only a few people who will arrange their world around cost. Some people do, some people will review their insurance policies every three months. They actually know what they pay on their bank fees, and they will go through the pain of changing. I don't, because I know I could save money on my insurance or on this, but it's just comforting not to have to do anything about that. So I know consumers are very cost sensitive, but they are largely cost sensitive in a commodity market. Cost sensitivity may prevent people from experimenting. But people are willing to pay for a service and so I think that we chunk on costs too much. You know there are just so many cell phones. You talk to the players who were involved in telephony analysis in the '90's before cell phones came in. They were doing estimates on rolling out a big landline thing, if they gave people fixed lines, what would they pay. And they were worried, 20c a minute, I don't think people would pay. Cell phones are the most amazing example of the fact that cost is not a big driver. It is so not a driver, and we pay an unbelievable amount for phone costs and everybody does. I know that people at the bottom end they love all the "please call me", but they still pay a lot of money. They pay an enormous amount of money and they pay it and they don't complain. So we over chunk about cost I think. Of course, for the consumer guys, cost is a problem. I guess you can get away with charging a lot if the rest of it is great. I don't think if you have got a bad service, offering it for free won't help. So you've got to get the other stuff right and then you must look at cost. If you want people to experiment with something, say to them "try it this way and don't worry, it doesn't cost anything". Sometimes it's an incentive to experiment, just to get people over this little hurdle. On an ongoing basis I don't think it's an issue, sometimes cost is an important thing to get people to try something, but then it's not so much the cost, it's the incentive, and the incentive is lower cost. Equally it could be, "we will give you ten bucks in airtime or something". It's just I do believe that you need to help people over the adoption hurdle. Sometimes cost is a lever to do that, but I don't think it's an issue on an ongoing basis.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 9: Well, only if we are offering it. If Vodacom win completely with M-PESA, we will be out of a job. Because they will be the platform and you can't in the long term have three or four platforms. Do you remember there were two ATM switches, SASWITCH and there was another one whose name I can't remember? Anyway, they have disappeared. Even across the world there are only two major credit card switches and then a few other lower key ones, AMEX and Diners, they are not really switches, but you can only manage a few. But I'm a believer. I think it will come, there is absolutely no doubt that in five or ten years time we will think of phones like we think of cards, they will be so a part of our lives. I don't know if it's five or if it's ten, I don't know if we will make it or someone else will, but it's coming like a steam train.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 9: The biggest driver of adoption rate is the quality of what you offer and the extent to which it meets the people's needs. So, different products will see different adoptions. Money transfer: you're going to see very limited adoption in the higher LSMs because their money transfer is pocket money for the kids. Whereas money transfers, essentially electronic power for cash, will be adopted in the bottom end of the market because that's their need. So adoption rates I think are going to be driven by the quality of the product, less so than by the LSM. In some ways that may mean that higher LSMs adopt slower, but that's only if you offer them a product that's bad, so this product for an LSM 10, who doesn't have family in the Transkei; it's a meaningless product. We are spending all our time in the top half of the pyramid. We're offering a very different product. We are offering a bill presentment payment product which will not be adopted by the bottom end, because they don't get any credit. No one says I will bill you at the end of the month. So they would never adopt it, they have absolutely no need for it. But the stuff that we are doing with it now, is facilitating bill presentments and payments so people see the bills on their phone, and they can pay their bill on their phone. It's integrating that. Remember I told you about the information, it's taking the information and the ability to act on that information, i.e. authorise a payment, and put it in one place. And that is a super rich product for top LSMs. We've done research across the bands, and we have seen that in the top half of the LSM band, perhaps even the top third, bills are the most painful payments that people make. They've all got cards and they generally use them, so they swipe, face to face payments are not a problem. It is remote payments that are bills, that are the problem, until you get right to the top end where people pay other people to do that stuff for them. But it's bills and it's an information problem. So our view is that if you offer the right product you will see greater adoption across all of the LSMs. In the case of the currently well served, you have to have a very different payments view in order to be able to offer them a new product. Because most people in mobile payments are still thinking about giving people a way to move money from A to B. People at the top half of the pyramid do not have that problem. They have an information problem. So for me it indicates a narrowness of vision, if you say that mobile payments is for the bottom half because then you're saying that the people at the top end are actually well served, they are well served from a debit and credit basis but not from an information basis.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 9: It has a massive impact on it because unless you understand that, you go nowhere. A big internet dude in the US said that things of a technological basis only become socially interesting once they have become technically boring. Now I don't think he means technically boring as in a calculator, I think he means where it doesn't look tech. Like Google looks boring, it's a planned play, it works brilliantly. Search took off after Google. I was a big Hotpot search engine fan, but they were dropdowns and configurations, it was never going to take off in the mainstream. You've got to make it technically boring. Now technically boring for different communities is very different. But you have to get inside people's heads. One of our values is obsession with user experience. And one of the ways that we talk about what that means is, we use the word empathy, which really talks about getting inside people's heads because mobile payments is about tech at its core. But at a consumer face, it's got to be absolutely not about tech. It's really stuffing of people's minds, but part of what we're trying to do is we need to work with people's minds to get them to do something. And in order to work with them we've got to understand exactly where they are and we have got to create a journey of many small steps. Because small steps anyone will take. So I think that the extent to which you really understand payment cultures, that's the first point. The next thing, although lots of people understand payment cultures, they have no idea how to translate that into the new world. You've got to have these two things. You have got to have good understanding, then you've got to be capable of saying I know how to build a journey from here to the Promised Land.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 9: You need to fix the information problems. You need to build open systems.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 9: When you're talking about merchants, I think you're talking about the kind of cash-in, cash-out network. Because then they provide a service that the consumer won't pay for, which is "register me". Registration is quite an expensive exercise especially if you're trying to do this exemption 17 FICA which is take a copy of the ID and capture an address. When we look at merchants, we look at people who have a real payment need that participates in the system, in the same way that a credit card merchant participates in the system. Why does a merchant get a card machine, because it helps them get more money faster? Why does Mr Price do a pilot with us, it's helping them get more money faster? So our dynamics with regard to merchants are very different. I think that as some of the most successful merchant incentives have been around annuity incentives, so what some guys will say "sign up this consumer for free and you will get x percent of all the airtime they ever purchase back in value". But I do think that this is a knotty problem, because if you don't get this right, you have a massive roll out problem because you will get very limited uptake and perhaps even with the uptake you will get unwilling people. "I'm too busy come back tomorrow" and that's a disaster for the system. It's not a tech issue it's a human issue. I think our environment is different from the rest of Africa, because we have very big corporate footprints where the incentives you can manage at a different level. You hook up Pick-n-Pay, you hook up Pep, and bang you've got two and a half thousand, and you can come up with a corporate incentive which can be much more sophisticated and you don't have to worry about the incentivisation of the people on the ground because it's part of their job. I think it's difficult to get that incentive right for merchants, particularly for the small guys, especially in South Africa where the regulation does make it hard because these people are doing banking stuff.

They're doing the FICA. They're like a bank agent or something and that's quite hard, because now you say to Mohammed's General Dealer in Escort, "now you've got this banking burden on you and we may send you an auditor" and he goes "this doesn't sound like fun".

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 9: MXit is an amazing example of that. They have been the poster children of unbelievable adoption of actually quite crappy tech. It tells you it's untrusted and signing up with Mxit is not going to empty your bank account and no one's going to do identity fraud because you can sign up as Jar Jar Binks and initially we had some people who signed up as Jar Jar Binks here. But the power of referral is enormous.

Social influence is a much better word than social pressure because social influence is a positive. It's a drawing where social pressure is more a push and the social influence is very powerful because particularly in an age where there is so much marketing. Everybody has marketing fatigue, but your friend says 'I use this, I'm still alive, I haven't been identity thefted, I haven't been emptied out, come on let me show you'. This setting up the stuff I think is an amazing thing to unlock and there may be ways with some thought around creating some incentives for people to make that happen. WIZZIT picked on an interesting idea here with WIZZ Kids, because they really set up somebody in the community. "The Tipping Point" by Malcolm Gladwell talks about three very important archetypes that drive social phenomena. The connector, a person who know lots of people, the salesman, a person who is very convincing and the maven, the person who knows everything. Your mate who you go to for advice when you want a digital camera or a hi-fi, they just know stuff. They knew that M-PESA was coming before it was coming; they knew the iPhone. They really set up the WIZZ Kids as the mavens, the expert, but not so much the convincer. The social pressure or the social influence doesn't come from a person who wears the brand, who is a signed up. It's when your mate comes and says this thing is just the business. And that's exactly what happened with PayPal. It was people who used the system who said "I take PayPal why don't you sort it out". It's really easy and that's what I'll do. It is an enormously powerful process. It is difficult in the payment space because this is the space where people are at their most conservative, unlike in messaging. In our research we spoke to students who are the most experimental, with money, they belt back and they start to look like they're wearing grey underwear, so the nature of social influence is different in this kind of space because it is a topic that has a greater sense of gravitas. So you need to think carefully about how you drive that because I'm not convinced that kids are going to convince their parents. It's when that influence must come from people who are trusted and who have stuff to lose. And of course it's hardest to make those people into referrers. But it plays enormously because it gives a face to an otherwise corporate brand and it takes the, if you like, the "Nigerian fear" out of it. We found this because in our pilots we are doing with Mr Price; essentially the only channel that we have got to interact with these guys is SMS. We send the brochures, but they disappeared, they didn't read them. And it's not a trusted channel. SMS is this like the lotto. You won ten million pounds. And ultimately what it comes down to is when a friend says something to you, it's a message that comes through a trusted channel. So time spent in considering how you're going to lock that, is time well spent in this area.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 9: There is a great book written by Geoffrey Moore who spoke about crossing the chasm and he identifies the different segments of any market pool, innovators, early adopters, early majority, late majority, that's always been there but he said that there is a chasm. After your early adopters, you can get amazing traction in early adoptiveness and then your business can fail because to move from that space into the early majority you actually have to change what you offer. Because early adopters will take things because they're cutting edge and early majority people will not. And I'm actually not an early adopter. So, of course I will use a mobile payments thing, but only if it's not more schlep. There is an important caveat there that that is not an unconditional endorsement of mobile payments. No, it must be simpler, more convenient, cheaper. For me I don't have the comfort thing, ok so I've crossed that barrier. I'm very comfortable with this, but it's still got to meet those criteria.

You know it's not so much whether they trust the technology or stuff, it's do they trust the brand? We've spoken a lot about how safe we are, and how much corruption there is, nobody cares. I know you're safe but what if it goes wrong, so they actually need to know that irrespective of how safe your tech is, that they're in good hands. Can they trust the people in this, can they trust the brand? If we process a payment from your account that wasn't authorised by you, we will pay you back. Now that builds trust. Let's say worst case scenario, they get hacked, it doesn't matter. Because security is only secure for a while and then someone is going to break it. That is why we put our money with banks. Because we know that once it's there, it doesn't matter if it gets stolen, that won't impact us, our balance will only be affected by us. It's not about the tech. And of course some people have got trust issues that's why they don't use internet banking. Some people don't use credit cards, but those are largely on the fringe and they are not the people we are trying to fix now. But it's saying "you are in good hands". That is what people really want to know. I know your tech is unbreakable, but if it breaks will you give me another one. Yes, then I'm in. But if it breaks will you give me another one. No. Well then I don't know if I'll take it. So we used to have a value called trusted security, it spoke about being robust and exuding this confidence. We've taken it away because from a system perspective, security is like a hygiene factor, it's a ticket to the game, but we've kept a little bullet point in our values that talks about inspiring confidence. And it's around this exuding trust. Is your system secure, well actually it doesn't matter. Do I stand to lose money if I use you? No, then I'm willing to trust you. So trust is a very big issue and its one of the problems we face. But it's not about the tech, it's about the brand.

Respondent 10: 3rd Party Provider B – Senior Executive

Question 1

Interviewer: What is your definition of mobile payments?

Respondent 10: I think if we look at mobile as an industry, like any industry that's still finding its way around definitions, so we talk about mobile banking, they talk about mobile payments. To me, mobile payment is something that is originated from a handset, a mobile phone but I know it's used interchangeably with a whole lot of things, but technically my definition would be a payment that's originated from a phone.

Question 2

Interviewer: What in your opinion are the factors affecting mobile adoption in South Africa?

Respondent 10: I think a couple of things. Just bear in mind we've targeted the lower end of the market rather than the banked segment of the market and I think you'll find different rates of adoption in each of those. The South African market has been brought up with a card paradigm so people are very comfortable with cards. There's a very large POS infrastructure, there's a large ATM infrastructure, and even today the market pulls a debit card and ATM card, so it's a means to access the cash, and particularly at that lower end of the market that's something they're comfortable with. It's also tangible. They can see it, touch it, and feel it. This is still cyberspace stuff. The banked segment of the market has evolved into internet banking so they've become used to and comfortable with doing payments on a laptop or on their PC, and they've got a zillion other choices including cash with the stop orders, debit orders, cheques, credit cards, you name it, they've got a multiple of choices. So we've always felt that mobile payments would be probably taken up first by the unbanked segment because there's no other choice. There's cash so when it comes to remote payments it's incredibly inconvenient. It's expensive. It's time consuming whereas people can use this, but at that lower end you've got a fear of technology I suppose. A resistance to change. Comfort with cash, comfort with the old ways of doing things. The older generation may have more disposable income, but they tend to be more technology resistant. The younger generation may be more comfortable with the technology but don't have the disposable cash, so you've got this contradiction. So yeah I would say that the card paradigm is probably the biggest stumbling block. In other parts of Africa where we've launched, the adoption has been far greater. We're in Tanzania, Rwanda, Zambia, I just choose one of them, Tanzania, that does probably a multiple of plenty. The volume of mobile payment transactions because there's very few alternatives in Tanzania. You don't have the infrastructure that you do here so I think the less developed infrastructure, the bigger the take up or the quicker the take up of mobile payments will be, in my view.

Question 3

Interviewer: How do you feel these issues should be addressed?

Respondent 10: I think first and foremost we've got to start by understanding the needs of the market and if there's a need and there's a solution to that need, then it's fine. The traditional banks have sort of taken their existing product set and said "well let's adapt it and make it work here". The products may not necessarily be appropriate to the needs of the mass market. So it's uncovering those needs because often that market may not even understand what the needs are and linked very closely to that then is how do you communicate with that lower end of the market, that mass market. Traditional media is one of my big bug bears in this country. Traditional advertising and marketing agencies are as clueless as I am when it comes to communicating with that lower end of the market. You know we've had agencies say "well unless you've got a starting budget of 10 million and start with a national TV campaign you can't get out of the starting blocks". Well I'm not sure how much of that rural market has got ready daily 24 hour day access to TV, so how do you educate that market? How do you uncover those needs? And what we've found is, when it comes to doing research at that lower end of the market, using different research companies, using different methodologies, the market tends to give you answers that they think you want to hear, not necessarily what the actual truth is, so it's quite difficult. But if you can uncover the needs and understand what the difficulties are in cash. It amazes me, everybody knows, even at that lowest end of the market how dangerous cash is, yet people will carry around cash. How do you change that behaviour which is very difficult? So the challenge I think is quite a complex one, but I think it starts with understanding what their needs are and if you can come up with a solution, I mean Kenya and the much bandied hype around M-PESA. Really it was sparked with almost a civil war there where the banks were closed for 4 or 5 days, people had to get money home, so that was really the trigger, the tipping point that got that thing in motion. Here we haven't fortunately had that type of crisis and people use the taxis, they use informal methods that work for them, they're comfortable with them, they trust them and I would trust them. But you send money to your mother who lives in a deep rural area of Kwa-Zulu Natal and she'll get an SMS saying her money's sitting on her phone. What does she do with it? She's got to get the money out because she can't, there isn't an acquiring infrastructure that she can go and utilise that, so that becomes a challenge. Whereas even in some of the more remote areas you can still use a card. There's still an ATM machine so it's balancing the issuing and the acquiring side of the payment equation.

Question 4 (Research Question 1)

Interviewer: What are the specific needs of consumers regarding mobile payments?

Respondent 10: Again depending on which segment of the market, but at the end of the day, to me it's about convenience. You know I've got this in my pocket all the time and that's why we coined the phrase – my bank in my pocket. I don't carry my laptop around with me so from a pure convenience point of view it's very hard to beat, and I do think as against 5 years ago when we launched, there were some serious question marks by, particularly the banks as to whether anybody in their right mind would do a payment on a cell phone, and I'm talking about very senior CEOs of the big banks. They said "it'll never happen". Today I think that myth has been dispelled. I think mobile is part of the mainstream. I think WorldwideWorx did some research in South Africa and every month since November last year more payments are generated on mobile than there are on internet, so I think that the wave is there. I think it is here to stay and I think we will see advances in the technology with Near Field Communication, Badge Touch and Go, all of that. People want to carry one thing around. They don't want to carry ten things around so I think it is the convenience of it. Unless it's ubiquitous in terms of its acceptance, you've continuously got this chicken and egg scenario. You need a mass application I think, Hong Kong with its Octopus Card. Its trigger was really transport and the ferries, low value payments. The other challenge I think you've got is this weird perception that cash is free. Goodness knows how it ever emerged but the perception is very strong in people's minds and I think it's at the point of the transaction that the cash is free, so that perception says "well cash is free". People forget very quickly the cost of getting that cash, the cost of getting to an ATM, the cost of an ATM but let's assume that that's discounted because when I go into a store and I buy a Coke I give them let's call it R10.00 for a Coke, I get a Coke for R10.00. If I use any other means, electronic, be that mobile or often card, there is a transaction fee, so at the micropayments level you may have a challenge because most entities are in it for commercial gain and to survive. So there will be a transaction charge and at what point does the transaction charge render the value too expensive? And that I think is something that people are still grappling with. Doesn't matter how low that charge is. So I don't know if there's an easy answer to that.

Question 5 (Research Question 2)

Interviewer: To what extent is transaction cost a barrier to adoption?

Respondent 10: I think it is difficult to peg a value on it but it's often the cost of the equivalent rather than necessarily the transaction charge per se. I use my domestic worker as a very good example, who 5 years ago was unbanked. Where I live I happen not to be very close to a Post Office so to give the example some context, for her to get to a Post Office to get a money order to send to her mother because she can't go to a bank, it's a R7.50 taxi ride to the Post Office, it's R7.50 back. It's typically at month end Saturday when the queues are coming out the Post Office door so it's probably 2 hours in terms of time and the minimum charge for a money order is R30.00. So you start adding all of that up, without the cost of time, you're already pretty close to R50.00, so a R2.99 charge is very cheap relative to the alternative, but you've still got the R2.99 charge to send R100.00. Is that bearable? Maybe it is at a R100.00 level but R2.99 to send R20.00, people may start questioning, that's now 15% of the value of the transaction, and perhaps it's that lower end of the market we don't understand enough. And again at the bank level, people will weigh up very quickly the cost of the alternative, but at that lower end of the market you know they don't, and the transaction charge can often be half a loaf of bread so you've got to continually weigh up those. So I think we've got a lot to learn in terms of it, I mean our ideal would be to have free transactions and we would make our money from commissions from suppliers, be that airtime vendors, electricity vendors or suppliers of goods and services, but we're not at that stage yet. You need the volumes, and the volumes are in the micropayment space so you've continually got to balance that scenario. M-PESA for example is quite expensive, but they've done a good job in educating us. Where's the market in terms of the cost of the alternative and how do you value safety? My life is worth more than carrying around, which I could lose for R100, so there the cost becomes irrelevant, but you know you need to get that message across continually. We've still got this mindset it'll never happen to me, it'll never happen to me, but I mean I know a supervisor in a particular business who in the course of last year was mugged four times having been paid his wages in cash and you think how does this guy and his family survive. If I had my salary taken from once in a year I would be in dire straits but four times, yet still this perception that cash, give me cash, I'm happy with cash. It becomes an issue.

Question 6

Interviewer: Are you convinced that your industry will benefit from the widespread adoption of mobile payments?

Respondent 10: Sure. I mean there's no doubt. Our whole business model is based on it and we were the pioneers in this country in it, but as I say it's not a premium priced product. It's a mass market product and it has to get the mass adoption, so you've got to weigh these things up. It really is difficult and even when the competition board did its inquiry to so-called monopolistic or oligopolistic practices of our banking industry, it was impossible for them to get a handle on their pricing. It is a complex thing and the cost of banking is expensive and I think that's something that many observers in the industry don't follow and don't quite understand, because from a regulatory point of view if you're going to make a payment on this hand, you have to have a corresponding deposit on this hand. You can't make the payment if there's no deposit and the only entities in South Africa at any rate that are allowed to take and hold deposits from the public are banks, and that's not a subject for discussion, "let's sit down and have a cup of coffee around it". The cost of banking today is incredibly expensive and the cost of compliance. I mean you look around there, most of my staff are involved in issues around compliance not around anything else, so your cost of opening, administering and complying with all the requirements around a bank account are incredibly high, and we've tried to make it as cheap and affordable and using technology and all the rest of it and not having branches to try and make it as affordable as possible. But still you've got unbelievable regulation and requirements that are attached with it. So if it was a simple matter of saying "well it's just covering the cost of the technology to facilitate the payment", that's one aspect but it's such a tiny aspect. It's the other costs that are incredibly high, so you've got to price in that you're going to hopefully recover your costs which are a challenge. It really is.

Question 7

Interviewer: Please elaborate on the differences in adoption rates amongst the various LSM groups

Respondent 10: I'm going to start by saying anything in the space around money is largely based on trust and credibility and whilst the lower end of the market might not like the big banks, they do trust them. They've been around a long time. They have a concern, believe it or not, despite the fact that people may claim they're not that educated and not that sophisticated, they're certainly not stupid and they do have a concern about the smaller banks. Are they going to be around? Is my money going to be safe? Is the bank going to disappear? Are the people going to run away with my money? So at that level you've got some fundamental trust and credibility issues because if they don't trust the entity, they're not going to deposit their money. If they're not going to deposit their money they're not going to make the payment so you've got that cycle that you've got to get through. So very different strategies employed at that lower end of the market than at the banked end of the market that just happen to blindly trust the banks and they say "well my money's going to safe there". They're also used to electronic transactions, be that via cards or be it via cheques, thay know it works. So if a big bank comes and offers a mobile thing, my assumption is, it's going to work. I'm not going to have a problem, but a new entity with new technology and a new brand name, the challenges are very different. So you know if you're a Safaricom in Kenya and you can throw hundreds of millions at advertising and creating that trust to get the mass adoption that's fine. But when you're a small entity you're going to struggle. We were very lucky in that when we launched, six months later the banks followed and they threw some money at advertising and that helped the industry because it created credibility for everyone. So it wasn't just little old us doing it, it was the big guys as well. So I think you've got to have different strategies at different segments of the market. You know if you look at the youth segment, yes you could argue they're unbanked. They might not be unsophisticated, they may not be at the lower end of the economic pyramid, but they are unbanked by definition. They will catch onto this very quickly. It's incredibly convenient for parents to send their money to the children and you know it is real-time, it's in your account instantly. They know their children don't have to concern themselves about carrying cash and yes the youth will sit and go to the pub and pay for their beers if there was the acquiring infrastructure on the other side, but then you've got to convince the merchant to say why should he use, he's already got POS devices and he already has to cater for cash and the security around cash, now you want them to introduce this, and as any business is going to say "well what's in it for me". If consumers demand it, yes I've got to do it, but if they're not going to demand it? A supermarket, and we've had these discussions, and although it's quick, it's not as quick as swiping the card so until you get to a point where you can perhaps badge it and touch it, and then speed-through tills is incredibly important to them so if you've got a delay of even a minute for each customer they're not going to put a separate line for mobile payments, so you've got a number of different challenges that you've got to work out. In a restaurant you could argue it's fantastic because you've got the time, you don't have the speed-through till issue but now you've got to have a device at the till that confirms that the payment has been made. These things, you know, I know, they get stolen. They're easy, pick up, put in a pocket and disappear. Not that there's any security risk around it but you know a shop owners going to say I'm not going to have a dedicated phone sitting at a till that's going to get stolen unless, how do I chain it down, so then it's got to be integrated into their till system somehow. So it's complex, it's not as easy as perhaps people say. Person to person payments is fine. That's an easy side of it. Person to business payments are somewhat different. If you could get government on board that could help, particularly in the area of social grants and welfare payments. They're paying and employing contracting third party agencies to do it. It's costing tax payers in the region of R18.00 – R23.00 per social grant payment that is made, which is ridiculous, when the alternative is for a buck they could be doing it through technology. Now, one could argue why aren't they doing it and again one of the tipping points for Safaricom was government going to the party and said fine "we will distribute payments, social grants and welfare through the system", which gives you the volumes. Why this 5 year dragging the feet is a big question, but they gained that with help because if you've got the mass adoption then the acquiring infrastructure will follow, but it's like a chicken and an egg. A merchant or an acquirer will adopt the technology if he knows that it's going to bring feet through the door, it's going to simplify his life, it's going to remove cash from his shop because of the security and all of those good things, but he's not going to do it if it's one customer a day, so those are some of the issues around it.

Question 8 (Research Question 3)

Interviewer: How do the characteristics of the different payment cultures in South Africa affect adoption of mobile payments?

Respondent 10: Essentially your cash alternative is one issue and the level of sophistication and widespread distribution of card acquiring devices is the other. In some parts of Africa, one would question do we need a card infrastructure at all? If it's not there now, the cost of laying out a card acquiring infrastructure is expensive. Maybe they'll leapfrog cards altogether and say "maybe we don't need it" and again I think that's been proved to a degree. But I do think it depends on the degree and distribution of alternatives, and at the end of the day it's still about changing behaviour. I've been used to keeping my money under the mattress. It works for me. I'm used to cash. I feel comfortable with it. I can see it, touch, feel it. Don't talk to me about the effects of inflation and interest rates because it's meaningless to me. I put R1000.00 under my mattress. I take R1000.00 out a year later. That's what matters to me. That's what's real to me. I put money into my bank account in most of our big banks. At the end of the year I've lost 24% of the value because there are administrative charges every month that come off my account so can I afford to lose 24% of the value of my money through the luxury of keeping it in a bank account? Well I can't, maybe you can, but it's expensive and banks are expensive in this country and they'll give you all 10 000 reasons as to why it is. So I think the alternatives become a fairly serious barrier and it'll be very interesting. Vodafone for the last 5 years has been trying to get a replicable case study to what they've got in Kenya and they just haven't been able to get it. They've tried in Afghanistan and it just has not worked. Tanzania right next door to Kenya, one could argue, similar market, similar culture, similar everything, it hasn't worked. Speak to the people here in South Africa, I've yet to find one person who is confident, including senior executives within Nedbank and within Vodacom who believe that it's going to work. So you say "well if you don't think it's going to work, why on earth did you launch it?", and you get various answers to that. But I think they're going to find it quite tough in South Africa because of the factors that I've raised. Not because it's a bad product, not because it's bad technology, not because of anything else, but because the alternatives are fairly well ingrained and instilled in this market. So it'll be interesting to watch that. GCASH in Philippines', they've been at it for 8 years. The adoption perhaps hasn't been what they thought it would be. The regulatory issues is one of the challenges they've got. One of the challenges is that the more successful these network-led models become, the tighter the regulatory noose around their necks will become. GCASH said “We’re now at a stage where the regulator is starting to look at us very seriously and may well force us to either align with a bank or somehow get involved with a bank”, and they ended up buying a bank because of the regulatory thing. In South Africa, the regulator says sure you can come, but the bank has to own the majority share of the business that’s set up. Now when you look at two greedy entities such as a network and a bank fighting for paper thin margin business and one would have thought that they’ve had the example of a Standard Bank and an MTN trying exactly the same thing, closing it down after investing 720 million, which is a significant amount of money, one would’ve thought, well what lesson did Vodacom and Nedbank miss because their model’s exactly the same. How’s it any different? I’m not sure that these joint ventures between parties like that work primarily, because the fundamental foundation of the joint venture is non-existent. The foundation is based on a very simple question. Who owns the customer? The bank will say “it’s a bank account, it’s my customer”. The network will say “it’s my SIM card”, and people that maybe don’t understand banking will say “well why is it relevant? Well, it becomes relevant because I open one of these bank accounts for you and suddenly you want a loan, so you go to your banking partner to get the loan. The joint venture says “hey that’s my customer, how can you claim all the profit?” It just becomes very messy down the line so I’m not sure that that’s the answer. The jury is still out. Just in terms of the hype race, certainly the network-led model would appear to be winning the race and you’ve got every network clamouring because their eyes have lit up like Christmas trees to say “if I can get my payments attached to your SIM card, I reduce churn, so their main motivation is about reduction of churn. That’s their motivation, and it’s not a bad strategy. I don’t think there’s a network in the world that has not either got or seriously well down the road in developing their own mobile payments model. But I just think the regulatory environment’s going to become tougher and tougher. Rightly or wrongly, but the world in which we live, I just believe that the bank-led model while it’s a much more conservative industry, it’s not as aggressive, it’s not as gung-ho, it probably will end up the victor down the line. Time will tell.

Question 9

Interviewer: What is needed to effect a rapid adoption of mobile payment in South Africa?

Respondent 10: I think you need government to have the guts to say, if we could get 12 million social grants recipients in this country, now you need that type of thing and the guts to say that’s how we are paying. We will facilitate it even though the one off cost of saying “let’s get everybody registered and up and going”. All the players can get involved, there’s no bias or vested interest to say “well this is a one bank solution”. It’s not; all the banks have got a solution. I think then you probably will get it. Transport industry maybe an option, but I think you’ve got a long way to go and it’s going to have to be some form of contactless, pinless payment. But it’s about, you get on a taxi and you’ve got somebody taking out their phone and, it’ll never ever work, so you’ve got to have something that is contactless, and if you’ve got that and maybe some of the issues around the micropayments. But I think it’s got to come from a mass application such as pension, social grant payouts and then the rest will follow and I think quite quickly.

Well I’ve given you a few things but I’ll go back to saying you know the simplest, quickest, easiest would probably be for government to have the guts to say OK, and they’ve been talking about it for I don’t know how long, but just haven’t had the wherewithal. They will give you 10 reasons as to why they haven’t been able to do it, but I think that would go a long way to do it. Back in the ‘60s we were saying we will move to a cashless society, increasingly you know where merchants may refuse to take cash. I know some of the car rental agencies, there’s one way to pay and that’s with a card and if you don’t have a card, sorry, you can’t hire a car. Now that’s maybe an extreme example but not so outlandish. I know we had a project going with Coca Cola because one of their big concerns and the cost of cash management are huge. But if Coca Cola had the guts to go to all their customers, the bottling companies and the distribution companies and saying “guys we’re not taking cash anymore, you know you want Coke you are going to pay electronically”. They don’t have the guts to do it, why? That’s a question only they can answer because they’re in a position of probable strength that others don’t have to say this is what we’re doing, because at the moment they’re acting as the bank for these little wholesalers and spaza shops. Wonderful for them because they don’t have to pay cash deposit fees. They don’t have to hassle about it, so Coke takes all the risk, all the cost, so things like that all start to help the adoption. But it’s having the guts to be the first to say, “that’s it, we’re not taking cash”, and I think the time will come when cash will increasingly disappear, the Dutch are aiming for a cashless society, the Brits are aiming for a cashless society. I think it will come. It’s not going to happen quickly. We’ve got to get around this challenge of the micropayment level and the cost of the transaction.

Question 10 (Research Question 4)

Interviewer: What are the appropriate incentives to get merchants to join a network?

Respondent 10: It’s a good question, and it gets down to the old adage “what’s in it for me?” So why would a merchant want to do it? Commission might be part of the reason but not. It’s also an education thing and most merchants are aware of a couple of things. If there’s not cash on the premises the risk of crime is reduced so point number 1 is the crime issue that’s unique to this country. Point number 2 is that the merchant is paying expensive cash deposit fees at the bank the next morning, so there’s a cost issue of cash not only a security issue. So if I could accept mobile payments I’m scoring on both fronts. I don’t have the cash deposit fee the next morning and I don’t have the risks of cash. If there’s a commission involved, it may or may not be an incentive but the commission is so small. Your other more formal already have card acquiring devices, so why would I use mobile and not card? Well the only way I’m going to do it is that I’m going to save on the merchant fee, so every time a customer uses a card, I’m paying a percentage merchant fee, which clearly is built into their prices but through this, at the moment, there is no merchant fee. It’s not to say we or others may not change their model and say “well why don’t we have a merchant fee, we’re doing the same function as a card?”. They’re used to paying the merchant fee so maybe there is a revenue model and a business case to be said, “well the merchant should pay”, but at the moment they don’t pay, so the advantage to the merchant is no merchant fee and no cash deposit fee, so we felt that you don’t probably have to pay them a commission at all. If they can start acting as a cash-in and cash-out agent, that could be quite attractive to get feet in and out of the store, particularly the cash-out part of the equation. Deposit is a little more tricky from a regulatory point of view in that our regulator is not convinced about this agency model whereas in Brazil, it's widespread. I think there are, hundreds of thousands of retail stores that are correspondent banks. You can go in and do all your banking, deposits, withdrawals, payments at these stores. We're not as advanced in that score, but one of the things we've been trialling in the more rural areas is that merchant becomes an agent of us. They can open accounts, they can dispense cash, they can't at the moment accept deposits. That could become quite an interesting model. Is there revenue in it for the merchant? Probably not enough to get them jumping up and down on the table and saying "wow this is the next major profit line for me", but there may be other reasons and alternatives that they would want to do it. You know people are coming in because they know they can get cash, the chances are they're going to buy stuff in the store so that to me is the motivation rather than "well you're going to get .2% of a fee". I might be wrong but I mean even in Kenya where they claim to have 20 000 of these merchant agents, I was reading an article last night on one of the blogs that says you know they keep bandying this number around, how many of them are actually active and how many of them are actually making any revenue out of it. No research has been done on that, but again Kenya's a very different scenario because Safaricom is a monopoly so you will do this, you will have a float of X amount and if you don't, we'll take your Safaricom licence away and you won't be able to dispense airtime. Try that with one of the stores here. They'll say "cheers Vodacom, we've got MTN, we've got Cell C". You're not going to tell us what to do and how to work, so it's a very different environment. But if I was running a store and 5 out of every 8 customers that came into my store said I want to pay with this, I might be forced into a situation of doing it, so is that going to happen? If you've got the other side of it, and all these entire pension and grant payments being fed in, because once the money's in, they're going to get it out, then you'll have that push rather than pull, that may well work in getting the merchants to say "well I have no choice now but to accept it". They're not going to be enticed to accept it through commissions, I don't believe. It's too small and already you've got a challenge around the transaction costs, so then the transaction cost has to go up. It becomes more of a disincentive for customers to use it and the level of margins. What might excite them as I said is not paying the merchant fee because if I can save, it depends on the merchant, whether it's 3% or 5% or 7%, if I can save on that, that starts to become a number then you may have the enticement that merchants are looking for. But then you've got the informal traders who don't want to be part of this tax net so their perception is "once I've got a bank account I'm going to start paying tax". Argument back to them, is to say "well you know paying your whatever percent tax surely is better than putting your life and your employees lives at risk through having the cash in your store", but they don't often see it that way and there's a large segment of the market that wants to stay outside of this tax net, so they're very happy. I talk to my own staff that live and breathe this business. You'll be amazed at how many of them are paying their landlord in cash. Why? Because the landlord says "you want to rent this place you pay me and you pay me in cash". It's the only form of payment he will accept. So that's another challenge but I think that's a challenge faced by probably a lot of markets.

Question 11 (Research Question 5)

Interviewer: How can social influence be used to increase adoption?

Respondent 10: I think it's particularly true amongst the youth. All our success has been viral. We have not spent any money on advertising, above the line advertising at any rate, so the growth has been through people talking to other people and clearly the network effect, and I look at me, everybody in my network from my domestic worker to my gardener, to my caddie, to my children, to my wife, is all on our product, because it makes my life a heck of a lot easier, and they in turn would go out and talk to their network and so you do get that. The downside of course, which is more severe, is this, you and I will understand if you're trying to do a transaction and the network's down, you say "OK the networks down, I'll try again" or you may have an alternative. This lower end of the market, if there's a problem in the technology, they forget it. They'll try it once, so uptime in your technology has to work 100% of the time, but this is unfortunately a real world. Hard as you might try, it's not always possible to get that 100% uptime and then they lose confidence. I suppose like riding a bicycle, if you fall off a bicycle you've got to get up on the bicycle as quickly as possible, or you're going to have this fear and I think that is one of the challenges around the technology. It's got to work. It's got to work all of the time because if it doesn't, then that network effect, it goes out incredibly quickly. The legislation around the Know Your Customer (KYC) and the FICA, accounts get frozen. The reputational risk flows through the community like wildfire. "I tried to get my money and I couldn't get my money because my account's frozen". "Well it's frozen because we asked you to submit documentation that you didn't. We have no choice legally, that's what we've got to do". They don't often understand that linkage is a dual responsibility in a banking relationship, so that becomes difficult, so from a social point of view, bad news spreads a hell of a lot quicker than good news. My domestic has become an agent for us because she liked the product. She's marketed it to all the domestics in the area in which I live, plus her family and that whole social thing works. No question that it works and as I say that's what we've really relied on. So yes I think it's very important.

Question 12

Interviewer: Would you use a mobile payment service? If not, why not?

Respondent 10: Clearly I do because of my business. So I had a group of customers and I just wanted to see some reaction. I was doing some focus groups and some research and I said to them quite obviously, but tongue in cheek, I said "our mission is to bank the unbanked". That's what we are passionate about. You as a group, and I think there were 15 people, are all now banked so what I would like you to do please is close your mobile payment accounts and give them back and you can go and open accounts at one of the banks. It was almost a riot. I use a stupid analogy that if you've never had a motor car with air conditioning you don't have a clue what it's about, but if you've had a car with air conditioning you're not going to go to a car without air conditioning and it's the same as this. Once you've experienced it and used it and appreciated the convenience of it, it's something that you'll think how on earth did I ever live without it? You've got to use it to experience it, and once you've experienced it, then I think you're going to be pretty much hooked.

It actually is amazing that what you can do and the fact that it is real-time, so yes I would use it and I would be lost without it. My domestic who 5 years ago was unbanked, today does between 17 and 23 transactions a month now. I tell you if you had to go and take her account away from her she'd kill you. You know it's become such a part of her life in the way that she runs her life. It's been fantastic for her. So yes to me it's obvious, but I think the challenge is to get people, once they've used it, they'll say "how can I live without it", but I can understand that until you've reached that point, you say "well I've got other alternatives". They work for me and so, yes I think it's here to stay.

Focus Group Transcript

The focus group consisted of 6 people including the interviewer.

The researcher was the interviewer/moderator.

Interviewer: What is your definition of a mobile payment?

Member A: Mobile payments can involve interconnect fees or customers pay the service provider for the usage.

Interviewer: OK, so no, let me just clarify. A mobile payment is a payment initiated by a mobile phone, so you go to the shop and you pay for your groceries with your cell phone or you withdraw the money at a store. So that's what a mobile payment is.

Interviewer: What in your opinion are the factors affecting mobile payment adoption? I mean you guys didn't know about it right? You know you've heard of M-PESA?

Member E: M-PESA is Vodacom.

Interviewer: Yes, Vodacom and Nedbank have partnered, so then you can send money to your maid, for example, with M-PESA and then she can go to a shop and maybe she's got R100.00 for the day, she can say I want R50.00 bread and milk and I want R50.00 cash, so she takes that from the shop. It's on the phone and then once she's at the shop, she does that transfer to the shop keeper. So you want to send to your family in Eastern Cape, you don't need to pay the taxi driver. What the people do now is, you want to send money to your rural relatives, you're going to send R100.00, you give R100.00 to the taxi driver, but he takes 20%. He may take R20.00. But now that's what people do in South Africa.

That's why mobile payments are useful, so if your granny has a cell phone you can just send her R100.00. She'll get as an SMS and then she'll go to a shop and withdraw the R100.00, and so that's what M-PESA is. It started 6 months ago in South Africa. People don't know about it. Why don't people know about it?

Member D: Is that selected shops?

Interviewer: Selected shops, yes, so that's another thing. You need more dealers in your network to, for it to be useful. So if it's only 1 shop that 50km away, then it's useless. Every town must have all the shops that are going to offer those services, so you convert your credit, your money, you convert it into groceries, into taxi or bus fare, or you can pay someone else or you get your salary with it. So how do you feel these issues should be addressed?

Member B: To me I think to address these issues, proper marketing, should be done. Most of the TV advertisements for the telcos don't advertise actually what the product is all about. What they advertise is probably the rates and people don't understand the purpose behind that product, so I think marketing of the product is the biggest one.

Interviewer: What do you think are the needs of consumers regarding mobile payments?

Member B: I think the consumers need something that's not time consuming, that's easy to use. If it's complicated to use it, then they won't use it.

Interviewer: To what extent is transaction cost a barrier to adoption? So say you're sending R100.00, they may charge you a R5.00 fee. It's still cheaper than the taxi driver.

Member C: So he gets charged on the airtime?

Interviewer: Yes, it comes off your mobile wallet.

Member C: Your mobile wallet. Yes, I think it's a reasonable fee.

Interviewer: What do you think are appropriate incentives to attract merchants to join the network? If there's only 1 shop that you can exchange it in, it's not worth it, so we need a big network of shops to sign up.

Member E: All dealers must use the same technology.

Interviewer: Yes, what do we need to attract a shop? If you're staying in a township you want your spaza shop to also use it there. What can we do to get him to come to the party?

Member A: Are they also gaining?

Interviewer: There's only one thing they're gaining. They're gaining cash out of their system. Cash is an expensive thing in South Africa. You know we have the cash in-transit robberies and so on. That's why when you go to the ATM and withdraw R1000.00, you pay R20.00 or whatever it is. They charge you to withdraw because there's so much security around cash to deliver it to the ATM, you have to pay the security guards. Also, they charge you like R70.00 to deposit cash. Now with businesses, if they take their cash at the end of the month or end of the day maybe, maybe it's R5000.00, and they go deposit that R5000.00, the bank may take a few hundred rands away from them. They "lost" a few hundred rands in deposit fees.

Member A: Yes.

Interviewer: So the benefit to the merchant, is that he has this R5000.00 in his till. Now if 5 people come and take out R1000.00 withdrawal, he's given them R1000.00 each.

Member A: Actually saves him money.

Interviewer: He's got no cash in his till, but he's got the R5000.00 transferred to his bank account. If robbers come to rob his till, there's no money to rob, it's already safely in the bank, so the incentive is, if he has to take the cash, he can get robbed before he gets to the bank and then he has to pay a fee to deposit it. So that's what the immediate benefit is to the merchant.

Member B: I think maybe for commission, like the more people that get money from your till, then the more a merchant earns. Also if you say, per transaction that a customer is doing, he gets a certain percentage.

Interviewer: But the transaction fee is R5.00.

Member B: It's R5.00? If you say to the merchant that he will earn R1.00 out of the transaction fee. I think the spaza shops owners will want to know how much money they will get out of this. So if you say you're getting R1.00 per R5.00 transaction, it's easier to attract them, and say "work with us and you'll get a certain commission". But not if you tell them you'll save their money.

Member D: Also there's an increased incentive for their customer who doesn't like to carry cash, so if you say to him "you have the option to offer to pay by mobile", the customer will decide to buy from your business because it can be an easier and convenient way to pay.

Interviewer: Just out of interest, you've never heard of M-PESA before? Do you know anyone who's using it?

Member B: No, I've never seen anyone. I've heard about it.

Interviewer: The TV advert doesn't even explain what it is.

Member B: That's it, yes. That was my point, the marketing. They don't advertise what the benefits of the product are, they just tell you the basic things, such as, it is cheaper. People want to know when you're using it, what are you going to benefit, e.g. these are the advantages and disadvantages.

Member E: You need the merchant to educate customers about this option, and that way you get people talking about it.

Member B: Word of mouth.

Member C: Word of mouth. Just say OK, within this hour we will advertise our product.

Member B: Because really I've never seen anyone use it before. I've heard about the product, but I've never seen anyone.

Interviewer: You know why they started it here? It was very popular in Kenya.

Member A: OK.

Interviewer: And Safaricom is a mobile company that started it there, but Safaricom has 80% market share in Kenya, so it was very successful in Kenya. Vodacom being also part of the Vodofone group is trying it here now. What does PESA mean? It's a Swahili word meaning money. In South Africa, no one knows PESA means money.

Member B: Exactly, so it's again language barrier.

Interviewer: Language. Why did they have to call it the same name? They could have called it something else. I mean what's the Zulu word for money.

Member B: Imali.

Interviewer: So maybe Imali-M or something like that, "Money mobile", if they could call it that in South Africa, the majority of the people know what you're talking about. They don't know what PESA means. What is it? It's a foreign word.

Member B: Exactly. True.

Interviewer: You know what's social influence? So if your friend is using it, you want to use it. If your friend says "look I'm using this mobile payment, I can do this", do you think that will help in South Africa. How can it be used to help adoption?

Member A: A lot of young people are using Facebook, these social networking sites, so probably somebody would just drop an update on it like, I've used this cool technology and it was quick, so I would advise you guys to try it, maybe.

Member E: Because, you know most of the young people in South Africa are between the age of I'd say, 15 – 21. Most of them are on Mxit and if you have someone on the social network to say 'teach them on how to use that M-PESA', and then show them the benefits to say 'it's like having money on your mobile' and advertise it that way to say 'you can buy anything, you don't have to carry cash in your pocket', because they know they can be pick-pocketed. People also want to know which shops you are talking about. You need to list the selected shops which cater for mobile payments.

Interviewer: OK. Last question. Would you use a mobile payment service? Is that a no?

Member A: Very sceptical about it.

Member E: I would use it if it's easy to use, but if it's complicated, that's going to need me to put in pin codes and remembering passwords, then no.

Interviewer: How much you going to transact? How much are you willing to pay a month using mobile payments?

Member A: Under R1 000. Depending on the charges like you said.

Interviewer: What's the transaction limit you would set?

Member C: Transaction limit, probably it would be like for things like petrol, around I'd say R2000.00.

Interviewer: So you're happy to spend R2000.00 a month on mobile payments?

Member C: R2000.00 a month on mobile payment. I'll spend R2 000.00.

Member B: I'll use it, but initially I will say R500.00, because I'm afraid and not sure if it's going to work.

Member D: I'll spend R1000.00.

Member E: So would I.

Interviewer: OK. Thanks guys. Really appreciate it.

APPENDIX D

Table 17: Consistency matrix

Research problem : To identify and assess the factors affecting the adoption of mobile payments by consumers in South Africa					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
To identify and assess the factors affecting the adoption of mobile payments by consumers in South Africa	Borg and Persson (2009) Dahlberg et al. (2008) Mallat (2007) Mallat and Tuunainen (2005) Mehra (2010) Koivumäki et al. (2008) Venkatesh and Davis (2000) Venkatesh et al. (2003)	• What are the specific needs of consumers regarding mobile payment adoption? • To what extent is transaction cost a barrier to mobile payment adoption? • How do the characteristics of different payment cultures impact the development and success of mobile payment services? • What are the appropriate incentives to attract merchants to join existing mobile payment networks? • How can social influence be used to increase adoption of mobile payments?	Respondents in semi-structured interviews Consumer Focus Group	Qualitative data Expert Opinion based on semi-structured interviews	Data Reduction Content analysis Conclusion Drawing/Verification