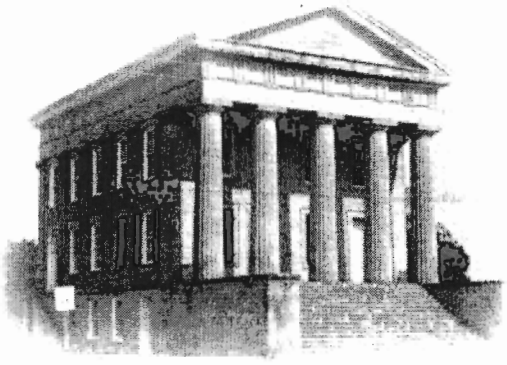
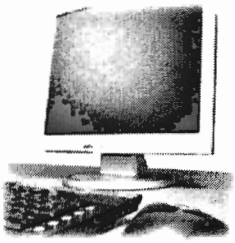
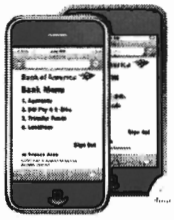


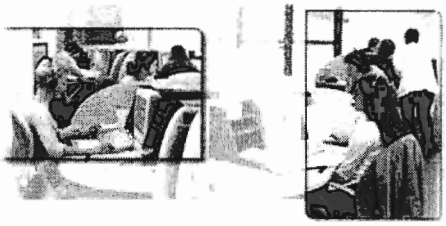
Investigating Multi-Channel Banking Adoption in South Africa





By

Kunal Patel



Investigating Multi-Channel Banking Adoption in South Africa

Kunal Patel

(PTLKUN001)

Bachelor of Business Science - Honours

A Dissertation Presented to the

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In partial fulfilment of the requirements for the degree of

Masters in Information Systems (INF5005W)

Supervisor: Associate Professor Irwin Brown

February, 2009

DECLARATION

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2. I HAVE USED THE APA CONVENTION FOR CITATION AND REFERENCING. EACH CONTRIBUTION TO, AND QUOTATION IN, LITERATURE REVIEW FROM THE WORKS OF OTHER PEOPLE HAS BEEN ATTRIBUTED, AND HAS BEEN CITED AND REFERENCED.

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ACKNOWLEDGEMENTS

I would like to thank, Associate Professor Irwin Brown, my supervisor for his continuous support and encouragement. Your guidance provided me with many moments of inspiration.

I would also like to thank all my friends. Their continued inspiration and support kept me motivated.

Finally I would like to thank and acknowledge the respondents – without whose assistance, this study would not have been as rich.

I certify that except where noted, this report is my own work and all references have been accurately reported.

DEDICATION

This Masters dissertation is dedicated to my family. Thanks to my parents for their guidance and emotional support throughout my academic career. Your guidance throughout my educational career has allowed me the opportunity to grow to the person I am today. Thanks to my brother for his belief in me.

Jayprakash & Panna Patel

ABSTRACT

Multi-channel retail banking is a novel banking approach, one which encompasses traditional banking approaches as well as modern internet based banking innovations. South Africa (SA) has the potential market to ensure the success of alternative banking strategies, which in turn would lead to better quality banking services.

This study is of importance to banks, providing them with a better understanding of the consumer's interaction within the banking environment. The main objective of the study is to investigate the adoption of multi-channel banking in SA and to develop a theory that explains this phenomenon. Identifying these factors may allow the banks to ultimately improve the quality and reach of services of the channels independently or collectively.

This study is conducted within an interpretivist paradigm under the guidance of an inductive approach. The purpose of this combination is to allow for the exploration of the phenomenon through the use of semi-structured interviews to gather data from only individuals who had bank accounts. The gathered data was analysed employing the techniques available through grounded theory methodology.

Numerous concepts evolved through the analysis of the data and through the open coding technique. The main results showed that the consumer's decision making process and their continual growth of knowledge were highly influenced by varying concepts such as their banking needs, received experiences, the associated costs, preference of channel, the associated convenience and the received satisfaction of the respective channels of choice.

The decision making process included the categories of channel evaluation and channel choice. The concepts within these categories were determined as being highly influenced among the collection of identified concepts. With their choices changing as their circumstances changed the channels were not thought of as independent, but rather a collective from which the consumer could choose from. This demonstrates the existence of the phenomenon of multi-channel banking.

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GLOSSARY

ATM, Automated Teller Machine	An electronic computerised telecommunications device that allows a bank's customers to directly use a secure method of communication to access their bank accounts, order or make cash withdrawals and check their account balances without the need for a human bank teller (Cashier).
Broadband	In general electronics and telecommunications is a term which refers to a signal or circuit which includes or handles a relatively wide range of frequencies.
Digital Wallet	Functions like a physical wallet, providing Internet users with a convenient way to store and use online shopping information.
DSTV	Is MultiChoices's multi-channel digital satellite TV service in Africa
DTV, Digital television	A telecommunication system for broadcasting and receiving moving pictures and sound by means of digital signals.
e-Commerce, (Electronic commerce)	Consists primarily of the distributing, buying, selling, marketing, & servicing of products or services over electronic systems such as the Internet and other computer networks.
EDI, Electronic Data Interchange	Is the computer-to-computer exchange of structured information, by agreed message standards, from one computer application to another by electronic means and with a minimum of human intervention
GPRS, General Packet Radio Services	A mobile data service available to users of GSM mobile phones.
GSM, Global Systems for Mobile Communication	The standards group established in Europe to devise a compatible, common system for mobile phone operators.
HDTV, High-Definition Television	means broadcast of television signals with a higher resolution than traditional formats (NTSC, SECAM, and PAL) allow. Except for early analogue formats in Europe and Japan, HDTV is broadcast digitally, and therefore its introduction sometimes coincides with the introduction of DTV
IPTV	Describes a system where a digital television service is delivered using the Internet Protocol over a network infrastructure, which may include delivery by a broadband connection.
JAVA	A general purpose programming language with a number of features that make the language well suited for use on the World Wide Web.
PVR	Is a device that records video without videotape to a hard drive-based digital storage medium
SIM, Subscriber Identity Module	Is a smart card that securely stores the key identifying a mobile phone service subscriber, also subscription information, preferences and text messages.
SMS	Is a service available on most digital mobile phones that permits the sending of short messages between mobile phones
USSD, Unstructured Supplementary Service Data	USSD is a standard for transmitting information over GSM signalling channels. It is mostly used as a method to query the available balance and other similar information in pre-paid GSM services. The function that is triggered when sending USSD is network-dependent and depends on the specific services the operator is offering.
WAP, Wireless Application Protocol	A global, open standard for providing mobile phones, pagers and other handheld devices with secure access to e-mail and simple WebPages.
WIG, Wireless Internet Gateway	A SIM-based WML browser not only lets a GSM operator deliver web-style content to the current large installed base of mobile phone subscribers, but it offers increased security inherent in the SIM's Smart Card technology.

CHAPTER 1: INTRODUCTION

1 INTRODUCTION

1.1 BACKGROUND AND CONTEXT

Banks have evolved in recent times from the traditional walk-in facility towards multimedia, privatised institutes (Aladwani, 2001). The various types of banks, such as foreign, retail, private and commercial banks offer different services to the consumer, and the choice of bank depends on the consumers' needs. Likewise the retail banking consumer will interact with these banks through a single or combination of channels of their choice depending on their current needs (Black, Lockett, Ennew, Winklhofer & McKechnie, 2002; Simons & Bouwman, 2005).

Over the last forty years the face of banking has been continually changing, providing users more flexibility and better services (Louden, 2004). Being early adopters of technology (Harter, 2001), banks are continually trying to find new innovative banking solutions for consumers to employ (Brown, 2004). With the advancements made in information technology (IT), productivity enhancement allows for more services to be made available (Shanmugam, Suganthi & Balachandher, 2002). An example of this phenomenon is highlighted by the recent exponential growth of the Internet which has transformed the landscape of the financial services industry beyond recognition, allowing for banking services to be conducted with an anytime, anywhere philosophy (Dandapani, 2004; Brown, 2004; Lichtenstein & Williamson, 2006).

The channels available to consumers are: Banking Halls, ATM's, Credit/Debit Card, telephone banking (Interactive Voice Response), PC Banking, and the newer electronic channels of Internet banking (i-banking), Mobile banking (m-banking) and Television banking (t-banking) (Binda, 2005; Luštšik, 2004). These electronic channels grew after the advent of the Internet. They are applications of their respective commerce groupings (Electronic Commerce, Mobile Commerce and Television Commerce). As these three electronic applications are so similar in nature they are affected by many of the same factors, however the degree to which the factors impact on these applications differs (Brown, De Rijk, Patel, Twum-Ampofo, Van Belle, 2006).

In South Africa (SA) the retail banking industry has evolved considerably over the last decade with the introduction of i-banking and m-banking which have resulted from the enhancement of technology. The adoption of these channels is growing (Brown, 2004; Brown, Hoppe, Mugera, Newman & Stander, 2004), but are not yet fully utilised or available to all consumers. t-Banking is one of the channels not available, as Television Commerce (t-commerce) is still in its infancy and many consumers are not yet fully aware of its potential (Brown, Hassim, Lee & Wang, 2005b).

Standard Bank have also launched speech enabled telephone banking, but like most other channels it has yet to overcome obstacles like signatures (Suhm, Bers, Mccarthy, Freeman, Getty, Godfrey & Peterson, 2002). Among all these channels there are only two ways of depositing physical money into users' accounts (the banking hall and ATM), and three ways of withdrawing physical money (the banking halls, ATM's and debit/credit cards). The remaining channels allow for electronic transactions of amounts from account to account, or to digital wallets.

Of all banking channels some are more popular than others, while some are viewed as a necessity for consumers. Banking halls are still required as they act as a doorway to the bank, and users need to verify opening of accounts through this outlet. Some channels are not readily available or accessible to all consumers all the time and because of this consumers will employ one or more channel(s) to maximise efficiency.

A great deal of research into the diffusion and adoption of electronic banking has focused on a single channel at a time. Not much is known about how consumers employ multi-channel banking. This study will use an inductive theory-building approach to develop an understanding of multi-channel banking from the perspective of consumers. The findings will be of direct benefit to banks, as well as to other organisations that employ a multi-channel approach for the delivery of services to the public.

1.2 STATEMENT OF PURPOSE

This paper will look to **'Investigate Multi-Channel Banking Adoption in South Africa'**.

This leads to the following research questions:

1. Why do consumers use multiple banking channels?
2. How do consumers decide which channel to use for a particular service?
3. What factors impact or influence the adoption of multi-channel banking by consumers?
4. Why are these factors of concern to consumers in utilising more than one channel?
5. When and where do consumers decide to use a specific channel for a specific service?
6. Who is affected by these factors and in what way does it impact on their choice?
7. What differences exist between consumers perceptions on multi-channel banking?

> *'The future of [the] banking sector belongs to companies which can not only offer products and services fallen with needs of an individual client, but can provide them at any time and anywhere as well'*
>
> (Binda, 2005, pp.1494)

The above statement can be deemed true, as the banking sector dynamically changes with advancements in technology. Banks will look to provide consumers with the latest available services that technology has to offer. In order for banks to do this they need to ensure their banking services are in line with the technological trends of the future (ACI, 2002; Riivari, 2005). Since its advent the Internet has penetrated many markets and industries setting levels of higher quality and service. Thus to keep with these trends banks have incorporated Internet based services with their daily actions (King, Sen & Xia, 2004).

In the process more technology is becoming Internet compatible, allowing for banking services to grow (Rasch & Lintner, 2001). With the future trends embracing the Internet as the base it is helpful to investigate the Internet based banking channels available. These channels are Internet banking (via personal computer), mobile banking (via mobile phones) and television banking (via television). The study will look to at the level of adoption (diffusion) of the available banking channels among South African consumers.

1.3 OBJECTIVES AND SUB-OBJECTIVES

This research attempts to illustrate the state of multi-channel banking in SA. This in turn may serve to identify the use of the different channels by consumers. The associated objectives and sub-objectives of this study are stated below.

1.3.1 Objectives:

- To investigate the adoption of multi-channel banking in South Africa and to develop a theory that explains this phenomenon.

1.3.2 Sub-Objectives:

1. To identify the factors that impact or affect the usage and deliverance of multi-channel banking.
2. To identify how these factors relate to banking channel usage and to each other.
3. To identify why these factors are of concern to consumers when utilising more than one channel.
4. To identify when these factors impact on the use of channel(s) and under what circumstances.
5. To identify who is affected by these factors and in what way does it impact on their usage.
6. To identify consumer perspectives on multi-channel banking.

These will help to better understand banking behaviour.

1.4 RELEVANCE OF RESEARCH

The current study is of particular importance to banks, as it has the potential to optimise the usage of available channels employed by consumers by identifying which services are mostly associated with these channels. With these factors identified better structures can be put into place, enhancing the effectiveness and efficiency of these channels independently or collectively. This allows for a better overall understanding of use patterns and decision making by consumers with respect to their banking choices. A better understanding will result in less problems associated with these banking channels and will lead to improved quality of service. It also has positive aspects in reducing the ever-increasing crime-rate in SA, as most crimes are directly influenced by the amount of cash available on the streets of the country (Benjamin, 2006).

With better services available to a larger market, than at present, the banks have the potential to attract many more consumers. Creating awareness of the actual channels and the factors affecting these channels may facilitate the growth. This will also help identify whether the adoption of t-banking will be a risk or a success. With new advancements in technology, the newer banking channels have greater potential to reach more consumers with their anytime and anyhow approach as opposed to the previously fixed time and location channels.

> *'...Retail banks must continually optimise their service 'distribution networks' in response to market changes and new business initiatives. Is your infrastructure ready?...'*
>
> (Louden, 2004, pp.1)

This study will help identify the factors that impact on the adoption of multi-channel banking from views of the consumers to ensure banking growth remains steady.

1.5 STRUCTURE OF THESIS

The review of prior, current and relevant literature was conducted in the next chapter. The review introduces and defines the term *'channel'* with respect to the context of this research. These channels were further investigated looking at the individual and comparative studies previously conducted within the banking environment. Following this, the relevance of the terms multi-channel and choice were introduced and addressed.

The research design was discussed and explained in Chapter 3. The principle objective was reintroduced and the sub-objectives were established and elaborated on. The philosophical stance employed by the researcher was stated and discussed. This chapter also discussed the relevant

qualitative and data collection methods utilised in this study. The grounded theory methodology was the selected analysis tool of choice to best allow for the development of a theory from the data.

Chapter 4 discusses the analysis and results of the research with respect to grounded theory. This chapter elaborates on the step-by-step coding procedures of open coding, axial coding and selective coding. These coding processes assisted in introducing new concepts and identifying existing concepts in literature, from the data collected.

Chapter 5 presents the discussion of the results and their implications for this research. Chapter 6 identifies the limitations experienced during the period of this research. Recommendations for future research were also discussed. This research report culminates with the conclusion in Chapter 7.

CHAPTER 2: LITERATURE REVIEW

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2 LITERATURE REVIEW

2.1 INTRODUCTION

The following chapter reviews the necessary literature available to help the researcher gain a greater and holistic understanding of the phenomenon being studied. The purpose of a literature review is to provide the researcher with a greater volume of relevant knowledge in the desired area of interest. An accumulation of such knowledge facilitates the generation of theories, sparks the interest for potential phenomena to be studied and seals away areas of surplus research (Webster & Watson, 2002). Furthermore a literature review allows the reader the opportunity to obtain a necessary understanding of the phenomena in question (Webster & Watson, 2002).

Due to the researchers coursework requirements an initial literature review and research design was conducted. However, in keeping with the proposed methodology (discussed in Section 3.6), the construction of this literature review was continuous, done in parallel with each of the subsequent chapters so as to minimise the bias and influence towards the researcher to follow a predetermined path. With the aid of constant comparative analysis and theoretical sampling the data gathered was allowed to grow naturally, without external influences. The terms constant comparative analysis and theoretical sampling will be defined and discussed in Chapter 3.

The literature review begins by introducing and discussing the various channels provided by the retail banks in SA. A meta-analysis was carried out identifying the individual channels that have been researched and/or compared with another. The electronic based banking channels such as internet banking (i-banking) and mobile banking (m-banking) were granted more attention as they protruded from the data as being much more significant. This section is followed by a meta-analysis of banking channel studies.

When the study commenced the concept of *'multi-channel'* in a banking context was not researched much. However, during the course of this study more research on multi-channel has been published and made available. For this reason, and keeping in line with the constant comparative analysis there is a section pertaining to this concept.

During the process of the data collection the concept of *'choice'* evolved as being one of great importance. At this stage further research was conducted in this field and integrated into the literature review. This chapter ends with a summary of the literature review.

2.2 *BANKING CHANNELS*

Banks offer many different channels to access their banking and other services. These *'channels'* refer to the medium of interaction with the bank employed by the consumer (Laukkanen, 2007). This section will introduce the different banking channels available to consumers in retail banking within SA. Table 2.1 below shows the banking channels that will be discussed identifying their online or offline nature if they are electronic based channels.

Table 2.1 - Available Banking Channels

Channel [Technology]	Traditional/Electronic	Online/Offline
Banking Hall	Traditional	Offline
ATM's (Cash dispensers)	Traditional/Electronic	Offline/Online
Telephone banking [Voice-IVR]	Electronic	Offline/Online
Internet banking (Internet)	Electronic	Online
Mobile banking (SMS banking) [WAP, SPRS,3G]	Electronic	Online
TV-banking (Interactive Television)	Electronic	Online

(Adapted from Binda, 2005; Luštšik, 2004; Scarborough & Grieser, 2006)

2.2.1 Traditional Banking

Banking hall

The banking hall, also referred to as the banking branch, was the first outlet made available to consumers to store their financial gains in a more secure environment. The banking hall allows the consumer to conduct all the services a bank has to offer at the expense of the time lost in waiting for the service to be completed (Mols, Bukh & Nielsen, 1999).

The majority of the consumer base of banking hall consumers is of older, non-computer literate persons who prefer the personal relationships forged with the bank personnel (Mols et al., 1999) and enjoy the interaction as they feel more in control of the situation. The banking hall is and will remain a traditional means of banking.

The banking hall has an order of movement. After the consumer arrives at the banking hall they are required to wait in queues for either the teller or the consultant to address their specific needs. Consumers need to ensure that they conduct their banking needs within the banking halls operating hours, which potentially can be extremely difficult and can also become monotonous very quickly.

It has been seen time and again that an expansion in branching tends to increase competition within the banking environment (Carlson & Mitchener, 2005). However if the branching is not managed correctly it could lead towards bank failure resulting in the banks merger or sale (Carlson & Mitchener, 2007).

2.2.2 Electronic Banking (e-Banking)

The digital age has led to advancements in information technology. These advancements have resulted in banks being able to offer services to their consumers in different, more effective and cost efficient ways (Lichtenstein & Williamson, 2006; Binda, 2005; Shanmugam et al., 2002). The definition of e-banking however differs amongst researchers. e-Banking can be characterised as an electronic connection between the bank and the consumer to prepare, manage and control financial transactions (Luštšik, 2004). It can also be defined as the automated delivery of new banking products and services directly to consumers through electronic, interactive communication channels (FFIEC, 2003), such as computers, mobile phones, ATMs and televisions.

The versatile services that these channels provide include balances on accounts, transfer funds, and payments to name a few. Consequently e-banking is the provision of banking services via means other than traditional physical branches, allowing consumers more control over when and where they perform their banking transactions (Liao, Shao, Wang & Chen, 1999). Some of these electronic channels are conducted offline providing delayed information, while others are conducted online providing real-time information.

The usage of any of these channels may vary depending on the level of details required by the transactions. In December of 2008 global Internet access exceeded 1 463 million people (IWS, 2008), offering new markets for Internet-based services, such as e-banking (Lichtenstein & Williamson, 2006).

> *'A bank robber once infamously remarked, when asked why he robs banks: 'Because that is where the money is!' In the modern era, money has become bits of data stored on computers and moves around the world as bytes of information on data communication networks.'*
>
> (Kumar & Hillegersberg, 2004, pp. 30)

Despite the exponential growth of Internet, some organisations are not taking full advantage of the available technologies and are falling behind their competition (Southard & Siau, 2004). The e-banking options are explained next.

Automated Teller Machine (ATM)

Looking for other means of interaction with consumers the City Bank of New York rolled out the earliest patented version of an automated teller machine (ATM) in 1939 (MIT, 2003). However, this was short lived as the consumer acceptance was low. Over two decades later, in 1967, the first electronic ATM was installed by Barclays Bank. Four decades later there are over 1.6 million ATMs worldwide (BBC, 2007).

The ATM has evolved over the years. From allowing consumers to withdraw vouchers of cash to now requiring the consumers plastic ATM card and the respective personal identification number (PIN) that allows them permission to interact with the bank (Moncur, Leplatre, 2007). The ATM cards are associated with magstripes or smart cards. Magstripes are a low cost debit card based around magnetic stripe technology. This allows for online access to consumers accounts through a network of point of sales (POS) or ATMs (Cracknell, 2004). Smart cards contain an imbedded machine readable chip that allows for offline transactions. The card is loaded with value by the consumer either over the counter, ATM or POS (Cracknell, 2004).

Today's ATMs are no longer restricted to only performing withdrawals. These ATM's also allow the consumer a selected range of other services, like making deposits or transferring payments (Cracknell, 2004; Hartley, 2006; Moncur, Leplatre, 2007). The consumer is also provided the convenience of being able to pay fines and bills through the ATM (Moncur, Leplatre, 2007). However, a consumers' main use of an ATM is the withdrawal of cash. ATMs are linked via nationwide networks allowing consumers to access ATMs of other banks to withdraw cash or even deposit cash. Some ATMs are connected through interbank networks allowing services to occur across banks (Hartley, 2006).

This networking between banks increases the charges consumers incur for ATM usage (BBC, 2005). However, this is not the biggest deterrent of ATM use. Consumers are very wary of their physical security around ATMs. There is fear of being robbed after withdrawals or their cards being cloned and ultimately their electronic finances being siphoned off (News24, 2007). ATM banking is one of the earlier electronic banking channels that is still popular amongst consumers. However, little research has considered the interaction of people and technology in public zones (Little, 2003).

Telephone banking

Telephone banking was introduced to supplement the traditional banking hall. This channel allows the banks to lower the cost incurred for both the consumer and the bank (Ahmad & Buttle, 2002). Telephone banking requires the consumer to phone into the bank and interact with bank personnel or an automated phone answering system with phone keypad response or interactive voice response (IVR) (Sankar, Greyling, Vogts & du Plessis, 2008; Suhm et al., 2002).

The technology behind the IVR allows computers to detect voice and keypad inputs. These inputs are traced through the IVR engine. The consumer is guided through various information categories towards the desired information which is ultimately voiced out. (Greeff, Coetzee,& Pistorius, 2008).

Many consumers tend to dislike touch-tone IVRs that are difficult to use, instead they would wait for the first available consultant. This touch-tone problem has brought about speech enabled IVRs (Greeff et al., 2008; Suhm et al., 2002). This allows the channel to be available all hours of the day, all week at a location suitable for the consumer (Mols et al., 1999).

With telephone banking becoming convenient the number of consumers using telephone banking has been growing steadily from one in five consumers a decade ago (Ahmad & Buttle, 2002) towards one in three. However, telephone banking has the lowest adoption rate in comparison with banking halls, ATMs and i-banking (Wan, Luk & Chow, 2005).

Internet banking (i-banking)

The introduction to electronic commerce (e-commerce) allowed many alternate avenues for organisations to use innovative electronic applications to overcome common difficulties. One of these applications is Internet-banking. In short Internet banking has been classified as the provision of information services offered by a bank to its consumers over the Internet (Floh & Treiblmaeir, 2006; Tan & Teo, 2000). When i-banking was initially introduced the application was only information driven, providing consumers with information about the banks' products and services. Today, with the growth in asynchronous and secure transaction technologies, it is both information and transaction driven. Consumers can now perform financial transactions over the Internet (Tan & Teo, 2000).

i-banking stemmed from PC (Home) banking. Essentially both channels allow for the provision of the same services. However the difference resides in that PC banking requires extra proprietary software to be installed on the consumers' machine, to access the banks services over the Internet, such as Electronic Data Interchange (EDI) (Cheung, 2001; Liao et al., 1999). On the other hand, i-banking is browser-based and can be accessed from the public network of the Internet.

This allows for *'anytime, anywhere'* usage provided Internet access is available (Cheung, 2001; Liao et al., 1999). A notable restriction of PC banking was that the software packages were unique and incompatible with other packages (Liao et al., 1999). i-Banking is still relatively new in comparison with other channels such as ATM's and telephone banking, however its growth has been significantly sharper.

Appendix A represents the types of interactions introduced through i-banking. These services can be observed to be a direct cause of growth and adoption of i-banking. However, the services noted are not

the only services available, with specific banks being more responsible for the services offered to the consumer (Buys & Brown, 2004).

Currently, i-banking is an integral part of banking for both banks and consumers, and is not seen merely as a means for banks to gain competitive advantage (Brown & Buys, 2005). Since approximately 24.7% of the world has Internet access (ranging from dial-up to broadband), this banking approach has a limited consumer base. Of the 1 463 632 361 Internet users worldwide, only 51 365 630 users are from Africa with 4 590 000 from SA (IWS, 2008).

Mobile banking (m-banking)

Even though there is a lack of standards in terms of concepts and theories, m-commerce is thought of as the same as e-commerce and a clear distinction has rarely been made between them (Okazaki, 2005). The big difference being that the services are conducted over a mobile device such as a mobile phone or PDA (Personal Digital Assistant). With the rapid rise in acceptance of Internet-enabled mobile handsets as a result of its personal touch and sophisticated communication technologies (Okazaki, 2005; Riivari, 2005), e.g. mobile phones (Mallat, Rossi & Tuunainen, 2004), there is a potentially large market for banks to penetrate to reinforce their market presence (Riivari, 2003). From this, m-banking can be understood as the part of products or services established between banks and/or consumers based on a mobile device (Rusu & Dospinescu, 2005).

With mobile phones increasingly being used to communicate data and not only voice, a market for m-banking was born (Brown, 2004). This form of banking allows consumers to access restricted i-banking services, such as bill payments and viewing accounts, through their mobile phones (Brown, Gordon, Janik & Meyer, 2005a). In its simplest form m-banking allows consumers to receive information, via SMS, about their account balances (Mallat et al., 2004). With today's technological advancements mobiles phones are now JAVA enabled, wireless application protocol (WAP) (Brown et al., 2005a) and subscriber indemnity module (SMS) based wireless internet gateway (WIG) (Brown, Cajee, Davis & Stroebel, 2003; Cellular Online, 2004) enabled technologies using general packet radio services (GPRS) or unstructured supplementary service data (USSD) to support many more services such as fund transfers, stock trading and confirmation of direct payments. These services are possible as they are essentially modified versions of i-banking displayed on the phones micro browser (Mallat et al., 2004).

The continued expansion of mobile networks, penetration rate of mobile phones and use of banking services over the Internet allow m-banking to maintain its anticipated strong growth (Rusu & Dospinescu, 2005). As a result of these motivating factors and others to be mentioned in the sections

that follow, the banks' interest in m-banking is continually growing (e-Business Handbook, 2005). With the ability to conduct various banking services regardless of time and place, little or no effort is required, making this banking approach widely attractive to consumers (Dandapani, 2004). Appendix A also provides a table of the services that make m-banking so attractive.

In 1995 there were roughly 91 million mobile subscribers worldwide. In a mere six years the subscriber base grew to 946 million. Some nations have experienced subscriber base growth rates exceeding 100%, like Senegal whose base grew from 100 consumers to 390 thousand, Egypt from seven thousand to under three million, and Romania from nine thousand to about four million consumers (Overmorgen, 2002). Today, however, there are an estimated two billion mobile phones in the market worldwide, leaving about 4.5 billion people without this privilege (Leo, 2006). Thus the potential for m-banking is immense.

Television banking (t-banking)

t-Commerce is essentially the buying and selling of goods and services over a digital television (DTV) (Technical Evaluation, 2005). This electronically mediated commerce using interactive television (Yu, Ha, Choi & Rho, 2005) has been noted to be a viable future banking approach, with more television sets in households worldwide than PCs (Shapshak, 2002). Even with this opportunity, businesses are unable to exploit this widely trusted and available medium, and as a result, early expectations of t-commerce have not been met (Shapshak, 2002). This could be due to the actual medium itself. The television is seen a passive product whereby it is seen as a means of entertainment in the household and not for business (Pemberton & Griffith, 2005). It is also secondary activity in some cases, where viewing occurs whilst performing other activities, like cooking or eating (Technical Evaluation, 2005).

Broadband communication in households allows the television set to become an e-commerce medium that merges voice, video and transactional data (Yu et al., 2005). This leads to one of the newest applications provided by banks to consumers, t-banking. With the aid of satellites and cable TV the client is able to conduct banking services such as checking account balances, pay bills or transfer money (Binda, 2005). For this application to operate a digital transmission channel is required (Brown et al., 2005b), for example, DSTV (Digital Satellite TV) in SA.

With more television sets in households worldwide than PCs there is great potential for t-banking to become an equal player in the e-banking market (Shapshak, 2002). In Europe, there is still growth in the DTV (Digital Television) market with an expected rise up to 44% in 2007 in comparison to its 11%

in 2002 (Binda, 2005). However, even with such a large potential market it should be noted that for any t-commerce services to occur, DTV is required by the consumer as t-commerce is essentially electronically mediated commerce (Armstrong & Collins, 2004; Yu et al., 2005).

At present the t-banking market is limited in SA, as only a small percentage of the population has access to digital TV in the form of DSTV. In 2000, Standard Bank and MultiChoice rolled out an early version of t-banking, but because of limited technology the service was very simple and unimpressive. The service was available on DSTV channel 142. Standard Bank's intention was to learn from the environment before expanding on a larger scale (De Wet, 2000). Slowly the available technologies in SA are improving, as seen with the introduction of Personal Video Recorder (PVR) and Internet Protocol TV (IPTV) (ITWeb, 2006) and with this MultiChoice are expecting the uptake to be significant.

For some nations it comes down to technological and economical barriers that impede its growth and progress. This is the case in Poland (Binda, 2005), but quite the opposite in Romania where the market is price sensitive and relatively large (Hlaciuc, Mihalciuc & Daschievici, 2005). Research conducted by Celent Communications estimated that by 2004 the number of European consumers utilising t-banking services would reach the 10 million mark (Shapshak, 2002). However there are still many factors that will limit the growth of t-banking, and until they can be identified and overcome this service will not make significant enough inroads into the e-banking market.

2.3 MULTI-CHANNEL

In its simplest form multi-channel represents the use of two or more approaches (channels) to complete some known task (Zaharia & vom Strombeck, 2003). The concept of multi-channel has been used by many different organisations and individuals. Some of the uses of the multi-channel concept have been researched in education (vom Brocke, 2006; Wang and Ye, 2004), audio and sound (Bourlard, 1999), retail (Laukkanen & Lauronen, 2005; Laukkanen, 2006; Laukkanen, 2007, Marchetti, Pernici & Plebani, 2004; Madlberger, 2004; Müller-Lankenau, Klein & Wehmeyer, 2004), banking (Buhl, Kundisch, Leinfelder & Steck, 2000; Louden, 2004; Pinches, De Francesco & Onoufriou, 2004; Royal Bank of Scotland, 2005; Scarborough & Grieser, 2006), strategies (Louden, 2004; Müller-Lankenau, 2005; vom Brocke, 2006; Zaharia & von Strombeck, 2002), and marketing (Madlberger, 2004; Riggins, 2004; Vishwanath & Mulivin, 2001, Zaharia & von Strombeck, 2002). However, the multi-channel concept is predominantly utilised in marketing.

Multi-channel marketing refers to the use of more than one method to sell products or services. These methods include the traditional methods, such as newspaper advertisements, retail stores or telephone

sales, in addition to the new electronic methods (as a direct result of the Internet boom), such as online stores or SMS's (Madlberger, 2004; Marchetti, 2004; Müller-Lankenau et al., 2004; Müller-Lankenau, 2005; Riggins, 2004; Vishwanath & Mulivin, 2001;Zaharia & von Strombeck, 2002; Royal Bank of Scotland, 2005). This multi-channel approach allows organisations more opportunities to interact with the consumers, with the usage of each channel having the ability to reinforce another channel (Buhl et al., 2000; Louden, 2004; Pinches et al., 2004). Since approximately 75% of consumers will be utilising more than one channel, the multi-channel marketing approach is assumed to be beneficial (Riggins, 2004; Zaharia & von Strombeck, 2003).

2.3.1 Multi-Channel Banking

In terms of banking, Multi-Channel refers to the usage of more than one of the available banking channels (Laukkanen & Lauronen, 2005; Laukkanen, 2007; Liao et al., 1999; Riggins, 2004; Scarborough & Grieser, 2006). This does not mean that more than one channel is used to do the same transaction at the same time, but rather that more than one channel is capable of completing the same task. It depends on which one the consumer opts to utilise at the given time (Carroll, Howard, Peck & Murphy, 2003; Scarborough & Grieser, 2006, Vishwanath & Mulvin, 2001).

There are many banking channels available to consumers that range from the traditional banking hall to the new electronic channels like Internet banking. With the successful introduction and adoption of the Internet, internet based 'virtual' banks were conceived. This often meant that there was no physical, *'brick and mortar'*, outlet. Instead virtual banks embraced the available electronic channels. However, lack of adoption and use led to the failure and subsequent dissemination of most of these banks, with only a few remaining (Laukkanen, 2006; Laukkanen, 2007; Liao et al., 1999). This seemingly fruitless venture further emphasised the need for traditional approaches – the banking hall most notably is still essential for the success of. With that in mind it does not mean that the banking halls are the most frequently used banking channel, consequently with approximately 65% of current world wide consumers regularly using the ATM for their banking needs (Louden, 2004). These findings were confirmed by Brown and Buys (2005), who identified the significant usage of ATMs in their study of the South African banking market.

These channels are still primarily standalone applications with limited collaboration and integration. This is largely due to the banks multiple views of the consumer, with the use of each channel being targeted to different consumer markets (ACI, 2002; Laukkanen & Lauronen, 2005; Laukkanen, 2006; Laukkanen, 2007; Pinches et al., 2004) as opposed to each channel targeting the same consumer

market. This leads to consumers' experiences of these channels to vary as there are fewer consistent services and transaction capabilities across these channels (Pinches et al., 2004; Scarborough & Grieser, 2006).

Enders, Jelassi, König & Hungenburg (2006), suggested that initially the technology may not meet the consumer's performance demand, but over time, as technology advances the consumer is unable to utilise the full potential that the technology has to offer. Thus a possible deterrent to the multi-channel approach is that technology is growing at a faster rate than the consumers demand for better performance (Moore's Law).

This can lead to technology in its early stages experiencing non-adoption not because the technology does not work but because there are limited resources and infrastructure to see the further growth of the technology (Enders et al., 2006; Tan & Teo, 2000).

An example of this is the South African banking market. When internet banking was first launched the uptake was low due to the lack of availability of access to the technology (Enders et al., 2006). The lack of exposure, which intensified the lack of compatibility with the consumer's lifestyle, hindered usage of this channel (Brown et al., 2005a). However, the potential that new technologies provide is still great. Now banks are able to provide services that can reach further than before, into regions of little or no banking experience (ACI, 2002, Pinches et al., 2004). For the banks it promotes a more efficient, less costly transaction handling environment (ACI, 2002).

The usage of multiple channels clearly enables the banks to extend their reach, increasing their capacity to communicate with more consumers (Laukkanen & Lauronen, 2005; Laukkanen, 2006; Laukkanen, 2007; Louden, 2004; Pinches et al., 2004; Scarborough & Grieser, 2006). However, to maintain consumer trust it is imperative to provide a familiar environment and consistent service across these channels (ACI, 2002; Binda, 2005; Pinches et al., 2004; Scarborough & Grieser, 2006).

2.3.2 Patterns of Banking Channels

The research introduces the concepts of multi-channel and electronic banking. Of the types of banking channels identified a lot more research has been conducted with respect to i- banking and m-banking. The use of i-Banking and m-banking have risen in certain developed and developing countries globally, including the United States of America (USA), Europe and Far East. Whilst the popularity of alternative banking strategies is vastly increasing globally, SA has been slow to adopt the new and emerging banking technologies.

The current literature shows that even though the mobile market is significantly bigger in size than the Internet market, the use of m-banking is still inferior to i-banking (Goldstuck, 2004a; Goldstuck, 2004b; Goldstuck, 2005). The current state of these channels is overviewed over two regions: a Global View and South Africa. It is observed that the growth of these channels in SA is not as prominent as in other countries, such as Japan, USA and the United Kingdom (UK).

Table 2.2 - Summary of Global Trend

Channel	State of Channel	Reference
Banking Hall	UK – Branching increases competition US - 32% of the banks in 1997 were purchased by other banks by 2004.	Carlson & Mitchener, 2005; Carlson & Mitchener, 2007.
ATM	USA – Failed Launch in 1939; UK – Successful Launch in 1967 UK – Over 1.6 million ATMs worldwide Hong Kong – Most frequently adopted channel Europe & North America - Majority of cash Withdrawals done by ATM	MIT, 2003; BBC, 2007; BBC, 2007; Wan et al., 2005; Thatcher, Shaik & Zimmerman, 2005.
Telephone Banking	Hong Kong – Introduction in 1989; UK – Growing Preference	Wan et al., 2005; Ahmad & Buttle, 2002.
i-banking	Launched in 1984; USA – 53 million users in 2004; Germany – 40% of accounts are online; Australia – 5.5 million users in 2005; Romania – 10000 users in 2005	Enders et al., 2006; Floh & Treiblmaeir, 2006; Association of German Banks, 2004; Lichtenstein & Williamson, 2006; Dospinescu & Rusu, 2005.
m-banking	Estimated two million mobile users in 2006; USA – 203 million subscribers; Africa – has highest mobile phone growth rate; m-banking had slow take-off; Taiwan – 24.5 million mobile subscribers, but less than 1% utilise m-banking; Italy – 1.4 million m-banking users; Korea – estimated over six million users by 2006.	Leo, 2006; Leo, 2006; Butler, 2005; Riivari, 2005; Luarn & Lin, 2005; Riivari, 2005; Ihlwan, 2004; Tae-Gyu, 2004.
t-banking	UK – uptake was slow and some banks ceased with these services; Korea – introduced by four service providers in 2005;	Telewest, 2000; iPark, 2005; Parthajit, 2005.

Table 2.3 - Summary of Trend in SA

Channel	Current State	Reference
ATM	ATM Fraud Credit and ATM Fraud	News21, 2007; IOL, 2008.
Telephone Banking	IVRs reduce costs; Speech enabled IVRs	Sankar et al., 2008; Greeff et al., 2008.
i-banking	Introduced in 1994; 8% of population use internet; Internet usage costs are high; Big four retail banks offer i-banking; In excess of one million i-banking users in 2005	Brown, 2004; Goldstuck, 2004a; IWS, 2008; Brown, 2004; News24, 2002; Brown & Buys, 2005.
m-banking	Launched in 1998; 19 million mobile subscribers in 2006 Market is small due to slow connectivity and high data rates; The big four banks provide m-banking together with the mobile phones service providers;	e-Business Handbook, 2004; Cellular Online, 2004; Riivari, 2005; e-Business Handbook, 2005.
t-banking	Sentech looking to reach a 92% national coverage before 2010 changing from analogue to digital; Can access digital with a set top box and smart card; Market is limited due to access to digital TV; MultiChoice SA in talks to introduce t-banking services to SA	Mochiko & Khuzwayo, 2006; De Wet, 2000; Parthajit, 2005; De Wet, 2000; Shapshak, 2002.

The states of theses banking channels are tabulated above summarising a global trend (Table 2.2) and a trend in SA (Table 2.3).The tables are structured to show the state of relevant channels and their related references. The first column identifies the channel (Channel), and the second column

provides a state of the channel within some period of time or some country (State of Channel), while the final column shows the related reference for the state mentioned.

To gauge a better understanding of the banking environment it is necessary to analyse various theory models for adoption of new technologies to determine the level of the adoption of banking channels.

> *'...models have provided researchers with a theoretical framework to guide many of the studies that have sought to predict and explain end-user adoption and acceptance of information systems (IS).'*
>
> (Rawstorne, Jayasuriya & Caputi, 2000, pp35)

2.4 E-BANKING ADOPTION MODELS

These theory models will highlight some factors that aid or hinder the progress of the adoption of technologies. Figure 2.1 below illustrates the general idea of a user acceptance model (Venkatesh, Morris, Davis & Davis, 2003). This model shows the flow between intending to use the technology to actually using the technology.

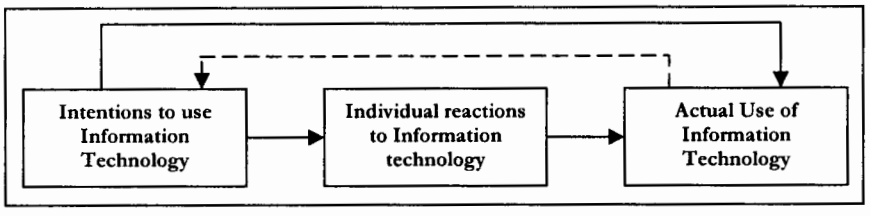

Figure 2.1 - Basic Concept Underlying User Acceptance Models

(Source: Venkatesh et al., 2003)

Various models have been utilised, some independently while others have been used in conjunction with others. These adoption models, with respect to banking research, will be explained in further detail next.

2.4.1 The Theory of Reasoned Action (TRA) & Technology Acceptance Model (TAM)

The TAM model is a derivation of the Theory of Reasoned Action (TRA) model proposed by Ajzen in 1975 (Davis 1989; Davis, Bagozzi & Warshaw, 1989; Lee, Kozar & Larson, 2003a). The difference being that the TAM model replaces the attitude construct with two fundamental and distinct constructs, better explaining the intention precisely (Venkatesh et al., 2003). The TAM model was specifically designed to explain and predict IS usage behaviour (Alshare, Grandon & Miller, 2004, Mathieson, Peacock & Chin, 2001; Phillips, Calantone & Lee, 1994; Venkatesh et al., 2003).

Davis and Bagozzi developed TAM from TRA illustrating that beliefs influenced attitudes about information technology (Davis 1989). These beliefs lead to intentions and subsequently behaviours of actual technology usage (Davis et al., 1989; Lee et al., 2003a; Chen, Gillenson & Sherrell, 2000).

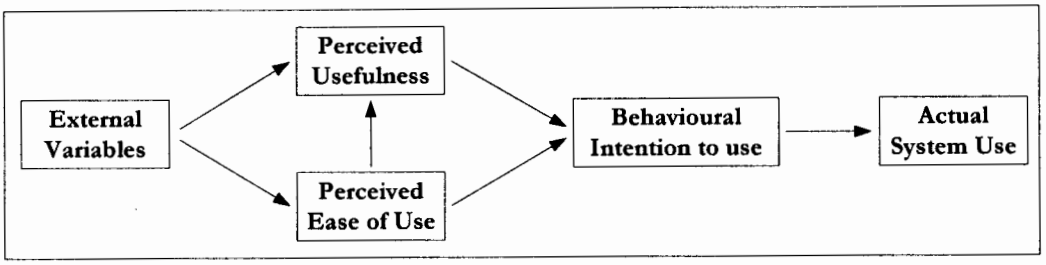

Figure 2.2 - Technology Acceptance Model

(Source: Venkatesh, 1999)

The two fundamental and distinct constructs that TAM introduces are illustrated in Figure 2.2 [Perceived Usefulness and Perceived Ease of Use] (Alshare et al., 2004; Rawstorne et al., 2000; Venkatesh, 2003; Venkatesh et al., 2003). These constructs are the key determinants of IS usage in this model (Alshare et al., 2004).

Even though TAM is useful in predicting and explains the use of technology, it fails to provide an understanding of individuals' opinions about the technology (Lu, Yu, Liu & Yao, 2003). However with the appropriate adjustments TAM allows for application with many diverse sets of technologies other than only the acceptance of computer based technology (Phillips et al., 1994; Venkatesh et al., 2003). Various external variables have indirectly affected intention to use through perceived usefulness and perceived ease of use. The studies that have employed TRA or TAM to investigate the adoption of e-banking channels have identified various factors. The factors identified with some of the more recent studies conducted in e-banking with regards to TRA and TAM is shown in Table 2.4, along with the reference and their respective findings. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.4 - Some e-Banking Adoption research conducted through TAM or TRA

Reference	Technology	Factors	Findings
Nor, Abu-Shanab & Pearson (2008)	Internet	Time Pressures; Social Density; Privacy; Safety; Design and Location; Age; Gender; Race; Usefulness, Ease of Use, Compatibility with values, and Image; Perceived Usefulness, Ease of Use; Trust; Usage; Relative Advantage; Perceived Usefulness; Perceived Ease of Use; Perceived Credibility; Perceived Financial Cost; Perceived Self-Efficacy; Awareness.	Results have supported the theory's proposition that individuals' behavioural intention to use Internet banking is influenced by their attitude and subjective norm. The results indicate the applicability and ability of the theory of reasoned action to predict adoption intentions.
Eriksson, Kerem & Nilsson (2005)	Internet		The findings of this study point to the perceived usefulness of internet banking as the primary reason that Estonian bank customers use the internet for banking.
Little (2003)	ATM		Attitude towards ATM use is influenced by several external factors. Effect on use is mediated exclusively by each construct independently and/or in combination.

2.4.2 Theory of Planned Behaviour (TPB)

The TPB is another extension of TRA. Along with the constructs, attitude toward the behaviour and subjective norm, from the TRA there is an additional construct, perceived behavioural control (PBC) (Brown, 1999). PBC is essentially the individual's belief in the ease or difficulty of performing the behaviour (Brown, 1999; Rawstorne et al., 2000; Venkatesh et al., 2003). Thus PBC has an inverse relationship with volition, so as volitional control declines PBC increases.

This theory proposes that subjective norms and PBC (skills, opportunities, and resources needed to use the system) also influence behaviour not only the attitude toward the use (Lu et al., 2003). The theory...

'...predicts deliberate behaviour as behaviour can be deliberative and planned...'

(Universiteit Twente, 2004).

Behavioural performance is predicted by an individuals' perception of control over behaviour and their intention to actually perform the behaviour (Doll & Ajzen, 1992). This is illustrated in Figure 2.3.

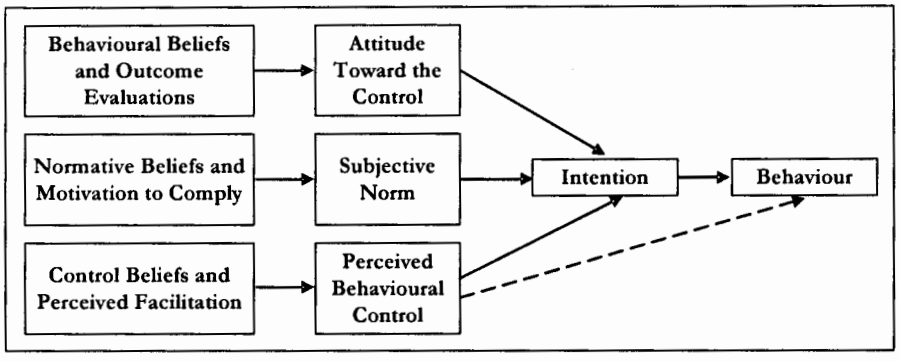

Figure 2.3 - Theory of Planned Behaviour

(Source Mathieson et al., 2001)

The three categories of TPB hold a collection of factors that indirectly affect behaviour through intention. With respect to e-banking this collection of factors is tabulated below, with references and their respective findings of some of the more recent studies. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.5 - Some e-Banking Adoption research conducted through TBP

Reference	Technology	Factors	Findings
Lee (2008)	Internet	Convenience; Security and Privacy; Economic Benefits; Age; Education; Gender; Income; ; Control; Visibility; Image; Perceived Usefulness; Perceived Ease of Use; Perceived Credibility; Perceived Financial Cost; Perceived Relative Advantage; Compatibility with values; Internet Experience; Banking Needs; Complexity; Trialability; Risk; Subjective Norms; Self-Efficacy; Government Support; Technology Support.	Suggests the proposed model is capable of explaining a relatively high proportion of variation of intention to adopt online banking.
Hernandez & Mazzon (2007)	Internet		Results from the proposed model suggest that its ability to explain adoption of internet banking exceeds that of previous studies.
Shih & Fang (2004)	Internet		The intention to adopt Internet banking can be explained by attitude. However, only relative advantage and complexity are related to attitude, while compatibility is not.

2.4.3 The Innovations of Diffusion Theory (IDT)

Innovations of Diffusion (IDT) is a well established model whose roots are found in rural sociology, geography, medical sociology, cultural anthropology and industrial economics as well as technology (Gatignon & Robertson, 1985; Lee, Lee & Eastwood, 2003b). Since the 1960s this theory has been used to study a variety of innovations, from agricultural to organisational innovations (Tornatzky & Klein, 1982; Venkatesh et al., 2003).

The diffusion theory is a collective use of multiple theories from different disciplines, each focusing on a different element of the innovation process. These theories combined create a meta-theory of diffusion (Surrey & Farquhar, 1997). There are four theories among these that look at adoption of innovation from different viewpoints (Surrey & Farquhar, 1997; Clarke, 1999; Orr, 2003). These theories are:

- **Innovation Decision Process;**
- **Individual Innovativeness;**
- **Rate of Adoption; and**
- **Perceived Attributes.**

Research regarding the adoption of e-banking with respect to the innovations of diffusion theory is captured in Table 2.6. This table highlights the factors of significance along with the findings of the respective research. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.6 - Some e-Banking Adoption research conducted through IDT

Reference	Technology	Factors	Findings
Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé & Sanz-Blas (2009)	Internet	Accessibility; Confidentiality; Convenience; Economic Benefits; Compatibility; Trialability; Observability; Risk; Personal Innovativeness; Complexity; Relative Advantage; Competition.	Consumer innovativeness as a key construct to improve e-banking adoption both directly and by its effective role in reducing consumer risk perception of using internet channel in the financial services context.
Gerrard & Cunningham (2003)	Internet		The results suggest that consumers are very concerned with the accessibility and confidentiality as they relate to internet banking.
Bradley & Stewart (2002)	Internet		Identified drivers and inhibitors to internet banking adoption.

2.4.4 Combined Adoption Models

Combined TAM and TPB (C-TAM-TPB)

This model essentially combines the predictors of TPB with the perceived usefulness from the TAM model (Taylor & Todd, 1995). Thus the four construct are:

- **Attitude Toward Behaviour:** Adapted from TRA/TPB.
- **Subjective Norm:** Adapted from TRA/TPB.
- **Perceived Behavioural Control:** Adapted from TRA/TPB.
- **Perceived Usefulness:** Adapted from TAM.

This model incorporates the factors that are important determinants of behaviour, which are not present in TAM and also provides a better understanding of usage that is missing from TPB (Lu et al., 2003). Table 2.7 highlights significant factors introduced by the application of this combined theory with respect to single channel banking. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.7 - Some e-Banking Adoption research conducted through TAM-TPB

Reference	Technology	Factors	Findings
Luarn & Lin (2005)	Mobile	Perceived Credibility; Perceived Financial Cost; Perceived Self-Efficacy; Perceived Ease of Use; Perceives Usefulness; Complexity; Social Influences; Trust, Ease of Use; Personal Innovativeness; Age; Income; Gender;	Compared with prior studies integrating the TAM and TPB, the findings of this study strongly suggest that our extended TAM has a higher ability to predict and explain behavioural intention to use an information system.
Lu et al, 2003	Internet/ Mobile		The intention to use attitude towards using are adopted as important decision variables to defer user acceptance.

Decomposed Theory of Planned Behaviour (DTPB)

DTPB brings together two distinct lines of research in the form of TPB and IDT. This theory was proposed by Taylor & Todd (1995). This theory offers advantages by enabling the easier understanding of the relations among the beliefs, attitudes and intentions. Also the model can be applied to various situations allowing for the identification of specific factors for the adoption and use of the new technology. Table 2.8 identifies the factors and findings of some research conducted in e-banking adoption with respect to DTPB. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.8 - Some e-Banking Adoption research conducted through DTPB

Reference	Technology	Factors	Findings
Hernandez & Mazzon (2007)	Internet	Compatibility; Banking Needs; Internet Experience; Complexity; Trialability; Risk; Subjective Norm; Self-Efficacy; Technology Support; Government Support; Age; Income; Ease of Use; Convenience; Security and Privacy; Image; Visibility; Education; Social Norm; Economic Benefit; Cellphone Experience; Perceived Risk; Relative Advantage.	Results from the proposed model suggest that its ability to explain adoption of internet banking exceeds that of previous studies.
Jaruwachirathanakul & Fink (2005)	Internet		Whether these factors inhibit adoption is determined by the degree of control the bank has of the factors.
Tan & Teo (2000)	Internet		The findings show that intention to adopt Internet banking services can be predicted by attitudinal and perceived behavioural control factors, but not by subjective norms.

TAM-TPB-IDT

This theory is derived from the combination of the technology acceptance model (TAM), theory of planned behaviour (TPB) and the innovations of diffusion theory (IDT) (Yi, Jackson, Park & Probst, 2006).

An example of the use of this theory to explain adoption of a banking channel is tabulated below. The table shows the source of the model with its respective accumulation of factors and findings.

Table 2.9 - Some-Banking Adoption research conducted through TAM-TPB-IDT

Reference	Technology	Factors	Findings
Yi, et al., (2006)	Internet	Perceived Behavioural Control; Perceived Ease of Use; Perceived Usefulness; Subjective Norm; Personal Innovativeness; Image, Demonstrability.	The objective of our study was to integrate the three streams of research and define the relationships between their key constructs in explaining and predicting technology acceptance.

Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT model is an acceptance model which integrates eight prominent models. These models are the Theory of Reasoned Action (TRA), TAM, Motivational Model (MM), T heory of Planned Behaviour (TPB), C-TAM-TPB, Model of PC Utilisation (MPCU), IDT and the Social Cognitive Theory (SCT) (Anderson & Schwager, 2004). Seven constructs were identified to be important direct determinants of intention or usage. However, only four of these constructs play a vital role in acting as direct determinants of user acceptance and usage behaviour (Venkatesh et al., 2003), as shown in Figure 2.4. UTAUT is referred to as…

> *'…a definitive model that synthesises what is known and provides a foundation to guide future research…'*
>
> (Anderson & Schwager, pp.40)

These four constructs are broken further down to show the individual sub-constructs that makes it up. Each of these sub-constructs identified are from one of the eight integrated models (Venkatesh et al., 2003). These constructs are:

- **Performance Expectancy** is reinforced by Perceived Use, Extrinsic Motivation, Job-fit, Relative Advantage and Outcome Expectancy.
- **Effort Expectancy** includes Perceived Ease of Use, Complexity and Ease of Use.
- **Social Influence** contains Subjective Norms, Social Factors and Image.
- **Facilitating Conditions** look at Perceived Behavioural Control, Facilitating Conditions and Compatibility.

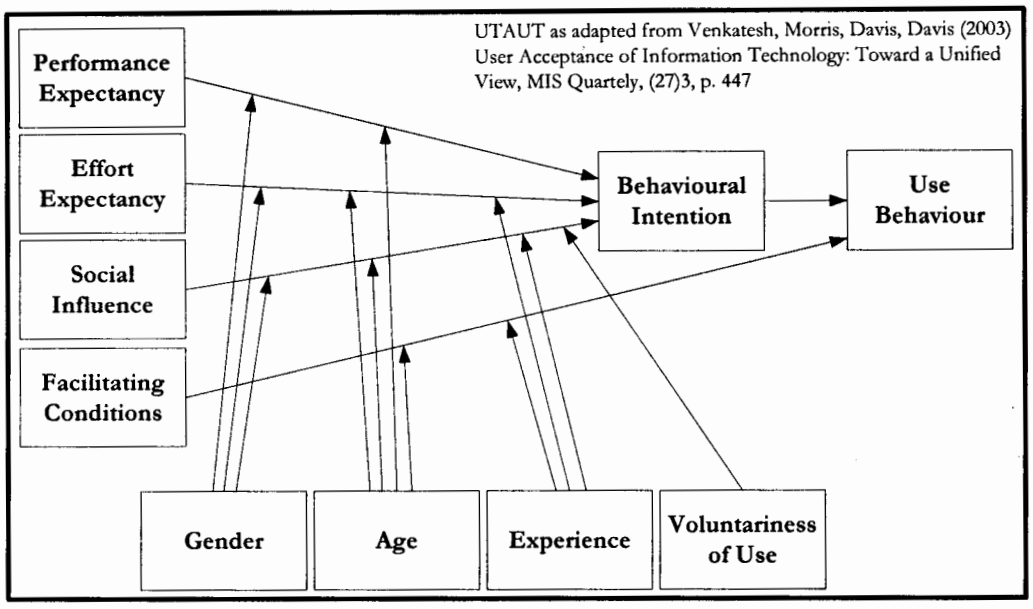

Figure 2.4 - UTAUT Research Model

(Source: Venkatesh et al., 2003)

The more recent studies conducted on e-banking adoption through UTAUT are found in Table 2.10. The respective findings have also been identified along with a collection of factors provided as being significant through these studies. The Second column (Technology) identifies the technological medium the study focused on.

Table 2.10 - Some e-Banking Adoption research conducted through UTAUT

Reference	Technology	Factors	Findings
Cheng, Liu, Qian & Song (2008)	Internet	Trust; Service Quality; Self-Efficacy; Perceived Trust; Control; Perceived Usefulness; Relative Advantage; Perceived Ease of Use; Complexity; Age; Gender; Image; Subjective Norm; Compatibility; Technology Support; Experience; Voluntariness to Use;	Based on the UTAUT model, the IS quality constructs, and the concept of trust, a comprehensive research model was developed and empirically examined.
Abu-Shanab & Pearson (2007)	Internet		UTAUT provides a foundation for future technology acceptance research. Performance Expectancy, Effort Expectancy, and Social Influence) were significant and explained a significant amount of the variance in predicting a customer's intention to adopt internet banking.
Abu-Shanab (2005)	Internet		The proposed model of this study supported the influence of performance expectancy, social influence, self-efficacy, perceived trust and locus of control on Jordanian's intentions to use Internet banking.

Rather than using existing frameworks as a basis, other studies have aimed to inductively develop theoretical frameworks (e.g., Brown et al., 2005a). Although most studies have looked at adoption of single channels, a few have attempted to look at electronic banking in general (Liao & Cheung, 2003), while others have compared channels (Brown & Molla, 2005).

2.5 *META-ANALYSIS OF CHANNELS*

The sum total of factors identified through the literature is identified in Table 2.11. By extending the current UTAUT model these classifications are achieved. This classification is broken into

manageable categories of Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). Some factors identified through the literature do not fall into either of these groupings so the extension incorporates two further classifications Demographic Characteristics (DC) and Services (S). The channel analysis of factors identified, in the table below, is split into six groupings. The groupings are Banking Hall (BH), Electronic banking (E) (including the likes of virtual banking, ATM's and telephone banking), i-banking (I), m-banking (M), television commerce (TV), and multi-channel banking (MC).

Table 2.11 - Summary of Factors influencing Adoption by Category

Category	Factors	BH	E	I	M	TV	MC	Reference
PE	Relative Advantage		✓	✓	✓			Abu-Shanab, 2005; Abu-Shanab & Pearson 2007; Ahmad & Buttle, 2002; Aldás-Manzano, et al., 2009; Armstrong & Collins, 2004; Barnard & Wesson, 2003; Binda, 2005; Bradley & Stewart, 2002; Brown et al., 2003; Brown, 2004; Brown et al., 2004; Brown & Buys, 2005; Buhl et al., 2000; Butler, 2005; Carlson & Mitchener, 2005; Carlson & Mitchener, 2007; Chen, Gillenson & Sherrell, 2000; Cheng et al., 2008; Dandapani, 2004; Brown & Buys, 2005; De Wet, 2000; Dospinescu & Rusu, 2005; Enders et al., 2006; Eriksson et al., 2005; Eriksson & Nilsson, 2006; Jaruwachirathanakul & Fink, 2005; Floh & Treiblmaeir, 2006; Fox, 2001; Gerrard & Cunningham, 2003; Greeff et al., 2008; Hernandez & Mazzon, 2007; Hlaciuc et al., 2005; Ihlwan, 2004; Jahangir & Begum, 2008; Kim & Prabhakar, 2003; Koskosas & Paul, 2004; Lao & Wang, 2005; Laukkanen, 2007; Lee, 2008; Lee, Lee & Eastwood, 2003; Lichtenstein & Williamson, 2006; Little, 2003; Lu, Yu Liu & Yao, 2005; Luarn & Lin, 2005; Mallat et al., 2004; Mochiko & Khuzwayo, 2006; Nor et al., 2008; Okazaki, 2005; Parthajit, 2005; Riivari, 2005; Rusu & Dospinescu, 2005; Sarker & Wells, 2003; Scarborough & Grieser, 2004; Shih & Fang, 2004; Simpson, 2002; Stamoulis, Kanellis & Martakos, 2002; Tae-Gyu, 2004; Tan & Teo, 2000; Thatcher et al., 2005; Wan et al., 2005, Weir, Anderson & Jack, 2006; Yi et al., 2006; Yousafzai, Pallister, & Foxall, 2003.
	Perceived Usefulness	✓		✓				
	Compatibility			✓	✓	✓		
	Banking Needs	✓		✓		✓		
	Experience	✓		✓		✓		
	Time Pressures			✓	✓			
	Convenience		✓	✓	✓			
EE	Competition	✓	✓		✓	✓		
	Mobility				✓			
	Complexity/ Ease of Use			✓	✓	✓		
	Trialability			✓	✓	✓		
SI	Awareness		✓	✓				
	Exposure	✓	✓	✓	✓			
	Image		✓	▪	✓			
	Threats to Physical Security		✓	✓	✓	✓		
	Observability		✓	✓	✓			
	Subjective Norm		✓	✓	✓	✓		
	Lack of Information Privacy			✓	✓	✓		
	Confidentiality		✓	✓	✓			
	Trust		✓	✓	✓	✓		
FC	Cost	✓	✓	✓	✓	✓		
	Access	✓	✓	✓	✓	▪		
	Compatibility			✓	✓	✓		
	New Technology		✓	✓	✓	✓		
	Market size		✓	✓	✓	✓		
	Location			✓	✓			
	Lack of Transactional Security			✓	✓	✓		
	Infrastructure		✓	✓	✓	✓		
	Self Efficacy		✓	✓	✓			
	Communication		✓	✓	✓	✓		
DC	Personal Innovativeness	✓		✓	✓			
	Gender		✓	✓	✓			
	Age		✓	✓	✓			
	Income		✓	✓	✓			
S	Satisfaction			✓	✓			
	Service Quality		✓	✓	✓			

New technology has enabled the emergence of a variety of new communication and coordination behaviours. The understanding of the way in which people use technologies to organise and define their social networks cannot be broken down to events of physical relocation or information access. The conceptualisation of this technology needs to be more sophisticated than *'using a computer while moving'*. However, such an understanding of mobility is not always manifest in current mobile computing research literature (Hagen, Robertson, Kan & Sadler, 2005).

Few studies have compared two channels. Primarily the comparison has been between i-banking and m-banking (Brown ,2004; Brown & Molla 2005), while very few have compared i-banking and other banking channels (Calisir & Gumussoy, 2008) like telephone banking (Sundarraj & Wu, 2005). There are a few studies that look at e-banking (Cracknell, 2004; Dospinescu & Rusu, 2005; Jahangir & Begum, 2008; Liao & Cheung, 2003; Laukkanen, 2007).

Table 2.11 also indicates that there are no studies specifically conducted on multi-channel banking. Multi-channel studies conducted in other fields refer to the distribution and design purposes of services over various channels (Black et al., 2002; Simons & Bouwman, 2005). Factors that stand out in all but the multi-channel groupings are cost, threats to physical security, trust, infrastructure and communication. There is a clear lack of research conducted in the phenomenon of multi-channel banking. Thus this study is interested in the combination of all the banking channels, providing an insight into the adoption of a multi-channel environment.

2.6 *MULTI-CHANNEL ADOPTION*

The introduction of more choice of channels leads to unanticipated consumer movements between these channels as they decide which channel(s) to use, and is further aggravated when the market is small, as is the case in developing countries such as SA.

Investigating the multi-channel approach will allow for a greater understanding of the opportunities available to both the consumer and provider of the service(s) (Buhl et al., 2000; Louden, 2004; Pinches et al., 2004). It has already been identified in marketing research, that a multi-channel approach is beneficial to the consumer and provider (Riggins, 2004; Zaharia & von Strombeck, 2003). Benefits range from quality services, cost reductions and market growth (Binda, 2005; Brown, 2004; Cheung, 2001; Pinches et al., 2004; Scarborough & Grieser, 2004, Tan & Teo, 2000) to satisfied and innovative consumers (Binda, 2005; Dandapani, 2004; Lao & Wang, 2005; Lichtenstein & Williamson, 2006; Luarn & Lin, 2005; Riivari, 2005; Shanmugam et al., 2002; Shergill & Li, 2005).

It follows that the retailer who is able to exploit the advantages of every channel will prevail, while the consumer who recognises the advantages of each channel remains satisfied (Rasch & Lintner, 2001). The consumers' intent to use a technology is what drives consumer adoption. This is the underlying principle of almost all technology adoption models (Tan & Teo, 2000). However, it is the process of appropriation that leads to actual usage of the technology (Carroll et al., 2003). This intent is well marshalled by the determining factors which have been addressed in detail in earlier sections.

Consumers are looking for overall satisfaction in all aspects of life (Rasch & Lintner, 2001). With usage of these channels more avenues of communication are created which can primarily lead to consumer satisfaction (Cheung, 2001; Rasch & Lintner, 2001; Pinches et al., 2004; SPSS, 2005). As seen in the earlier sections there are various factors that affect the consumer's decision to adopt. For the case of multi-channel banking there is no difference to this thought. However the above studies looked at each of the channels individually, thus collectively the abovementioned factors all come into play together. However the impact will differ depending on the consumer's situation and need. As with the multi-channel marketing concept, consumers will use the available resources to their best advantage (Goode, 2005; Rasch & Lintner, 2001). For example when purchasing a product/service the consumer can enter the store to purchase the product/service or purchase the product/service from the outlet on the Internet (Rasch & Lintner, 2001).

The Internet can also have a negative effect on consumers, especially if its use is not understood. Consumers will use it without knowing how and just become frustrated. However there can also be other factors that can deter even the consumers that know how to use the Internet, such as security, complexity or cost (Brown, 2004; Luarn & Lin, 2005; Müller-Lankenau, 2005; Müller-Lankenau et al., 2004; SPSS, 2005; Stamoulis et al., 2002; Tan & Teo, 2000). Martin, a respondent from the study of Rasch & Lintner, (2001) states...

> *'When I started online two years ago, I was more forgiving of technical problems. Now if things go wrong, I do not forgive. I switch sites and I spread the word.'*
>
> Martin (Rasch & Lintner, 2001, pp.26)

2.7 CONSUMER CHOICE

People make choices every day. Some of the choices are simple, while others more complex. Choice is present in all facets of one's life, from the psychological to the economical (Görür, Jäkel & Rasmussen, 2006).

Choice is often driven by simple decision rules like *'buy the cheapest'*. However, choice with banking becomes more complex (Babakus, Eroglu & Yavas, 2004). An individual's choice is primarily driven by the received output expected and bounded by their current circumstances (Olson and Reynolds, 2001). In principle a choice is a simple action. However, when the influencing inputs and expected outputs are factored the choice becomes more complex. Provided all else remains the same the probable choice will also not change.

Individuals are faced with making short term choices like choosing between brands of bread or modes of transport, or longer term choices like choosing between education institutions (Görür et al., 2006). Some of the choices these individuals make lead towards identifiable patterns. Researchers have attempted to explain this phenomenon.

In psychology, choice theory assumes that behaviour represents an individual's constant attempt to satisfy one or more of the basic needs (Glasser, 1996). These basic needs are: (a) the need to survive, (b) the need to belong, (c) the need to gain power, (d) the need to be free, and (e) the need to have fun (Crawford, Bodine & Hoglund, 1993). This basically means that no behaviour is caused by any situation or individual within/outside themselves.

In economics, rational choice theory is a framework for understanding and often formally modelling social and economic behaviour. It is the dominant theoretical paradigm in microeconomics (Ostrom, 2000). It helps us understand humans as self-interested short term maximisers (McFadden, 2001). Discrete choice refers to making a choice between one or more discrete options, like *'to attend the ceremony'* or *'not to attend the ceremony'* (McFadden, 2001; Train, 2002). Statistics are utilised to analyse this discrete choice. This model is primarily applied in econometrics marketing research and transportation mode and route choice (Train, 2002).

With respect to banking the consumer's choice is extremely complex (Weir, Douglas, Carruthers & Jack, 2008) as they not only have to choose a channel but they also have a choice of the technology and the choice of the circumstance is also mouldable. A consumer's choice is influenced by their preferences and the values they place on the respective channels (Laukkanen & Lauronen, 2005; Laukkanen, 2006; Laukkanen, 2007).

2.8 SUMMARY

Multi-channel banking is herein defined as a novel banking approach, which encompasses traditional banking approaches as well as modern banking innovations. SA has the potential market to

ensure the success of non-traditional banking strategies, which in turn would lead to the better quality of banking services. However, before the banks introduce new banking technologies, the adoption of these technologies by the consumers' needs to be addressed

Many different and extended adoption models have been used to try and understand the adoption of some of these banking channels. The two channels i-banking and m-banking have even been compared against each other (Brown et al., 2004). t-Banking on the other hand has not had much attention as yet, especially in the South African context. However, the literature shows that there is some interest for this channel.

Since the introduction of internet based financial services, technology has continued to advance. These technological advancements have enabled the use of other means through which consumers can interact with their financial institutions (ACI, 2002; IDC, 2005). This has increased the awareness on the part on the consumer. Consumers are new able to use their personal computers, mobile phones or television sets to execute available banking services.

The use of i-Banking and m-banking have risen in certain developed and developing countries around the world, including the U.S., Europe and Far East. Whilst the popularity of alternative banking strategies is vastly increasing globally, SA has been slow to adopt the new and emerging banking technologies. The current literature shows that even though the mobile market is significantly bigger in size than the Internet market, the use of m-banking is still inferior to i-banking. The lack of growth of these channels in SA can be attributed to Telkom's monopoly over the Internet access (Goldstuck, 2004a; Goldstuck, 2005).

With the multi-channel approach consumers will potentially be able to eliminate some of the insignificant factors. This, however, depends on the utilisation of these channels to the advantage of the consumer, along with the optimisation of available resources.

Gaps and Limitations

Various factors that affect the adoption of banking can be identified. However, there is no explanation towards the adoption of multi-channel banking.

Furthermore, the limitations are: (a) The consumer is not aware of all the banking channels available; (b) They are unaware of all the means of accessibility; (c) The lack of t-banking services available in SA; and (d) The perceived security of these banking channels.

CHAPTER 3: RESEARCH METHODOLOGY

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3 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter addresses the methodology and the philosophical and theoretical perspectives conducted in this research. The principle research purpose, questions and objective are reintroduced and the sub-objectives are es tablished and explained. The philosophy employed is identified and discussed. The justification of the research approach, purpose and strategy follows. The timeframe and data collection methods are then explained. The data analysis technique is then described and discussed considering the methodology employed. The limitations and ethics concerns of this research are outlined concluding this section.

3.2 RESEARCH QUESTIONS

This paper intends to **'Investigate Multi-Channel Banking Adoption in South Africa'**.

This leads to the following research questions:

1. Why do consumers use multiple banking channels?
2. How do consumers decide which channel to use for a particular service?
3. What factors impact or influence the adoption of multi-channel banking by consumers?
4. Why are these factors of concern to consumers in utilising more than one channel?
5. When and where do consumers decide to use a specific channel for a specific service?
6. Who is affected by these factors and in what way does it impact on their choice?
7. What differences exist between consumers perceptions on multi-channel banking?

3.3 OBJECTIVES

This research attempts to illustrate the state of multi-channel banking in SA. This in turn may serve to identify the use of the different channels by consumers. The associated objectives and sub-objectives of this study are stated below.

3.3.1 Objectives:

- To investigate the adoption of multi-channel banking in South Africa and to develop a theory that explains this phenomenon.

3.3.2 Sub-Objectives:

1. To identify the factors that impact or affect the usage and deliverance of multi-channel banking.
2. To identify how these factors relate to banking channel usage and to each other.

3. To identify why these factors are of concern to consumers when using more than one channel.
4. To identify when these factors impact on the use of a channel(s) and under what circumstances.
5. To identify who is affected by these factors and in what way it impacts on their usage.
6. To identify consumer perspectives on multi-channel banking.

The above sub-objectives help to better understand banking behaviour.

3.4 PHILOSOPHY

There are three different research paradigms utilised for research in the Information Systems (IS) field (Myers, 1997). These paradigms are positivism, interpretivism and criticalism (Orlikowski & Baroudi, 1991). de Villiers (2005), states that each of these paradigms is based on varying philosophical foundations and conceptions of reality, thus each paradigm is implemented by associated approaches and strategies.

When the study of the phenomena has evidence of formal propositions, hypothesis testing or quantifiable measures all from a sample of a stated population the research is classified as *'positivist'* (Klein & Myers, 1999; Orlikowski & Baroudi, 1991). This indicates that the results are observable and objective, as the researchers have no influence on the inputs or outputs (Khazanchi & Munkvold, 2003; Orlikowski & Baroudi, 1991). However, if the research phenomena is understood by means of accessing the intentions perceived by the user, in other words subjective, then the research can be classified as either *'interpretivist'* or *'critical'* (Khazanchi & Munkvold, 2003; Klein & Myers, 1999; Myers, 1997; Orlikowski & Baroudi, 1991).

This distinction in research philosophies has grown due to researchers finding different ways to understand research (Myers, 1997), just as people have different ways of expressing themselves and arriving at the same outcome from different beginnings, beliefs and values. These views shift the research from measure-orientated, quantitative methods to meaning-orientated (Pozzebon, 2004; Welman, Kruger & Mitchell, 2005), qualitative methods. Which is the...

> *'...systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds.'*
>
> (Cavana, Delahaye & Sekaran, 2001, pp.36)

Interpretive research does not disregard positivist research. At times it can act as the precursor to positivist research as it clarifies areas of uncertainty clearing the way for positivist research to be conducted on a well defined phenomenon (Padayachee, 2002). This is made possible as interpretive

research does not predefine dependant or independent variables, but instead focuses on the complexity of human sense making (Galliers & Land, 1987) enabling the understanding of all the nuances of the phenomenon (Padayachee, 2002).

Critical research borrows methods such as historical analysis and textual analysis from interpretive research (Gephart, 1999; Pozzebon, 2004; Stahl & Elbeltagi, 2003; Welman, Kruger & Mitchell, 2005). However, to distinguish between interpretive and critical research, which are both meaning –orientated methods, one needs to look away from their methodological similarities and focus on the degree of their recurrent commitment, to critique of ideology, domination and status quo (Pozzebon, 2004; Stahl & Elbeltagi, 2003; Welman, Kruger & Mitchell, 2005).

Klein and Myers (1999) proposed seven principles to guide interpretive research (See Appendix B). These principles impact differently for each methodology followed. The fourth principle ties in well with a grounded theory strategy where the aim is to develop a theory (Goede & de Villiers, 2003).

Interpretive research aims to…

'…uncover the socially constructed meanings of reality as understood by an individual or a group.'

(Cavana et al., 2001, p.10)

Thus, the interpretivist paradigm is well suited for this type of research as the researcher will be exploring the consumer's understanding and adoption of the phenomenon. This perspective allows for the emergence of otherwise unexpected outcomes (Boudreau, 1997; de Villiers, 2005) through qualitative and unrestricted means.

3.5 RESEARCH APPROACH, PURPOSE & STRATEGY

When choosing a qualitative research methodology the matter of methodological congruence needs to be addressed. This implies that the research method (e.g. grounded theory, ethnography), strategy (e.g. interviewing, videotaping), and analysis techniques (i.e. data coding, data abstraction) must go hand in hand with one another for the research goal to be achieved (Razavi, 2006). The following sections shed more light on these aspects of the research.

With little evidence of existing research being conducted in understanding the adoption of multi-channel banking, there is no one theory that can be utilised to explain this phenomenon. This lack of knowledge along with the interpretive philosophy followed in this research also provides an ideal environment to employ an **inductive** approach. This approach allows for the empirical observations of certain phenomena to lead towards certain conclusions (Cavana et al., 2001; Heath & Cowley, 2004;

Hussey & Hussey, 1997; Ghauri & Gronhaug, 2002; Thomas & James, 2006; Sekaran, 2003). This is essentially the development of theory logically based on observed facts, as presented in Figure 3.1 below.

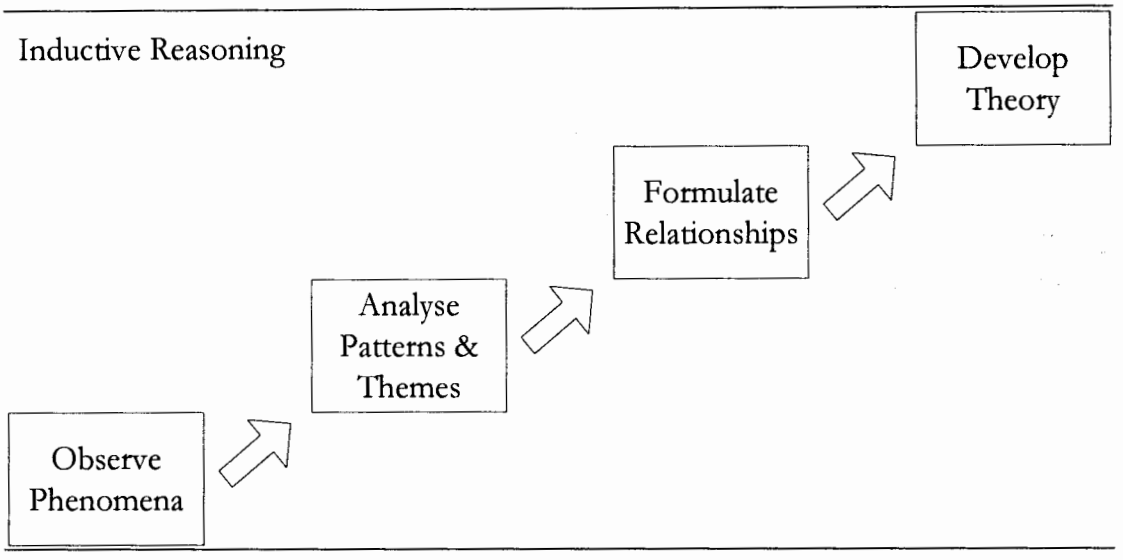

Figure 3.1 - Inductive Reasoning

(Source: Adapted from Cavana et al., 2001)

The purpose of this research is **exploratory** in nature. Exploratory research allows for the nature of the phenomenon to be better understood through methods such as an extensive interview process. These interviews lead the researcher to a better understanding of the phenomena which ensures the research is more rigorous and complete (Cavana et al., 2001; Ghauri & Gronhaug, 2002; Hussey & Hussey, 1997; Pinsonneault & Kraemer, 1992; Welman et al., 2005). By exploring more outlets of information a larger volume of data can be obtained. Analysis of this data ensures the growth in the knowledge area of this phenomenon.

This approach and purpose fits well within a **grounded theory** strategy, especially as grounded theory methodology by nature is an 'emergent methodology' (de Villiers, 2005; Fitzgerald, Simon & Thomas, 2005; Hughes & Jones, 2002; Hussey & Hussey, 1997) as stated by Strauss & Corbin.

> *'...the grounded theory approach is a qualitative research **method** that uses a **systematic** set of **procedures** to **develop** an inductively derived grounded **theory** about a **phenomenon**....'*
>
> (Strauss & Corbin, 1990, pp.24)

3.6 GROUNDED THEORY METHODOLOGY (GTM)

This section seeks to understand grounded theory by firstly addressing the fundamentals of theory. By exploring *'theory'* one is able to understand the need for theory. After this grounded theory is defined, setting the picture for the rest of this section. The different aspects of grounded theory are

discussed, starting with the emergence principle. An account of constant comparative analysis and theoretical sampling follows. This leads towards a discussion between the two fathers of grounded theory, Glaser and Strauss. This is followed by brief view of positivist and interpretivist stances within grounded theory. The section is concluded with a look at the coding techniques employed by Strauss and Corbin.

3.6.1 Understanding of Theory

There are many theories used to explain different phenomena in and out of the discipline of Information Systems (IS) research. Theory merely allows people to make sense of different phenomena. It is…

> *'…a way of seeing and thinking about the world rather than an abstract representation of it.'*
>
> (Alvesson & Deetz, 2000, pp. 37)

Scientific theories are…

> *'…universal statements. Like all linguistic representations they are systems of signs or symbols. Theories are nets cast to catch what we call* ***'the world'****; to rationalise, to explain and to master it. We endeavour to make the mesh even finer and finer.'*
>
> (Popper, 1980, pp. 59)

A complete theory will contain four fundamental building blocks. These blocks are:

1. ***'What'***

This block essentially identifies the variables, constructs and concepts surrounding the phenomena of interest. From this collection of factors all the factors that add little additional value, to understanding the phenomenon, are removed while the relevant factors are kept. The collection is refined in this way as the removal of irrelevant factors is simpler than to justify the addition of factors (Whetten, 1989).

2. ***'How'***

The *'How'* block aids in recognising how the above *'What'* factors do or do not relate. This step adds order to the chaos of factors already identified by introducing causality. Together these two blocks describe the domain of the theory (Whetten, 1989).

3. ***'Why'***

The *'Why'* block helps explain the previous two blocks by justifying the factors kept and their causal relationships. In doing so a theory is born.

4. ***'Who', 'Where' & 'When'.***

The temporal and contextual aspects of the fourth block set the boundaries of generalisability, defining the scope of the theory (Lee & Baskerville, 2003; Whetten, 1989).

Theory has been categorised differently by many authors. Some of these categorisations are tabulated below in Table 3.1.

Table 3.1 - Different Categorisations of Theory

Author(s)	Year	Categorisation	
Markus & Robey	1988	(A)	The nature of the causal agency (technological, organizational or emergent,
		(B)	The logical structure (whether variance or process theory), and
		(C)	The level of analysis.
Lee, Barua & Whinston	1997		Discuss theory in Information Systems in terms of underlying causal relationships, but primarily from a statistical viewpoint.
Neuman	2000	(A)	The direction (deductive or inductive),
		(B)	The level of the theory,
		(C)	Whether it is formal or substantive,
		(D)	The forms of explanations it employs, and
		(E)	The overall framework of assumptions and concepts in which it is embedded.
Gregor	2002	(A)	Theory for analysing and describing,
		(B)	Theory for understanding,
		(C)	Theory for predicting,
		(D)	Theory for explaining and predicting, and
		(E)	Theory for design and action.

(Source: Adapted from Gregor 2002)

Gregor (2002, 2006), identifies that theory can be classified in five different categories. These classifications are described in more detail in Appendix C. T hese types of research can and are investigated individually, but they are interrelated (Gregor, 2002; Gregor 2006).

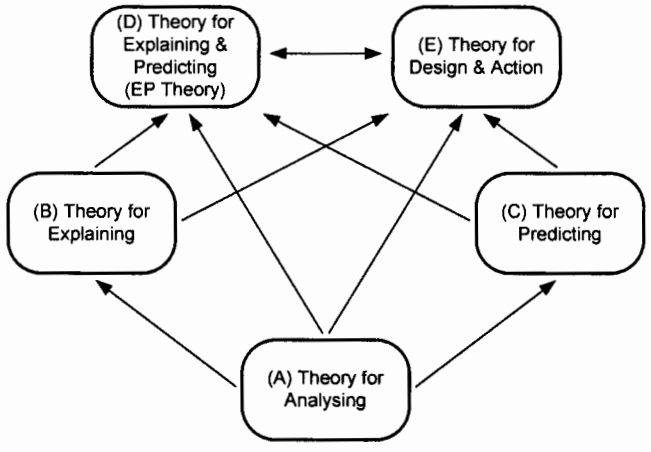

Figure 3.2 - Interrelationships of Theory Types

(Source: Gregor 2006)

3.6.2 Grounded Theory (GT)

Grounded Theory (GT) was termed by Glaser and Strauss in 1967. GT is viewed by many as a means of better understanding a phenomenon. Strauss and Corbin state…

> *'...a grounded theory is one that is derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory stand in reciprocal relationship with each other. One does not begin with a theory then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge.'*
>
> (Strauss & Corbin, 1990, pp. 23)

GT was inspired by the need to address the issue of highly abstract sociology and as a result spurred the growth of qualitative research (Mills, Bonner & Francis, 2006). Its initiative was to find a connect between theoretically *'uninformed'* empirical research and empirically *'uninformed'* research, by grounding theory in data (Goulding, 2002).

A well constructed grounded theory within a substantive area needs to meet with four criteria: 1.) *Fit* – its categories and their properties should fit the realities being studied; 2.) *Work* – in order to work, it should explain variations in behaviour; 3.) *Relevance* – this is achieved when a grounded theory both fits and works; and 4.) *Modifiability* – the emerging theory is open to adaptation as new data and variations are integrated (de Villiers, 2005; Strauss & Corbin, 1990). By conducting this research through the lens of grounded theory a greater understanding of the phenomenon can be gained.

From their original text emergence remains the key throughout theory development.

> *'It must be emphasised that integration of the theory is best when it emerges, like the concepts. The theory should never just be put together.'*
>
> (Glaser & Strauss 1967, pp. 41)

3.6.3 Emergence Principle

> *'... one must remember that because emergence is the foundation of our approach to theory building, a researcher cannot enter an investigation with a list of preconceived concepts, a guiding theoretical framework, or a well thought out design. Concepts and design must be allowed to emerge from the data.'*
>
> (Strauss & Corbin, 1998, pp. 34, original emphasis)

When concepts and categories are allowed to emerge (Glaser, 1992), a clearer understanding of the issue is grasped from a wider untainted view of the data. These concepts and categories better emerge with the use of constant comparative analysis (Hughes & Jones, 2002; Kelle, 2005) throughout the entire analysis phase of this methodology.

3.6.4 Constant Comparative Analysis

Constant comparative method is a four step procedure. The first is to compare data incidents with data incidents (Duchscher & Morgan, 2004; Glaser & Holton, 2004). The purpose of this is to create some uniformity of the concepts identified (Duchscher & Morgan, 2004). Secondly, these concepts are compared with evolving data (Duchscher & Morgan, 2004) verifying the concepts inclusion (Glaser & Holton, 2004). Third, the concepts are compared against other concepts (Glaser & Holton, 2004) enabling relationships formed to be identified and defined (Duchscher & Morgan, 2004; Glaser & Holton, 2004). These relationships lead towards the generation of the theory. Finally, the writing up of the theory is required.

3.6.5 Theoretical Sampling

Strauss and Corbin (1990), define theoretical sampling as...

> *'...data gathering driven by concepts derived from the evolving theory and based on the concept of* ***'making comparisons'****, whose purpose is to go to places, people, or events that will maximise opportunities to discover variations among concepts and to densify categories in terms of their properties and dimensions.'*
>
> (Goede & de Villiers, 2003, pp. 5)

Theoretical sampling is conducted until a point of theoretical saturation is reached. This saturation is achieved:

A.) When no more new or relevant concepts emerge;

B.) When the development of the category's properties and dimensions can withstand variations in the context of the phenomenon; and

C.) When the relationships amongst categories are well established.

(Morse & Field, 1995)

This process is continuous and used to guide the researchers direction of data collection (Glaser 1992) until no new or relevant information emerges to further define the theory being generated.

3.6.6 Glaserian vs. Straussian

These are two directions of GTM. The Glaserian approach was introduced by Barney Glaser and Anselm Strauss in 1967, while the Staussian approach was introduced by Anselm Strauss in 1987. The significant differences between Glaserian and Straussian GTM lie within their methodological influences. Glaser promotes an inductive approach to analysis, data to empirical generalisation towards a theory. However, with Strauss and Corbin deduction and verification is dominant in their approach to analysis (Strauss & Corbin, 1990; Glaser, 1992, Glaser & Holton, 2004; Hughes & Jones, 2002). Glaser's critique to the deductive approach is that the researcher is influenced by the direction of the

questioning due to speculation about what might be rather than allowing the data to diffuse naturally (Glaser, 2002; Heath & Cowley, 2004).

Both Strauss and Glaser believe in the emergence principle as is iterated in their subsequent papers. However, their outlook on how the data emerges is no longer the same. Strauss and Corbin's selective coding engages within theory of construction (Mills et al., 2006), while Glaser's theoretical coding engages within a theory of discovery (Heath & Cowley, 2004). This separation is attributed to what is considered to be data and how it is managed. Glaser states that *'all **is data**'*. This statement boils down to...

> *'...exactly what is going on in the research scene is the data, whatever the source, whether interview, observations, documents, in whatever combination. It is not only what is being told, how it is being told and the conditions of its being told, but also all the data surrounding what is being told. It means what is going on must be figured out, exactly what it is to be used for, that is conceptualization, not for accurate description. Data is always as good as far as it goes, and there is always more data to keep correcting the categories with more relevant properties.'*
>
> (Glaser, 2002, pp.9)

The data is essentially allowed to speak free of influence from the researcher. Once the theory is more developed additional reading regarding literature is conducted. Strauss and Corbin, on the other hand, believe that emergence occurs from the interactions within the field and the questions asked (Glaser, 2002). Past experience and literature act as early influences on the emergence. The views provided by both Glaser and Strauss & Corbin are a means to reaching theoretical saturation.

Table 3.2 - Data analysis: Glaser and Strauss compared

	Strauss and Corbin	Glaser
Initial coding	***Open coding*** Use of analytic technique.	***Substantive coding*** Data dependent.
Intermediate phase	***Axial coding*** Reduction and clustering of categories. (paradigm model)	Continuous with previous phase. Comparisons, with focus on data, become more abstract Categories refitted. Emerging frameworks.
Final development	***Selective coding*** Detailed development of categories, selection of core, integration of categories.	***Theoretical*** Refitting and refinement of categories which integrate around the emerging core.
Theory	Detailed and dense process fully described.	Parsimony, scope and modifiability.

(Source: Heath & Cowley, 2004)

Three coding procedures are employed by Straussian GTM, while Glaserian GTM promotes two coding procedures. By breaking these coding procedures into phases open coding and substantive

coding are paired together, with selective coding and theoretical coding also showing similarities (Heath & Cowley, 2004). The difference between selective and theoretical coding is the way they are used to generate different theory types. These procedures are tabulated Table 3.2.

Research using GTM has been conducted using both positivist and interpretivist epistemologies. Conducting GTM research through a positivist lens leads towards a predictive theory, while through an interpretivist lens leads towards a more heuristic outcome (Levy, 2006; Piantanida, Tananis & Grubs, 2002). A pure Glaserian GTM is positivist due to the fact that Glaser continuously states that the data should speak for itself (Glaser, 2002; Glaser & Holton, 2004), while Strauss and Corbin bring in a sense of subjectivity through interpretation of what the data is saying leaning towards an interpretivist stance (Hughes & Jones, 2002; Mills, Chapman, Bonner & Francis, 2007). For this reason the Straussian outlook to grounded theory was employed.

Thus, Grounded Theory Methodology (GTM) can be used to develop a theory which at some point is capable of prediction, and thus can be tested (Gregor, 2006; Levy, 2006). Grounded theory methodology is a research approach used within Gregor's fourth classification (refer to Appendix C).

Theory Type (D): Theory for Explaining & Predicting

Nature: Says 'what is', 'how', 'why', 'when', 'where' and 'what will be'.

Description: This theory type combines the natures of the preceding theory types allowing for a better understanding of the phenomenon.

3.6.7 Coding Techniques

Even though GTM is deemed qualitative it does contain traits of both a positivist and/or interpretivist nature; in the way the speculative assumptions not founded on observations are eliminated by the systematic coding procedures used to analyse the data (Goede & de Villiers, 2003; Heath & Cowley, 2004; Huehls, 2005; Sarker, Lau & Sahay, 2001). The open, axial and selective coding techniques are discussed further next.

Open Coding

> *'...is the process of breaking down, examining, comparing conceptualising and categorising data.'*
>
> (Strauss & Corbin, 1990, pp. 61)

According to Strauss and Corbin (1990, 1998) open coding is the initial process when the data is read through for the first time. Once it has been read through it is grouped into high level categories allowing the data to be less complicated and manageable (Hussey & Hussey, 1997). This allows the

researcher to ask questions about the phenomena as seen in the data. At the same time constant comparative analysis of the data incidents and concepts is also conducted (Glaser & Holton, 2004; Duchscher & Morgan, 2004). Through this process the assumptions of the researcher and others' can be explored, possibly leading to new discoveries (Sarker et al., 2001; Strauss & Corbin, 1990). Glaser warns against the line of questioning as it may influence the data by directing the interviewee down a predetermined path (Glaser 1992, Glaser 2002).

Axial Coding

Axial coding refers to the analytic activity for...

'...making connections between a category and its sub-categories.'

(Sarker et al., 2001, pp. 40)

Strauss and Corbin (1990, 1998) termed this process *'axial'* as the coding occurs around the axis of the category. This process links categories at a more detailed level of properties and dimensions. Axial coding essentially reconstructs the broken data categorised in the open coding process by refining the information about each category through its properties and dimensions (Goede and de Villiers, 2003; Hussey & Hussey, 1997; Sarker et al., 2001) by relating to:

1. Phenomena at which the action and interaction in the domain under study are directed;
2. Causal conditions which lead to the occurrence of these phenomena;
3. Attributes of the context of the investigated phenomena;
4. Additional intervening conditions by which the investigated phenomena are influenced;
5. Action and interactional strategies the actors use to handle the phenomena; and
6. The consequences of their actions and interactions.

(Kelle, 2005)

This process leads towards the formation of mini theories about the relationships among the categories at the dimension level. These relations are then verified against the data from actual accounts of the incidents to determine if they can be grounded in reality (Corbin & Strauss, 1990; Goede & de Villiers, 2003; Heath & Cowley, 2004; Hussey & Hussey, 1997; Sarker et al., 2001; Strauss & Corbin, 1990). For these mini theories to be grounded in reality they must appear and reappear in the data over and over again. Hussey and Hussey (1997), further state that unsupported mini theories need to be critically evaluated to determine its reality. This process is followed by selective coding.

Selective Coding

'...is the process of selecting the core category, systematically relating it to other categories, validating these relationships and filling in categories that need further refinement.'

(Hussey & Hussey, 1997, pp.268)

Strauss and Corbin (1990, 1998) say this process is likely to occur in the later phase of the study. By this stage multiple categories have been developed. This process encourages the researcher to build around a *'core'* category. This enables the identification of weaker categories. The researcher then turns back to the data or enters the field again to obtain data to fill the holes in the respective categories (Corbin & Strauss, 1990; Goede & de Villiers, 2003; Hussey & Hussey, 1997; Strauss & Corbin, 1990). This process strengthens the relationships of the categories for the overall paradigm model or theory, as the model or theory is determined directly from the data collected. In other words it is ***'grounded in reality'*** (Heath & Cowley, 2004; Strauss & Corbin, 1990).

3.7 TIMEFRAME

3.7.1 Time Horizon

This research has a limited time allocation making a longitudinal study unfeasible. This leaves the researcher to conduct a cross-sectional study (Hussey & Hussey, 1997). Unlike a longitudinal study where data is collected at several points in time, a cross-sectional study collects data once over a short period of time before analysing it. In effect a cross-sectional study takes a snapshot of the phenomenon for this short period of time (Cavana et al., 2001; Hussey & Hussey, 1997; Pinsonneault & Kraemer, 1992; Sekaran, 2003; Welman et al., 2005).

There are problem areas associated with this type of study. One example is in selecting a sample large enough to be representative of the whole population. On the other hand, this type of study is inexpensive and there is no need to call upon the interviewee again as research is conducted over a short time period (Hussey & Hussey, 1997).

3.7.2 Research Timeline

This research project began in mid 2006 and is planned to culminate in January of 2009. However, should additional time and resources be required for its completion, the end date can be extended an additional month. Refer to Appendix D for the major milestones of the expected project plan. This is only a plan and was refined as uncertainties become certainties. In between the stated dates continual research and meetings with the supervisor took place.

3.8 DATA AND SAMPLING

Grounded theory utilises data from multiple sources including interviews, organisations documents and even literature (Strauss & Corbin, 1990). These data sources can be split into two classes, namely primary and secondary data.

3.8.1 Data Sources

Both primary and secondary data was collected to ensure that the researcher is able to substantiate any conclusions reached. **Primary data** is data collected by the researcher in person. This data was collected by semi-structured interviews and a short questionnaire (Ghauri & Gronhaug, 2002; Sarker et al., 2001; Sekaran, 2003). **Secondary data** includes all the literature on the phenomenon and all the third party data collected by organisations (Ghauri & Gronhaug, 2002; Sarker et al., 2001; Sekaran, 2003; Welman et al., 2005), such as statistics on the number of banking consumers or even the number of cellphone consumers. In keeping with the emergent principles of GTM the literature was reviewed and updated at every stage of the research.

The biggest advantage of secondary data is that it saves on time and money as the data has been collected and compiled by other researchers. However, this is not always ideal as this secondary data may not necessarily *'fit'* within the objectives of the current study. In other words, the secondary data also needs to be screened for relevance (Ghauri & Gronhaug, 2002; Sarker et al., 2001; Sekaran, 2003; Welman et al., 2005).

3.8.2 Units of Analysis

There are six units of analysis available for researchers to select from with a seventh option being a combination of more than one unit. These six units of analysis are: 1.) Individuals; 2.) Dyads; 3.) Organisation; 4.) Groups; 5.) Divisions; and 6.) Cultures & Countries (Cavana et al., 2001; Hussey & Hussey, 1997; Sekaran, 2003; Welman et al., 2005). The unit employed in this research is that of individuals. The individuals include all the consumers and non-consumers of the banking channels available. Obtaining the opinions and an understanding of these units of individuals is vital for the outcome of the study.

3.8.3 Target Population & Sampling Plan

FinMark Trust (2005), places 14.3 million banking consumers in SA. The target population is the retail banking consumers among all these banking consumers.

Sampling Method

For the purpose of this study the sample includes participants from the Western Cape and Gauteng area. The term *'individuals'*, indicates consumers of any banking channel(s).

This selection is dependent on the phenomenon being studied such that the participants reflect the relevant characteristics of the population (Corbin & Strauss, 1990; Bonebright, Miner, Goldsmith & Caudell, 2005; Sekaran, 2003). However, with grounded theory sampling is more concerned with the

representativeness of concepts. The researcher is looking for evidence of the concepts significant presence or absence in each instance of data (Strauss & Corbin, 1990). A sampling approach to this result is theoretical sampling.

Throughout the coding procedures of grounded theory sampling occurs (Glaser & Holton, 2004; Goede & de Villiers, 2003; Strauss & Corbin, 1990). Initially the sampling should be done as wide as possible enabling the researcher the opportunity to discover concepts. During this process the researcher needs to continuously question and compare the data which leads to further sampling and coding (Glaser & Holton, 2004; Goede & de Villiers, 2003; Heath & Cowley, 2004). At first this procedure seems to be unfocussed, but as the research progresses it becomes more focused. In the next coding step sampling is conducted to define the dimensions and properties of the categories and concepts already discovered. In the final coding step, sampling is used to strengthen the theory (Heath & Cowley, 2004; Huehls, 2005; Strauss & Corbin, 1990). The categories and concepts are tested. Sampling continues until all the categories and concepts that have emerged are saturated (Glaser & Holton, 2004).

Hussey and Hussey (1997), state that for qualitative research the selection of an appropriate number of subjects to include in the sample is very complex. Using theoretical sampling, information was required until all the emergent concepts were saturated. Thus, unlike quantitative research there is no way to precisely determine the size of the sample to begin with.

There were no selection criteria for the first respondent allowing for a plethora of concepts to be identified. However, thereafter respondents were selected based on the concepts that evolved through the previous interviews so as to allow for the representativeness of these concepts. This method of theoretical sampling was not the sole selection method used. With time and budgetary constraints convenience sampling was soon employed to assist reaching the point of saturation. The interviewees were asked if they knew of any others that had had similar or different experiences that would be willing to be interviewed. This study reached a point of saturation with eight respondents having been interviewed. Persons from all walks of life were targeted.

Of the eight respondents four were male and four were female. Some of these respondents were technologically literate and working with the IT domain while the others were dependent on other persons' assistance to conduct certain channels of banking. The majority of the respondents were under 40 years of age. All the respondents were educated up to a level of Matric with half of them going

further to obtain a University degree or two. All the respondents interviewed were currently holding an active bank account, whether they were personal accounts or joint accounts.

3.8.4 Data Collection

This section illustrates the process in which the data was collected from the inception of the questions for the interviews to the actual conducting of the interviews themselves.

Collection Method

The more common data collection methods for interpretive studies are case studies (Walsham, 1993), focus groups (Sekaran, 2003) and interviews (Pinsonneault & Kraemer, 1992; Razavi, 2006). As mentioned earlier the data collection methods must complement the research methodology. Thus, in accordance with this concept of methodological congruence the best fit data collection method for grounded theory research are semi-structured in-depth interviews (Pinsonneault & Kraemer, 1992; Razavi, 2006). These interviews provide the researcher with the opportunity to examine empirical material at an exact point in time.

Unlike structured interviews which are rigid, semi-structured interviews allow the respondent(s) to elaborate on their experiences (Padayachee, 2002). This provides the researcher with a more flexible and dynamic conversation based questioning style (Razavi, 2006). The researcher can walk away with more useful information as the respondent feels less intimidated and more willing to participate. GTM does not disregard all other theories. Instead it generates theory from drawing upon primary and secondary data sources collected through their respective collection methods (Hughes & Jones, 2002; Sarker et al., 2001). The primary data is personally collected by the researcher (Ghauri & Gronhaug, 2002; Pinsonneault & Kraemer, 1992), while the secondary data is collected by a third party. This research collected its primary data through semi-structured interviews and the secondary data was gathered through short questionnaires and the literature, which is discussed next.

Interview Design

The use of semi-structured interviews allows the researcher to conduct planned and unplanned probing of key topics of the phenomenon (Padayachee, 2002). This allows the respondent the opportunity to discuss the importance of these topics from their perspective. However, for semi-structured interviews to be beneficial the researcher is required to have sufficient enough knowledge about the domain to construct questions, but not enough to anticipate the answers (Razavi, 2006).

The researcher also employed the use of pilot interviews. The pilot interviews were based on concepts extracted from literature along with concepts identified by the researcher. This pilot interview helped to

phrase the questions in a way to extract the most important and relevant information, while at the same time weeding out insignificant questions from the respective question sets prepared for the individual units of analysis. This question set was generated to help answer the sub-objectives and research questions of the research. During the interview process the researcher probed into areas of interest indicated by the respondents' responses. This enables the researcher to collect the most relevant information from questions that have been screened and retested. The respondents were given the opportunity to talk freely.

Interview Process

The researcher began every interview with a short questionnaire to obtain generic information of the phenomenon as recommended by Pinsonneault and Kraemer (1992), see Appendix E. Thus, some of the interview questions that followed were influenced by the respondents' answers to the questionnaire. Also the researcher began each interview by welcoming and thanking the respondent for their time and also invited the respondent to question the researcher about the research. This allowed for a more comfortable environment to develop for the remainder of the interview. To keep the respondent interested the duration of the interview was kept to between 20 – 40 minutes. A copy of the interview schedule is provided in Appendix F.

Due to the pilot interview, the subsequent interviews were more interactive as the researcher was able to adapt the tone to the environment of the interview making the respondent more comfortable. This sense of comfort enabled the respondent to be more forthcoming with their responses, instead of second guessing if their responses were correct they were now opening up to the researcher.

All of the interviews in this study were tape-recorded with the respondents' permission. These recordings were then transcribed to provide accurate records of the data for analysis. These standard procedures were followed to maintain the confidentiality of the interview data and the anonymity of the respondents as mentioned later in Section 3.12.

3.9 DATA ANALYSIS

With the majority of the data acquired through semi-structured interviews there is a need for this data to be transcribed, enabling it to be collated and analysed using grounded theory techniques. Grounded theory requires continuous analysis throughout its coding process. This enables the researcher to build concepts from the data (de Villiers, 2005; Heath & Cowley, 2004; Huehls, 2005; Sarker et al., 2001). The formation of these concepts may also drive the direction of the data collection process. This flexibility is allowed due to the theoretical sampling employed.

There are three basic types of coding procedures utilised by grounded theory: open, axial and selective. These codes are essentially labels which enable qualitative data to be separated, compiled and organised (Heath & Cowley, 2004; Huehls, 2005; Hussey & Hussey, 1997). The steps taken to analyse the data are discussed below.

3.9.1 Transcription

Before any coding could take place the data was transcribed. The transcribing process was very time consuming and was repeated for each interview. The interview transcript was formatted and is shown in Appendix F the transcription booklet to help facilitate the subsequently discussed analysis techniques. Each response is labelled with the respective participant for the related question number (Q). The responses provided by the respondent are referred to as data incidents from this point forward. An example extract of an interview statement is seen below.

Q	Participant	Response
1	Researcher	Ok, we can start off, is there anything you would like to ask me? After this questionnaire is there anything...
1	Respondent	No questions.
2	Researcher	Based on the channels you've identified here, when did you first experience using these channels?
2	Respondent	Normal banking hall I would say 1988, ATM's, when was it, could be in 2001. Internet banking I've been using about say since about, [about] say 2001 somewhere there.
2	Researcher	At the time when you began using these were you apprehensive of the technology?
2	Respondent	No. Not after being in IT (Short Laugh).
2	Researcher	And why was this the case, why were you...
2	Respondent	You know the banks would make, would see to it that things are secure and it would be in their interest as well that they give us secure facilities.
3	Researcher	What lead you to using these channels, and what is the reason you began using these channels?
3	Respondent	The banking hall was that I started studying and I needed an account for a work study that was involved with and they paid money into there, and it was the same with ATM banking, because I think they started appearing on campuses and then, Internet banking was for convenience.

Figure 3.3 - Example Extract of Interview Statement

(Extracted from the Transcription & Data Booklet (TDB), pp. 4)

3.9.2 Open Coding

After the completion of each transcribed interview the captured data was subjected to open coding. The data was read through multiple times during which time the researcher grouped the data into more manageable terms, thus identifying data incidents and/or concepts of interest. With the aid of constant comparative analysis these data incidents were contrasted against themselves to establish some consistency. After this they were compared against data incidents of the other interviews to generate more theoretical properties of the concepts. Last but not least these concepts were compared against the literature to ensure that any previously defined concepts were not being redefined and new concepts were addressed accordingly. These concepts also have a dimensionality characteristic that helps clarify the reach of the concept.

These concepts were then grouped into sub-categories and these sub-categories respectively classified into categories. An example of this classification is of *'Consumer Knowledge'* (Category), which has

'Awareness' and *'Channel Knowledge'* grouped within (Sub-Category). *'Channel Awareness'* is a concept within *'Channel Knowledge'* with the dimensionality ranging from being 'aware' to being 'unaware' of the channel(s). Classifying the concepts into these categories makes it simpler for the researcher to remember, conceptualise and thus develop a theory (Locke, 2001).

Once an interview is completed with open coding the refined data is subjected to the next coding step, axial coding. It must be remembered that the whole analysis procedure is iterative and that when more interviews were transcribed the data was first analysed using open coding, with comparison of the pre-existing data of the previous interviews.

3.9.3 Axial Coding

During the axial coding process the data incidents are revisited to explore the conception of relationships among categories at the detailed level of concepts. These relational links were generated at the concept level to enhance the understanding of the categorical relationships established. The links are categorically discussed as this coding process occurs around the axis of the category. This helps the researcher clearly define the categories with respective to their sub-categories and concepts. During the constant comparative analysis the emerging concepts are validated for representativeness by examining them across the individual respondents.

Some relationships are easily detected, while most of them are a little more complicated to differentiate, as the broader context of the whole interview also needs to be considered. This process also focused its efforts on comparing the data incidents with the emerging categories (Matavire & Brown, 2008; Locke 2001). In doing so a more thorough description of the concepts in relation to their core category is established.

A paradigm model is employed to further abstract the categories. A paradigm model is a blueprint for understanding how categories are related to each other around the phenomenon under investigation (Le Roux, 2001). It indicates that actions/interactions which lead towards consequences. Causal conditions have direct and indirect influences on these actions/interactions. While, intervening conditions dilute the effects of the causal conditions and the contextual conditions reflect the environment the phenomenon is within.

It is seen through the axial coding that the categories of comparative advantages and compatibility have a high affinity for influe ncing the category of channel choice amongst others. This high affinity indicates the causal nature of these categories. The categories that emerged through the open and axial

coding process cannot be labelled as either causal or contextual or any other condition. This is due to the categories being able to act as one or more of these conditions depending on the phenomenon under study.

3.9.4 Selective Coding

Selective coding does not differ too much from axial coding, only takes place at a higher, more abstract level of analysis (Burden & Roodt, 2007). The selective coding process enables the integrating and refining of the theory. A core category is identified and related to other categories. This allows for the validation of the relationships and the poorly developed and excess categories are either filled in or trimmed away. These steps are not linearly sequential, nor are they distinct in practice (Straus & Corbin, 1998). This process strengthens the relationships of the categories for the overall paradigm model or theory, as the model or theory is determined directly from the data collected. In other words it is ***'grounded in reality'*** (Heath & Cowley, 2004; Strauss & Corbin, 1990). The theory is validated through a high level comparative analysis of the data in the form of a story line. This story line explains the theory developed.

3.10 METHODOLOGY SUMMARY

All the events described for GTM above are depicted below showing the iterative nature towards generating a grounded theory.

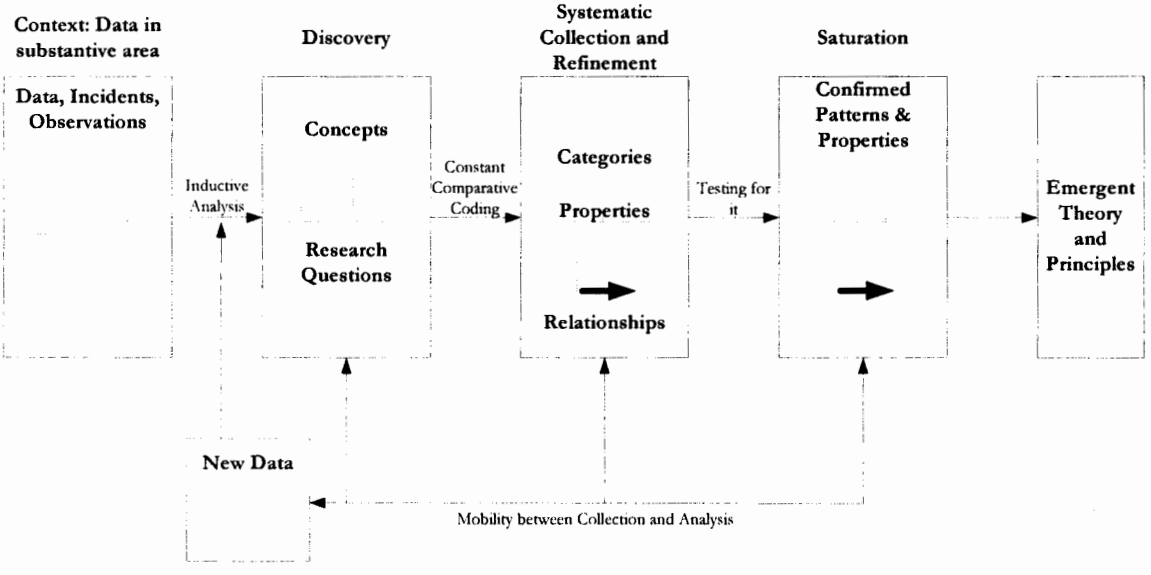

Figure 3.4 - Model of Grounded Theory Emergence

(Adapted from Source: de Villiers, 2005)

After data is captured it is continually compared with both the primary and secondary data that has been collected. Following the iterative nature the emergent data is refined further at every stage until theoretical saturation is achieved at which point the theory can be discovered. The table below shows the methodology of this research

Table 3.3 - Research Methodology

Epistemology	Interpretive.
Research Approach	Inductive.
Research Purpose	Exploratory.
Research Strategy	Grounded Theory Methodology **(Straussian).**
Data Sources	Primary Data & Secondary Data.
Units of Analysis	Individuals.
Sampling Method	Theoretical Sampling.
Data collection	Interviews.
Analysis Techniques	Open Coding, Axial Coding & Selective Coding.

3.11 LIMITATIONS OF THE RESEARCH

It is acknowledged that with an interpretive approach there is a greater opportunity of bias to be reflected in the results as the subjectivity is intrinsically linked to the conducting of the study. In other words the researcher is pivotal in leading the direction of the study.

A greater difficulty lies in finding the most appropriate participants for the study. Only with the participants who were able to illuminate on the phenomenon under study, was useful enough data provided to be analysed. However, due to time and budgetary constraints multiple trips to Gauteng from Western Cape were not feasible. This being the case the researcher had to fall back onto convenience sampling, which deviates slightly from theoretical sampling.

3.12 ACCESS & ETHICS

The interviews were setup telephonically with the individual units, and at the time of interview a written or oral consent was recorded before beginning. Participation is non-compulsory and the respondents' personal information is kept confidential, unless given prior permission to use any information. The report is not confidential, and statements made during these interviews only remained concealed if requested by the respondent. The nature of this study and the respondents implies that some of the data may need to remain confidential. No monetary incentives are available as there is no budget available to permit them. No minors were used in the study without consent of their guardian.

See Appendix G for a provisionally completed ethics form as required by the Ethics Commission, Faculty of Commerce at the University of Cape Town.

CHAPTER 4: ANALYSIS & RESULTS

LIST OF FIGURES

LIST OF TABLES

4 RESULTS & ANALYSIS

4.1 INTRODUCTION

There are many banking channels used in SA. According to the data the more common channels used are the Banking Hall, ATM, Telephone Banking, Internet Banking, and Mobile Banking. The resulting analysis is thus based with these banking channels in mind.

This chapter provides a detailed account of the grounded theory coding techniques applied throughout the analysis process. Section 4.2 provides descriptions of the individual concepts the open coding process produced. This is followed by an account of the results produced from the axial coding process. The final section of this chapter provides a depiction of the evolution of the theory with assistance from the selective coding process.

4.2 RESULTS FROM OPEN CODING PROCESS

The open coding process was an ongoing examination of the data incidents provided from the interview transcripts. This ongoing examination allowed for the identification of concepts. The identified concepts were grouped and categorised providing the researcher with a more manageable environment of information. The naming of the concepts and their groupings and categories is such that the researcher does not need to ponder its significance, the name is self descriptive (Strauss & Corbin, 1998). Some of these naming conventions are established through literature while the remainder are directly related to their respective data incidents, referred to as 'in-vivo' codes (Strauss & Corbin, 1998).

Throughout the course of the open coding process many of the concepts identified were renamed and/or redefined numerous times. This iterative process captured 52 concepts to be relevant (Appendix H). During this process these concepts were also grouped into respective sub-categories and categories. This classification of concepts moulded a clearer environment in which to operate in for the researcher.

The final grounded theory comprises of 13 categories defined from their respective concepts. Figure 4.1 shows the classification of the categories and their respective number of concepts. The category of Comparative Advantages is shown to be the most conceptually dense consisting of 11 concepts. The remainder of this section will provide a clearer account of the concepts, sub-categories and categories identified in final classification of the grounded theory through the open coding process. This final classification is the result of numerous iterations with respect to the data available (Figure 4.1).

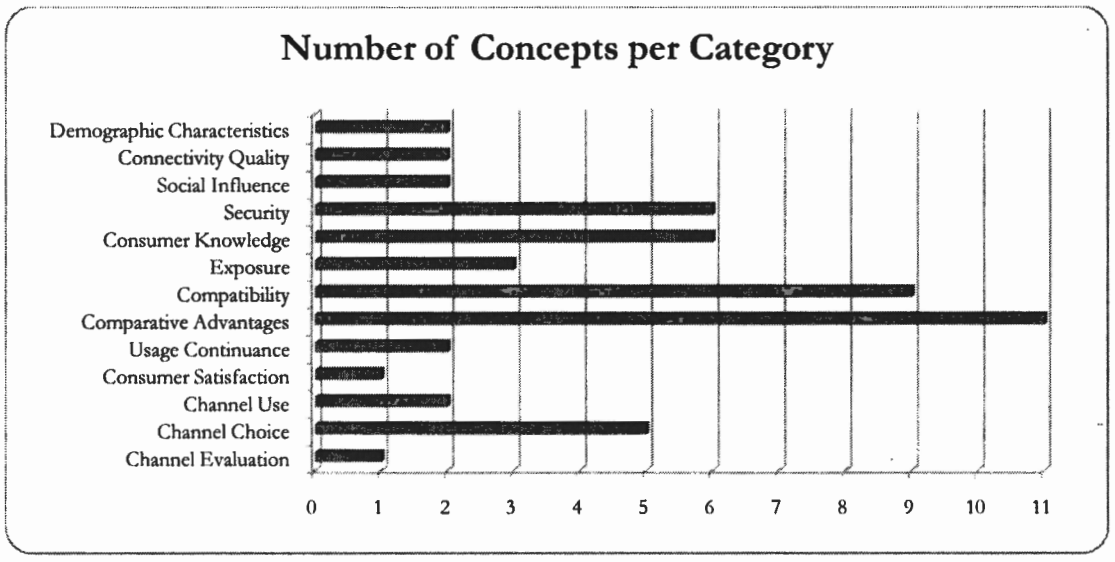

Figure 4.1 - Number of Concepts per Category

For each category a table will depict the respective sub-categories and concepts. Also included in the table is the count of the number of times each concept emerges (Count of Concept) [extracted from TDB – pp. 72-73], and quotes from interviewees supporting their relevance (Supporting Evidence) from the data incidents. The final column indicates which interviewee (I) provided the supporting quote.

Each category will be introduced and discussed with respect to its concepts. Each concept is further explained with reference to is dimensionality. This dimensionality is denoted inside the corresponding brackets ***[ ]***. The categories will be discussed in a manner of a sequence. This sequence will be further elaborated on in Section 4.3.

4.2.1 Channel Evaluation

Channel evaluation entertains the process undergone by consumers during their evaluation of the channel(s). Each of the concepts that helps define this category impacts the consumer uniquely, resulting in different outcomes dependant on the scenario due to prior experience or perceptions. Table 4.1 shows the concept that defines the category of channel evaluation. This evaluation of the channel(s) will influence the consumer's willingness to support the channel(s) in question.

Table 4.1 - Supporting Evidence for Concepts of Channel Evaluation

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Evaluation	**Weighing up of Options** *[Throughout all Banking Channels]*	17	*The ATM, when it is not the end of the month, then it's ok.* ***If I need cash then I'll use the ATM.*** *Internet banking I use that all the time. It's very convenient.* ***I try to avoid the banking hall,*** *those queues. Banking hall I'll use when I have a query. I'll see customer service first.*	4
			Well ***if I didn't have good internet access I would be more inclined to go for mobile banking or telephone banking,*** *but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*	3
			In most cases less [of the] banking hall, then from there it was less ***ATM. I think each one just has a specific need in me. [The] ATM is for getting cash, [the] banking hall is for signing docs, and internet the rest.***	2

4.2.1.1 Evaluation

Weighing up of Options *[Throughout all Banking Channels]*

This concept looks at the benefits the consumer can derive from the banking channel(s) with respect to the consumers need. The consumer weighs the benefits against the detriments of the channel(s) they have available to them. This weighing up of options helps the consumer in their evaluation for the most suitable combination of channel(s) for their current requirements.

'If I didn't have good internet access I would be more inclined to go for mobile banking or telephone banking.'

(Interviewee 3)

This essentially aids in determining the consumer's choices from all the banking channels available.

4.2.2 Channel Choice

The initial label for this category was choice. However, through continued analysis the more appropriate label of channel choice was established. Channel choice is defined as part of the consumers decision making process, determining which channels are ultimately chosen after all the other impacting categories have been factored. This choice is largely influenced by the evaluations of the channels and the respective requirements of the consumer. Channel choice is comprised of five concepts as shown in Table 4.2.

Table 4.2 - Supporting Evidence for Concepts of Channel Choice

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Fixed Channel	Cash Based *[Human - Electronic]*	14	*Well Ok, I kind of shy away now from ATM's and I was vehemently against internet banking kind of 180°.*	2
Mobile Channel	Internet Based *[All Internet Types]*	26	***If I don't need hard cash then I just do it with online banking its simpler.** Banking Hall, ATM is, I've heard horror stories and actual incidents of cards getting stuck*	3
			***Internet banking** and banking hall. **They're safe in my opinion.** I'm assuming banks need to activate [certain] channels right **so I like the idea there're less ways of accessing my bank account than** more, so…*	1
	Mobile Based *[All Mobile Types]*	6	*Mobile **banking** and internet banking. When did I **start** using it! I think about three years **ago at my** old work. Internet banking **but not cell-phone banking,** cell-phone **banking is a recent thing.***	8
			*ATM have never used, **only the mobile** and the internet...*	8
Migration	Channel Migration *[Throughout all Banking Channels]*	6	***Well when I moved,** internet banking became available and that is **where I migrated to,** so I didn't need to use telephone banking anymore. And I go to the bank once every two or three months to go and collect a new cheque book. That is basically all I go to the banking hall for now*	3
Multi-Channel	Multi-Channel *[Multi - Single]*	11	*In most cases less of the banking hall, then from there it **was** less ATM. I think each one just has **a** specific need in me. **[The] ATM is for getting cash, [the] banking hall is for signing docs,** and **internet the rest.***	2
			***I'd say most of the banking is done by internet now,** majority, that's the, **let's see, 5% percent is going into the branch and the rest is split between ATM's and internet banking. And basically going to branches if I have to sign something or,** that's about it.*	2
			*I work in the IT field and a lot of the time I cannot follow a paper trail in all sales. Going **into the bank to do banking all the time is very inconvenient. This is what drove me to use ATM banking and** telephone banking and internet banking as such*	5

The consumer will make an informed choice depending on the type of access they have at their disposable. This access type will also influence the end choice of the channel chosen. The different types of access to banking channels available to consumers in SA are shown in Figure 4.2.

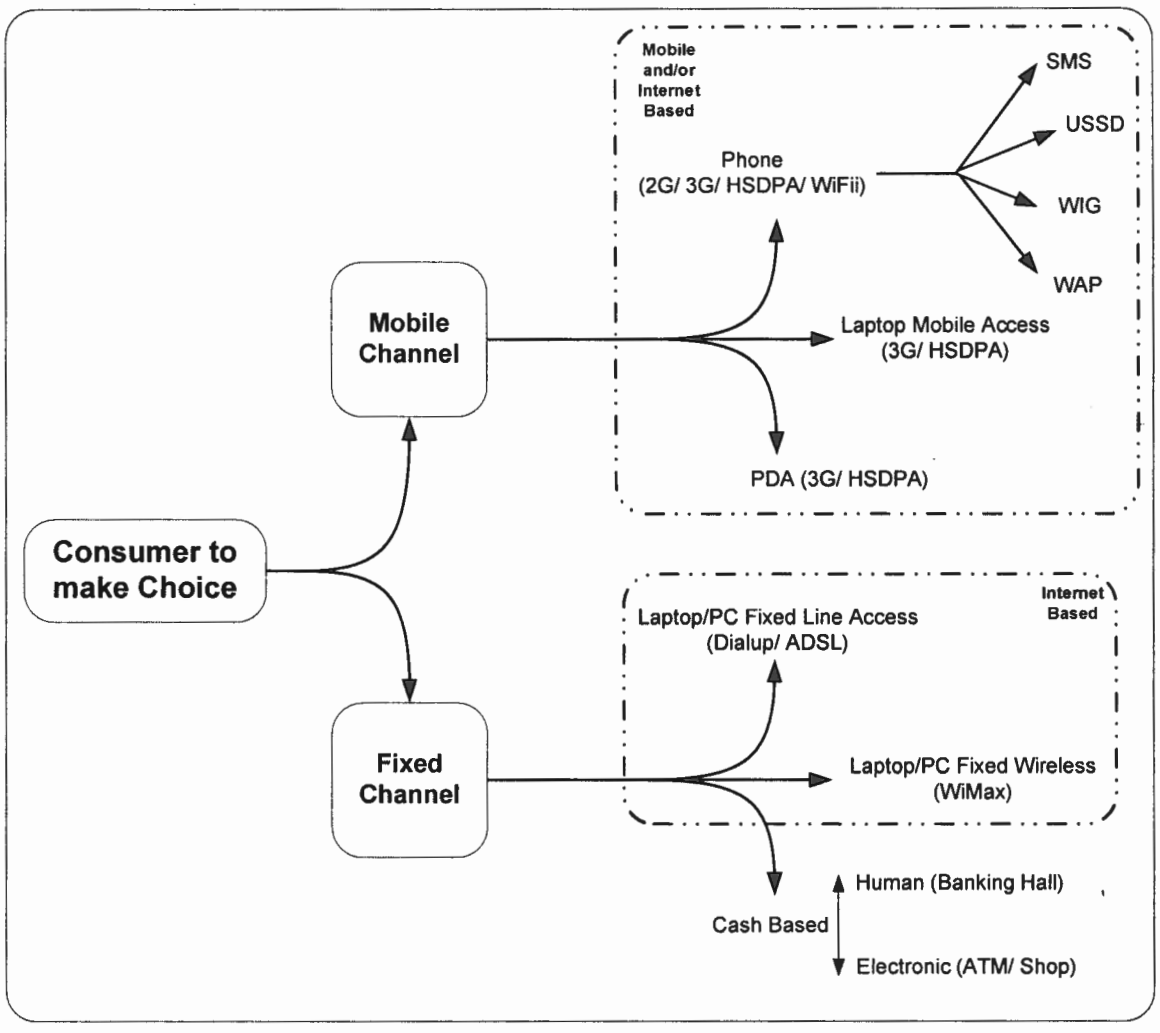

Figure 4.2 - Choices of type of channel access available to consumers in SA

4.2.2.1 Fixed & Mobile Channels

Fixed and mobile channels cover all the different banking channels available to a consumer in SA. Depending on the consumer's requirements and the channels availability, the consumer will make a choice to use an appropriate channel(s). A cash based channel is a prerequisite after the consumer has determined that they will require cash, while the internet and mobile based channels are also influenced by the type of access available to the consumer.

Cash Based *[Human – Electronic]*

A cash based choice answers the consumers need for cash. Deciding between a human or electronic channel interaction with the bank is determined by the consumers current requirement. The Human interaction coming from the bank employees of the banking hall and the electronic interaction of cash based experiences, from an ATM or point of sale.

Internet Based *[All Internet Types]*

An internet based choice allows the consumer to choose a fixed or mobile medium with which to interact with the bank, such as a laptop or desktop or even a PDA. There are different types of

internet access available for consumers to aid their banking experience. The technological medium at the consumers disposable will influence the access type available.

Mobile Based *[All Mobile Types]*

A mobile based choice allows the consumer use from a range of mobile mediums, such as smart phones, PDAs, cellphones, and i-phones. Like the internet based options the technological medium also influences the access type available.

4.2.2.2 Migration

Channel Migration *[Throughout all Banking Channels]*

Channel migration refers to the consumer's willingness to move from banking channel(s) to banking channel(s). This does not imply that the consumer uses only one channel for all their banking needs. On the contrary, it is the consumers search for the most stable channel(s) for their respective service(s) requirements. The migration from channel to channel is influenced by the consumer's needs, and preference of those channels.

4.2.2.3 Multi-Channel

Multi-Channel *[Multi - Single]*

A consumer's need for multi-channel allows the consumer to attain the best possible relationship with their bank, dependant on their current banking need.

> *'In most cases less [of the] banking hall, then from there it was less ATM. I think each one just has a specific need in me. [The] ATM is for getting cash, [the] banking hall is for signing docs, and internet the rest.'*
>
> (Interviewee 2)

They are able to conduct the same services with different channels even if their preferred channel is unavailable at any time. This concept indicates a dimensionality of using a single channel for a specific need or more than one channel for the same need, dependant on the availability of the channel and location of the consumer and channel.

4.2.3 Channel Use

Channel use is defined as the actual use of the channel(s) after the consumer's experiences and choices have been taken into consideration. The channel(s) used is dependent on the consumer's current requirements with respect to the impacting categories. This will result in influencing the consumer to use the channel most favoured from the outcome of the requirements. This demonstrates that different channels are used for different scenarios, sometimes more than one channel and sometimes only the one channel. The usage of a specific channel is now less pre-determinable as there are now multiple options available to achieve the same outcome. The evidence supporting the concepts for this category are depicted in Table 4.3 below.

Table 4.3 - Supporting Evidence for Concepts of Channel Use

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Channel Usage	Extent of Use *[Extensive – Restrictive]*	19	***Well mostly internet banking**, going to **lean towards that the most now** because it's the easiest*	1
			***I think I'd still say internet banking**. As it is **I've got access most of the time to internet**, and for me a cell phone is just a means of making a call from it, it is because the screen is small that, I don't think I would get into television banking as well*	2
	Frequency f Use *[Frequent – None]*	5	*Well when I moved, internet banking became available and that is where I migrated to, so I didn't need to use telephone banking anymore. And **I go to the bank once every two or three months** to go and collect a new cheque book. That is basically all I go to the banking hall for now*	3
			*Ok the ATM certain things, if I need cash then I'll use the ATM. **I use that maybe twice a month.** The internet banking I will use to pay all my accounts, transfers and payments. I hardly go into the bank; well everything is set up on my internet banking. All my accounts, all my beneficiaries are in place, transfer money to beneficiaries. I don't need to do anything else.*	4

4.2.3.1 Channel Usage

Extent of Use *[Extensive – Restrictive]*

This concept refers to the degree to which the consumer utilises the channel(s). The dimensionality ranges from an *extensive* to a *restrictive* use of the channel(s). An extensive use of the channel(s) would indicate the consumer is satisfied with the channel(s), while a restricted use would indicate that the consumer is short on options due to varying circumstances of no access or the urgency of the banking requirement.

Frequency of Use *[Frequent - None]*

This concept refers to the consumer's frequency of use of the channel(s). This essentially indicates how frequently the consumer utilises the channel(s). A greater frequency of usage would indicate the consumer's satisfaction of the channel(s) which is reassured with the continual use of the channel. However, a lesser frequency could indicate that this channel is used limitedly due to availability or location, or no longer provides the consumer with the required level of satisfaction.

4.2.4 Consumer Satisfaction

This refers to the consumer's satisfaction of the banking channel(s) they use. Allowing the consumer to have real-time access to the bank ensures the consumer is kept content at all times as they know exactly where their funds are at any time. This is only possible though with the internet based banking. However, this is not the only means of consumer satisfaction. On occasion the consumer may not be satisfied with certain features of their current channel selections and so will actively seek out a different channel, while on other occasions an opportunity to experience another channel presents itself. Satisfaction is primarily achieved from the positive experiences gained as depicted in Table 4.4.

Table 4.4 - Supporting Evidence for Concepts of Consumer Satisfaction

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Satisfaction	Satisfied with Channel *[Satisfied - Dissatisfied]*	32	***They were good**. I mean they were better than waiting for someone to manually update your savings book or account book. At the moment internet banking is does have a lot of problems, but it seems to be working fine. **I'm happy** that it's secure.*	3
			Amazing really. If I can put it that way**. From standing in queues **to all of a sudden instant,** you can do it at your own pace, I think the word **amazing sums it up.	7

4.2.4.1 Satisfaction

Satisfied with Channel(s) ***[Satisfied - Dissatisfied]***

This concept determines the consumer's satisfaction with the channel(s) they are using. The dimensionality indicates the consumer's degree of satisfaction from anywhere between *satisfied* and *dissatisfied.* If the consumer is satisfied with a channel they are currently using this will lead towards continued usage, while if the consumer is not satisfied with a channel they are currently using they will stop using the channel and may look for other alternatives.

4.2.5 Usage Continuance

Usage continuance indicates the consumer's continued use of the channel(s) currently being used. This continuance is influenced by the consumer's satisfaction with the channel(s) as well as their experiences. If the consumer experiences any negative aspects or becomes dissatisfied for any reason they will stop using the channel, and may search for an alternative. However, a negative experience or dissatisfaction is not a necessity for the consumer to stop using a channel. If the consumer finds a channel that they are more comfortable with, they may replace one that they are currently using having experienced a greater satisfaction with the newer channel. Evidence supporting the concepts of this category can be found in Table 4.5

Table 4.5 - Supporting Evidence for Concepts of Continuance Intention

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Continued Usage	Intensity of Usage *[Intense - Moderate]*	9	*I [used] to do transfers by the ATM. That was before internet banking. I think once internet banking came along anything that I need to do I do on there*	2
			I normally make my own decisions. If there's news on accounts being hacked then it makes me apprehensive but I still continue using that 'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...	2
	Years of Usage *[Many – Few]*	13	*I became much older [laughing] I've been using well I've been using the internet now since '94 and that's thirteen years now, and you know I've kind of kept track with internet use and the internet became a bigger part of doing business, of looking for stuff to buy, buying or purchasing stuff, and getting information than it was before. Now it's easier to find all that instead of looking in a phone book to find it. Even if things are small and odd it will be quicker to Google it than to find it in the telephone directory. If I need to find a restaurant or so on. Internet has become more of a daily tool not only for my work but also for my entertainment. For other information, for making decisions, for buying stuff.*	3
			Well Banking hall, I've been going into the bank, I've been using since 30 year ago. Telephone banking, from about 1994. I'm almost exclusively using internet banking at the moment. I accepted them, It was quicker	3

4.2.5.1 Continued Usage

Intensity of Usage ***[Intense - Moderate]***

The intensity of usage indicates how comfortable the consumer is with the chosen channel(s). The dimensionality ranges from an *intense* to a *moderate* usage of the channel(s). The greater the intensity of usage the more familiar and satisfied the consumer becomes with the chosen channel(s) and the longer they will continue to use the channel(s).

Years of Usage ***[Many - Few]***

The years of usage highlights the consumer's derived satisfaction from the channel(s) to continue using it. The dimensionality ranges from *many* to a *few* years of usage of the channel(s). The

longer the channel(s) is used the more likely the consumer is satisfied with this means of interaction with the bank, compared to other means. However, this may not always be the case; it may just be the only means available to the consumer to interact with the bank. With the introduction of newer banking technology more options are made available for consumers to employ.

4.2.6 Comparative Advantages

This category is the most conceptually dense category, consisting of 18 concepts. This category is defined by the consumer's belief of gaining an advantage using a channel(s) over other means of performing the same tasks. Based on the results, this category has a high explanatory power on the overall grounded theory. This is due to the concepts having a significant impact on all other categories, ultimately resulting in influencing the consumer's choice. Table 4.6 shows the concepts that define the category of comparative advantages.

Table 4.6 - Supporting Evidence for Concepts of Comparative Advantages

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Convenience	Convenient *[Convenient - Inconvenient]*	29	*Banking hall is inconvenience looking for parking standing in queues, ...*	2
			*I found it fine, **Convenient [short laugh]. Didn't have to go to the bank or wait in the queues***	8
			*With banking halls because I finally had money [laugh], ATM's **I know it sounds like I keep on saying convenient but its [the] most applicable, [yeah] the convenience factor.***	2
Cost	Bank Charges *[High - Low]*	13	*Not entirely, probably not, I doubt I use all the services. **It depends on bank charge rates** they seem to go up as you add services so I generally stay away from them the unnecessary things*	1
			*Well initially when I started working, I don't think internet banking was quite widespread at that time. So it was, my options [were] either the banking hall, the ATM or the telephone banking was also around. But I think it was more about **saving costs** and that. At the time there was some **monetary fee involved** to do telephone banking. That is why I didn't go that route*	4
	Internet Charges *[High - Low]*	3	*Well, I [wouldn't] like to say anything bad about Telkom, **but we need to put** a bomb under Telkom, because **the extortion that is going on and the unfair business practices** that Telkom are subjecting us to. **Internet access is extremely expensive,** compare relatively to other countries. There is a whole bunch of reasons why Telkom should be wiped from the planet.*	3
	Travel Cost *[High - Low]*	4	*Banking hall is **inconvenience looking for parking standing in queues,** ATM's is the security factor 'you always have to look over your shoulder', telephone banking is outdated, **mobile banking** is the limitations of a cellphone, TV banking haven't tried it so no current, no opinion on that one*	2
Ease of Use	Comparative Ease of Use *[Easy - Hard]*	15	*The ATM, when it is not the end of the month, then it's ok. **If I need cash then I'll use the ATM. Internet banking I use that all the time. It's very convenient. I try to avoid the banking hall, those queues. Banking hall I'll use when I have a query.** I'll see customer service first.*	4
			***Well if I didn't have good internet access** I would be more inclined to go for mobile banking or telephone banking, but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*	3
Limitations of Use	Technology Limitations *[Many - Few]*	10	*I think I'd still say internet banking. As it is I've got access most of the time to internet, **and for me a cell phone is just a means of making a call from it, it is because the screen is small that, I don't think I would get into television banking as well***	2
Location	Location of Channel *[Safe – Unsafe]*	13	*You don't have to walk to the bank to do stuff, to do transactions and whatever. I 'kind of' tend to not carry as much cash on me anymore so **know, because just about every shop has got one of those swipe terminals, where your cards are,** it's very convenient*	1
			*I'd say [the] convenience [as] **they start appearing at the campus I was studying at** so instead of having to go to a branch nearby you could draw money at the ATM and get mini statements.*	2
	Distance to Channel *[Near - Far]*	4	*It has been more convenient, because it has opened up more, all the time, 24 hours. **It's convenient because you don't have to drive and find parking in town** – Cape Town. Yah, it is basically convenient*	3
Safety	Channel Safety *[Safe - Unsafe]*	16	***Internet banking and banking hall. They're safe in my opinion.** I'm assuming banks need to activate [certain] channels right. **So, I like the idea there're less ways of accessing my bank account than more, so...***	1
			*N. Not after being in IT. **You know [that] the banks [would see] to it that things are secure and it would be in their interest as well, that they give us secure facilities.***	2
Time	All Hours *[All Hours of the Day]*	9	***... access to things 24 hours a day ...***	2
			*It has been more convenient, because it has opened up more, **all the time, 24 hours.** It's convenient because you don't have to drive and find parking in town – Cape Town. Yah, it is basically convenient*	3
			*In my case its mostly, internet. I'd say it is convenient and using them all together, **I think it's that 24 hour access to it,** not having to look for parking, not standing in queues, I can do it at home, I can be working and doing it at the same time*	2
	Saves Time *[Quick - Slow]*	23	*The bank offered it to us; I thought it would be **quicker than writing out a cheque.***	6
			*... **from standing in queues to all of a sudden instant, you can do it at your own pace,***	7

4.2.6.1 Convenience

Convenient *[Convenient – Inconvenient]*

This concept refers to the convenience experienced by the consumer. The dimensionality indicates the consumer's convenience ranging between *convenient* and *inconvenient.* The more convenient the channel is for the consumer the more likely the consumer is to use this channel. This convenience may also lead towards satisfaction received from the chosen channel(s)

4.2.6.2 Costs

Bank Charges *[High - Low]*

Bank charges refer to the rates that the banks charge for transactions of different channels. The higher the charges the less likely the consumers will be fully satisfied with that choice. In other words, the consumer will strive to find a cheaper means to attain the same outcome.

Internet Charges *[High - Low]*

This concept refers to charges necessary when using internet. The local internet charges are excessive compared with charges of some other less developed countries out of Africa (IWS, 2008). Thus, the higher the internet charges the smaller the number of users that can afford to use it.

Travel Cost *[High - Low]*

Travel Costs refer to the cost the consumer spends on petrol getting to the necessary banking location. The dimensionality ranges between a *high* and l*ow* cost of transport. The greater the need for the consumer to visit a physical location the greater the cost grows.

4.2.6.3 Ease of Use

Comparative Ease of Use *[Easy - Hard]*

This concept looks at the comparative ease of use of the banking channel(s) with respect to the consumers need. The dimensionality ranges from *easy* to *hard.* The consumer is more likely to use a channel they find easier, however that channel is not always a guaranteed choice. It is dependent on the circumstance the consumer finds themselves in when they require the channel(s). This comparison helps the consumer in evaluating for the most suitable combination of channels for the current requirements. This essentially aids in determining the consumer's choices.

4.2.6.4 Limitations of Use

Technology Limitations *[Many - Few]*

Some limitations of the technologies act as deterrents of the banking channels. The dimensionality ranges between *many* and *few* limitations for each channel. The more limitations a technology presents the less likely the consumer is to employ the corresponding channel. However, these limitations may not impact on all consumers in the same manner.

4.2.6.5 Location

Location of Channel *[Safe – Unsafe]*

This concept refers to the actual location of the channel. The location plays an important part in the consumer's channel choice and use process. This concept encompasses a dimensionality that ranges within a *safe* or *unsafe* region. The location may be at home, in town, at work, or elsewhere. Thus consumer may be influenced by the locality of the channel.

Distance to Channel *[Near – Far]*

The distance to a channel is of importance to a consumer. The consumer is more likely to visit a channel that is closer to them (at home) than one that is further away (in town). However, this may not always be the case. Depending on the consumers current banking requirements the distance to the channel may or may not impact on their choice.

4.2.6.6 Safety

Channel Safety *[Safe - Unsafe]*

This concept refers to the comparative safety of the channel in question. Generally the safer the channel the more inclined the consumer will be to using the channel. However this is not always a given. At times the consumer will use a channel if they have a means of making it safer, such as anti-virus for internet based threats.

> *'No. Not after being in IT. You know [that] the banks [would see] to it that things are secure and it would be in their interest as well, that they give us secure facilities.'*
>
> (Interviewee 2)

4.2.6.7 Time

The time of access to some channels has changed. The consumer no longer has to ensure that all their requirements are conducted during banking hours.

All Hours *[All Hours – Office Hours]*

ATMs allow the consumer to conduct various services after hours, including also cash withdrawals. The newer internet-based channels allow for a few more of these services to be made available after hours. This ensures that the consumer does not have to complete all their banking requirements during office hours. This brings the consumers banking experience towards a 24 hour environment. However, depending on the sensitivity of the requirements the consumer may wish to conduct such requirements through the banking hall, during office hours.

Saves Time *[Quick - Slow]*

Certain channels afford the consumer more time to do other tasks. Instead of having to wait in queues after finding parking a consumer can save themselves some time by conducting the requirement

with a different channel. The quicker the banking task can be conducted the happier the consumer remains.

4.2.7 Compatibility

This category refers to the compatibility and accumulated banking experiences of the consumer and the respective channel(s). These experiences influence the consumer's choices about the channel(s) at their disposal. It is also indicated that positive experiences lead towards the consumers being satisfied with the channels(s) in question. Table 4.7 shows the evidence that supports the significance of compatibility, and the concepts of this category are discussed in further detail below.

Table 4.7 - Supporting Evidence for Concepts of Compatibility

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Channel Apprehension	Apprehensiveness *[High - Low]*	12	***Apprehensive about internet banking, not comfortable with security and computer viruses an all sorts of things like that.***	1
			*I normally make my own decisions. If there's news on accounts **being hacked then it makes me apprehensive** but I still continue using that 'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...*	2
Comfortable	Comfortable *[Comfortable – Uncomfortable]*	4	*Mobile banking was fairly safe it turned out considering they sms you random verification numbers, **so comfortable with mobile banking**. But ultimately to begin with I was sceptical until things put in place afterwards*	5
			*It would be internet banking … Because it is an environment I am **familiar with and comfortable with.***	3
Consumer Experience	Internet Banking Experience *[Good - Bad]*	8	*Yes and no. In the beginning we liked internet banking and we went for it. **Now that we are using it we won't ever change.***	7
			*Well, I felt that the **internet banking was cool because you don't have to stand in a queue** and I could do, all my payments in virtually five minutes. If I go to pay five accounts it would probably have taken a day to two to pay them.*	4
	Channel Experience *[Good - Bad]*	19	*Our decision was to go through the bank that we bank with, that we trust. **How do I decide? Whichever is faster and convenient, and previous experience,** I would never turn back.*	7
			*I can't say much for the **banking halls because I'm very seldom there.** But, internet banking is, **I still get the same experience,** but [BANK] recently had a change over which caused hiccups but that's been sorted out. And [BANK's] one has basically stayed, I can't remember if it's changed much so...*	2
Consumer Needs	Need for Cash *[Cash – No Cash]*	12	*You don't have to walk to the bank to do stuff, to do transactions and whatever. **I [kind of] tend to not carry as much cash on me anymore** so know, because just about every shop has got one of those swipe terminals, where your cards are, it's very convenient.*	1
			*The ATM, when it is not the end of the month, then it's ok. **If I need cash then I'll use the ATM.** Internet banking I use that all the time, it's very convenient. I try to avoid the banking hall, those queues. Banking hall I'll use when I have a query. I'll see customer service first.*	4
	Need for Payment Method *[Human - Electronic]*	14	*I guess the banking hall is kind of a secure place to draw cash, and **internet banking again is just easy to use when I need to pay accounts of mine,** I'd say it's relatively secure so don't have to worry about theft.*	2
			*If I was on the road or at function, e.g. restaurant and decided **I needed to pay an account or something I could use my mobile phone. There is always telephone banking also.** Although with telephone banking tend not to use it when I am around lots of people. So I tend really not to use telephone banking, so depends on what I need and who is around me actually*	5
	Need for Real-Time Information *[Real-Time - Delayed]*	6	*Access to things 24 hours a day. I think part of access is someone might phone you, when there's a bill overdue you can do an immediate payment of the bill, **and on the internet there's a confirmation of a survey you can send the fax or an sms once you've done a transfer.** [In] that case it saved my father in law from going through a second robbery, payroll robbery, because a sixty year old paying these guys by cash at a specified rate was just … do the transfers on the internet so there's a safety aspect as well.*	4
			*I normally make my own decisions. If there's news on accounts being hacked then it makes me apprehensive but I still continue using that **'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...***	2
	Need for other Service *[All Other Services]*	10	*When **I need cash** - then ATM, and anything else, **money transfers, checking statements** that's internet and going in this hall, **signing documents or getting information on products.** You can add this but generally the internet documents are more updated than **what the consultants in the bank sometimes know.***	2
			*TV banking I don't know much about, didn't know it existed. Mobile banking I've never used and in fact I don't know what services are available as well. Now with internet banking as far as I'm aware, it's got everything to do within a branch except **signing things aren't available,** because like I said do **debits there, transfers to different banks,** sometimes help my father in law **run the payroll for his business over there...***	2
Preference	Channel Preferred *[Throughout all Banking Channels]*	11	*Well **initially, Telephone banking was good** for me for doing transfers. **That was before Internet banking made some things more convenient,** like paying your rates and electricity account. And then the internet banking was like a natural progression from like with internet becoming faster and the web becoming more wide spread.*	3
			*Well **initially when I started working, I don't think internet banking was quite widespread at that time.** So it was, my options [were] either the banking hall, the ATM or the telephone banking was also around. But I think it was more about saving costs and that. **At the time there was some monetary fee involved to do telephone banking. That is why I didn't go that route***	4

4.2.7.1 Channel Apprehension

Apprehensiveness *[High - Low]*

Apprehensiveness refers to the consumer's wariness of the channel(s) in question. The dimensionality ranges from a *high* to a *low* apprehension towards the channel(s). The consumer is hesitant to use certain channels due to incidents of negativity. These incidents may have been experienced directly or through word of mouth, from electronic theft to physical theft. Thus the lower the apprehension the more likely the consumer's outlook towards the channel will be favourable.

4.2.7.2 Comfortable

Comfortable *[Comfortable - Uncomfortable]*

This concept is defined by the level of comfort experienced by the consumer for the channel(s) in question. The dimensionality indicates the comfort the consumer endures ranging between *comfortable* and *uncomfortable*. The consumer is more likely to use a channel that they are more comfortable with and probably less likely to use a channel that they are not comfortable with. However, this does not mean to say that the consumer will not ever use a channel they are uncomfortable with; they are just less likely to do so.

4.2.7.3 Consumer Experiences

Internet Banking Experience *[Good - Bad]*

This concept determines the consumer's internet banking experience. With internet banking a good experience is beneficial to attract the consumer to this channel. However, the consumer must also be vigilant at all times when using internet banking. This is attributed to the fact that no matter how many security features are implemented by the bank, if the consumer is careless or unaware of site tampering their accounts may get hacked.

Channel Experience *[Good - Bad]*

Channel experience refers to the experience the consumer receives from the channel(s). The dimensionality indicates the consumers experience ranging between a *good* and a *bad* experience. The greater the experience the more inclined the consumer will be to accept the channel(s). As with internet banking, consumers of other banking channels still need to be aware of their surroundings, as all channels have their own risks.

4.2.7.4 Consumer Needs

Need for Cash *[Cash – No Cash]*

This concept is defined as the need for the consumer to hold cash. This concept directly influences ATMs and the banking hall, being the main outlets for cash. These channels will influence a

consumer's choice dependent on their requirement to carry cash. The more cash that is needed the more regular the consumer will visit these establishments.

Need for Payment Method *[Human - Electronic]*

This concept refers to the payment methods that are available to consumers. Today, consumers tend to avoid carrying large sums of cash as there are more convenient ways to access this money. The recipients' payment requirements will determine which payment method is most desirable. If a cash payment is required then the consumer will find the most convenient way to pass that cash along, likewise if a transfer is required the payment method will be different.

Need for Real-Time Information *[Real-Time - Delayed]*

This concept enables the consumer to ensure that their funds are properly managed, to their exact needs, as they have real-time information available to them. This real-time feature to banking allows the consumer to experience satisfaction with the chosen channel. However, a delay with this information does not necessarily lead towards consumer dissatisfaction. Depending on the requirement the consumer may be content waiting for the respective information.

Need for other Service *[All Other Services]*

This concept refers to the consumers need to conduct various other services with the channel(s) in question. The consumer's choice is thus influenced dependent on the need and the comparative advantage received from the channel(s) for that need.

4.2.7.5 Preferences

Channel Preferred *[Throughout all Banking Channels]*

This concept refers to the consumer's preference of a banking channel(s). This preference can be at a specific point in time to meet the needs of a specific scenario, or just a general preference for the banking requirement at hand.

> *'Ok the ATM certain things, if I need cash then I'll use the ATM. I use that maybe twice a month. The internet banking I will use to pay all my accounts, transfers and payments. I hardly go into the bank.'*
>
> (Interviewee 4)

4.2.8 Exposure

Exposure looks at the exposure of the channels and the technology to the consumer.

Table 4 .8 provides some supporting quotes for the concepts that define this category of exposure. This category has a dimensionality: active search - passive search. This implies that a consumer can find themselves anywhere between an active or passive search for a channel(s), dependant on their necessity.

Table 4.8 - Supporting Evidence for Concepts of Channel Exposure

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Availability	Channel Availability *[Available - Not Available]*	13	*Well when I moved, internet banking became available and that is where I migrated to, so I didn't need to use telephone banking anymore. And, I go to the bank once every two or three months to go and collect a new cheque book. That is basically all I go to the banking hall for now*	3
			And it was the same with ATM banking, because I think they started appearing on campuses and then...	2
	Technology Availability *[Available - Not Available]*	12	*Well the option was given, when I moved to Cape Town, and I switched banks then and all of those things came standard as part of the account. In other words, I got access to telephone banking at [BANK] and then the ATMs of course and then the internet banking I think came about '96 or so. So I mean being in an internet business I was very keen*	3
			I think I'd still say internet banking. As it is I've got access most of the time to internet, and for me a cell phone is just a means of making a call from it, it is because the screen is small that, I don't think I would get into television banking as well	2
General Exposure	Channel Exposure *[Good - Bad]*	7	*Well Banking hall, I've been going into the bank. I've been using since 30 year ago. Telephone banking, from about 1994. I'm almost exclusively using internet banking at the moment...*	3
			I'd say [the] convenience [as] they start appearing at the campus I was studying at so instead of having to go to a branch nearby you could draw money at the ATM and get mini statements.	2
			Well Hall banking I experienced when I was 18. ATM was whenever ATM came in. And internet banking, well that was a few years ago, I don't know. Whenever it came in	6

4.2.8.1 Availability

Channel Availability *[Available - Not Available]*

This concept refers to the channel(s) becoming available to consumers. This is done by the physical channels appearing in ideal locations, while the electronic channels require an efficient introduction and implementation of the required technology (see Technology Availability). This allows the respective channels the due exposure necessary to make consumers conscious of the different channels available to them. The more readily available the channel is to the consumer the higher the possibility the consumer will be intrigued maybe even to the point of experimenting with the channel.

Technology Availability *[Available - Unavailable]*

As the technology becomes more readily available to consumers, different doors are opened with respect to the channels that will become available with that technology. With current technology (the likes of WAP; 3G; HSDPA; WIG; ADSL; WiMax and/or Dialup) improving, the costs come down and consumers are able to afford them.

4.2.8.2 General Exposure

Channel Exposure *[Good - Bad]*

This concept determines the exposure the consumer receives. The greater the exposure the more aware the consumer becomes of the channel(s) services and attributes. The greater the exposure the consumer receives to the internet the more likely the consumer is to take an active interest in exploring the possibilities of an internet based banking channel. Essentially, the consumer becomes more and more comfortable with the medium of the internet and is less hesitant to experience internet based banking sincerely. This exposure may or may not encourage the consumer's decision making process to eventually use the channel(s).

4.2.9 Consumer Knowledge

Consumer knowledge is gained through the awareness of the banking channels, the knowledge of the technology required to operate them at the consumer end, and the knowledge of the services the channel(s) provide. Together these concepts define the consumer's knowledge. This knowledge provides the consumer with a clearer picture of the strengths and weaknesses of the channel(s), to make a more informed choice. Evidence for these concepts can be found in Table 4.9.

Table 4.9 - Supporting Evidence for Concepts of Consumer Knowledge

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Awareness	Awareness of Site Tampering *[Aware - Unaware]*	8	*Yes I would warn people about the various kinds of scams that are being pushed. What is the other term,* ***mostly phishing****. That there are assurances as well [of] secure [and] telling all people to look [out] for –* ***Beware of females asking to confirm your account details.***	3
			With internet banking it's - ***'make sure you clicking on the correct links'****, and know how to get to the correct links without seeing people do funny stuff to it - 'because, with the internet bank[ing and] all the phishing going on* ***[if] you just click haphazardly you'll end up with something that looks like you at the bank but you're not'****.*	2
	Channel Awareness *[Aware - Unaware]*	33	*Well,* ***with the mobile banking*** *I don't think that they sold it to me. I consider myself a technical person who understands, it made me more aware of features and what you can do with it, and time and if it's going to save me money as well.* ***I don't about the other one – the telephone banking. Oh television banking.***	4
			Now with ***internet banking as far as I'm aware****, it's got* ***everything to do within a branch except signing things aren't available, because like I said do debits there, transfers to different banks****, ...*	2
	Technology Awareness *[Aware - Unaware]*	4	*Quite simple, it was straightforward if there was a problem,* ***clicked on help and stuff popped up and you find your own quickly. And their security with regards to PINS and sessions are much nicer now.*** *They send you codes* ***when you log on, so you know if there is any activity***	2
			I don't know. I'm very old and internet banking is [not]. ***I don't even know how to use a cellphone, so my children have to do it for me, so I can't see it happening.***	6
Channel Knowledge	Channel Convergence *[Knowledgeable - Unknowledgeable]*	2	*Well I would* ***imagine that mobile and internet banking would merge****, that there would be no difference between using the internet and using your mobile phone.* ***And that will eventually converge.***	3
			That is the industry trend. You know ***I see telephone, internet and mobile basically converging into one universal service where you wouldn't actually know where your data is going out onto a line or a wireless*** *– you wouldn't actually care – but they would be so cheap and universal that there will be basic universal coverage where you are and the cost will be negligible. So it would open up a whole new field of services available by the internet. The obvious ones are ...*	3
	Knowledge of Services *[Knowledgeable - Unknowledgeable]*	13	***Payments, debits. They have cellphone payments now online I think.*** *I'm not quite sure of any others.* ***There is notifications for when transactions happen,*** *and so you can get sms's of just about anything that happens, specifically.* ***Stop orders is one as well not sure about anything else.***	1
	Knowledge of Technology *[Knowledgeable - Unknowledgeable]*	14	*Well that your* ***phone becomes more fully-fledged web browsing instrument****. So the* ***web would be the universal interface and you will have better mobile accessing to the web.***	3
			I became much older ***[laughing]*** *I've been using well I've been using the internet now since '94 and that's thirteen years now, and you know* ***I've kind of kept track with internet use and the internet became a bigger part of doing business****, of looking for stuff to buy, buying or purchasing stuff, and getting information than it was before.*	3

4.2.9.1 Awareness

Awareness of Site Tampering *[Aware - Unaware]*

Awareness of site tampering is specific to internet based banking. Consumers need to be made more aware of the risks of internet based banking and how to overcome them. The more aware a consumer is towards site tampering the better informed they become. This affords them the precaution to put safeguards in place, making their banking interactions securer.

Channel Awareness *[Aware - Unaware]*

This concept refers to a consumer's awareness of channel(s). The dimensionality ranges from *aware* to *unaware*. The more aware a consumer becomes of the channel(s) the more well informed they are to make a choice about the channel(s). However, the consumer's awareness of the channel(s) is not

directly proportional to a favourable choice towards the channel(s). The awareness towards each channel helps guide the consumer's personal choice.

Technology Awareness *[Aware - Unaware]*

This concept refers to the consumer's awareness of the technology required for the banking channel(s). The greater their awareness of the technology the greater their knowledge of how the channel works. This knowledge influences the consumer's personal choice. Once again, the consumer's awareness of the technology is not directly proportional to a favourable choice towards the channel(s).

4.2.9.2 Channel Knowledge

Channel Convergence *[Throughout all Banking Channels]*

This concept ideally refers to the converging of channels to the point of possibly only being one universal channel. However, realistically consumers perceive it as the merging of related channels like internet and mobile banking.

> *'Well I would imagine that mobile and internet banking would merge, that there would be no difference between using the internet and using your mobile phone. And that will eventually converge.'*
>
> (Interviewee 3)

Knowledge of Services *[Knowledgeable - Unknowledgeable]*

With knowledge of the services the consumer is able to receive the complete banking experience. Knowing these services are available also makes the consumer's channel choices easier. With this knowledge the consumer will use the channel that is most appropriate for the task at hand.

Knowledge of Technology *[Knowledgeable - Unknowledgeable]*

Knowledge of the technology is not a necessity. However, it does help the consumer overcome the initial apprehension towards it. The more knowledge the consumer has about the technology the more comfortable they are with the channel(s) the technology assists. The consumer is also able to navigate easier through the channel. The consumer can also ensure that the channel they interacted with has the necessary security features implemented.

4.2.10 Security

This category identifies some of the different security threats and measures presented to consumers when they utilise a banking channel. This leads to consumers being guarded over the channel(s) they may or may not end up using. Thus, being cautious at all times of certain security concerns the consumer indirectly falls upon other banking channel outlets, to conduct their banking needs, if they are not fully accepting of their surroundings. Evidence supporting the concepts of this category can be found in Table 4.10 Identifying these security concerns and measures allows the consumer to become more accepting about the banking channels

Table 4.10 - Supporting Evidence for Concepts of Security

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Security Threat	Electronic Threat *[Low - High]*	6	*And their **security with regards to PINS and sessions are much nicer now**. They send you codes when you log on, so you know if there is any activity...*	1
	Information Threat *[Low - High]*	9	*Cellphones get stolen a lot. **I don't like the idea of keeping any sensitive information**, anything like that on my cellphone*	1
			*Because I tend to see resistance from, you know people around me to using it, and I'm not sure if it's, [to compete with] or if it's internet banking specifically but you always get asked 'are you sure it's safe?' **'you sure you should be having all your details like that flying across a line?'***	2
Perceived Security	Perceived Lack of Security *[Unsecure - Secure]*	4	*well for ATM's is going just outside of working hours, is your only option, and then ... later on for internet banking again is just ... you don't have to go to the bank. well there was a lot of things that, well I'd say that lack, **perceived lack of security was stopping me before**, but then they seem to have sorted out that problem*	1
Security Measures	Security Measures *[Active - Inactive]*	9	*I guess, oh shucks, how would you do that! **Security measures, something where it's not specific to the phone** so that if it does get swiped they can't really do anything. I'm not actually quite sure exactly what they have in place at the moment, it just, suppose ...*	1
			*Recently with the internet banking, we found some malware on my laptop. And I did some more investigating on the malware that was on my laptop. It was that particular malware [that] tries to get hold of your banking passwords and so **it made me go buy security packaging for [it]**, so that is a bit scary.*	4
			*The other channels. **Just to be cautious about other people. Be cautious is the main thing.** With ATM banking you worry about people peeping over your shoulder to get your pin number and fixing the machines so that your cards get stuck.*	7
Physical Threat	Card Theft *[Safe - Unsafe]*	6	*ATM's is just 'make sure there's no one around you who shouldn't be there', and with ATM's there are **'people who are swopping out your cards'**, 'it happened to my wife as well' so people want to get hold of your PIN number*	2
			*The other channels. Just to be cautious about other people. Be cautious is the main thing. With **ATM banking you worry about people** peeping over your shoulder to get your pin number and **fixing the machines so that your cards get stuck.***	7
	Physical Theft *[Safe - Unsafe]*	6	*The bank which led to internet banking. **At least you won't get held up at gunpoint.** You get scared that there are people watching you and they are going to hold you up. Some people, **they are busy and I think it was more about being held-up at gunpoint.***	7
			*If I knew the others yes, but not the ATM – **be robbed for the money**, so do they really have television banking? **If you stand at the ATM and you get robbed and then?** What do you call it when the card is stuck in the ATM*	8

4.2.10.1 Security Threat

Electronic Threat *[Low - High]*

Electronic threat is the threat consumers are wary of when interacting with the bank through electronic means. The fear of losing their PIN (Personal Identification Number) or having their accounts hacked and actually having their accounts cleared out. The lower the electronic threat the consumer experiences on a channel the more inclined they will be to consider this channel as a viable choice.

Information Threat *[Low - High]*

Information threat on the other hand is the consumer's wariness of losing their personal information to strangers. They fear that if this information is somehow intercepted then there is a possibility that they could be robbed without their knowledge. The lower the information threat the consumer anticipates for a channel the more likely they will be to consider this channel as a viable choice

4.2.10.2 Perceived Security

Perceived Lack of Security *[Unsecure - Secure]*

This concept defines the consumer's perceived lack of security. This is the security or lack thereof that the consumer perceives the channel to present. If the consumer perceives that the channel

lacks sufficient security then they are more likely to be dissuaded from considering this channel as a viable choice for the immediate future

4.2.10.3 Security Measures

Security Measures *[Active - Inactive]*

The concept of security measures is defined by the personal prevention measures the consumer can take to ensure further security with the banking channel(s) of their choice. The dimensionality indicates the consumers approach towards security, from between an *active* to *inactive* approach towards making the channels more secure for themselves. The more security measures available the more inclined the consumer is towards that channel. Consumers will utilise banking channel(s) with security concerns provided they feel they have adequate security measures in place.

4.2.10.4 Physical Threat

Card Theft *[Safe - Unsafe]*

The concept of card theft is illustrated by the consumers concerns over their bank cards getting stolen. In order to minimise or even eliminate the possibility of this incident the consumer is wary of where and when they use their cards. The safer the consumer feels using their cards the more they will be inclined to use it. However, if they feel the current environment is unsafe they will be inclined to search for other means of banking interaction.

Physical Theft *[Safe - Unsafe]*

Consumers are frightened by the thought of being mugged or of being caught up in a bank robbery. For this reason they will carry less and less cash on their person and avoid the banking hall. This concern for physical safety leads them towards other banking channels, which in turn are burdened with their own security concerns. The safer the consumer feels the more they will use this channel. However, if they feel unsafe they will look for alternative means of banking interaction.

4.2.11 Social Influence

Social influence is defined as the perceived importance the consumer places on the input by their own or others thoughts and past experiences. This category may or may not directly influence the consumer's choice. However, the consumer will always be aware and watchful about these perceptions. On the other hand some consumers do not pay heed to these *'horror'* stories; their decisions are independent of opinions. Evidence supporting the concepts of this category can be found in Table 4.11

Table 4.11 - Supporting Evidence for Concepts of Social Influence

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Social Norms	Family Sources *[Good - Bad]*	2	*and ATM's is just 'make sure there's no one around you who shouldn't be there', and with ATM's there are 'people who are swopping out your cards', **'it happened to my wife as well' so people want to get hold of your PIN number***	2
			*Access to things 24 hours a day. I think part of access is **someone might phone you, when there's a bill overdue you can do an immediate payment of the bill**, and on the internet there's a confirmation of a survey you can send the fax or an sms once you've done a transfer, **and I think the, all stuff is. In that case it saved my father in law from going through a second robbery, payroll robbery,** because a sixty year old paying these guys by cash at a specified rate was just ... do the transfers on the internet so there's a safety aspect as well.*	7
	Secondary Sources *[Good - Bad]*	12	*I normally make **my own** decisions. If there's **news on accounts** being hacked then it makes **me apprehensive** but I still continue using that 'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...*	2
			*Maybe for ATM's seeing as **you read the** paper and **then, local bulletin then, someone got his** card got swiped again, I mean that's about it. I don't really listen to it .*	2

4.2.11.1 Social Norms

Family Sources *[Good - Bad]*

This concept is defined by the influence family members' perceptions and thoughts about certain channels may have on the consumer. The dimensionality indicates that these familial sources range between *good* and *bad* influences. The consumer is more likely, but not guaranteed, to accommodate a banking channel they have heard good stories about.

Secondary Sources *[Good - Bad]*

Some consumer's decisions on and about the banking channels are influenced by the opinions of others. The opinions of secondary sources range between *good* and *bad* influences. These opinions may be collected through printed, audio or video media, or word of mouth of others experiences and mishaps. Stories of card swapping, bank robberies and electronic fraud act as deterrents. While more positive stories of banking experiences such as timely transfers will entice the consumer.

4.2.12 Connectivity Quality

This category is concerned with the quality of connectivity to the internet. The consumers will have better experiences if their connections are faster and uninterrupted. Also uninterrupted connectivity will attract consumer's conscious of the benefits they could derive from internet based banking channels. Evidence supporting the concepts of this category can be found in Table 4.12.

Table 4.12 - Supporting Evidence for Concepts of Connectivity Quality

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Access	Internet Access *[Good - Bad]*	9	*Well if I didn't have **good internet access** I would be more inclined to go for mobile banking or telephone banking, but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*	3
			*If I couldn't get to a computer or **get up the internet to use it**, or if the system is not working, **if there was no internet connection or ...***	7
	Type of Access *[All types of Access]*	2	*As far as connectivity is concerned, no. **I do use the vodacom 3G network now and then**, but it is not something I rely on.*	3
			*If I go on the internet, Internet is more convenient for me than anything else **when you on** [Cell Provider] and you don't have money on you, you can't do nothing. **Internet** you can put everything right.*	8

4.2.12.1 Access

Internet Access *[Good - Bad]*

This concept refers to the internet connectivity the consumer has at their disposal. The dimensionality ranges between a *good* and *bad* connection to the internet. A good connection attracts and maintains the consumer's interest towards this internet based channel. While a bad or no connection would act as a deterrent from the channel.

Type of Access *[All types of Access]*

This concept considers the different types of access to the internet available to the consumer. This includes all the access types identified from Figure 4.2. The consumer will make greater use of these channels depending on their preference of these access types for the channels. The more the consumer can rely on this technology the more inclined they will be to use it.

4.2.13 Demographic Characteristics

This concept addresses the demographic characteristics of consumers that play a role in aiding their choice of banking channel(s). The two concepts identified are that of age and occupation. These concepts assist the consumer to make their choice. Evidence supporting these concepts is depicted in Table 4.13.

Table 4.13 - Supporting Evidence for Concepts of Demographic Characteristics

Sub Category	Concept *[Dimension]*	Count of Concept	Supporting Evidence	I
Age	**Age** *[Young - Old]*	5	*for me if you look at the generations...* ***my father's generation*** *it was the banking halls so they're very resistant to internet banking ...* ***in my generation*** *it was computers so* ***I think my age category*** *will be more into the internet banking, and the* ***younger guys pre-30's*** *they grew up with cellphones so for them mobile banking is a... might be more natural than* ***for my age group.*** *because it took me a long while to convince my father in law to do his payroll on internet banking and even after two years he still constantly asks 'are you sure it's safe?'*	3
			Well Hall banking I experienced when ***I was 18.*** *ATM was whenever ATM came in.* And *internet banking, well that was a few years ago, I don't know. Whenever it came in*	6
Occupation	**Occupation** *[Experience - Inexperience]*	4	*Well the option was given, when I moved to Cape Town, and I switched banks then and all of those things came standard as part of the account. In other words, I got access to telephone banking at [BANK] and then the ATMs of course and then the internet banking I think came about '96 or so.* ***So I mean being in an internet business I was very keen***	3
			Mobile banking and internet banking. When did I start using it! I think about three years ago ***at my old work.*** *Internet banking but not cell-phone banking, cell-phone banking is a recent thing.*	8

4.2.13.1 Age

Age *[Young - Old]*

This concept determines if the age of the consumer directly or indirectly influences the banking channel(s) they will use. The dimensionality ranges between a *young* to *old* generation of consumer. It is observable that the majority of the older generation of banking consumer's are more resistant to the newer internet and mobile based channels available than the younger generation..

4.2.13.2 Occupation

Occupation *[Experience - Inexperience]*

This concept determines if the occupation of the consumer directly or indirectly influences the banking channel(s) they will use. The dimensionality considers the consumers *experience* or *inexperience* with the technology their occupations provide. It is noticeable that consumers, who have work experience with the technology required for these channels, will be more inclined to be accepting of these channels. For example, working closely with the internet will allow the consumer the chance to grow accustomed to this technology and develop their own perceptions and experiences that they can consult when needed.

4.3 Results from Axial Coding Process

This section looks at the axial coding process at the category level. Table 4.14 shows the axial coding links at a category level. For each category this table depicts the number of relationship links that emitted from and towards that category. The first column refers to the category label, while the second column provides the number of axial links arising from (# of links FROM Category) and the last column indicates the axial links arising towards (# of links TOWARDS Category) the categories respectively. The FROM link indicates an instance of a link that has been initiated by a concept from within this category while a TOWARDS link indicates an instance of a link that influences a concept within this category.

Table 4.14 - Axial Coding Links at Category Level

Category	# of links FROM Category	# of links TOWARDS Category
Channel Evaluation	8	38
Channel Choice	8	70
Channel Use	9	46
Consumer Satisfaction	3	16
Usage Continuance	7	12
Comparative Advantages	69	21
Compatibility	58	42
Exposure	18	17
Consumer Knowledge	34	17
Security	42	7
Social Influence	10	-
Connectivity Quality	12	-
Demographic Characteristics	8	-

(Extracted from the TDB – Relationship Matrix, pp. 76)

The following sub-sections will take closer look at these categories and the links that emit from and towards other categories. For each category a table will be provided indicating the category the relationships links flow towards (Column 1: Relationship TOWARDS). The second column will

indicate the number of times this relationship appears (Instances of Relationships), while the final column will provide the supporting evidence for the relationship (Evidence of Relationship). These links will be discussed with the use of a story line narrative. Each story line makes reference to concepts that have been discussed in detail in the open coding process (Section 4.2)

4.3.1 From Channel Evaluation

Channel evaluation consists of one concept with eight different axial links emanating from the category. The categories linked with channel evaluation along with the respective evidence of these links are depicted in Table 4.15. A more detailed discussion of these links follows.

Table 4.15 - Axial Links emanating from Channel Evaluation

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Choice	5	*Well if I didn't have good internet access I would be more inclined to go for mobile banking or telephone banking, but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*
Exposure	1	*Well the option was given, when I moved to Cape Town, and I switched banks then and all of those things came standard as part of the account. In other words, I got access to telephone banking at [BANK] and then the ATMs of course and then the internet banking I think came about '96 or so. So I mean being in an internet business I was very keen*
Consumer Knowledge	2	*If I need to draw cash and I need to make payments or transfer money. All the transfers I can do on the internet. And I can go to the ATM when I put in petrol or something, or to the closest ATM when I need to draw the cash that I need*

4.3.1.1 To Channel Choice

The concept of *weighing up the options* of **channel evaluation** is linked to each of the five concepts within the category of **channel choice** *(Cash Based; Mobile Based; Internet Based; Channel Migration; and Multi-Channel).* Weighing up of the different banking options allows the consumer to become conscious of the possibilities available to them. These five different axial links denoted are described further next.

If a situation arises where the consumer requires cash and they have evaluated that due to their current surroundings, in other words their locality or even the time of day, the *cash based* option of an ATM is the most beneficial rather than going into a banking hall or vice versa.

If the consumer is without the accessibility they require to use certain channels, say *mobile banking*, they would be more inclined to choose the next, most appropriate, channel(s). Some evaluations essentially boil down to being personal preferences of the consumer irrespective of the consumer's situation. Interviewee 7 shows a personal preference for an *internet based* channel.

'Definitely the internet banking, it is taking over. Computers are the way to go. Internet is the way to go.'

(Interviewee 7)

On the other hand, when the consumer finds a channel they have grown more familiar with they may be inclined to *migrate* towards that channel. In doing so, the previous channel is replaced by the newer, more familiar, channel of choice.

However, at times the consumer is unable to differentiate individual benefits received from the banking channels that they find themselves utilising more than one channel, *multi-channel.* They inadvertently commence interacting with the banking environment through a multi-channel approach.

4.3.1.2 To Exposure

The concept of *weighing up the options* of **channel evaluation** creates one axial link to the concept of *channel exposure* within the category of **exposure**. In the process of evaluating channels the consumer becomes more exposed to the channels available.

Looking at the respective quote towards exposure in Table 4.15 the consumer re-evaluated their banking environment after making the move to a new city. This re-evaluation led the consumer to switch banks which ultimately exposed the consumer towards a new banking environment offering a larger set of banking channels. This exposure indirectly helps the consumer in making their final choice of channel(s).

4.3.1.3 To Consumer Knowledge

The concept of *weighing up the options* of **channel evaluation** is linked to the concept of *channel awareness* and *knowledge of services* within the category of **consumer knowledge** creating two axial links. In the process of evaluating channels the consumer inadvertently increases their knowledge concerning these channels.

Awareness of a channel grows as the consumer evaluates the advantages and disadvantages of the different banking channels. Ultimately the end result of the evaluation allows the consumer to become more knowledgeable of the different channels available and the services they provide. At the same time the consumer's knowledge of the services these channels provides also grows.

4.3.1.4 High Level Discussion

The interviews exposed that some consumers conduct an evaluation of the banking channels available to them before choosing any. This evaluation essentially assists in determining the benefits the consumer can receive, thus influencing the consumer's choice of channel(s). Throughout their evaluation the consumer becomes more knowledgeable of what each channel can provide for them in terms of services and output.

This evaluation of the banking channels does influence the consumers banking direction. However it must be remembered that a consumer's evaluation of these channels is biased, and prone to change along with their environment. External issues of availability, time of day, and location, to name a few, play their own roles towards the consumer's bias.

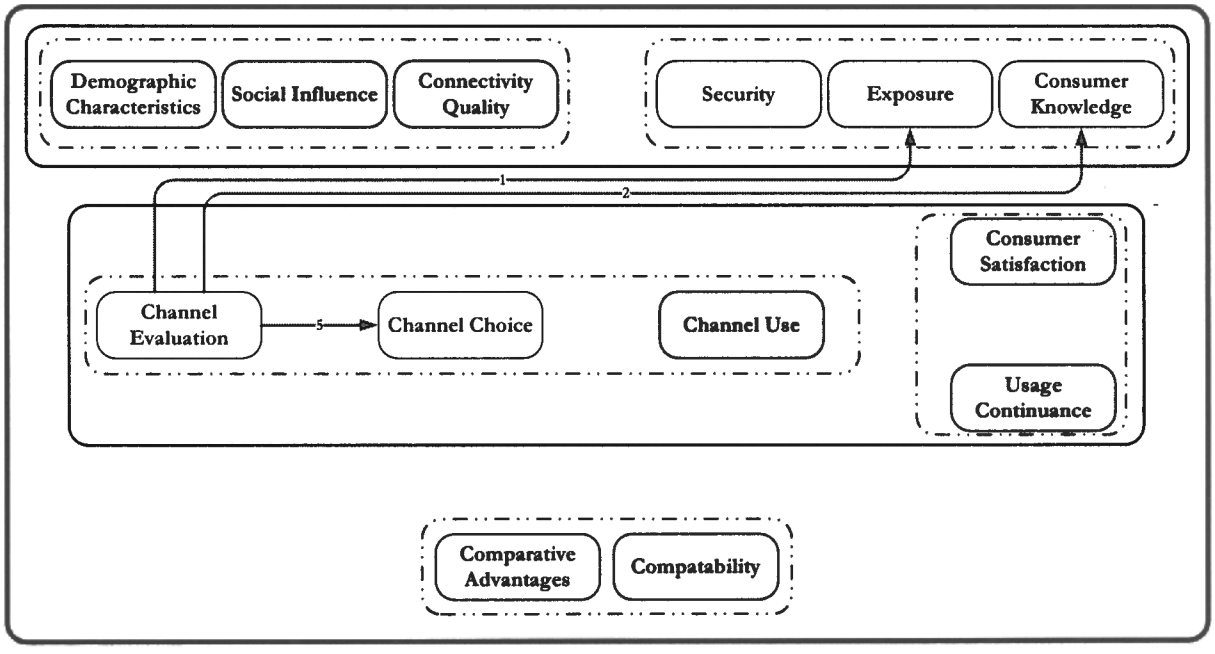

Figure 4.3 - Channel Evaluation Relationships

Figure 4.3 shows these relationships and the direction of the impact that is generated through an evaluation. An evaluation of channels not only influences their choice, it also creates a repository of further knowledge while at the same time exposing other channels.

4.3.2 From Channel Choice

Channel choice consists of five concepts with eight different axial links emanating from the category. The categories linked with channel choice along with the respective evidence of these links are depicted in Table 4.16. A more detailed discussion of these links follows.

Table 4.16 - Axial Links emanating from Channel Choice

Relationship TOWARDS	Instances of Relationship	Evidence of Relationship
Channel Use	8	*Ok the ATM certain things, **if I need cash then I'll use the ATM.** I use that maybe twice a month. The **internet banking I will use to pay all my accounts, transfers and payments. I hardly go into the bank.** Well everything is set up on my internet banking. All my accounts, all my beneficiaries are in place, transfer money to beneficiaries. I don't need to do anything else.*

4.3.2.1 To Channel Use

All five concepts within **channel choice** are linked to the concept of *extent of use* of **channel use** creating five different axial links, while the three concepts *cash based*, *internet based* and *multi-channel* of **channel choice** are linked to the concept *frequency of use* also of **channel use** creating three different axial links. These eight axial links are discussed further next.

The consumer's choice influences their extent of use. Of the cash based choices the consumer's use of the banking hall is employed rather restrictively, due to tedious waiting times and lengthy queues. Their needs can be met much quicker by other banking channels.

'The internet was a lot quicker, a lot faster. No long queues.'

(Interviewee 7)

Consumers also tend to migrate to from channel(s) to channel(s) as the latter presents them more benefits. This movement amongst channels(s) ensure that the consumer's extent of use of the latter channel(s) grows.

From the respondents responses it is evident that internet banking and ATM's are the channels of choice for most consumers. Their attractiveness leads the consumer to employ these channels more extensively and more frequently. To this end some consumers employ these channels cooperatively (multi-channel), and not in contrast of one another.

'I'd say most of the banking is done by internet now, majority, that's the, let's see, 5% percent is going into the branch and the rest is split between ATM's and internet banking. And basically going to branches if I have to sign something or, that's about it.'

(Interviewee 2)

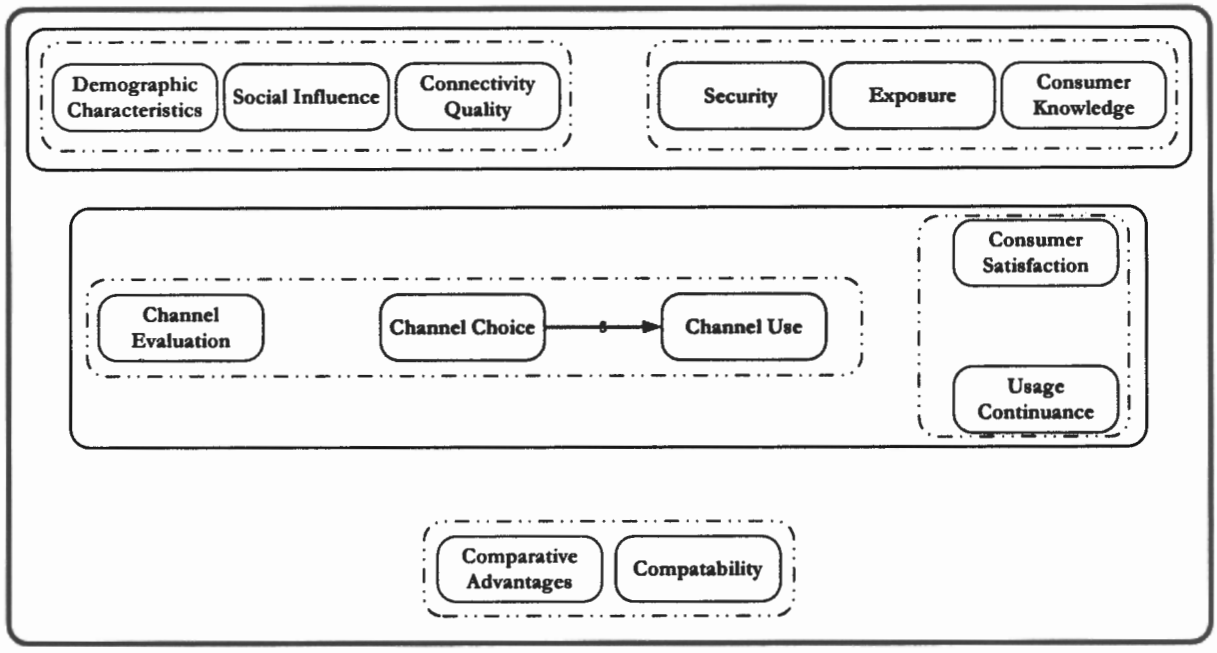

Figure 4.4 - Channel Choice Relationships

A consumer will use a channel(s) more provided that the channel(s) meets their banking needs sufficiently. The consumer's choice of channel(s) ultimately leads the consumer towards using the channel(s). This choice has been evaluated and granted as the most feasible choice available. Figure 4.4 below shows the direction of this linkage.

4.3.3 From Channel Use

Channel use consists of two concepts with nine diff erent axial links emanating from the category. The categories linked with channel use along with the respective evidence of these links are depicted in Table 4.17. A more detailed discussion of these links follows.

Table 4.17 - Axial Links emanating from Channel Use

Relationship TOWARDS	Instances of Relationship	Evidence of Relationship
Consumer Satisfaction	1	*TV banking I don't know much about didn't know it existed. Mobile banking I've never used and in fact I don't know what services are available as well. Now with internet banking as far as I'm aware, it's got everything to do within a branch except signing things aren't available, because like I said I do debits there, transfers to different banks, sometimes help my father in law run the payroll for his business over there...*
Usage Continuance	4	*Well Banking hall, I've been going into the bank, I've been using since 30 year ago. Telephone banking, from about 1994. I'm almost exclusively using internet banking at the moment. I accepted them, It was quicker.*
Compatibility	4	*Well I mean the banks were switching their systems so you didn't really have a choice. I'm mainly using ATM and internet banking. If I need cash I go to the ATM and for other transactions like transfers and stuff it's the internet.*

4.3.3.1 To Consumer Satisfaction

The concept of *extent of use* of **channel use** is linked to the concept of *satisfied with channel(s)* of **consumer satisfaction** creating one axial link. In the process of using the channel(s) the consumer determines their level of satisfaction using the channel(s). Use of the channel can lead the consumer to experience satisfaction or dissatisfaction. If the consumer is happy with the channel they use then they are adequately satisfied with its use.

4.3.3.2 To Usage Continuance

Both the concepts of **channel use** and **usage continuance** are linked creating four different axial links. The continued usage of the channels is attributed to the consumer's reliance and trustworthiness of the channels in question.

The intensity with which the consumer ends up using a channel is attributed to many different factors, some unique to the consumer. In this case, the frequency of use of the banking hall led towards the consumer's moderate usage. Even if they do visit the bank once every two to three months it is something they continue to do. Also a frequent use of the channels can lead to the consumer to continually use the channels over many years. Using the channels they have at their disposal frequently ensures that the consumer becomes attached to this means of banking and will fall back onto it over long periods of time, due to habit.

In other cases the extent the consumer uses a channel can lead towards an intensive usage. An extensive use allows the consumer to become familiar with the technology to the point of continued usage. Using the channels they have at their disposal extensively to conduct their banking needs ensures

that the consumer has their channel preferences. These preferences become more apparent when used year after year.

4.3.3.3 To compatibility

Both the concepts of **channel use** are linked to two concepts, *channel experience* and *channel preferred* of **compatibility**, creating four different axial links. By using more of the channels at their disposal a consumers experiences with this channel grows accordingly. This experience could grow towards a point where the consumer prefers to use this channel as opposed to another. If a consumer always uses the ATM for cash withdrawals or internet banking for transfers then their experiences have encouraged their preference for these channels.

Using the channels more frequently also enables for the same outcomes of growing experiences and channel preferences. If a consumer uses the ATM at the end of the month only, their experience grows as they become more at ease with the channel, to the point of preference.

4.3.3.4 High Level Discussion

Using the channel(s) leads the consumer towards different outcomes. One of these outcomes is increasing their experiences and the determining of their preferences. Other outcomes lead them to continue using the channel and they also receive some level of satisfaction from the use of the channel(s). The reasons for either of these outcomes will vary between consumers. This variance is due to the consumer's individual experiences and thoughts about the channel(s). The nine relationships that emanate from channel use is depicted in Figure 4.5

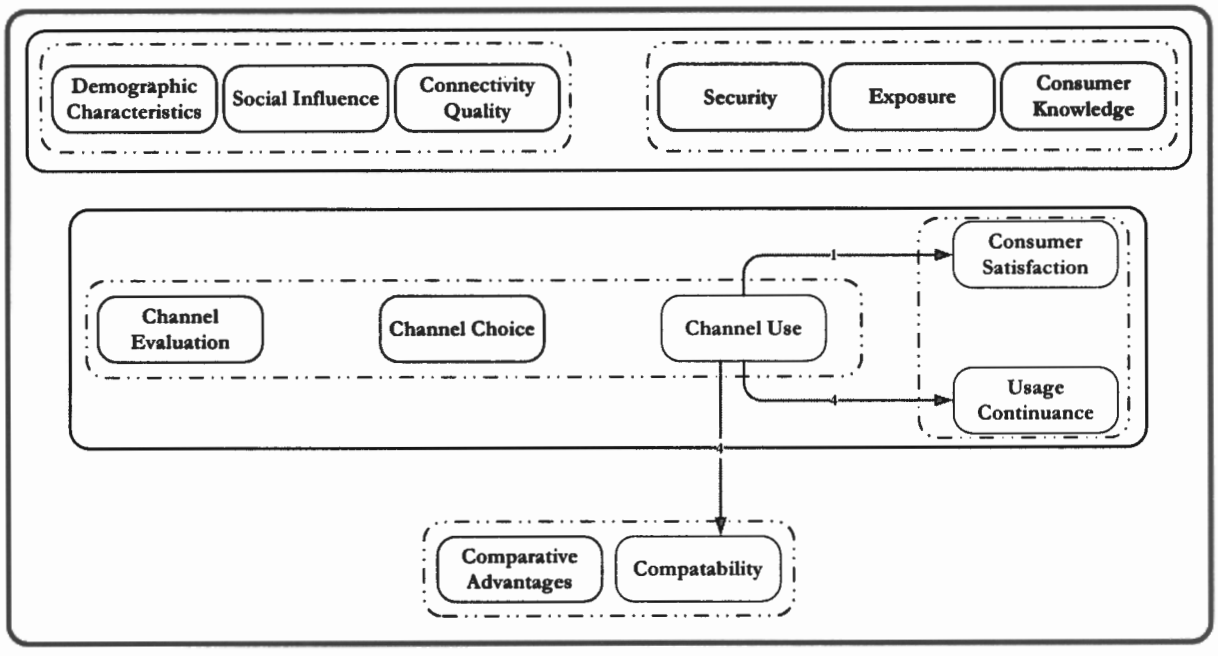

Figure 4.5 - Channel Use Relationships

4.3.4 From Consumer Satisfaction

Consumer satisfaction consists of one concept with three different axial links emanating from the category. The categories linked with consumer satisfaction along with the respective evidence of these links are depicted in Table 4.18. A more detailed discussion of these links follows.

Table 4.18 - Axial Links emanating from Consumer Satisfaction

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	1	*Well, I felt that the internet banking was cool because you don't have to stand in a queue and I could do, all my payments in virtually five minutes. If I go to pay five accounts it would probably have taken a day to two to pay them. If I had to come out by all the shops, or clothing stores or whatever, it would take me a day or two. So I was happy with that. The ATM, well I don't have any feelings about that. It's just a way of getting cash I think. The banking hall I'm not too happy about, frustrating queues.*
Channel Use	1	*They were good. I mean they were better than waiting for someone to manually update your savings book or account book. At the moment internet banking is – does have a lot of problems, but it seems to be working fine. I'm happy that it's secure*
Usage Continuance	1	*Two people recommended it at the time. And I've never looked back.*

4.3.4.1 To Channel Evaluation

The categories of **consumer satisfaction** and **channel evaluation** are linked as follows by one axial link; *satisfied with channel* leads towards *weighing up of options*. When a consumer is dissatisfied with the channel(s) they use they will be encouraged to consider other channels that may be more beneficial. This dissatisfaction does not always mean that the consumer will discontinue using the channel(s), it only identifies that the channel(s) has fallen out of favour with the consumer.

When considering other channels they will have accumulated relevant information with which they can evaluate the benefit of this channel. T hese implicit evaluation notes of the benefits derived will influence the consumer's future use of these channels.

> *'The ATM, well I don't have any feelings about that. It's just a way of getting cash I think. The banking hall I'm not too happy about, frustrating queues.'*
>
> (Interviewee 3)

4.3.4.2 To Channel Use

The concept of *satisfied with channel(s)* creates one axial link to the concept of *extent of use* of **channel use**. Over time the consumer's satisfaction may change. Depending on this degree of change it will impact on the use of the channel. It may result in the use of the channel becoming restrictive,

> *'... ATM's it's the number of people getting their cards swiped out of ATM's...'*

or extensive.

> *'... internet banking, it was kind of a, let me try it and see what happens, and it was a good experience the first few times so I stuck with it.'*
>
> (Interviewee 1)

So if the consumer employs a channel and finds that they are much happier with another channel they may end up using both channels, but use the channel they are less satisfied with sparingly.

4.3.4.3 To Usage Continuance

The concept of *satisfied with channel(s)* is linked to the concept of *intensity of usage* of **usage continuance** creating one axial link. If the consumer's satisfaction continues to grow, so will their usage of the channel. This usage will become more intensive, to the extent that they will believe that they may not require any other channel.

'Yes and no. In the beginning we liked internet banking and we went for it. Now that we are using it we won't ever change.'

(Interviewee 7)

4.3.4.4 High Level Discussion

Satisfaction can lead towards any of three outcomes depending on the consumer's level of received satisfaction. These outcomes are depicted in Figure 4.6 along with the number of relationships between them.

If the consumer reaches a point of dissatisfaction for any channel they will cease to use this channel and begin searching for another by evaluating the remaining available channels. Conversely if the consumer is fully satisfied with the channel they will continue to keep using it. However, say the consumer is neither satisfied nor dissatisfied with the channel they will use the channel, but only sparingly as it still serves a beneficial purpose.

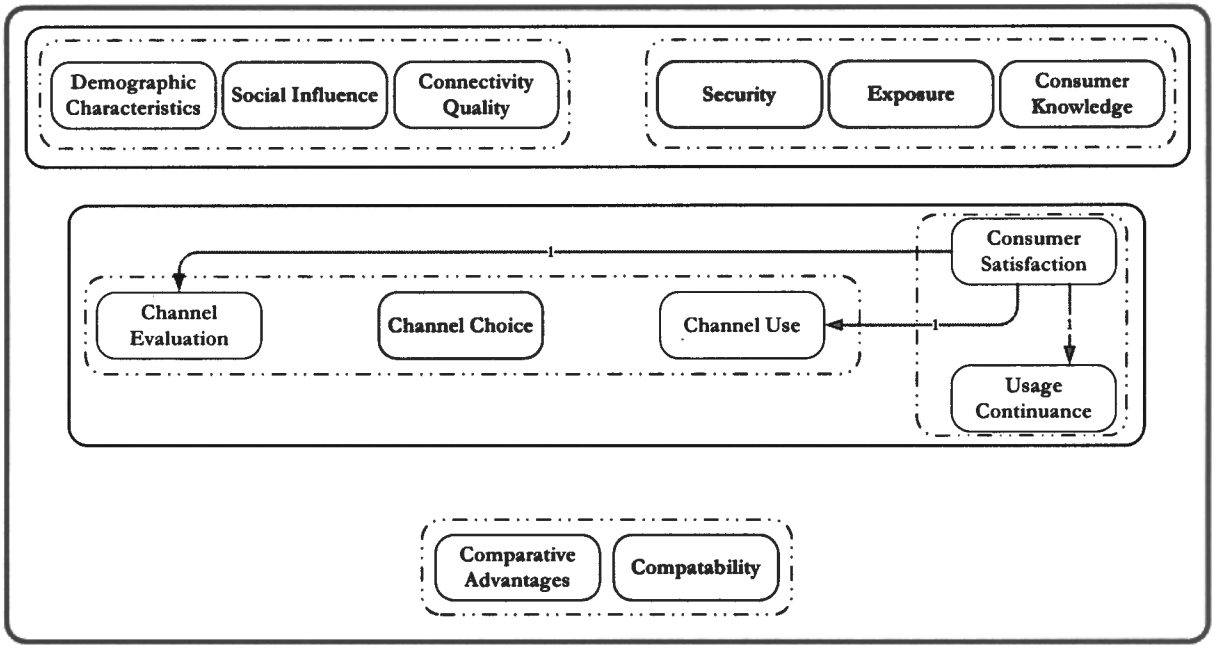

Figure 4.6 - Consumer Satisfaction Relationships

4.3.5 From Usage Continuance

Usage continuance consists of two concepts with seven axial links emanating from the category. The categories linked with usage continuance along with the respective evidence of these links, are depicted in Table 4.19. A more detailed discussion of these links follows.

Table 4.19 - Axial Links emanating from Usage Continuance

Relationship TOWARDS	Instances of Relationship	Evidence of Relationship
Channel Use	2	***With the internet banking I used to do transfers by the ATM. That was before internet banking.*** *I think once internet banking came along anything that I need to do I do on there so…*
Consumer Satisfaction	2	***well mostly internet banking, going to lean towards that the most now because it's the easiest***
Compatibility	3	*For me if you look at the generations; my father's generation it was the banking halls so they're very resistant to internet banking, in my generation it was computers so I think my age category will be more into the internet banking, and the younger guys pre-30's they grew up with cellphones so for them mobile banking [might] be more natural than for my age group.* ***[This is] because it took me a long while to convince my father in law to do his payroll on internet banking and even after two years he still constantly asks 'are you sure it's safe...?'***

4.3.5.1 To Channel Use

Both the concepts of **usage continuance** are linked to the concept of *extent of use* of **channel choice** creating two axial links. The extensiveness of use of the channel will vary the longer or more or less intensely the consumer employs the channel(s).

Bit by bit, as the consumer's intensity of the channel deteriorates so does the extent of their use of the channel. As the consumer continues using the channel they begin to use it less extensively, and look towards another channel to replace some of their required banking services.

> *'Well initially, Telephone banking was good for me for doing transfers. That was before Internet banking made some things more convenient, like paying your rates and electricity account. And then the internet banking was like a natural progression from like with internet becoming faster and the web becoming more wide spread.'*
>
> (Interviewee 3)

Over time consumers may no longer experience the same level of benefit from certain channels and use them less extensively. This is due to the fact that the consumer has time to assemble and disband attachments with the channel through their own experiences.

4.3.5.2 To Consumer Satisfaction

Both the concepts of **usage continuance** are linked to the concept of *satisfied with channel(s)* of **consumer satisfaction** creating two axial links. The consumer remains satisfied with the channel(s) they use, this is evident through the consumers continued usage of the channels.

The more intensely the consumer uses the channel the more aware they become of the security concerns and how to overcome or manage them. During this process they become more satisfied with the channel. Essentially they trust the security measures they have in place or those the banks have in place.

> *'If there's news on accounts being hacked then it makes me apprehensive but I still continue using that 'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me'...'*
>
> (Interviewee 2)

Not to forget that some consumers derive satisfaction from channels through long periods of usage. The longer the consumer uses the channel the more they learn about it, making their experience more complete. This allows the consumer to remain highly satisfied.

4.3.5.3 To Compatibility

Both the concepts of **usage continuance** are linked to the concept of *channel experience* of **compatibility** creating two axial links. Continued usage of a channel allows the experience of the channel to grow for the consumer. These experiences can be negative or positive, and some can be neutral. The more intensely the consumer uses the channel the more likely the consumer is to generate an experience, be it good or bad.

> *'The ATM, when it is not the end of the month, then it's ok. If I need cash then I'll use the ATM. Internet banking I use that all the time. It's very convenient. I try to avoid the banking hall, those queues. Banking hall I'll use when I have a query. I'll see customer service first.'*
>
> (Interviewee 4)

Experiences can be attained not only from the intensity of usage, but also from using the channel over longer periods of time. These experiences can be ranked and compared to other channels over the years.

> *'...still internet banking, because I've used it for years.'*
>
> (Interviewee 2)

Also the concept of *years of usage* is linked to the concept of *apprehensiveness* of **compatibility** creating the third axial link. The fact that a consumer is using a channel does not mean that their apprehension has completely disappeared. Some consumers remain cautious of the channel even while using it.

> *'... because it took me a long while to convince my father in law to do his payroll on internet banking and even after two years he still constantly asks 'are you sure it's safe?"*
>
> (Interviewee 2)

4.3.5.4 High Level Discussion

The seven different relationships that emanate from usage continuance are depicted in Figure 4.7. Continued usage of the channel(s) a consumer is using leads the consumer to experience a change in overall satisfaction. This change may be positive or negative. Also by continuously using these channels the consumer may vary the extent to which they use these channels. They may use some of the channels in more or less ways than before.

Continued usage also impacts on the compatibility aspect of the channels with respect to consumers. Through continual use of these channels consumer experiences can grow while their apprehensiveness has more time to diffuse towards acceptance.

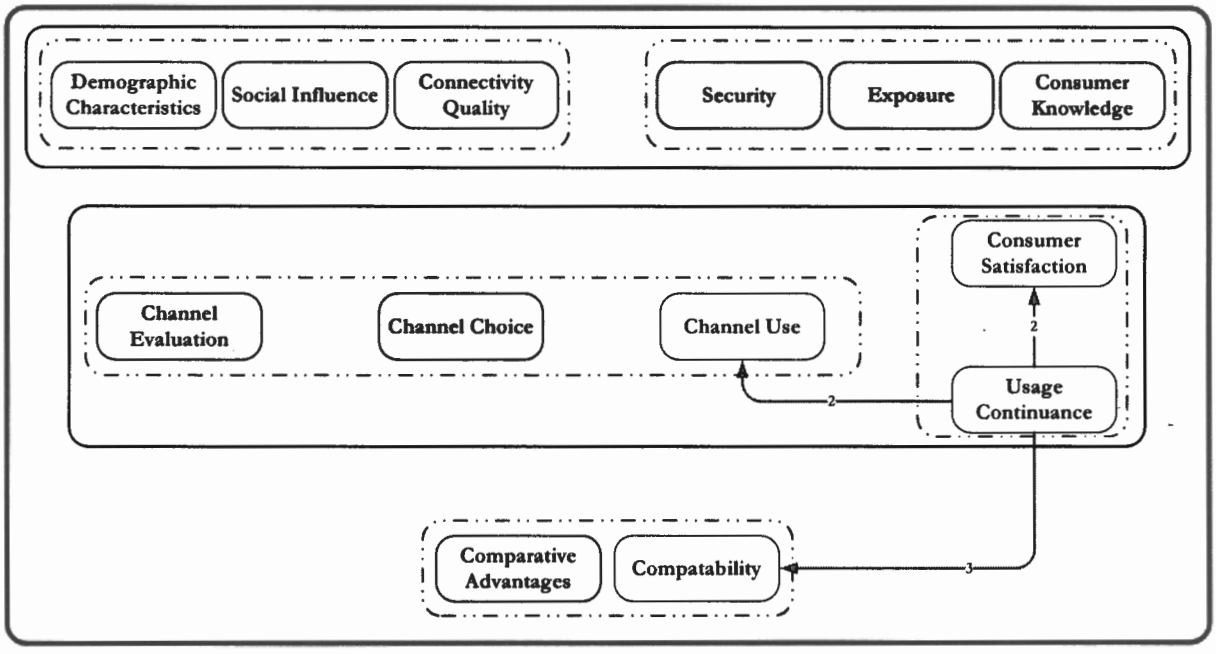

Figure 4.7 - Usage Continuance Relationships

4.3.6 From Comparative Advantages

Comparative advantages consists of twelve concepts with 69 different axial links emanating from the category. This high infinity of axial links expresses the causal nature of this category. The categories linked with comparative advantages along with the respective evidence of these links are depicted in Table 4.20. A more detailed discussion of these links follows.

Table 4.20 - Axial Links emanating from Comparative Advantages

Relationship TOWARDS	Instances of Relationship	Evidence of Relationship
Channel Evaluation	11	*I think I'd still say internet banking. As it is I've got access most of the time to internet,* ***and for me a cell phone is just a means of making a call from it, it is because the screen is small that, I don't think I would get into television banking as well***
Channel Choice	21	*First the banking hall.* ***I think the fees were cheaper if you used the ATM****, somewhere along the line I think* ***they increased the fees dramatically for over the counter transactions. It was cheaper just to use the ATM.***
Channel Use	7	*I'd say [the convenience [as]* ***they start appearing at the campus I was studying at so instead of having to go to a branch nearby you could draw money at the ATM and get mini statements. It was a convenience factor***
Consumer Satisfaction	5	***They were good****. I mean they were better than waiting for someone to manually update your savings book or account book.* ***At the moment internet banking is – does have a lot of problems, but it seems to be working fine. I'm happy that it's secure***
Usage Continuance	3	*If I need to draw cash and I need to make payments or transfer money.* ***All the transfers I can do on the internet, and I can go to the ATM when I put in petrol or something, or to the closest ATM when I need to draw the cash that I need***
Comparative Advantages	10	***ease of use and less banking charges for internet banking****. Well you* ***pay less money and you can do it from the privacy of your own home.*** *It's kind of, the bank not being open is not a problem anymore*
Compatibility	7	***Quite simple****, it was straightforward if there was a problem, clicked on help and stuff popped up and you find your own quickly.* ***And their security with regards to PINS and sessions are much nicer now. They send you codes when you log on, so you know if there is any activity***
Exposure	5	*Internet banking, yes.* ***I don't know about the television banking but no, not the ATM****. Internet is very convenient, most people are using internet banking.* ***They have internet at work and at home and wherever.***

4.3.6.1 To Channel Evaluation

The twelve relationships that emanate towards **channel evaluation** are initiated by all eleven concepts within **comparative advantages** to the single concept in **channel evaluation**. As all the

concepts within comparative advantages are present these relationships are discussed with respect to the seven sub-categories that these eleven concepts are grouped within.

When consumers experience convenience from a channel it generally entails that they were able to perform the banking requirements amply, but at the same time identified negative aspects of other channels.

> *'Internet banking was more recent. I started about last year. Maybe say a year or a year and a half ago. I embraced it. It was convenient, to pay all my accounts. It saved me a lot of time; I don't stand in queues anymore.'*
>
> (Interviewee 4)

A consumer can experience inconvenience too, and this drives them towards finding more suitable channels to perform their tasks.

Cost is another factor that influences consumers towards or away from certain channels. Most consumers are deterred from some channels the higher their associated costs. Now when a consumer finds a channel to be easier than another they have made a comparison that identifies an advantage. This advantage is mentally recorded until another comparison arrives that may change the outcome.

> *'If I don't need hard cash then I just do it with online banking it's simpler.'*
>
> (Interviewee 1)

In most cases, if a consumer comes across a channel that has technological limitations, such as the size of the cellphones input mechanism they would avoid it and rather remain with the channel(s) that they already use.

A channels location also plays its role for consumers. Some locations are more advantageous than others. Another aspect for comparison is the safety of these channels. Consumers engage with channels that they feel are more secure. Some channels also add an advantage with respect to time. In recent times consumers have been able to conduct most of their banking requirements much quicker and at anytime of the day.

> *'The bank not being open is not a problem anymore'*
>
> (Interviewee 1)

Indirectly the consumer is growing an internal evaluation of which channels are beneficial, and in which environments. The consumer adds these advantages or disadvantages as a side note to their internal evaluation checklist of the channel. It must be remembered that through gaining or losing an advantage a consumer is able to enrich their evaluation of these channels.

4.3.6.2 To Channel Choice

The 21 different axial links that radiate towards **channel choice** are initiated by all eleven concepts within **comparative advantages**. As with the explanations of the relationships towards channel evaluation, when a consumer experiences a comparative advantage or disadvantage from a channel they will be influenced towards either choosing or refusing the channel presently.

Due to the large number of relationships between these two categories an interviewee statement that best sums up this categorical relationship was chosen and its explanation follows.

> *'The banking hall was that I started studying and I needed an account for a work study that [I] was involved with and they paid money into there, and it was the same with ATM banking, because I think they started appearing on campuses and then Internet banking was for convenience. The only reasons' convenience [yeah], saves you from having to drive somewhere and look for parking and...'*
>
> (Interviewee 2)

From this statement above it can be seen that the consumer chose the banking hall, because at the time it was the only available channel for them that provided an adequate safety for their income. Soon followed the ATM and the locations of these channels provided a greater advantage than the location of the banking hall. Their choice towards internet banking was due to its convenience, and the time it saved as the channels location was now even closer.

The cost of the channel also had its influence on the consumer's choice. The higher the cost the less motivated the consumer was. The following statements help reinforce the prior choices made by the consumer in the above example with respect to cost. The consumer's choice to incorporate the ATM into their banking environment...

> *'...I think the fees were cheaper if you used the ATM, somewhere along the line I think they increased the fees dramatically for over the counter transactions. It was cheaper just to use the ATM.'*
>
> (Interviewee 1)

An incentive behind internet banking was also cost related.

> *'Less banking charges for internet banking. Well you pay less money and you can do it from the privacy of your own home.'*
>
> (Interviewee 1)

This shows that an advantageous comparison of a channel will lead favourably towards the consumer choosing this channel.

4.3.6.3 To Channel Use

The relationships that emanate towards **channel use** are initiated by most of the concepts within **comparative advantages**. Eight different axial links are created between these two categories. Consumers will use the channel more if they receive more comparative advantages.

These advantages can be found in the form of the location of the channel as they are not required to go to an ATM, when they have internet banking at their disposal. Also they can access internet banking at anytime of the day, saving the consumer time to do other activities. The consumer does not need to go to the ATM to check their balances, they can now do this task with internet banking.

'Internet banking [is] time saving. More time to do other stuff, I suppose. Oh and it's more transparent. You know, I can see what's going on in my account, whenever I want to, anytime. I don't need to go to the ATM to go and check my balances...'

(Interviewee 4)

Receiving these advantages or disadvantages influences the consumer's extent of use of the channels(s), be it extensive or restrictive.

4.3.6.4 To Consumer Satisfaction

The relationships that emanate towards **channel use** are initiated by some of the concepts within **comparative advantages**.

The concepts of *channel safety* and *time saving* are the bigger drivers of advantages that lead to the consumers increase in overall satisfaction. While, the concepts of *bank charges* and *technology limitations* tend to lead towards decreasing the consumer's overall satisfaction.

With bank charges being high for most consumers they tend to become wary of using these channels often, to the point of not using them at all.

'If it becomes too expensive to use one specific channel, I would probably migrate away from it. At this point maybe I'm not really happy with paying the R20 or whatever it is a month that the bank is charging me for the service. I imagine as a bank that they should provide that kind of service free.'

(Interviewee 3)

Some comparative advantages or disadvantages lead directly towards consumer's satisfaction. The advantages will lead towards consumers experiencing a higher level of satisfaction, while a disadvantage leads towards a consumer experiencing a decreased level of satisfaction.

4.3.6.5 To Usage Continuance

Certain advantages ensure that the consumer will continue using the channels that they currently use. If the consumer finds the internet banking to be easier to use and more convenient then why would they want to change.

'Well mostly internet banking, going to lean towards that the most now because it's the easiest'

(Interviewee 1)

Internet banking also adds the dimension of having more control over the location as you do not need to go to the banking hall. This minimises the distance to the consumers banking environment.

The channels continually used may not always remain as advantageous, easier, more convenient or even closer for that matter. The future may provide a more tempting channel for the consumer. Until that day arrives, this consumer will continue to use internet banking.

4.3.6.6 To Comparative Advantages

These relationships are internal to the category of **comparative advantages**. An example of this is the *channel safety* the consumer gains due to the *channels location*. They do not have to fear being robbed. This location also reinforces the *convenience* a consumer experiences.

> *'Access to things 24 hours a day. I think part of access is someone might phone you, when there's a bill overdue you can do an immediate payment of the bill, and on the internet there's a confirmation of a survey, you can send the fax or an sms once you've done a transfer and I think the, all stuff is. In that case it saved my father in law from going through a second payroll robbery, because a sixty year old paying these guys by cash at a specified rate was just ... do the transfers on the internet so there's a safety aspect as well.'*
>
> (Interviewee 2)

The location of the channel also enhances its availability throughout the day. Internet banking is available at work, in the home, and is available all day to conduct the majority of consumer's banking needs.

This highlights that some comparative advantages help to reinforce other comparative advantages, mostly with positive reinforcement.

4.3.6.7 To Compatibility

The relationships that emanate towards **compatibility** are initiated by some of the concepts within **comparative advantages**.

Positive *experiences* and *channel preferences* are born from various advantages that the consumer is presented with for the channel(s) they use. These advantages help the consumer grow their experiences and preferences. Some consumer's preferences of channels improve due to the disadvantages experienced with other channels. Likewise, these preferences will lessen if advantages are experienced with other channels. Some advantages are the ease of use and location of the channel, and some disadvantages are the *limitations of the technology, bank charges...*

> *'...but I think it was more about saving costs and that. At the time there was some monetary fee involved to do telephone banking. That is why I didn't go that route...'*
>
> (Interviewee 4)

Also *safety concerns...*

> *'I think maybe that internet banking is not as unsafe as people think it is.'*
>
> (Interviewee 2)

The bad *experiences* and *apprehensiveness* is attributed to the disadvantages the consumer is presented with, like the *limitations of the technology* and possible *safety concerns* for the channel(s) they use.

'Banking hall is inconvenience looking for parking standing in queues, ATM's is the security factor; 'you always have to look over your shoulder', telephone banking is outdated, [and] mobile banking is the limitations of a cellphone.'

(Interviewee 2)

These advantages or disadvantages lead towards compatibility issues that are experienced by the consumer.

4.3.6.8 To Exposure

The relationships that emanate towards **exposure** are initiated by a few of the concepts within **comparative advantages**. These comparative advantages impact on the exposure through the availability of the channels and the technology. The concept of *all hours* ensures that the consumer has a few channels available to them; such as internet banking, mobile banking and ATM's. This is provided that the consumer is actually employing any of these channels.

'In my case it's mostly, internet [banking]. I think it's that 24 hour access to it, not having to look for parking, not standing in queues. I can do it at home. I can be working and doing it at the same time'

(Interviewee 2)

The sample statement above shows that all day availability of the channel and the flexibility on where the required banking needs can be conducted is much approved of. This availability of both channel and technology exposes the consumer to other available channels after office hours.

4.3.6.9 High Level Discussion

When a consumer experiences a comparative advantage or disadvantage it identifies with their personal bias as to how to record this incident.

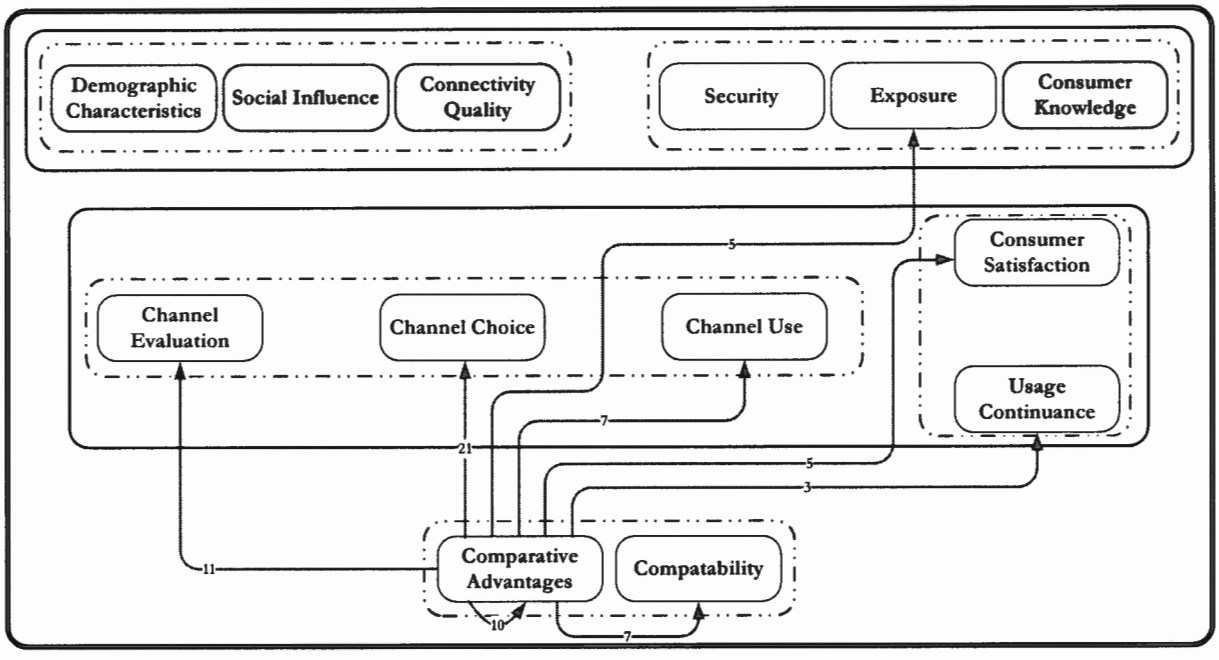

Figure 4.8 - Comparative Advantages Relationships

As informed in the sub-sections above some comparative advantages directly influence a positive outcome with respect to a channel, while others indirectly influence the same outcome with respect to

other channels. Likewise, some comparative advantages display the same characteristics with negative outcomes. Figure 4.8 attempts to show all these outcomes, positive or negative, as they are all influences towards the consumer's final choice.

4.3.7 From Compatibility

Compatibility consists of nine concepts with 58 different axial links emanating from the category. This high infinity of axial links expresses the causal nature of this category. The categories linked with compatibility along with the respective evidence of these links are depicted in Table 4.21. A more detailed discussion of these links follows.

Table 4.21 - Axial Links emanating from Compatibility

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	9	*because* ***I tend to see resistance from, you know people around me, to using it,*** *and I'm not sure if it's [to compete with] or if it's internet banking specifically but you always get asked* ***'Are you sure it's safe?' 'You sure you should be having all your details like that flying across a line?'***
Channel Choice	18	***I'd say most of the banking is done by internet now, majority, that's the, let's see, 5% percent is going into the branch and the rest is split between ATM's and internet banking. And basically going to branches if I have to sign something or, that's about it.***
Channel Use	12	*I wouldn't say completely,* ***I just use the facilities that I need.*** *I didn't go into studying what else I could [use],* ***I just set up beneficiaries and I pay them***
Consumer Satisfaction	4	*well for ATM's is going just outside of working hours, is your only option, and then later on for internet banking again is just 'easier', you don't have to go to the bank.* ***Well there was a lot of things that, well I'd say that lack, perceived lack of security was stopping me before but then they seem to have sorted out that problem***
Usage Continuance	4	*I'd say most of the banking is done by internet now, majority, that's the, let's see, 5% percent is going into the branch and the rest is split between ATM's and internet banking.* ***And basically going to branches if I have to sign something or, that's about it.***
Comparative Advantages	5	***But I imagine that mobile banking would be something that I could use in future.*** *That I would switch on and probably use.* ***I am happy with the web and my web interface is actually easier than to make an SMS conversation with the bank***
Compatibility	4	***In my case it's mostly, internet.*** *I'd say it is convenient. And using them all together I think it's that 24 hour access to it, not having to look for parking, not standing in queues, [and]* ***I can do it at home, I can be working and doing it at the same time***
Consumer Knowledge	2	***Yes I would warn people about the various kinds of scams that are being pushed.*** *What is the other term, mostly phishing.* ***That there are assurances as well [of] secure [and] telling all people to look [out] for – Beware of females asking to confirm your account details.***

4.3.7.1 To Channel Evaluation

The relationships that emanate towards **channel evaluation** are initiated by all nine of the concepts within **compatibility**.

Initially consumers are not *comfortable* with or *apprehensive* towards new channels, unaware of what they can fully offer. This sometimes leads towards limited *internet banking experiences* and other *channel experiences*. However, they all lead towards the consumer being unable to evaluate these channels to their full potential.

Also the banking needs of the consumer add towards their evaluation process, helping to provide a more complete picture of the channel(s). If the consumer is in need of making a payment then the channel experience they gain from making this payment influences the consumers overall evaluation of this channel.

As a consumers experiences and their evaluation of their *channel preferred* grows, their personal evaluations of other channels become more and more negatively biased. At times a consumer can reach the extent of not wanting to use another banking channel.

'I think once internet banking came along anything that I need to do I do on there so...'

(Interviewee 2)

These compatibility concepts allow the consumers to accumulate further understanding of the channel(s) that positively or negatively alter their current evaluations of the channel(s).

4.3.7.2 To Channel Choice

A combination of 18 different axial links is forged from all nine concepts of **compatibility** with all the concepts of **channel choice** except for *mobile based.*

Each of these concepts has influenced the consumer's choice of channel(s). A positive outcome of these concepts enables a favourable choice for the channels concerned. As for negative outcomes of compatibility they enable a favourable choice for the other channels. A negative outcome reduces the chances for those particular channels, but at the same time these negative outcomes attracts the consumer towards the other channels.

If a consumers channel experiences are good they will have achieved a positive outcome and will be more favoured towards choosing these channels, to keep with the good experiences. However, if a consumer is apprehensive about using a channel such as the ATM because of security concerns of being mugged, then they have endured a negative outcome. This outcome attracts the consumer towards another means to conducting their banking needs, like internet banking as it provides a more secure location.

This denotes that issues of apprehensiveness, comfort, preferences, experiences and needs all influence the consumer's final choice(s).

4.3.7.3 To Channel Use

The relationships that emanate towards *extent of use* of **channel use** are initiated by all nine of the concepts within **compatibility**. While, the concepts of *channel preferred*, *need for cash* and *need for other services* of **compatibility** are linked with *frequency of use* of **channel use**.

A consumers banking needs encourages them to use the channels available to them more extensively. If a consumer requires real-time information on their banking interactions they will ensure that they use the appropriate channel that provides this function. In the process they are now using the channel more extensively.

The more apprehensive a consumer is towards a channel the less likely they are to use it extensively. They will conduct simple banking needs with these channels. However, through their experiences gained from using these channels they will ultimately decide whether it is more beneficial for them to use the channels extensively or restrictively.

The more comfortable they become with this channel the more extensively they will interact with these channels. A consumer's preference of channels can also encourage them to use these channels more extensively.

The consumers needs' can also encourage them to use these channels more frequently for the assistance of the functions it provides. If a consumer requires cash they can visit the banking hall or the ATM. They will use these channels more frequently the more they require cash. For some consumers they will use the ATM more frequently as opposed to the banking hall due to their preference for this channel.

The consumer's compatibility with the channels enables their extent or frequency of use of these channels.

4.3.7.4 To Consumer Satisfaction

The four relationships that extend from four concepts within **compatibility** all connect to the concept to *satisfied with channel(s)* of **consumer satisfaction**.

The consumers experiences of the channels they employ act as the main driver towards their satisfaction. If consumer's experiences of channels are good the consumer's level of satisfaction may either increase or remain the same with satisfaction of other channels possibly decreasing. Where consumer's experiences are unpleasant the consumer's satisfaction may either decrease or remain the same with satisfaction of other channels possibly growing.

Likewise a consumer's apprehension can also lead towards their satisfaction changing. If the consumer is very apprehensive they tend to ignore these channels. However, when their apprehensions for these

channels decrease consumers show signs of some level of satisfaction. The more comfortable the consumer is with their channel(s) the greater their level of satisfaction.

These concepts within compatibility all lead towards the consumers level of satisfaction to change. Some lead to greater satisfaction, others lead to lesser satisfaction, but these concepts all impact towards a change in satisfaction.

4.3.7.5 To Usage Continuance

The relationships that emanate towards *intensity of usage* of **usage continuance** are initiated by four concepts within **compatibility**. A further examination of these relationships follows.

If the apprehensions of the consumer towards the channels they use grow, then the consumer's intensity of usage naturally diminishes. This is probably due to bad experiences with these channels. Likewise when the consumers experiences are greater they will tend to use the channels more intensively, and this degree of intensity is reversed when the experiences are unpleasant.

Another reason consumers continue to use the channels they use is encouraged by their personal channel preferences. When consumers use the channels they prefer to conduct their banking interactions they indirectly increase the intensity with which they continue to use these channels.

Thus, the more compatible the consumer is with the channels they use the greater the chances for continued usage.

4.3.7.6 To Comparative Advantages

The five axial links that emanate towards concepts within **comparative advantages** are initiated by three concepts within the category of **compatibility**. Consumers channel experiences and preferences allow them to record advantages of these channels over others. These advantages arrive in the form of convenience, comparative ease of use and/or time saving.

> *'I started about last year. Maybe say a year or a year and a half ago. I embraced it; it was convenient to pay all my accounts. It saved me a lot of time; I don't stand in queues anymore.'*
>
> (Interviewee 4)

The statement above shows the consumer's experiences of internet banking with respect to its convenience of being able to pay all their accounts and its time saving nature as it saves time not having to wait in a queue.

Comparative advantages are recorded when consumers channel experiences continue to grow, be it positive or negative. Also with new channels being introduced it allows for consumer preferences to possibly change.

4.3.7.7 To Compatibility

These relationships are internal to the category of **compatibility**. If a consumers experiences grow in a positive direction they can become attached to this channel and regard it to be their preference.

> *'Yes and no. In the beginning we liked internet banking and we went for it. Now that we are using it we won't ever change.'*
>
> (Interviewee 7)

This can also be the case the more comfortable a consumer is with the channel.

> *'It would be internet banking; because it is an environment I am familiar with and comfortable with.'*
>
> (Interviewee 3)

This position of comfort can also be gained from good experiences. On the other extreme, experiences in the negative direction will lead towards consumers become more wary or apprehensive about its usage.

> *'ATM's is just - 'make sure there's no one around you who shouldn't be there', and with ATM's there are - 'people who are swopping out your cards', 'it happened to my wife as well' people want to get hold of your PIN number'*
>
> (Interviewee 2)

These examples help to identify that certain concepts of compatibility are reinforced by others within the same category.

4.3.7.8 To Consumer Knowledge

The concept of *channel experience* of **compatibility** is linked with the concept of *knowledge of services* of **consumer knowledge**, while the concept of *internet banking experience* of **compatibility** is linked to the concept of *awareness of site tampering* of **consumer knowledge**.

Through experience with a channel the consumer is able to gain more knowledge of the services this channel provides. Also if the consumer uses more than one channel then they will gain more knowledge of what these channels have to offer.

> *'In most cases less [of the] banking hall, then from there it was less ATM. I think each one just has a specific need in me. [The] ATM is for getting cash, [the] banking hall is for signing docs, and internet the rest.'*
>
> (Interviewee 2)

Growing experiences with internet banking allows the consumer to become more aware of the different ways that people may attempt to access their accounts. Knowing of these ways provides the consumer with a way to combat this from happening.

> *'With internet banking it's - 'make sure you clicking on the correct links', and know how to get to the correct links without seeing people do funny stuff to it - 'because, with the internet bank[ing and] all the phishing going on [if] you just click haphazardly you'll end up with something that looks like you at the bank but you're not'.'*
>
> (Interviewee 2)

As the consumers experiences grow so does the knowledge the consumer gains. This does not change in any way as any experience good or bad will be knowledge gained by the consumer.

4.3.7.9 High Level Discussion

These compatibility matters play their role in influencing the consumer's choices as well as the result of them using these channels. Consumers experiences and needs drive the outcomes the consumers are faced with. Figure 4.9 attempts to show all these influences of compatibility that aid the consumer's final choice.

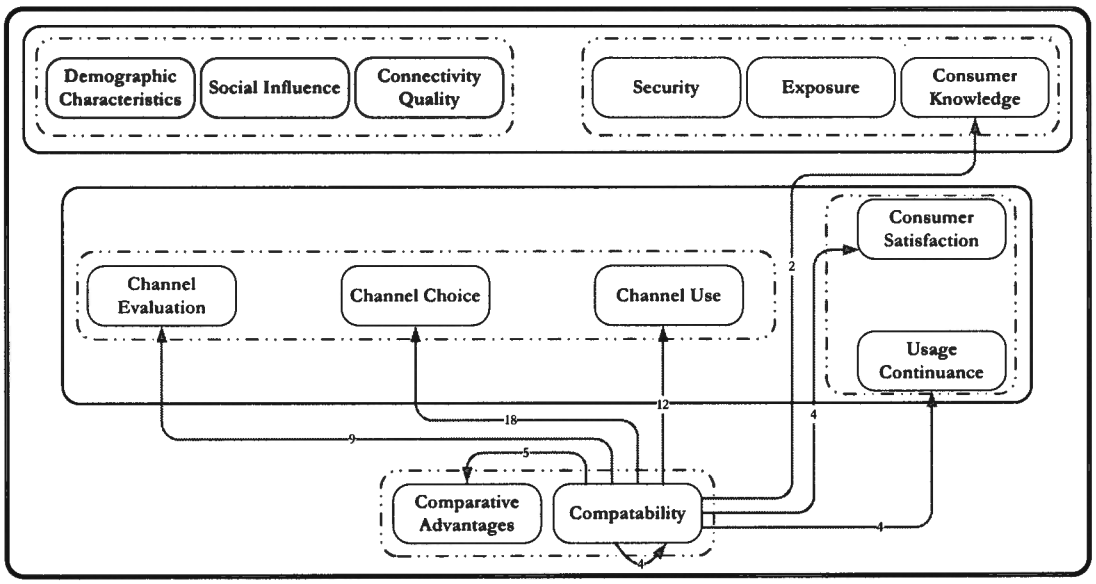

Figure 4.9 - Compatibility Relationships

4.3.8 From Exposure

Exposure consists of three concepts with eighteen different axial links emanating from the category. The categories linked with exposure along with the respective evidence of these links are depicted in Table 4.22. A more detailed discussion of these links follows.

Table 4.22 - Axial Links emanating from Exposure

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	2	*Well if I didn't have good internet access I would be more inclined to go for mobile banking or telephone banking, but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*
Channel Choice	5	*I'd say [the convenience as] they start appearing at the campus I was studying at so instead of having to go to a branch nearby you could draw money at the ATM and get mini statements. It was a convenience factor*
Channel Use	3	*Well I only use the one channel; it's what I'm looking for. It's fantastic really. Because like I said everything is out there at the click of a button, or a web address, or it is all available at your fingertips.*
Compatibility	3	*Payments, debits. They have cellphone payments now online I think. I'm not quite sure of any others, there is notifications for when transactions happen and so you can get sms's of just about anything that happens, specifically. Stop orders, is one as well not sure about anything else*
Exposure	2	*I've got a feeling that mobile banking, as more of the population has cellphones than the[y] have internet connection on a computer.*
Consumer Knowledge	3	*Well initially when I started working, I don't think internet banking was quite widespread at that time. So it was, my options [were] either the banking hall, the ATM or the telephone banking was also around. But I think it was more about saving costs and that. At the time there was some monetary fee involved to do telephone banking. That is why I didn't go that route*

4.3.8.1 To Channel Evaluation

The **exposure** concepts of *channel availability* and *technology availability* are both linked with *weighing up of options* of **channel evaluation**.

These relationships are based on the availability of the channels and the technology they may require. If the channel or the technology is available the consumer is more likely to favour this channel, while if the channel or technology is not available they will favour other channels.

Whether these channels or the technologies are available or not to a consumer they are able to incorporate this into their evaluations of the channel to determine which of the channels is viable for them.

4.3.8.2 To Channel Choice

The **exposure** concepts of *channel availability* and *channel exposure* are linked with four concepts within **channel choice** creating five different axial links.

Channel availability is linked to three concepts of **channel choice**. These concepts are *channel migration*, *multi-channel* and *cash based.* As the channels become available and provide better banking conditions the consumers are drawn towards them, finally making a choice. As ATMs began appearing in appropriate places, such as student campuses, the consumers made choices to either migrate from the banking hall towards the ATMs due to the convenience of the channels location or replace banking hall visits with greater use of ATM.

> *'I'd say [the] convenience [as] they start appearing at the campus I was studying at, so instead of having to go to a branch nearby you could draw money at the ATM and get mini statements. It was a convenience factor…'*
>
> (Interviewee 2)

Channel exposure is linked to both concepts *multi-channel* and *internet based* of **channel choice**. As the consumer is exposed to more channels they allow themselves the opportunity to choose which channels they would like to use. Many consumers have chosen the route of internet banking, but this channel is not their sole choice. They have the option to make more than one choice as is evident in the statement below.

> *'…because of internet banking certain things like when I need cash in my wallet, when I don't want to use my credit card or my debit card or something like that, then I'll just have some cash, and like some places don't use that facility so some cash.'*
>
> (Interviewee 2)

The greater the exposure of the banking environment the consumer receives the more informed is their choice.

4.3.8.3 To Channel Use

Channel availability of **exposure** is linked to both concepts *extent of use* and *frequency of use* of **channel use**, and *technology availability* of exposure is linked to *extent of use* of **channel use**

The availability of a channel allows the consumer the opportunity to use this channel more extensively and/or more frequently.

> *'Well I only use the one channel; it's what I'm looking for. It's fantastic really. Because like I said everything is out there at the click of a button, or a web address, or it is all available at your fingertips'*
>
> (Interviewee 7)

If the technology required for the channel is made more readily available the consumers will be inclined to use this channel more extensively. However this also depends on how much the consumer can rely on the source of the technology to conduct their banking needs safely, in this case the internet café.

> *'Do you mean internet banking now? The fact that I use the internet café – that makes me scared'*
>
> (Interviewee 8)

Exposure allows consumers to find other channels that provide the same, similar or different ways to conduct their banking needs. The exposure of these channels drives the consumer's use of the channel.

4.3.8.4 To Compatibility

A combination of three different axial links is forged between all three concepts of **exposure** and two concepts within **compatibility**.

Exposure of certain channels provides the consumer an indirect opportunity to experience using them. The greater the exposure of these channels the greater the possible experience received. This experience can be either good or bad.

The availability of these channels also contributes towards a consumer's experience, dependant on their requirements. If the consumer requires cash then internet banking would not suffice, and this is realised through the experiences gained.

At times the availability of technology can lead towards apprehensiveness. This situation arises when the consumer is not completely convinced that the technology available can provide them with the expected safe banking environment. Consumers would be more comfortable using the likes of internet banking in the privacy of their own homes than at an internet cafe, as they have more control over the security features on the personal computers being used.

Exposure of channels provides the consumer the opportunity to welcome the experiences they gain through these channels.

4.3.8.5 To Exposure

These relationships are internal to the category of **exposure**. As more channels and technologies become readily available they are given more opportunities to be exposed to the consumers.

The statement below indicates the current exposure of mobile phones throughout the population, as opposed to internet connections on a computer.

> *'I've got a feeling that mobile banking, as more of the population has cellphones than the[y] have internet connection on a computer.'*
>
> (Interviewee 2)

The availability of both the channel and technology allows for the exposure of these channels to the consumer.

4.3.8.6 To Consumer Knowledge

Channel availability of **exposure** is linked directly to the concept of *technology awareness* of **consumer knowledge**, and *technology availability* of **exposure** is linked to *technology awareness* of **consumer knowledge**.

The availability of the channels and the technologies required grow the consumer's awareness of both the channels and their technologies. If one channel was less available than others then the consumer was less aware of the benefits they could offer.

> *'Well initially when I started working, I don't think internet banking was quite widespread at that time. So it was, my options [were] either the banking hall, the ATM or the telephone banking was also around. But I think it was more about saving costs and that. At the time there was some monetary fee involved to do telephone banking. That is why I didn't go that route'*
>
> (Interviewee 4)

The exposure of these channels and technologies allows the consumer to gain their own knowledge to ultimately aid in their choice.

4.3.8.7 High Level Discussion

Exposure of channels enables consumers to gain more information about the relevant channels available, which inevitably assists the consumer's choice making process. The exposure also influences the usage of these channels. The relationships discussed above are depicted in Figure 4.10.

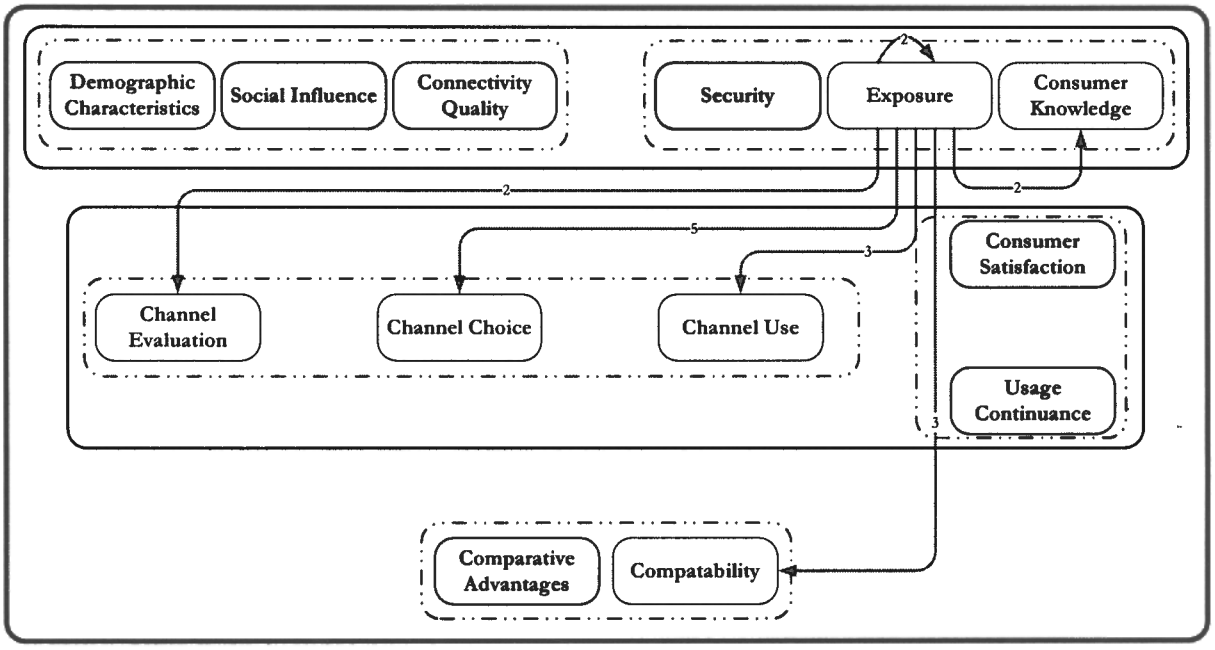

Figure 4.10 - Exposure Relationships

4.3.9 From Consumer Knowledge

Consumer Knowledge consists of six concepts with 34 axial links emanating from the category. The categories linked with consumer knowledge along with the respective evidence of these links are depicted in Table 4.23. A more detailed discussion of these links follows.

Table 4.23 - Axial Links emanating from Consumer Knowledge

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	5	*The internet. Are we still keeping in mind, you know I'm not familiar with telephone banking. I'm totally inexperienced. What is out there, do you know.*
Channel Choice	6	*Well, on internet banking account payments, I think that they have their own beneficiary list as well. Transfers. I don't know anything about mobile banking and television banking. I don't know. Right now for me it is fine for what I want to do so, I haven't thought about anything else.*
Channel Use	3	*When I need cash - then ATM, and anything else, money transfers, checking statements that's internet and going in this hall, signing documents or getting information on products. You can add this but generally the internet documents are more updated than what the consultants in the bank sometimes know*
Comparative Advantages	4	*Not entirely, probably not, I doubt I use all the services. It depends on bank charge rates they seem to go up as you add services so I generally stay away from them the unnecessary things*
Compatibility	5	*Internet banking. Yeah, the viruses that I spoke about. Well, viruses – I think I didn't have a problem with them earlier. I kind of know how to get rid of them, but it is just that the type of viruses that I found recently, specifically to gain access to your banking username and password. That's scary because talking about savings and check bank accounts.*
Exposure	4	*TV banking I don't know much about, didn't know it existed. Mobile banking I've never used and in fact I don't know what services are available as well. Now with internet banking as far as I'm aware, it's got everything to do within a branch except signing things aren't available, because like I said do debits there, transfers to different banks, sometimes help my father in law run the payroll for his business over there...*
Consumer Knowledge	5	*Well I would imagine that mobile and internet banking would merge, that there would be no difference between using the internet and using your mobile phone. And that will eventually converge.*
Security	2	*With internet banking it's - 'make sure you clicking on the correct links', and know how to get to the correct links without seeing people do funny stuff to it - 'because, with the internet bank[ing and] all the phishing going on [if] you just click haphazardly you'll end up with something that looks like you at the bank but you're not'.*

4.3.9.1 To Channel Evaluation

All of the concepts within **consumer knowledge** except for *channel convergence* are linked to the concept of *weighing up options* of **channel evaluation**.

Awareness of the channel, technology and even of site tampering creates a base of knowledge for the consumer. The consumers gained awareness assists their evaluation of the channels, when identifying different channels or technologies or even identifying areas of potential concern for the channel. The consumer's evaluation is subjective to the consumer's awareness's.

The knowledge of the technology and services the channels provide also impacts on a consumer's evaluation of channels. If the consumer is unaware of the technology or the services the channel posses their evaluation towards this channel will be skewed negatively as they are still uninformed about the channel.

> *'I'm not clued up on the television banking, internet banking – my husband does most of the banking. Services, would that be like sms notification [and] security.'*
>
> (Interviewee 7)

Thus knowing more about the channels and the technologies that provide these channels allows for the consumer to ensure that their evaluations are well informed.

4.3.9.2 To Channel Choice

A combination of six different axial links is forged between three concepts found in **consumer knowledge** and three concepts within **channel choice**.

Channel awareness allows for the consumer to gain more knowledge about the channel. By becoming aware of more channels the consumer is placed with a dilemma, to stay with the channel they using already or move towards another channel or use more than one channel. Sometimes the use of multiple channels is due to matters of need and not due to wanting to use the channel.

> *'If I don't need hard cash then I just do it with online banking it's simpler. Banking Hall, ATM is, I've heard horror stories and actual incidents of cards getting stuck.'*
>
> (Interviewee 1)

The knowledge of the technology that the consumer has gained enables them to choose to use more than one channel. However, the less the consumer knows about the technology the more cautious they will be, to the point of not choosing this channel. Knowing more of the services that the channel provides allows the consumer to make a more informed choice. This choice could also incorporate multiple channels the greater their knowledge of channels becomes.

As a consumer's knowledge grows they are directly influenced to choose the channels they will benefit from.

4.3.9.3 To Channel Use

The relationships that emanate towards *extent of use* of **channel use** are initiated by three concepts within **consumer knowledge**. A further examination of these relationships follows.

The driver of a consumer's extensive use of a channel is their awareness of the channel. The greater the awareness the more they use this channel. This is also the case with knowing the technologies required for these channels. If the consumer knows these technologies they are more likely to use more of the channel.

Knowing the services these channels provide is the main driver of a consumer's extent of use of the channel. If the consumer knows all the services the channel provides it means they can potentially use the channel to its maximum output.

> *'I wouldn't say completely, I just use the facilities that I need. I didn't go into studying what else I could [use], I just set up beneficiaries and I pay them.'*
>
> (Interviewee 4)

The problem with that is that even if consumer knows of all the services they may not need to use them all. For this reason the consumer uses the channel to the extent they require to meet with their needs.

4.3.9.4 To Comparative Advantages

A combination of four different axial links is forged between three concepts found in **consumer knowledge** and two concepts within **comparative advantages**.

If a consumer is aware of the services the channels provide they are able to make an informed comparison with respect to their financial means. The belief is that if the channels are to converge into one universal channel that the same would happen with the charges associated for the channel.

> *'That is the industry trend. You know I see telephone, internet and mobile basically converging into one universal service where you wouldn't actually know where your data is going out onto a line or a wireless – you wouldn't actually care – but they would be so cheap and universal that there will be basic universal coverage where you are and the cost will be negligible. So it would open up a whole new field of services available by the internet.'*
>
> (Interviewee 3)

The greater the knowledge of both the technology and the services the channels provide the more informed is the consumer's comparison of ease of use between these channels. The consumer may knows or believe that the technology will become more universal and that the accessibility will be better compared to the other channels that may or may not require this technology.

> *'Well that your phone becomes more fully-fledged web browsing instrument. So the web would be the universal interface and you will have better mobile accessing to the web.'*
>
> (Interviewee 3)

The more knowledge a consumer can gain about a channel the greater advantages they can maximise from the appropriate channels they use.

4.3.9.5 To Compatibility

A combination of five different axial links is forged between four concepts found in **consumer knowledge** and three concepts within **comparative advantages**.

A greater knowledge of the technology and services the channels provide will lead the consumer towards more favourable experiences, or at least enable the consumer to avoid unfavourable experiences.

> *'ATM I'd say don't use it when there're any strangers lurking around and if you can [use it] during the day, internet banking I'd say use your own, don't use public computers and close, [and] restart. Can I get technical? Delete any private data before and after in your browser when you using it.'*
>
> (Interviewee 1)

If a consumer is to use internet banking it is advisable for them to use their own computer instead of a public computer. Even when using their own computer they must take all necessary precautions like deleting all private data before and after using the browser to ensure that no pertinent information can be retrieved from their browsers private data.

Awareness of the possibilities of site tampering when using internet based banking allows a consumer to be apprehensive towards this channel. This apprehensive nature will decrease as the consumer becomes more aware of how to overcome such tampering.

Awareness of the different channels leads the consumer towards experiences. These experiences are directly influenced by the growing awareness of the channels out there. As the awareness of one or more channels grows the consumer may use their current channel(s) less, halting their experiences for the moment. This allows for the experiences of these other channels to begin.

4.3.9.6 To Exposure

The relationships that emanate towards *channel exposure* of **exposure** are initiated by four concepts within **consumer knowledge**. These relationships are examined further next.

A consumer's exposure of a channel is directly proportional to their awareness of the channels and the technologies required as well as their knowledge of these technologies and the services these channels provide.

The statement provided in Table 4.23 with respect to the relationship towards exposure highlights the fact that as the consumer's awareness of the channels and technologies widens parallel with their knowledge of how these technologies work and the services provided their exposure increases.

As a consumers knowledge and awareness of the current banking environment grows so too does their exposure to this environment.

4.3.9.7 To Consumer Knowledge

These relationships are internal to the category of **consumer knowledge**. As a consumer gains knowledge they become more aware of the banking environment they have been captured in, and vice versa. This banking environment allows the consumer's the opportunity to understand the channels better.

Knowledge of a technology and services a channel provides grows the consumer's awareness of the banking environment. The statement below demonstrates the consumers knowledge of the technologies required for telephone banking and mobile banking. This knowledge of the restrictions of these technologies has enabled this consumer's awareness of their banking environment to become more refined.

'...telephone banking is outdated, mobile banking is the limitations of a cellphone.'

(Interviewee 1)

Likewise the awareness of site tampering and certain technologies enables the consumer's knowledge of such technologies to expand. As the consumer becomes more aware they will take the initiative to learn more about the technology. Thus knowledge builds on knowledge.

4.3.9.8 To Security

The relationships that emanate towards *security measures* of **security** are initiated by the two concepts of *awareness of site tampering* and *knowledge of technology* of **consumer knowledge**.

As a consumer's knowledge of a technology grows they are better informed of the potential threats that may arise, and as such they can ensure that the appropriate security measures are in place. With laptops and personal computers they are susceptible to viruses. An appropriate virus protection regularly updated and conducted will help ensure that the threat remains minimal.

Awareness of site tampering also enables the consumer the opportunity to take the necessary precautionary measures. The consumer's awareness of malware, phishing and viruses reaches a point of

concern when employing an internet based channel. Being aware of these channels allows the consumer to ensure that they safeguard against these threats to the best of their ability.

Knowledge plays an integral part in the consumer's battle towards a secure banking environment. The greater the consumer's knowledge the better equipped the consumer is to incorporate the necessary security measures.

4.3.9.9 High Level Discussion

As a consumers' knowledge grows, their experiences and security concerns also grow. Managing the knowledge gained efficiently ensures the consumer's banking environment remains stable. Figure 4.11 shows the depiction of the consumers banking environment with respect to the impacts of their knowledge.

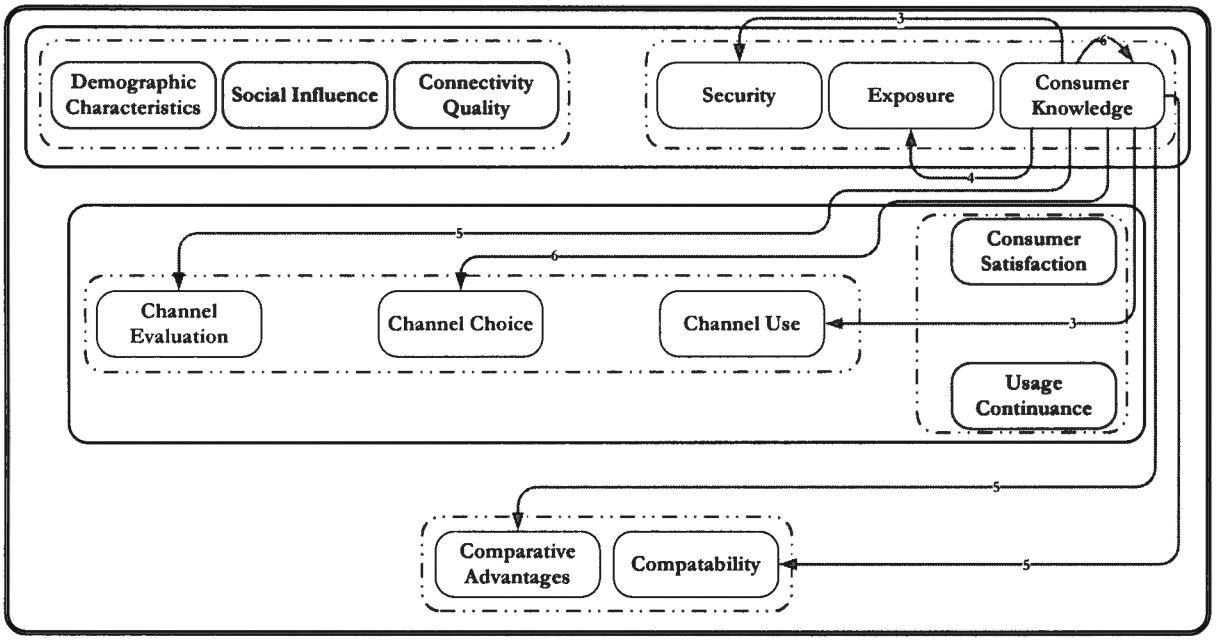

Figure 4.11 - Consumer Knowledge Relationships

4.3.10 From Security

Security consists of six concepts with 42 different axial links emanating from the category. The categories linked with security along with the respective evidence of these links are depicted in Table 4.24. A more detailed discussion of these links follows.

Table 4.24 - Axial Links emanating from Security

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	6	*And **ATM's is just 'make sure there's no one around you who shouldn't be there', and with ATM's there are 'people who are swopping out your cards', 'it happened to my wife as well' so** people want to get hold of your PIN number*
Channel Choice	8	***I guess the banking hall is kind of a secure place to draw cash,** and internet banking again is just easy to use when I need to pay accounts of **mine, I'd say it's relatively secure so don't have to worry about theft** ...*
Channel Use	6	*Quite simple, it was straightforward if there was a problem, clicked on help and stuff popped up and you find your own quickly. **And their security with regards to PINS and sessions are much nicer now. They send you codes when you log on, so you know if there is any activity***
Consumer Satisfaction	4	***They were good.** I mean they were better than waiting for someone to manually update your savings book or account book. At the moment internet banking is – **does have a lot of problems, but it seems to be working fine. I'm happy that it's secure***
Compatibility	9	***I don't think that there is anything missing. If you go to the internet café whatever, you hear from other people I don't know how they pick up information on your account, I don't know how it happens but it happens.***
Consumer Knowledge	4	*Guess, oh shucks, how would you do that! **Security measures, something where it's not specific to the phone so that if it does get swiped they can't really do anything. I'm not actually quite sure exactly what they have in place at the moment,** it just, suppose ...*
Security	5	*Recently with the internet banking, **we found some Malware on my laptop. And I did some more investigating on the Malware that was on my laptop. It was [the] particular malware [that] tries to get hold of your banking passwords, and so that made me go buy security packaging. So that is a bit scary.***

4.3.10.1 To Channel Evaluation

The relationships that emanate towards *weighing up of options* of **channel evaluation** are initiated by each of the six concepts within **security**.

Consumers' evaluations of channels are sometimes influenced by the threats the channels present. These threats come in the form of physical or electronic threats. The physical threats refer to bank cards being swopped out or stolen, and consumers being mugged or robbed. If a consumer has experienced any of these threats or perceives them to be dangerous they become more cautious of the channels and their surroundings. These concerns influence their evaluations; the greater the concern for their safety the more likely the evaluation will result in a negative output.

There are security measures that consumers can put into action when required. The consumer's evaluation of channels is also reliant on the availability and the effectiveness of these measures. If a consumer is required to always be looking over their shoulder when using an ATM they may be susceptible to use another channel for their needs. Inadvertently the consumer makes note of this inconvenience, which results towards a less than favourable evaluation.

All the concepts within security influence a consumer's evaluation of a channel. This is attributed to the consumer wanting to feel safe, be it safety of a physical or electronic nature.

4.3.10.2 To Channel Choice

A combination of eight different axial links is forged between all the concepts within **security** and two of the concepts within **channel choice**.

As the threats and perceived threats of channels increase the consumer's choices are influenced towards finding other means of banking interaction. This is true for both physical and electronic channels. The higher the physical threats grow the more likely the consumer is to migrate towards an internet based channel. Likewise the higher the threats are on electronic channels the more likely the consumer will migrate towards another channel with less or more manageable threats.

However, if the consumer can better manage these threats with or without the assistance of security measures they will not be inclined to dismiss this channel, be it internet based or cash based. The choice of channel will then be dependent on the consumer's ability to maintain their required level of threat management.

The better the security measures are the more likely the consumer will be attracted to this channel, which will ultimately lead towards the consumer's choice of the channel.

4.3.10.3 To Channel Use

The relationships that emanate towards *extent of use* of **channel use** are initiated by each of the six concepts within **security**.

Like with the relationships of security with channel evaluation and with channel choice, the threats of the channels will limit their use. The higher the physical threat of the channel the less the consumer will use that channel. If a consumer was to get held up in a bank robbery, they would be less inclined to conduct more of their banking needs with this channel. If the physical threat is low then the consumer is more willing to use more of the channel.

Likewise, the higher the threat on electronic channels the consumer is likely to use the channel more restrictively. While the lower the threat or more manageable this threat is with the assistance of personal or bank equipped security measures the consumer is more likely to want to use the channel. If a consumer's account is hacked without their knowledge and the bank is able to catch it in time to ensure no losses then the consumer is more willing to use such a channel.

> *'...and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...'*
>
> (Interviewee 2)

Provided the consumer is able to manage the threats themselves or the banks have adequate security in place then they will use the channel more extensively.

4.3.10.4 To Consumer Satisfaction

The relationships that emanate towards *satisfied with channel* of **consumer satisfaction** are initiated by four concepts within **security**.

If a consumer experiences or perceives a threat of a channel they use to be too high then they may ultimately move away from this channel, because they experience a lesser satisfaction. However if a consumer is able to manage the threats of the channel adequately then their level of satisfaction will increase. This is evident with the statement recorded in Table 4.24 with respect to the relationship towards consumer satisfaction.

The results show that the consumer remains satisfied with the channels they use provided that the threats are viewed as minimal or manageable with the measures the banks and the consumer themselves have in place.

4.3.10.5 To Compatibility

A combination of nine different axial links is forged between all the concepts within **security** and two of the concepts within **compatibility**.

All the concepts of security, excluding *security measures*, impact upon the consumer's level of apprehension. The greater the threat of the channel the consumer encounters the more apprehensive of this channel they become. If a consumer gets robbed while holding large amounts of cash required for payments they will hesitate to do so again. In this case they look towards another channel to provide a safer solution. The lesser the threat the less apprehensive and more welcoming the consumer is in return.

The other extreme is that having gone through some of these threats consumers experiences have grown. These negative experiences will compel the consumer to employ a safer alternative. However with appropriate security measures in place a consumer can experience this channel within a much safer environment than before.

If a consumer employs channel appropriate security measures, such as using the ATM during the day while being vigilant or deleting all private data before and after use of internet banking, then their experience with the channel becomes much safer.

> *'ATM I'd say don't use it when there're any strangers lurking around and if you can [use it] during the day, internet banking I'd say use your own, don't use public computers and close, [and] restart. Can I get technical? Delete any private data before and after in your browser when you using it.'*
>
> (Interviewee 1)

Dependent on the level of the threats the channel presents the consumers level of apprehension and experience of this channel will vary accordingly.

4.3.10.6 To Consumer Knowledge

The concept *security measures* of **security** initiates a relationship with each of the concepts *technology awareness* and *knowledge of technology* both of **consumer knowledge**.

When a consumer implements certain security measures, such as clearing private data from the computer in use regularly, their knowledge of the technology being used increases as a result. On the other hand when a consumer applies a security measure that is not specific to the medium of the channel then their awareness of the technology required grows. They have now come across acceptable precautionary measures that are readily available and effective.

Two further relationships are created between the concepts *information threat* and *electronic threat* of **security** with *awareness of site tampering* of **consumer knowledge**.

As the informational and electronic threats towards consumers increase so too does their knowledge of the possible causes of these threats.

With security measures and certain threats comes an increased understanding of the channel that assists the consumer to ensure that the channel is employed within a safer environment.

4.3.10.7 To Security

These relationships are internal to the category of **security** where the physical and electronic threats and perceived lack of security are all linked with the *security measures* available that allow far a safer environment for these channels to be employed.

To combat some of these threats consumers have certain security measures they can implement. Some are as simple as being vigilant while using an ATM, others are more complicated like removing malware from your computer before using internet bank (refer to statement of evidence for relationship towards security in Table 4.24). However the consumer is not the only source of implementing security measures, the banks themselves have measures in place to counteract attempts of physical or electronic theft.

The consumer considers the certain measures for the channels they use, while the banks need to consider security measures for all the channels they offer.

4.3.10.8 High Level Discussion

Consumers concerns of security for the channels they are using along with the measures that can be and are already implemented help the consumers evaluation and essentially drives their final choice. Safety for the consumer and their financial assets is a primary concern for all consumers. Figure 4.12 depicts these relationships.

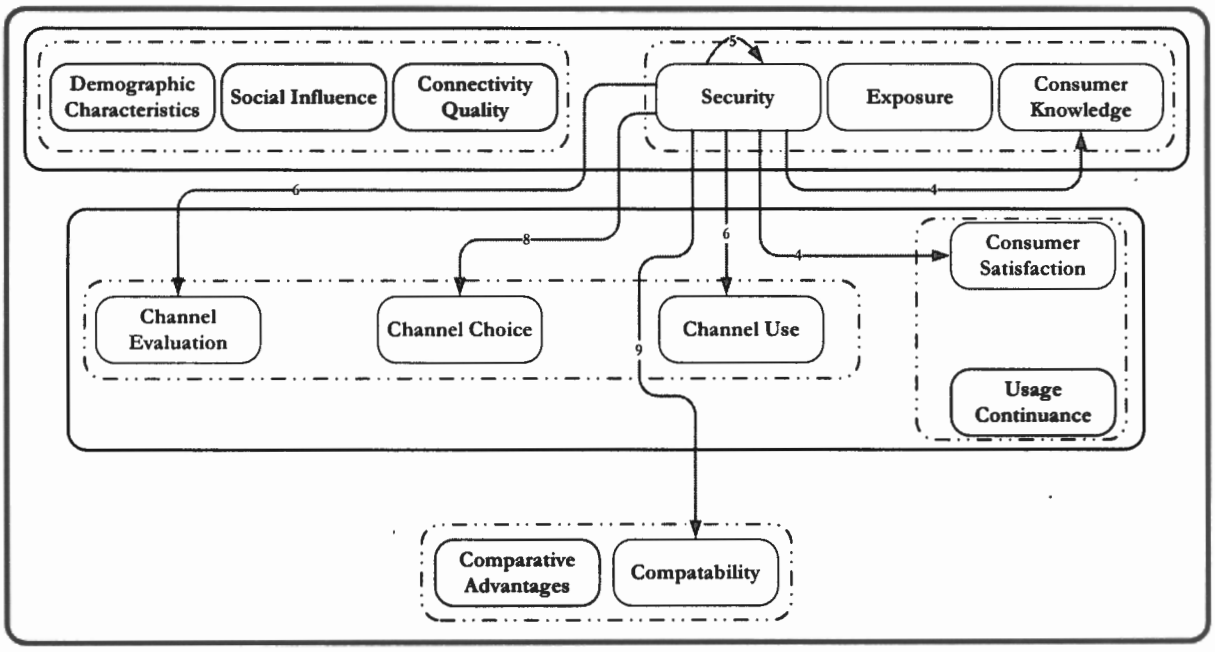

Figure 4.12 - Security Relationships

4.3.11 From Social Influence

Social influence consists of two concepts with ten axial links emanating from the category. The categories linked with social influence along with the respective evidence of these links are depicted in Table 4.25. A more detailed discussion of these links follows.

Table 4.25 - Axial Links emanating from Social Influence

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	2	*Maybe for ATM's seeing as you read the paper and then, local bulletin then, someone got his card got swiped again, I mean that's about it. I don't really listen to [it].*
Channel Choice	2	*If I don't need hard cash then I just do it with online banking it's simpler. Banking Hall, ATM is, I've heard horror stories and actual incidents of cards getting stuck*
Channel Use	2	*...Two people recommended it at the time. And I've never looked back.*
Compatibility	2	*I normally make my own decisions. If there's news on accounts being hacked then it makes me apprehensive but I still continue using that 'and one of my accounts was hacked once as well, but [BANK] picked it up before anything could be used out of it I didn't even know myself before the departments just phoned me...*
Exposure	1	*I suppose yeah. If it is negative. Even positive I would say. Say for example, news came out that mobile banking is going to be free, then I'll definitely go and check it out.*
Consumer Knowledge	1	*Sure ... Well, if someone tells me that mobile banking which I don't use doesn't work well, or is difficult to use, then, I'll take note of that*

4.3.11.1 To Channel Evaluation

The relationships that emanate towards *weighing up of options* of **channel evaluation** are initiated by both the concepts within **social influence**, *secondary sources* and *family sources.*

All printed, audio, and video media, or word of mouth of others experiences and mishaps act as secondary sources which influence a consumer's evaluation. Family sources come in the form of family members concerns due to prior experiences.

With both sources in mind negative stories of card swapping, bank robberies and electronic fraud act as deterrents. While more positive stories of banking experiences such as timely transfers will entice the consumer's evaluations of these channels.

> *'Well, if someone tells me that mobile banking which I don't use doesn't work well, or is difficult to use, then, I'll take note of that.'*
>
> (Interviewee 3)

Social influences play a role in assisting the consumer's evaluation of channels.

4.3.11.2 To Channel Choice

Both concepts of **social influence** are linked with the concept *channel migration* of **channel choice**.

Negative reports of channels the consumers are using encourage them to make a choice to migrate towards a channel they would feel better suited with. For the case of interviewee 2, his father-in-law migrated towards internet banking to avoid another payroll robbery experience. Positive stories encourage the consumer not to dismiss this channel too easily.

Some secondary sources lead a consumer to migrate away from some channels, while other sources entice consumers to migrate towards some channel.

4.3.11.3 To Channel Use

Both concepts of **social influence** are linked with the concept *extent of use* of **channel use**. These sources encourage the extensiveness of the consumers use.

Positive stories encourage for an extensive use of the channel, while negative stories and experiences lead the consumer towards restrictive use of the channel. An example of a negative source is provided in Table 4.25 with respect to the relationship towards channel use.

The extent to which consumers will use a channel is also influenced by members of society, some of whom have had negative or positive experiences.

4.3.11.4 To Compatibility

Both concepts of **social influence** are linked with the concept *apprehensiveness* of **compatibility**. These sources alter the level of the consumer's apprehensions.

Negative sources of a channel increase consumers' apprehensions towards this channel. If a consumer hears a story about other consumers who have had bad experiences with specific channels and that these consumer have no explanation, then they become more concerned with using such channels.

> *'If you go to the internet café, you hear from other people, 'I don't know how they pick up information on your account,. I don't know how it happens but it happens'.'*
>
> (Interviewee 8)

On the other hand, positive sources of a channel will encourage the consumer towards this channel. An example is provided in Table 4.25 with respect to the relationship towards compatibility. This example refers to a consumer's experience of their account being hacked. The bank identified this threat and rectified it promptly. The consumer was only aware of this when the bank informed them that it had happened and they had rectified it before any losses were incurred.

The consumer's level of apprehension towards a channel is influenced by members of society negative or positive sources.

4.3.11.5 To Exposure

The results show that a link exists between *secondary sources* of **social influence** and *channel exposure* of **exposure**. Some secondary sources expose other channels to a consumer. These negative or positive sources allow the consumer this exposure to the channel. Table 4.25 provides a statement of evidence with respect to this relationship towards exposure.

4.3.11.6 To Consumer Knowledge

The results show that a link exists between *secondary sources* of **social influence** and *channel awareness* of **consumer knowledge**.

Some secondary sources provide a consumer with awareness of other channels. These negative or positive sources allow the consumer the opportunity to become more aware of the channel. These sources add to the consumers overall knowledge of the channels recognised. Table 4.25 provides a statement of evidence with respect to this relationship towards consumer knowledge.

4.3.11.7 High Level Discussion

For some consumers the influence of society's thoughts and experiences are acknowledged, while other consumers consciously overlook these sources of influence. The impacts of social influence are depicted in Figure 4.13, below.

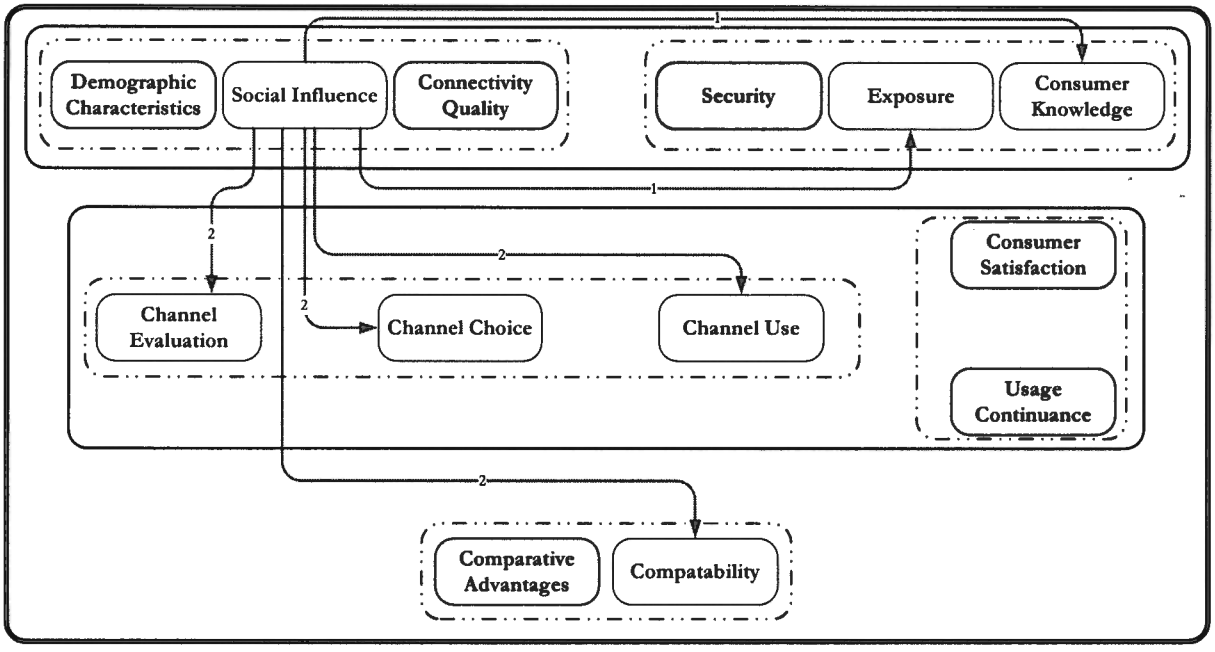

Figure 4.13 - Social Influence Relationships

4.3.12 From Connectivity Quality

Connectivity Quality consists of two concepts with thirteen axial links emanating from the category. The categories linked with connectivity quality along with the respective evidence of these links are depicted in Table 4.26. A more detailed discussion of these links follows.

Table 4.26 - Axial Links emanating from Connectivity Quality

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Evaluation	2	*If I go on the internet, Internet is more convenient for me than anything else. When you on [Cell Provider] and you don't have money on you, you can't do [anything]. [With] Internet you can put everything right.*
Channel Choice	3	*The next morning when you think know about the television banking but no, not the ATM. Internet is very convenient, most people are using internet banking. They have internet at work and at home and wherever.*
Channel Use	2	*As far as connectivity is concerned, no. I do use the Vodacom 3G network now and then, but it is not something I rely on.*
Comparative Advantages	2	*But I imagine that mobile banking would be something that I could use in future. That I would switch on and probably use. I am happy with the web and my web interface is actually easier than to make an SMS conversation with the bank*
Compatibility	1	*Well if I didn't have good internet access I would be more inclined to go for mobile banking or telephone banking, but which I find to be actually very good. You know the touch tone based phone banking that I used in the past, but when the internet or the access to the internet is not a problem then it's better for me to see what's going on there than to hear what's going on there*
Exposure	2	*If you are in a house with teenagers, you sometimes find that your bandwidth disappears at night. [This] leaves you with a surprise the next morning when you think you going to do your banking transactions. It's a very rare reason, but the connectivity is about the only, how can I say, obstacle, or the lack of connectivity. It can happen and does happen occasionally that there is no good connection for some reason. It doesn't happen often though.*

4.3.12.1 To Channel Evaluation

The relationships that emanate towards *weighing up of options* of **channel evaluation** are initiated by both the concepts within **connectivity quality**, *internet access* and *type of access.*

When a consumer has access to the internet they are able to evaluate the benefits they can receive through this connectivity. If a consumer has steady access to the connectivity they will evaluate the channel(s) positively. Support of this example is provided in Table 4.26 with respect to the relationship towards channel evaluation.

The type of access they have also assists in evaluating the benefits with the channels being used or to be used. If a consumer is using a specific type of connectivity, like Vodacom 3G, but they do not rely on the quality of connectivity they will evaluate that the channel associated with this connectivity negatively.

The superior the quality of connectivity the more positive will be the evaluation of the respective channel(s).

4.3.12.2 To Channel Choice

Both concepts of **connectivity quality** are linked with the concept *internet based* of **channel choice**, and the concept *internet access* of **connectivity quality** is linked to the concept *multi-channel* of **channel choice**.

With good quality connectivity the consumer is encouraged towards making a choice of internet based channels, the likes of internet banking or mobile banking at present. The type of connectivity is also plays its role in channel choice. The more readily available and steady the connectivity is the more likely the consumer is to be attracted towards the channel that employs this connectivity.

However, if the consumer is with poor connectivity or without connectivity at all they will be required to choose another channel, or even more than one, to conduct their banking needs. This choice of another channel can be temporary or permanent; it is dependent on the consumer.

4.3.12.3 To Channel Use

Both concepts of **connectivity quality** are linked with the concept *extent of use* of **channel use**. This implies that with poor quality of connectivity the use of the respective channel will be minimal, restrictive. On the other hand, with superior quality the consumer is encouraged to use the channel

more extensively. The more reliable the connectivity is the more inclined the consumer is to use the respective channel more extensively. Support of this example is provided in Table 4.26 with respect to the relationship towards channel use.

4.3.12.4 To Comparative Advantages

The results indicate that the concept *internet access* of **connectivity quality** is linked to the concept *convenience* of **comparative advantages**, and the concept *type of access* of **connectivity quality** is linked to *comparative ease of use* of **comparative advantages**.

If a consumer has steady connectivity to the internet then they experience an advantage of convenience compared to other channels, as they can conduct their banking needs at their own leisure. With this in mind the type of connectivity they have to this channel allows the consumer to compare its ease of use with other connectivity types to this or other channels.

Improved connectivity quality allows the consumer to be able to compare advantages they provide with the respective channel

4.3.12.5 To Compatibility

The concept *internet access* of **connectivity quality** is linked to the concept *channel preferred* of **compatibility**.

Using the statement in Table 4.26 with respect to the relationship towards compatibility as an example, a consumer can determine their own preferences based on the connectivity available to them. If the consumer does not have access to the internet they will revert back to prior channels, such as telephone banking, or use another, such as mobile banking. However if there access to the internet is uninterrupted their channel of preference is internet banking.

This ensures that the channel uses the channel they are most compatible with provided that they have the required level of connectivity quality.

4.3.12.6 To Exposure

Both concepts of **connectivity quality** are linked with the concept *channel availability* of **exposure**. It is shown that when a consumer's connectivity is great the channel is available for use, while a poor connectivity restricts the channels availability. In cases where there is no connectivity the channel is no longer available for use. However, it must be remembered that this availability status is not permanent but only a valid declaration for cases of no connectivity

4.3.12.7 High Level Discussion

The connectivity and type of connectivity to the internet based channels influences the consumer's respective evaluations. While the consumer has access to this connectivity then they are encouraged to make an internet based choice. However, the type of connectivity may deter the consumer from this channel. Figure 4.14 depicts the relationships created.

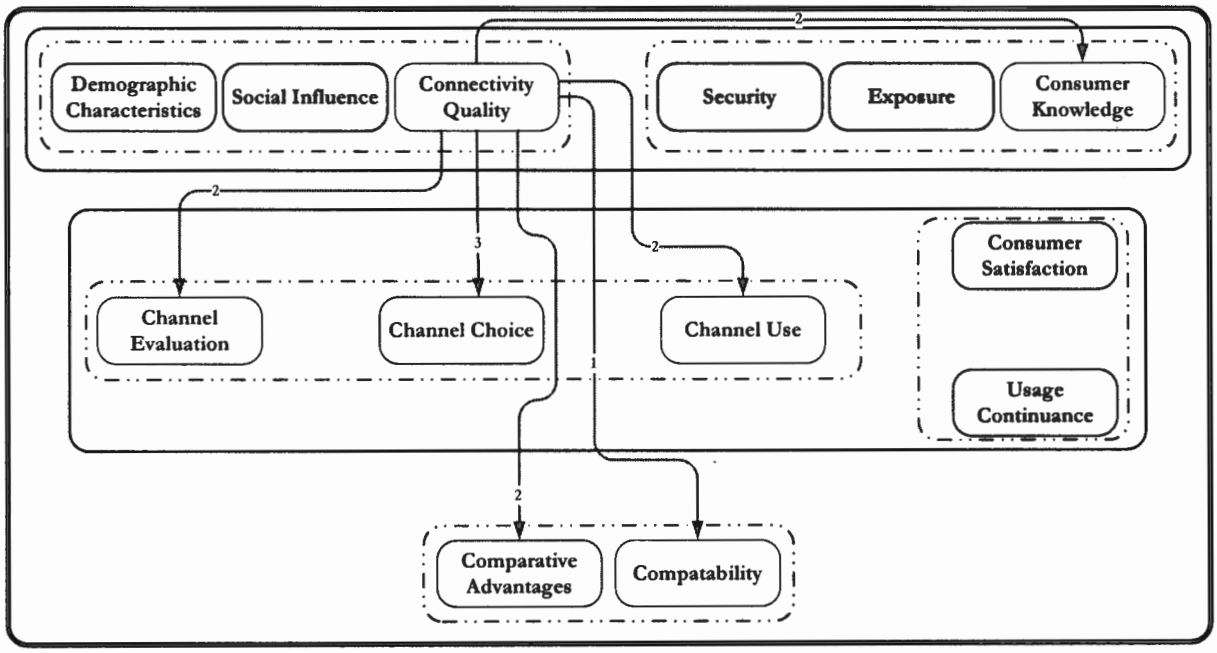

Figure 4.14 - Connectivity Quality Relationships

4.3.13 From Demographic Characteristics

Demographic characteristics consists of two concepts with eight axial links emanating from the category. The categories linked with demographic characteristics along with the respective evidence of these links are depicted in Table 4.27. A more detailed discussion of these links follows.

Table 4.27 - Axial Links emanating from Demographic Characteristics

Relationship TOWARDS	Instances of Relationships	Evidence of Relationship
Channel Choice	2	*For me if you look at the generations; my father's generation it was the banking halls so they're very resistant to internet banking, in my generation it was computers so I think my age category will be more into the internet banking, and the younger guys pre-30's they grew up with cellphones so for them mobile banking [might] be more natural than for my age group. [This is] because it took me a long while to convince my father in law to do his payroll on internet banking and even after two years he still constantly asks 'are you sure it's safe...?'*
Compatibility	4	*No. Not after being in IT. You know [that] the banks [would see] to it that things are secure and it would be in their interest as well, that they give us secure facilities.*
Exposure	2	*I don't know. I'm very old and internet banking is [not]. I don't even know how to use a cellphone, so my children have to do it for me, so I can't see it happening.*

4.3.13.1 To Channel Choice

The concepts of *age* and *occupation* of **demographic characteristics** are linked with the concept of *multi-channel* of **channel choice**.

The age of a consumer influences some of the choices they ultimately make. With the younger generation being more welcoming of newer technologies they are more likely to make a multi-channel choice.

The occupation of the consumer also leads them towards making a multi-channel choice. Their occupation provides them with experiences of the technologies required for the newer banking channels.

The age and occupation of a consumer will allow them to experiment with the different channels, assisting their final choices.

4.3.13.2 To Compatibility

A combination of four different axial links is forged between the concepts of *age* and *occupation* of **demographic characteristics** and the concepts of *apprehensiveness*, and channel experience of **compatibility**.

The age of a consumer influences their apprehensions towards certain channels. The older consumers are wary of the newer technology intensive banking channels such as internet and mobile banking because they do not trust them fully. While, the younger consumers are more receptive to these options as they tend to use these technologies for other activities as well. This enables their experience with the technologies to grow.

The consumer's occupation can also play a role in attracting them to certain channels. If the consumer's occupation provides them appropriate experience with the necessary technologies then they become more willing to consider these channels. In doing so they overcome some of the apprehensions they initially may have had.

4.3.13.3 To Exposure

The concepts of *age* and *occupation* of **demographic characteristics** are linked with the concept of *channel exposure* of **exposure**.

The age of a consumer influences the channels that are exposed to them. With the younger generation using technologies such as mobile phones and the internet they have already been widely exposed to these mediums. For older consumers their exposure is limited to specific uses only.

The same is implied for a consumer's occupation. If their occupation expects them to interact with these newer, internet and mobile phone, technologies then they become exposed to other means of interacting with the bank.

4.3.13.4 High Level Discussion

These demographic characteristics of *age* and *occupation* show that it is not only the context of the consumer's environment that influences their motivations, but even their personal contexts can influence them. Figure 4.15 shows the direction of the impacts of demographic characteristics.

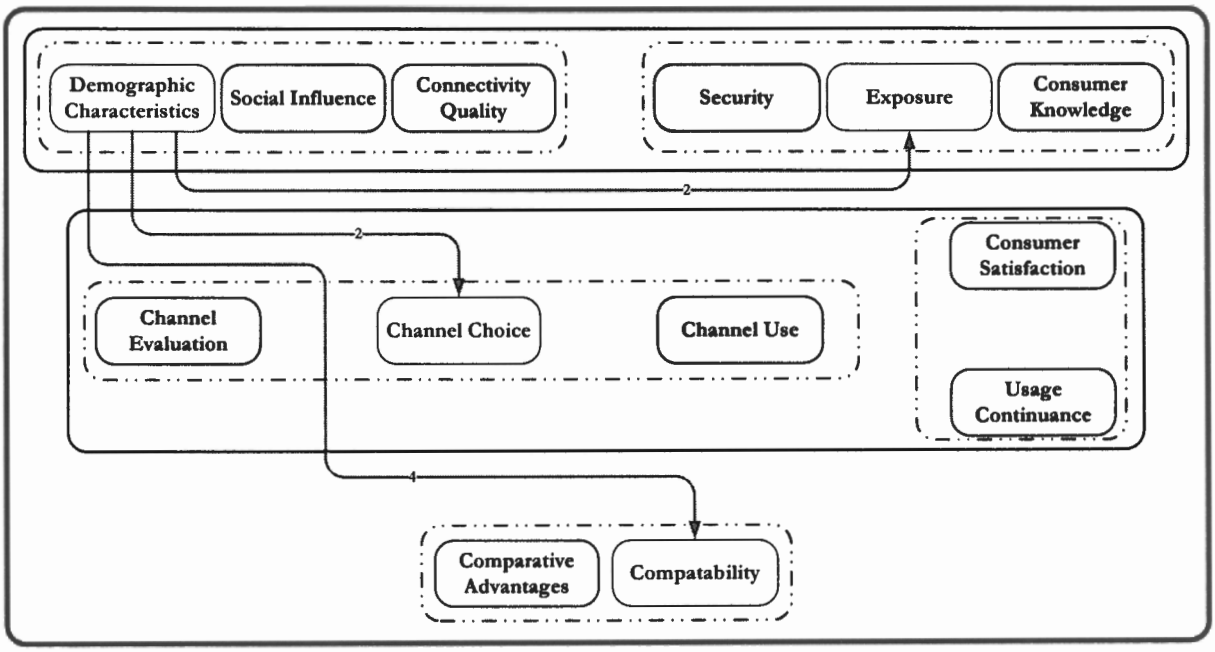

Figure 4.15 - Demographic Characteristics Relationships

4.4 RESULTS FROM SELECTIVE CODING

The selective coding process is the final stage of the analysis procedure. The selective coding process was conducted continuously throughout the analysis process at the concept level and relationship level. By continually conducting the selective coding process at these two levels unnecessary concepts and relationships were removed from the results. The purpose of this selective coding was to refine the categories of the theory resulting in the most relevant categories surviving.

The final list of concepts and relationships identified in the above sections of this chapter were derived after multiple iterations of the selective process. The selective process at the concept level and relationship level was conducted simultaneously and not independently. All the concepts that were discarded through this process were attributed to not being conceptually dense and not realising any significant relationships. However, some concepts that remain are also not conceptually dense, but their significance to the study was greater as is indicated by the relationships they helped realise. At the other

extreme some concepts are conceptually dense and only realise a few relationships, but these relationships are of great significance, thus validating their inclusion. Concepts that were relationship dense implied that these concepts had a high count of occurrences.

After concluding the selective process the refined categories that remained were of significance to the study. The sections below will introduce the evolution of the grounded theory and provide a story line to explain the ideal flow of the consumer's movements through the theory using their contextual, causal and intervening inputs that lead towards the actions and ultimately the consequences.

4.4.1 Theory Evolution

Having gone through several iterations of the open coding, axial coding and selective coding processes the grounded theory depicted in Figure 4.16 was identified. The selective coding process allowed for this theory to emerge to its final state.

The selective coding process also identified the core as being the decision making process which is inclusive of the action/interaction natured categories of channel evaluation and channel choice. The remaining categories were then related towards this core process and to each others. These proposed links were constantly validated by revisiting the data throughout this entire process.

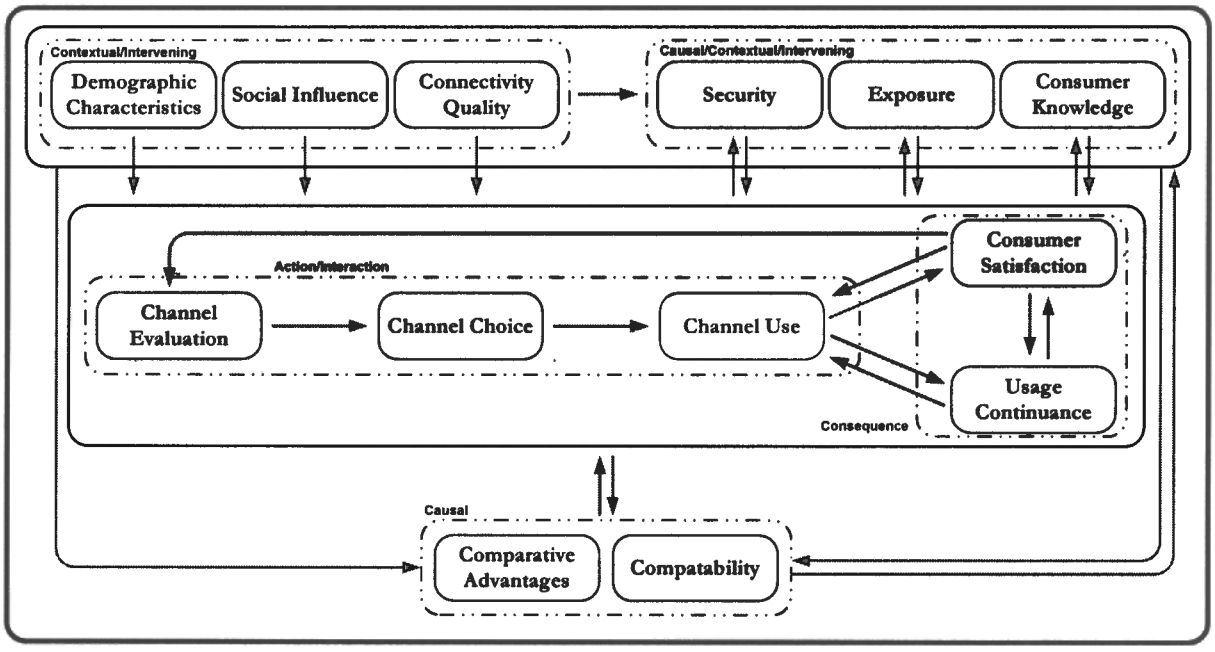

Figure 4.16 - Final Theory

The theory assists in understanding consumers' actions and interactions within the banking environment. The section below will endeavour to explain a consumer's movements through the banking environment.

4.4.2 Story Line Description

Each category plays its own role as one or more of the following categorisations. These categories are addressed as being causal, intervening, action/interaction, contextual, intervening or of a consequential nature (Strauss & Corbin, 1998). This categorisation is employed to highlight the higher order nature of these categories. Causal natured categories are the main driver behind the action/interactions categories which result in the consequential natured categories. The contextual categories aid in keeping them within the relevant environment, while the intervening natured categories impact on the causal, action/interactions and consequential natured categories by dampening or increasing the overall effects.

For the full benefit of understanding the theory the story line will be discussed from three different perspectives incorporating the three different action/interaction states of channel evaluation, channel choice and channel use. The three perspectives are: a new consumer to the banking environment; an already existing consumer of the banking environment; and a consumer's choice of channel(s) for the current circumstances at hand.

Perspective One: New Consumer

For a new consumer the states of channel evaluation, choice and use are more distinguishable as the consumer has not yet reached a point of diffusion with the banking environment where these states tend to overlap. This merely means that they have no first hand experiences or knowledge of the environment. This perspective will look at a new consumer to the banking environment.

The consumer enters the banking environment with restricted second hand knowledge of channels available and also the advantages they can offer. This restricted knowledge coupled with their initial exposure to the banking environment as well as the social influences of stories in the media and other consumer's accounts of experiences guides them in their explicit evaluation of the channel(s) they are aware of.

The consumer's thought and decision making process is directly influenced by these causal and contextual concepts. This gathered information will enable the consumer to weigh up all the advantages and disadvantages of the channel(s) at hand before making their choice. At first the consumer will make the choice of the most advantageous channel(s), however this will not always remain the case (see perspective of Existing Consumers). The evaluation and choice of the channel(s) inclusive of the movement from evaluation towards choice depicts the consumer's decision making process. This process guides the consumer towards the use of the channel(s).

Using the channel(s) provides the consumer with experiences from which they can form preferences. In doing so the consumer constructs a degree of satisfaction. The higher this level of satisfaction remains the consumer will continue to use the channel(s) with greater intensity or for longer periods. Sometimes the use of the channel itself leads towards continued use, bypassing the state of satisfaction, as this channel is the only option they have available to them. Thus, their level of satisfaction is at times unrelated. Continued usage ensures consumer's experience continue growing allowing for further reinforcement, no change or negative satisfaction to result.

By using the channel(s) the consumer enters the Channel Use - Consumer Satisfaction - Usage Continuance multi-directional satisfaction loop. This loop shows that the state of Channel Use can lead towards both Consumer Satisfaction and Usage Continuance. Likewise, the state of Usage Continuance can lead towards Channel Use and Consumer Satisfaction, and the state of Consumer Satisfaction can lead towards Channel Use and Usage Continuance. Movement from one state to the next is dependent on the dimensionality the consumer experiences. If the consumer uses a channel they will either be encouraged to continue to use this channel because it is the only channel available to them, or they will experience some level of satisfaction. When a consumer continues to use the channel(s) they can experience a different level of satisfaction if the intensity of usage increases, while if the intensity decreases the extent of use of the channel is restricted. When a consumer's satisfaction increases they are encouraged to continue using it, more intensively. Thus, when a consumer's satisfaction is unchanged or decreases their use of the channel(s) remains the same or is restricted to the point where the consumer may be encouraged to actively search for a more beneficial channel to conduct some of their banking needs with. In other words the loop is broken at this point.

When the consumer is required to find another channel the personal experiences, preferences, needs, social influences, knowledge, comparative advantages and security concerns they have gained will direct their evaluation of the next possible channel(s). This evaluation can be explicit or implicit, depending on how diffused the consumer is into the banking environment and the channel being evaluated. This allows the consumer to re-enter the banking environment with another channel until the loop breaks down again. However, the consumer can re-enter the banking environment at anytime during their interaction with the banking environment and not only when they experience dissatisfaction with the channel(s).

Perspective Two: Existing Consumer

This perspective will explore an already existing consumer's movement through the banking environment. In such a scenario the consumer has been able to gather first hand experiences of the

channels they may have used along with second hand accounts of channels they have been exposed to. They will have also either experienced or been made aware of various security concerns of all these channels. By implementing appropriate security measures their experiences remain positive and their knowledge continues to grow.

The age and occupation of the consumer also influence the type of channel they prefer to use as the more technologically minded consumers are drawn towards internet based channels, where concerns of unreliable and interrupted connectivity along with security threats may deter the consumers. While the older consumers prefer to personally interact with the banking personal at the banking halls.

Experiencing advantages of channels first hand together with the accumulation of growing experiences and knowledge encourages the consumer towards preferring certain channels with which to interact with the bank. All these experiences encourage the consumer's use of the channel(s). The consumer will continue using the channel(s) because of the satisfaction it provides in meeting their current needs. A consumer's use of the channel(s) will continue provided they remain satisfied. Dissatisfaction of the channel(s) will break this cycle leaving the consumer to use their remaining channels or look for another to replace the channel(s) that have fallen out of favour or been discontinued. Again this search for another channel does not have to be driven by dissatisfaction, but can also be driven by increased exposure and knowledge of the channel being considered.

Perspective Three: Individual Circumstances

Consumers can and do employ more than one channel to perform the same or different banking needs based on the circumstances surrounding them. The experiences they gain allow their knowledge of these channels to grow. This allows the consumer to become more aware and comfortable with these channels to a point where they can implicitly decide on which channel to use for the circumstances they will find themselves in.

The evaluation is primarily explicit when they are deciding to use the channel for the first time, thereafter the evaluation of which channel to use becomes primarily implicit as the choice is now driven by the consumers needs with respect to the circumstances surrounding them. Thus the consumer implicitly evaluates which channel is beneficial for the respective circumstance and makes their choice of channel to use. At times the consumer will bypass the stages concerning evaluation and choice as the only option available to the consumer for the circumstance is the use of one channel.

The circumstances that confine the consumer's decision making process are attributed to their location, the respective channel(s) costs, availability of the channel(s) and the time of day the need is required. If a consumer has more than one option with which they can perform the required banking need after the circumstance has been considered then they may choose to use the most convenient channel available or their channel of preference.

Intervening issues of poor connectivity and media releases of channel concerns such as ATM scams or internet fraud also influence which channel the consumer will employ to fulfil their banking need in a given circumstance.

Story Line Summary

A possible order of movement through the banking environment with respect to the theory is depicted in Figure 4.17 which is followed by an explanation of this possible order.

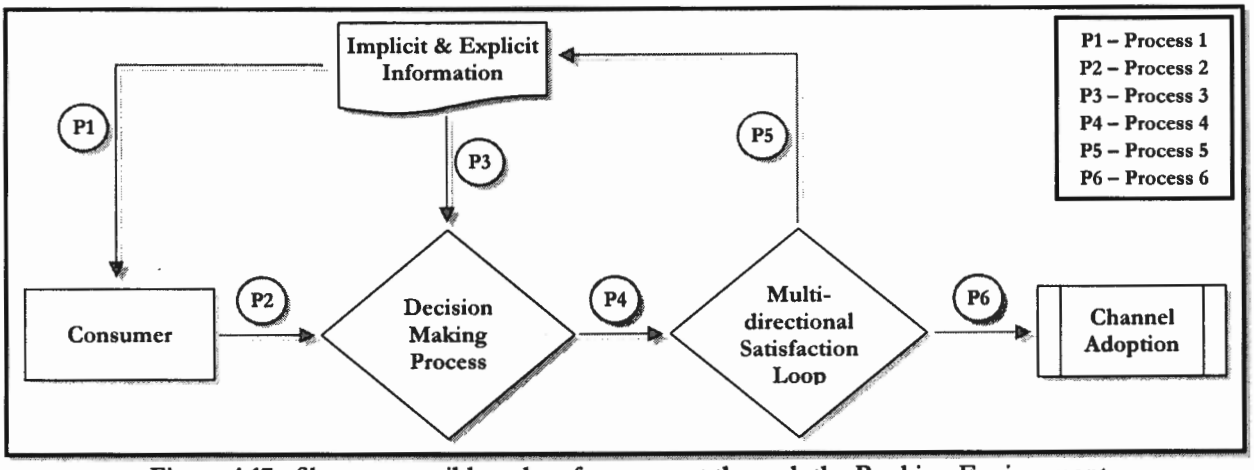

Figure 4.17 - Shows a possible order of movement through the Banking Environment

Initially the consumer gathers implicit and explicit information of a causal, contextual and or intervening nature as indicated by P1 (Process 1). With this information the consumer is able to enter the decision making process, conducting an implicit or explicit evaluation influencing the choice and use of the channel(s) (P2). P3 is the further gathering of information of a causal, contextual and intervening nature. P4 leads the consumer towards satisfaction and continuance allowing the consumer to enter the Channel Use – Consumer Satisfaction – Usage Continuance multi-directional satisfaction loop. Dissatisfaction of the channel(s) leads the consumer to re-enter the banking environment with another channel to repeat the whole process (P5). While satisfaction and continued usage of the channel(s) leads the consumer towards channel adoption (P6).

The consumer can actively search for another channel at any stage of this process, and not only when dissatisfaction is achieved. Evaluations of channels are conducted continuously throughout their

interactions with the banking environment, same as with the consumer's choices. These choices can be made before, during or even after use of the channel(s).

This repetitive process shows that consumers are willing to use more than one channel to fulfil their banking requirements. The use of more than one channel gives birth to the term multi-channel banking. It shows that the choice of which channels to use is considered from a collective and not on an individual basis. The decision making process includes the action/interaction natured categories of channel evaluation and channel choice. There is no one starting point to this theory. A consumer can enter their decision making process of a channel from any contextual, causal and intervening natured category within the model.

CHAPTER 5: DISCUSSION & IMPLICATIONS

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5 DISCUSSION & IMPLICATIONS

5.1 INTRODUCTION

This chapter aims to interpret the results obtained through the application of the grounded theory techniques on the data gathered through the interviews. This interpretation will be conducted at two levels of abstractions; at the model level and at the concept level. The latter is broken further into two segments of matching results and non-matching results. This chapter will finalise by looking into the theoretical and practical implications provided through the results along with the contribution this research provides.

5.2 DISCUSSION

The discussion will revolve around the interpretation of the results gathered through the application of the grounded theory techniques. The discussion will take the form of a theory level and concept level interpretation.

5.2.1 Theory Level

The model shows that there are different natured categories that influence or interact with one another. These different natured categories [Contextual, Causal, Intervening, Action/Interaction and Consequence] (Le Roux, 2001, Strauss & Corbin, 1990) allow for various paths of progression within the model. The most essential being the path of the decision making process. The other paths of significance are the Channel Use - Consumer Satisfaction - Usage Continuance multi-directional loop and their continual growth of experiences and knowledge the longer the consumer remains within the banking environment. A detailed inspection of these three paths follows.

Path One: Decision Making Process

The decision making process includes the categories of Channel Evaluation and Channel Choice. This process occurs before the consumer's adoption.

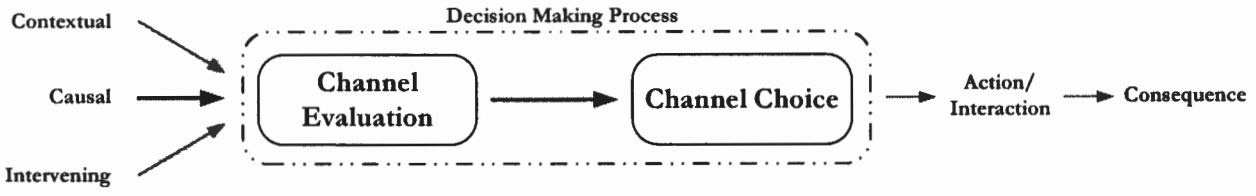

Figure 5.1 - Interaction with Decision Making Process

Figure 5.1 shows this possible interaction path that influences the decision making process and the outcome of that decision. This shows that the consumer's undergo a decision process before final adoption. This process is highly influenced by the concepts within the causal natured categories of

Comparative Advantages and Compatibility. Thus, the high significance of this flow is depicted in Figure 5.1 by a red arrow. This process is also influenced by contextual and intervening natured concepts as depicted by the then blue arrows. All the concepts identified within these causal natured categories impact directly towards the evaluation of channels, thus indirectly onto channel choice through the evaluation. However, some of these causal natured concepts also impact directly onto channel choice. A positive outcome of this decision process leads towards adoption of the channel(s), while a negative outcome of this decision process leads to an evaluation of a different channel or a re-evaluation of the same channel(s).

The larger contributors towards this decision making process are the banking needs' a consumer can conduct, the associated cost, convenience and experience the consumer receives. These concepts have also been noted as being influential in studies concerning single channel adoption (Brown et al., 2003; Hlaciuc et al., 2005; Shergill & Li, 2005; Yu et al, 2005). This indicates that consumer's needs, associated costs, experiences and convenience received will also impact highly towards a consumer's choice.

Path Two: Multi-Directional Satisfaction Loop

This multi-directional satisfaction loop between the three categories of Channel Use [1], Consumer Satisfaction [2] and Usage Continuance [3] is shown by the fact that each category is axially linked towards the other two forming a triangle but not a closed loop in Figure 5.2. It shows that the category Channel Use [1] can have a direct influence on the second category of Usage Continuance [2] or indirectly through the third category of Consumer Satisfaction [3].

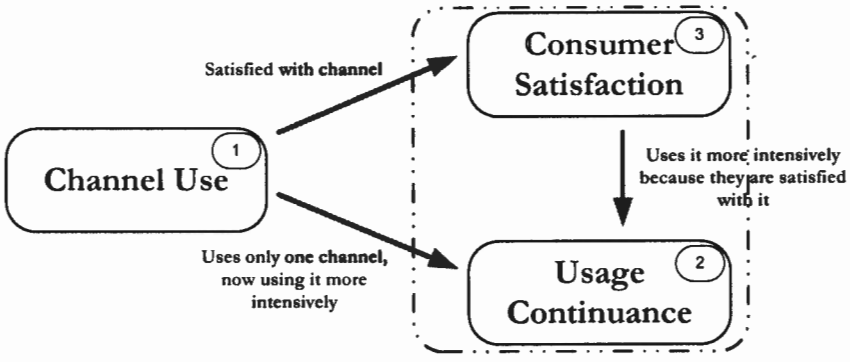

Figure 5.2 - Example of one possible path of progression in this multi-directional satisfaction loop

A consumer using only one channel can use this channel extensively and in doing so their intensity of the channel grows forcing them to continue using this channel as they have no other acceptable options. This is depicted by movement between categories [1] and [2] in Figure 5.2. The same outcome of intensity can also be achieved through consumer's increased satisfaction with the channel. As the consumer satisfaction grows the intensity of use increases leading towards usage continuance. This is

depicted by the movement between categories [1] and [2] through [3] in Figure 5.2. Bhattacherjee (2001) argues that usage continuance is strongly influenced by satisfaction. These findings have been subsequently verified by various studies conducted by Chiu, Hsu, Sun, Lin, Sun (2005); Eriksson & Nilsson (2006); Roca, Chiu, Martinez (2006); Vatanasombut, Igbaria, Stylianou, Rodger (2008). The consumer remains satisfied if the channel(s) they use can continue providing positive outcomes.

This study identified satisfaction driven by concepts such as positive prior experiences, convenience, time pressures and security. Knowing that the channel is secure both physically and electronically, increases satisfaction a consumer can achieve. Research on what drives satisfaction has been conducted in different fields with security being the mainstay when considering technology (Buys & Brown, 2004). Weir et al., (2008), also confirm the presence of security with regards to satisfaction adding convenience and experiences.

Path Three: Consumers Continual Growth

Continuous usage enables the consumer's knowledge and experiences to grow. This growth varies between consumers, depending on the rate they extract knowledge and experiences from interacting within the banking environment of the model. Consumers become aware of more options as their experiences guide their preferences and satisfaction. Increased awareness allows the consumer the opportunity to actively collect more information about other channels.

Before the channel is used the knowledge gathered is primarily a matter of subjective norms, where opinions about these channels are gathered before being evaluated. However after use of the channel the consumers own opinions and experiences take precedence. This increased knowledge feeds into the implicit or explicit evaluations of the channels guiding the consumer choice.

This ultimately ensures that the model is self-sustainable. There is no single point of entry into or exit from this model. A consumer can enter their decision making process of a channel from any contextual, causal and intervening natured category within the model.

5.2.2 Concept level

The results were matched with the literature identifying two segments of interest. The segments are where the results of the study and literature overlap, and where they do not overlap. The latter segment is further broken down into two divisions of concepts identified in literature of e-banking but not explicit to the theory and concepts identified through the theory but not identifiable in literature concerning e-banking.

5.2.2.1 Segment 1: Matching results from both Study and Literature

Of the 52 concepts identified in the study, 41 of them matched factors identified through literature while the remaining eleven added a new dimension towards understanding consumer adoption for multiple channels. Table 5.1 is constructed to show the categories and the concepts produced from this study matched with the most appropriate factor provided through literature along with a related literature reference.

Table 5.1 - Matching results from both Study and Literature

Category in Study	Concept in Study	Related Factor in Literature	Related Reference
Channel Use	Extent of Use	Actual System Use	Alshare et al., 2004
	Frequency of Use		
Usage Continuance	Intensity of Usage	Internet/Mobile Experience	Tan & Teo, 2000
	Years of Usage		
Comparative Advantages	Bank Charges	Cost	Dandapani, 2004
	Travel Cost		
	Internet Charges		Binda, 2005
	Comparative Ease of Use	Relative Advantage: Ease of Use	Brown et al, 2005
	Distance to Channel	Mobility/Location	Mallat et al, 2004; Nor et al., 2008
	Location of Channel		
	Technology Limitations	New Technology	Mochiko & Khuzwayo, 2006
	Convenient	Relative Advantage: Convenience	Shergill & Li, 2005
	All Hours	Time Pressures	Nor et al., 2008
	Saves Time		
Compatibility	Apprehensiveness	Compatibility	Brown et al, 2005a
	Channel Preferred		
	Comfortable		
	Channel Experience	Experience	Yu et al, 2005
	Internet Banking Experience		
	Need for Cash	Banking Needs	Hlaciuc et al., 2005
	Need for other Service		
	Need for Payment Method		
	Need for Real-Time Information		
Connectivity Quality	Internet Access	Access	Armstrong & Collins, 2004
	Type of Access		
Consumer Knowledge	Channel Awareness	Relative Advantage: Awareness	Brown et al, 2004
	Knowledge of Technology	New Technology	Mochiko & Khuzwayo, 2006
	Technology Awareness		
Demographic Characteristics	Age	Demographics	Pieterson & van Dijk, 2007
	Occupation		
Exposure	Channel Availability	Exposure	Lichtenstein & Williamson, 2006
	Channel Exposure		
	Technology Availability		
Security	Information Threat	Lack of Informational Privacy	Brown & Buys, 2005
	Electronic Threat	Lack of Transactional Security	Jahangir & Begum, 2008
	Perceived Lack of Security		
	Card Theft	Threats to Physical Security	Lao & Wang, 2005
	Physical Theft		
Social Influence	Family Sources	Subjective Norm: Image	Riivari, 2005
	Secondary Sources		
Consumer Satisfaction	Satisfied with Channel(s)	Satisfaction	Eriksson & Nilsson, 2006

The most conceptually dense of the concepts that evolved where that of **channel awareness, convenience, saves time and channel experience**. Literature of e-banking does not show channel awareness as being a factor of significance, the exception being the when determining the rate of adoption as introduced out by Saljoughi (2002) from the IDT model. This results shows that as a consumer's channel awareness grows so too does their knowledge, and proportionally at that. This growth in knowledge is attributed towards the consumer's exposure to more channels and their services and the experiences this awareness initiates.

The concepts of convenience and saves time where repeated over and over by consumers as they are able to receive these advantages through the channel(s) they employ. Experience of the channel(s) on the other hand can have both a positive and negative influence towards usage the channel(s) due to good or bad experiences, but knowledge will always be gained. This is also noted in the studies conducted by Lee (2008), and Hernandez & Mazzon (2007).

Of the concepts identified in Table 5.1, the concepts most influenced by others are **apprehensiveness, channel experience, channel exposure**. A consumer's apprehensiveness is highly influenced by the security aspects of the channel(s). If a consumer's view of the security the channel provides is inadequate then they are less likely to use this channel. Consumers fear physical, transactional and informational threat to their banking environment, avoiding them whenever possible. The issues of security and privacy have been identified as a major concern in previous studies. Provided the channel can provide the adequate security and privacy then the consumer is more likely to adopt (Aldás-Manzano et al., 2009, Brown & Buys, 2005; Cheng et al, 2008; Jahangir & Begum, 2008; Lao & Wang, 2005).

The study shows that the consumer's knowledge directly influences their exposure and experiences achieved to change. Their exposure will grow as the consumer gathers more information about the respective channel(s), the technology used and the services they provide. While resultant experiences can be both positive and negative. This increase in knowledge influencing exposure and experiences is not evident in previous studies. However, knowledge in the form of awareness does help differentiate the channels for the consumer (Brown et al., 2003).

5.2.2.2 Segment 2: Results do not match

This segment provides the interpretation of the factor from literature on e-banking but not explicit to the theory and concepts identified through the theory but not identifiable in literature concerning e-banking.

Concepts identified in literature of e-banking but not explicit to the theory

To reach a point of complete saturation with respect to all possible factors would be near impossible. For this reason not all the categories, that developed, were expanded to reach their point of saturation. To this end the factors identified through literature related to research conducted on the different channels individually or comparatively, but did not appear in through this theory is tabulated below with respective references. Thus these concepts may not have explicitly surfaced as significant in this study.

Table 5.2 - Factors Identified through Literature of e-banking that did not feature in this theory

Factor in Literature	Related Reference
Behavioural Control	Abu-Shanab, 2005
Competition	Mochiko & Khuzwayo, 2006
Gender	Hernandez & Mazzon, 2007
Income	Hernandez & Mazzon, 2007
Infrastructure	Barnard & Wesson, 2003
Interpersonal Communication	Scarborough & Grieser, 2006
Personal Innovativeness	Aldás-Manzano et al., 2009
Market Size	Butler, 2005
Observability	Aldás-Manzano et al., 2009
Service Quality	Cheng et al., 2008
Trialability	Dospinescu & Rusu, 2005

The factors that have played a significant role in determining the adoption of a single banking channel are **trialability** (Aldás-Manzano et al., 2009; Dospinescu & Rusu, 2005), **personal innovativeness** (Yi et al., 2006) and moderating individual characteristics of **gender** and **income** (Hernandez & Mazzon, 2007; Jaruwachirathanakul & Fink, 2005).

Trialability can be explained as the extent to which users would like an opportunity to experiment with the innovation prior to committing to its adoption (Aldás-Manzano et al., 2009; Agarwal & Prasad, 1997; Brown et al., 2004; Hernandez & Mazzon, 2007). The study conducted in SA by Brown et al. (2004), indicates that consumers would appreciate a trial period However, no respondents in this study reflected upon this opportunity as a possible route. The lack interest may be implicitly linked to the security concerns the consumers harbour about certain channels, fears of internet fraud and ATM fraud.

Personal innovativeness is the individual's willingness to experiment with new technology. This is not based on the effect of prior experiences or security concerns but rather the consumers desire to try this technology (Agarwal & Prasad, 1997; Lewis, Agarwal & Sambamurthy, 2003; Yi et al., 2006). However, this factor was not directly identified from this study as being of significance. This is attributed to the

fact that for some of these consumers the availability of the technology and channel were not readily attainable.

The individual characteristics of gender and income have been noted in prior studies to impact upon adoption of banking channels. It is denoted that income plays an encouraging part towards the adoption of internet banking as the consumers with higher incomes will have a choice from a larger array of banking channels (Brown et al., 2004).

Gender on the other hand has been identified as being an important determinant of short-term usage. This can also be used to predict the sustained usage of technology in the work place (Lu et al., 2003). These concepts did not explicitly arise through the theory but the concept of income may have been implicitly explained through the demographic characteristic of occupation. The category of demographic characteristics plays a significant but small role in the theory and so full saturation of this category was not required.

Concepts identified through the theory but not identifiable in literature concerning e-banking.

The concepts identified through the theory that did not match those identified through the literature on e-banking are depicted in the table below with the corresponding category of this study. These concepts were unique to outcome of the theory.

Table 5.3 - New Concepts identified through the theory

Concept in Study	Category in Study
Weighing up of Options	**Channel Evaluation**
Channel Safety	**Comparative Advantages**
Awareness of Site Tampering	**Consumer Knowledge**
Channel Convergence	
Knowledge of Services	
Security Measures	**Security**
Cash Based	**Channel Choice**
Internet Based	
Mobile Based	
Channel Migration	
Multi-Channel	

The most highly influenced concepts among the concepts listed in Table 5.3 are the concepts **weighing up of options**, and the channel choice concepts of **cash based, internet based, channel migration** and **multi-channel**. These concepts were not identified through the literature conducted with respect to e-banking. These concepts are the main collection of concepts within the categories of channel evaluation and channel choice that comprise the consumer's decision making process. Almost

everything within this theory impacts upon the consumer's decision making process explaining why these concepts have a high degree of being influenced.

These concepts are highly influenced by concepts within the causal natured categories of comparative advantages and compatibility. Concepts within the category of security also influence a consumer's evaluation and choice significantly. Together the concepts from these three categories impact directly on a consumer's evaluation and choice or indirectly on the consumer's choice through an evaluation.

The remaining concepts identified through the study increases a consumer's experience. This experience can be positive when the consumer's **awareness of site tampering** can ensure that the consumer has certain **security measures** in place increasing the **safety** of the channel. The experience can also be negative if the consumer is unaware of the possible security measures available to safeguard them from threats.

However, the emergence of the concept **channel convergence** is interesting. This concept introduces the idea of different banking channel technologies, like the telephone, internet and mobile, converging to provide one rather more superior banking channel. The primary advantage being reduced **costs**. For this uniqueness the concept remained in the study.

Initially this evaluation may be explicit, where the consumer takes their time to consider all the available channels. However, when the consumer is immersed in the banking environment for long enough these evaluations tend towards being implicit moulding the consumers choice to meet certain requirements.

5.3 IMPLICATIONS

The internet based choice of i-banking has evolved as the channel of preference for a majority of the respondents ensuring that it will remain dominant in the near future. Consumers were not very inspired by time lost looking for parking or waiting in queues when visiting the banking hall. As for ATMs consumers are still wary of the security threats surrounding the physical medium. The consumers need to be continually vigilant to ensure that their cards are not cloned, swopped or stolen. Telephone banking was not identified as being a commonly used medium in banking at present. As for mobile banking the biggest deterrent is the size of the actual mobile medium such as a cellphone or PDA. The smallness in size of the actual medium and the respective screens inhibits the usability of web interfaces amongst most consumers.

The theory assists with the understanding of a consumer's actions within this banking environment. Some of these factors influence or prompt consumers to migrate towards another channel or employ multiple channels. Factors that initiate channel migration are related to associated costs, prior experiences, security threats, preference of channel and satisfaction of the channel.
Thus, if banks are able to identify which of these channel these factors impact upon poorly then they can make appropriate changes to encourage consumers to stay loyal to a channel. In doing so, they will also encourage the use of multiple channels as the comparative advantages among channels will, in effect, be reduced.

Factors like **availability** and **access** of channels, **location** and **time** of day encourage the use of multiple channels. Such information within banks will enable them to improve upon these factors when promoting the channel(s).

Banks can also look into the usefulness and applicability of the convergence of channels by identifying which channels would be beneficial to converge or simply be replaced. This may identify an innovative approach that can reach towards the greater population of the country.

With the banks becoming aware of all these factors they can improve their attempts of attracting more consumers and possibly also increasing the banking reach within the country. Ultimately a consumer's knowledge of the banking environment grows the longer they remain within this environment.

5.4 CONTRIBUTIONS TO KNOWLEDGE

This grounded theory evolved through the grounding of theory in data. Thus, the contribution provided by this theory can be assessed through the four fundamental building blocks of a theory as determined by Whetten (1989) – *'What', 'How', 'Why' and 'Who Where and When'*. Alternatively, the contribution can also be assessed by the four criteria as proposed by Strauss & Corbin (1990) – *'Fit', 'Work', 'Relevance'* and *'Modifiability'*. The explanation of these terms is provided in Section 3.6. Ultimately both sets provide a matching contribution. Thus, only the theory as assessed through Whetten's building blocks is detailed below.

The *'What'* block is the refined list of concepts identified and explained in Section 4.2. The full list of these concepts is extracted in Appendix H The concepts generated that have not been indicated as being significant in other studies of banking channels as listed in Table 5.3 add towards a better understanding of consumers actions.

The *'How'* block is explained by the relationships generated in this study and the evolution of the theory. Theory level relationships of interest that have been identified include the decision making process, the multi-directional satisfaction loop and the continual growth of knowledge for the consumer. At the conceptual level relationships that highly influenced the concepts of the ***weighing up of options***, and the channel choice concepts of ***cash based***, ***internet based***, ***channel migration*** and ***multi-channel*** were of great interest. These relationships assist in better understanding the consumer's decision making process.

The *'Why'* block is explained by the reasons behind the consumer's interactions with and within the banking environment. This study has identified that consumers can use more than one channel to conduct the same banking need. The choice of the channel is primarily dependent on factors that vary influencing the consumer's individually. The consumers also illuminate that while they may prefer to use one channel more than another they do not restrict themselves to any singular channel. They will ultimately use the channel best suited for their current circumstance. This is attributed to their differing needs and wants within their banking environment. The *'Who Where and When'* block set the context of the theory. This theory was conducted within the context of banking consumers in SA. The next chapter also highlights some future research contexts.

CHAPTER 6: LIMITATIONS & FUTURE RESEARCH

6 LIMITATIONS & FUTURE RESEARCH

6.1 INTRODUCTION

This chapter looks to highlight the limitations experienced by the researcher throughout this study. The limitations noted are with respect to the study and the researcher. The chapter ends with an insight of possible paths of research for the future.

6.2 LIMITATIONS

This study is limited by the fact that only individuals with bank accounts were approached. Thus the results show how consumers of the banking market are affected, and not necessarily how to go about attracting non-banking individuals. Also this study may not be generalisable to consumers in other countries as the influence of these factors may have a different impact.

This study is also a cross-sectional study conducted over a specific short period of time. With a longitudinal study the interviewees' ever growing and changing experiences could be recognised as adding an extra dimension to the overall impact on the phenomenon.

This research is qualitative in nature primarily feeding off the interviews conducted. The use of both qualitative and quantitative approaches would have been of benefit to the study. However, limited resources discouraged the approach due to the fact that this study is a half dissertation.

This research does not provide a predictive theory but rather an explanatory theory of the phenomenon under study. Thus there is scope for future research to build upon this study.

6.3 FUTURE RESEARCH

The factors identified as possible influences in this study of multi-channel banking adoption are not exhaustive. Some factors of interest are trialability and personal innovativeness (Table 5.2 shows other factors of possible influence). Future research could be conducted to further understand the impact of these factors in this theory. The research can be continued to understand the impact of contextual factors such as infrastructure and the national environment. Thus, encompassing a greater range of individuals not only consumers already in the banking environment.

A different dimension can be gained by conducting a longitudinal study. The changes consumers undergo in their banking experiences and personal lives can enable banks to better understand

consumer's movements and loyalties within the banking environment. With personal characteristics such as age, gender and income possibly playing a more significant role.

Further research can be conducted from the perspective of the Bank itself around the phenomenon of multi-channel banking. This could assist in understanding the differences viewed as being significant between the perspectives of the consumers and the banks. Additionally Banks can conduct a study to identify which channels could be converged successfully and how the consumers will welcome such a convergence. The results of such research could provide an innovative approach to banking that could potentially be attractive to the greater population of the country.

The resultant decisions of consumers are not easily predictable at this stage, as there are many differing factors that personally influence the consumer positively or negatively. This would encourage researchers to conducted studies attempting to better understand the effects and the impacts of the decision making process within the banking environment as identified in this study.

A qualitative approach could be diffused into each of these studies adding a different dimension towards the assistance of better understanding the phenomenon in question.

CHAPTER 7: CONCLUSION

7 CONCLUSION

7.1 INTRODUCTION

This chapter looks at concluding this investigation by revisiting the research questions set out at the start. By answering these questions it can be seen how the investigation responded with respect to the phenomenon.

7.2 REVISITING THE RESEARCH QUESTIONS

The research question are revisited and explained with the results provided by the investigation of multi-channel adoption. The primary objective of this study is to ***Investigate the adoption of multi-channel banking in South Africa and in the process develop a theory that explains this phenomenon.*** The resultant theory evolved through the lens of grounded theory techniques.

RQ - 1: Why do consumers use multiple banking channels?

The findings identify the main purpose of using more than one channel is to be able to conduct the necessary **banking needs** from the most suitable **location** at the required **time** with an **available** channel. This progression allows for the consumer to receive **experiences** which they can call upon the next time they are faced with a similar situation.

RQ - 2: How do consumers decide which channel to use for a particular service?

The consumers decision of which channel to use for a particular service is primarily moulded by the consumers actual need and their current environment. This environment is impacted by their evaluation of the **location, availability** and **accessibility** of the **channel** and **technology, security measures** in place and the **time** of day. Once these factors have been considered and the inefficient channels eliminated the consumer is left with only viable channels.

If there is only the one channel then their decision is simple. However, if they have more than one viable channel at their disposal then factors of **prior experience, channel preference, comparative ease of use, cost** and **security** issues of the respective channels is considered, leading towards their channel of choice. This does not mean to say that the channel they end up using is the consumer favourite, but it is the most appropriate for the given circumstance.

RQ - 3: What factors impact or influence the adoption of multi-channel banking by consumers?

All the factors identified through this study are tabulated in Appendix H. This table also shows the category and sub category these concepts belong to along with their respective nature of the concept or category (Causal, Contextual, Intervening, Action/Interaction and Consequence). The causal natured concepts/categories were identified as having a greater affinity of influencing a consumer's choice, while the remaining concepts play their respective roles in providing a more positive banking environment for the consumer.

At present, the concept of **channel convergence** is probably the only channel that does not impact on the consumer's choice as this concept is still only conceptual. Channel convergence is a perceived probable outcome of technologies merging into a single technological medium. However, this may influence adoption in the future.

RQ - 4: Why are these factors of concern to consumers in utilising more than one channel?

The concepts that evolved through this study highlight the consumers perceptions of the channels and the technologies required for these channels to operate in, first hand experiences and accounts of second hand experiences. All of these assist the consumer's decision making process of evaluating and choosing an appropriate channel for the given circumstance.

RQ - 5: When and where do consumers decide to use a specific channel for a specific service?

The decisions of the respondents were implicit and/or explicit in nature, so the *'when'* and *'where'* varies. An implicit choice is rather an unconscious one. The consumer has decided upon the most feasible channel to employ, having unconsciously considered factors like **convenience, location, availability** and **time** of day. This implicit choice is a sign that the banking need is unplanned and the consumer is short on time to deliberate another option of channel.

An explicit choice shows signs of a pre-planned approach. A consumer has planned to take some time out of their day to conduct their banking requirement for the day. This choice is primarily driven by the **banking need** rather than the factors that are primary drivers during an unplanned interaction with the banking environment.

RQ - 6: Who is affected by these factors and in what way does it impact on their choice?

The findings of this study demonstrate that the consumers are affected directly and/or indirectly by these factors. **Bad experiences** and *'horror stories'* of **security** problems paint a negative

picture making consumers and potential consumers **apprehensive**. However, **good experiences** and positive stories can encourage consumers to employ certain channels.

RQ - 7: What differences exist between consumers perceptions on multi-channel banking?

The differences identified through this study are primarily those of the consumer's experiences of the individual channels. Another difference is the consumer's view on the potential premier mode of banking in the near future. There is a split between i-banking and m-banking. This spilt arises because consumers who consider i-banking identify this channel as being the closest to providing them with all the services they require, while others consider m-banking because of its mobility of the device and the fact that it is always with the consumer. Also there are differing views on the security of channels. These differ due to the consumers differing experiences and accumulated knowledge of the respective channel.

7.3 CONCLUSIONS

This study identifies a pattern of significance in the adoption of banking channels. Literature has failed to show the existence of the phenomenon of multi-channel banking. Through extensive analysis of literature certain underpinning theories were drawn up. The subsequent theory that evolved from the analysis of this study shows the abstraction of different interactions the consumer may experience within the banking environment.

The consumer experiences a continual growth of knowledge the longer they remain within the banking environment. The knowledge gained in turn, is borne from the resulting experiences which can be classified as being good or bad. The multi-directional satisfaction loop indicates that the satisfaction of the channels being used may vary as a consequence of their choice. Furthermore the good and/or bad experiences of the channels determine the direction in which the consumer will persevere within this loop.

The decision making process is noted as being of paramount importance, with the consumers choices once again driven by the influences that impact the decision making process. Some factors encourage the use of one channel or the migration towards other channels, while some factors encourage the use of multiple channels. Inevitably, in this study, consumer's choices were constant. As their circumstances changed so too did their choice of channel, from the collection of available channels. Thus, the existence of the phenomenon of multi-channel banking is concluded.

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APPENDIX A

RANGES OF TRANSACTIONAL INTERNET SERVICES OFFERED BY BANKS

Type of Service		
Balance Enquiry	Brokerage	Privacy Statement
Funds Transfer	Investments	Net Worth Statement
Bills Payment	Account Statements	Third Party Transfer
Tax advisory service	One View Account	Opening accounts
Financial Planning	Foreign Exch. Trading	Receive Alerts
Linking A/c Online	Credit Card Payment	Requests& Intimations
Market News Online	Standing Instructions	Insurance
Trading Online	Loan Applications	E-Shopping
Customer Correspondence	Cash Management Online	Foreign exch. Rates update
Stop and Debit order payments	Demonstration of I-Banking	Short term recurring payments
Increase/Decrease overdraft	Online Remittance of Funds	

(Adapted from Sources: ABSA, 2006a; Buys & Brown, 2004; Singh & Malhotra, 2004; Binda, 2005)

RANGE OF MOBILE SERVICES OFFERED BY BANKS

Type of Service		
Prepaid airtime	Inter account transfers	Account payments
Account balances	Mini statements	Proof of payments
Once off payments	Statements via fax or email	Change PIN
Electricity payments	Third party payments	

(Adapted from Sources: ABSA, 2006b; Standard Bank, 2006; FNB, 2006)

APPENDIX B

THE SEVEN PRINCIPLES TO GUIDE INTERPRETIVE RESEARCH AS PROPOSED BY KLEIN AND MYERS

1	**The fundamental principle of the hermeneutic circle.** This principle suggests that all human understanding is achieved by iteration between the interdependent meaning of parts and the whole they form. This principle of human understanding is fundamental to all the other principles
2	**The principle of contextualisation.** Requires critical reflection on the social and historical background of the research setting, so that the indented audience can see how the current situation under investigation emerged.
3	**The principle of interaction between the researchers and the subjects.** Requires a critical reflection on how the research materials (or 'data') were socially constructed through the interaction between the researchers and the participants.
4	**The principle of abstraction and generalisation.** Requires relating the idiographic details revealed by the data interpretation through the application of principles one and two to the theoretical, general concepts that describe the nature of human understanding and social action.
5	**The principle of dialogical reasoning.** Requires sensitivity to possible contradictions between the theoretical preconceptions guiding the research design and actual findings (' the story which the data tell') with subsequent cycles of revision.
6	**The principle of multiple interpretations.** Requires sensitivity to possible differences in interpretations among the participants as are typically expressed in multiple narratives or stories of the sequence of events under study. Similar to multiple witness account even if all tell it as they saw it.
7	**The principle of suspicion.** Requires sensitivity to possible 'biases' and systematic 'distortions' in the narratives collected from the participants

(Source: Goede & de Villiers, 2003)

APPENDIX C

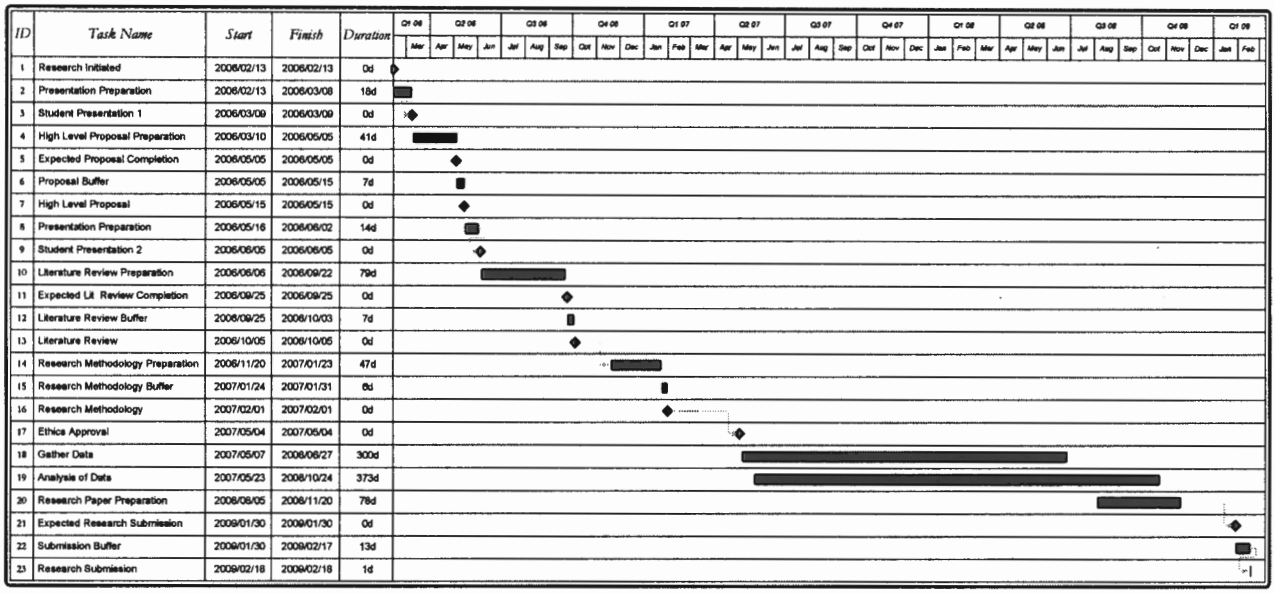
GREGOR'S CATEGORISATION OF THEORY

Theory Type	Nature	Description
Analysis	Says 'what is'	The theory does not extend beyond analysis and description. No causal relationships among phenomena are specified and no predictions are made.
Explanation	Says 'what is', 'how', 'why', 'when', 'where'.	The theory provides explanations but does not aim to predict with any precision. There are no testable propositions.
Prediction	Says 'what is' and 'what will be'.	The theory provides predictions and has testable propositions but does not have well-developed justificatory causal explanations.
Explanation & Prediction	Says 'what is', 'how', 'why', 'when', 'where' and 'what will be'.	Provides predictions and has both testable propositions and causal explanations.
Design & Action	Says 'how to do something'.	The theory gives explicit prescriptions (e.g., methods, techniques, principles of form and function) for constructing an artefact.

(Adapted from Gregor 2002; Gregor 2006)

APPENDIX D

THE EXPECTED RESEARCH PLAN



ID	Task Name	Start	Finish	Duration
1	Research Initiated	2006/02/13	2006/02/13	0d
2	Presentation Preparation	2006/02/13	2006/03/08	18d
3	Student Presentation 1	2006/03/09	2006/03/09	0d
4	High Level Proposal Preparation	2006/03/10	2006/05/05	41d
5	Expected Proposal Completion	2006/05/05	2006/05/05	0d
6	Proposal Buffer	2006/05/05	2006/05/15	7d
7	High Level Proposal	2006/05/15	2006/05/15	0d
8	Presentation Preparation	2006/05/16	2006/06/02	14d
9	Student Presentation 2	2006/06/05	2006/06/05	0d
10	Literature Review Preparation	2006/06/06	2006/09/22	79d
11	Expected Lit Review Completion	2006/09/25	2006/09/25	0d
12	Literature Review Buffer	2006/09/25	2006/10/03	7d
13	Literature Review	2006/10/05	2006/10/05	0d
14	Research Methodology Preparation	2006/11/20	2007/01/23	47d
15	Research Methodology Buffer	2007/01/24	2007/01/31	6d
16	Research Methodology	2007/02/01	2007/02/01	0d
17	Ethics Approval	2007/05/04	2007/05/04	0d
18	Gather Data	2007/05/07	2008/08/27	300d
19	Analysis of Data	2007/05/23	2008/10/24	373d
20	Research Paper Preparation	2008/08/05	2008/11/20	78d
21	Expected Research Submission	2009/01/30	2009/01/30	0d
22	Submission Buffer	2009/01/30	2009/02/17	13d
23	Research Submission	2009/02/18	2009/02/18	1d

APPENDIX E

UNIVERSITY OF CAPE TOWN
Department of Information Systems

Leslie Commerce Building
Engineering Mall. Upper Campus
Rondebosch 7700
Tel No: 021 650 2261
Fax No: 021 650 2280

To Whom It May Concern:

I am a fulltime Information Systems Masters student at the University of Cape Town **investigating the adoption of Multi-Channel Banking in South Africa,** with interest in three specific electronic based banking options, namely internet banking, mobile banking and television banking.

The data gathering will take place in one phase. Before commencing with the interviews a short questionnaire will be filled in. The semi-structured interviews will be conducted to obtain a richer understanding of the factors that have a bearing on multi-channel banking adoption.

We would greatly appreciate your time and effort in participating in an interview. Your participation is entirely voluntary. Anonymity and confidentiality will be assured, as no individual or company will be identified in the report. The study is conducted for academic purposes only, which includes publication in academic outlets. The questionnaire is estimated to take no more than 10 minutes to complete and consists of 3 pages. The interview is intended to take approximately 60 minutes.

This letter also serves as a consent form as we would like to record the interview to be transcribed later.

Yours sincerely,

Kunal Patel
patel.kunal.j@gmail..com/PTLKUN001@uct.ac.za

Supervisor: Prof. Irwin Brown

Pre-Interview Survey Questionnaire: Multi-Channel Banking

Please tick the appropriate option.

Section A: Demographics

Do not answer questions that you are unsure or uncomfortable about answering, instead leave them blank

1) What is your gender?

Female		Male	

2) What is your occupation?

_____

3) I live in:

Gauteng		Western Cape	

4) Which age category do you fall into?

18-24		25-30		31-36		37-42	
43-47		48-53		54 +			

5) What is your home language?

English		Xhosa		Sotho		Afrikaans	
Other							

If other, please specify _____

6) What is your average monthly income?

< R2000		R2001-R4000		R4001-R7000		R7001-R10000	
R10001-R15000		R15001-R20000		R20001-R30000		>R30000	

7) What is your level of education?

High School		Matric or A'levels		Diploma/Certificate		Degree/Honours	
Masters		Doctorate		Other			

If other, please specify _____

8) What is your race?

Asian		Black		Coloured		Indian	
White		Other					

If other, please specify _____

Section B: Banking Accessibility

Do not answer questions that you are unsure or uncomfortable about answering, instead leave them blank

9.a) Do you have access to the internet?

YES		NO	

9.b) If you answers YES to the above question, what type of internet access do you have?

Dial Up		Assymetric Secure Digital Line (ADSL)		Broadband		Wireless	
Other							

If other, please specify _____

10) Do you have access to: (Select all applicable options)

A home PC		Mobile Phone		Digital Television	

11.a) Do you have a bank account?

YES		NO	

11.b) If YES to the above question, where do you bank?

ABSA		FNB		NedBank		Standard Bank	
Other							

If other, please specify _____

12.a) Please tick the banking channel(s) you have heard of?

Banking Hall		ATM		Telephone Banking		Internet Banking	
Mobile Banking		Television Banking		Other			

If other, please specify _____

12.b) Please tick the banking channel(s) you have used?

Banking Hall		ATM		Telephone Banking		Internet Banking	
Mobile Banking		Television Banking		Other			

If other, please specify _____

If you are unfamiliar with any of these terms please consult the next page

Section C: Banking Terms

Banking Hall is the actual walk in bank outlet.

ATM machine that allows the consumer to conduct certain banking services with the use of an ATM card.

Telephone Banking enables the consumer to interact with a machine to conduct certain banking services over the telephone.

Internet Banking has been classified as the provision of information services offered to consumers by a bank, over the internet using a personal computer.

Mobile banking is similar to internet banking, except for the fact that the services are conducted over a mobile device, such as a cellphone.

Television banking is the provision of information services offered to consumers by banks using interactive TV.

APPENDIX F

INTERVIEW SCHEDULE – INDIVIDUAL UNITS

#	Interview Schedule	Sub-Objective	Research Question
1	Is there anything you would like to ask me?	-	-
2	[From questionnaire Q12.d] When did you first experience using this(these) channel(s)? At the time were you apprehensive of the technology or did you welcome the technology and find out more about it? Why was this the case?	1,3,4,6	5,7
3	What leads you to using this(these) channel(s)? How many of these channels are you happy using?	1,2,3,4,5	2,5
4	What was that experience like? Has it changed much since you began using it?	1,2,3,4,5	1,4,3
5	How do you decide on which channel to utilise?	1,2,3,4,5	1,2,3,6
6	[If used/using more than one of these channels] Which channel did you begin using first? What lead you to use/change to another channel?	1,2,3	2,4,6
7	What, if anything, do you know about these different banking channels?	1,2,4	1,2
8	Are you aware of all the banking services available for the channel(s) you use? If yes, do you use them all? If not, which services do you not use and why? If no, would you use these services if you were made more aware of them?	1,2,4,5	1,4,6
9	To your knowledge what services are made available for i-banking, m-banking & t-banking? What services do you think should be made available for these channels?	1,2,3,5,6	4,3,7
10	If these services were available would it encourage your usage of these channels? If not, why not?	1,2,3	1,4,6
11	What changes have occurred in your life since you began using this(these) channel(s)?	1,4,5	2,6
12	Do other people's opinions affect your decision to utilise certain channels. If so, what may these opinions be?	1,2,3,4,5	1,4,6
13	Which of the channels would you find most convenient, and why? [if the consumer does not use this channel] – what, if anything, prevents you from using this channel? What are your perceptions about these issues?	1,2,3,4,6	3,4,7
14	If you had access, would you use any of these channels? If yes, which channel(s) and why? If no, which channel(s) and why?	1,2,3,5	2,3,5
15	Do you see any of these channels becoming the premier mode of banking in the near future? If yes, why? If no, what do you think these channels still lack?	1,3,6	3,7
16	What benefits do you experience when using multiple channels?	1,2,3	1,3
17	Tell me how your views may have changed since you began using this(these) channel(s)?	1,2,3	1,2,3,4,5,6
18	From your experiences of this(these) channel(s) is there anything you would caution people about? If so, what would it be and why?	1,2,3,6	3,4,6,7
19	Is there anything you would promote about any channel(s)? What would it be and why?	1,2,3,6	3,4,6,7
20	Is there anything that you might not have thought about before that occurred to you during this interview?	All	All
21	Is there anything you would like to ask me?	-	-

APPENDIX G

UNIVERSITY OF CAPE TOWN
Commerce Faculty Ethics in Research Committee

Any individual in the Faculty of Commerce at the University of Cape Town undertaking any research that involves the use of human subjects, or research that may hold ethical consequences for the University of Cape Town, is required to complete this form. The completed form should be submitted to departmental Ethics Committee representatives for submission to the Commerce Faculty Ethics in Research Committee

1. PROJECT DETAILS		
Project title:	Investigating Multi-Channel Banking Adoption in South Africa: Consumers vs. Retail Banks	
Principal Researcher/s:	Kunal Patel	**Research Supervisor / Co-researchers:** Irwin Brown
E-Mail Address:	PTLKUN001@UCT.AC.ZA	
Brief description of the project: This paper intends to look at the adoption of multi-channel banking from two perspectives; consumer and bank. This will help to better understand banking behavior for both perspectives		
Research methods and procedure: (please tick and explain procedure) ☑ Interviews ☐ Survey questionnaire ☐ Experiment ☐ Secondary data ☐ Observation ☐ Other (please specify): Research will be conducted through the use of semi-structured interviews, broken into two distinct groups. A clearer question base will be drawn from the semi-structured pilot interviews.		

2. PARTICIPANTS

Characteristics of participants:

Gender:	50/50 gender split – to determine if males or females are more likely to utilise multi-channel banki
Race / Ethnicity:	N/A
Age range:	ABOVE 18
Location:	Cape Town and Johannesburg
Other:	Occupation – to determine if occupation influences individuals' to utilise multi-channel banking. Home language – to determine if there is a language gap in the banking sector. Income bracket – to determine if income influences an individual to utilise multi-channel banking

Affiliations of participants: (please tick)

□ Company employees □ Hospital employees ☑ General public □ Military staff □ Farm workers ☑ Students ☑ Other (specify)

Service Providers – Big Four Banks (ABSA, Nedbank, Standard Bank & FNB); Cellular phone Service Providers (MTN, Vodacom, CellC & Virgin Mobile); and Broadcasting Providers (Multichoice, SABC).
Pundits, Commentators and Consultants.

If your sample includes children (aged 15 and below), mentally incompetent persons, or legally restricted groups please explain on a separate page why it is necessary to use these particular groups

3. ORGANISATIONAL PERMISSION

If your research is being conducted within a specific organisation, please state how organisational permission will be obtained:

N/A

4. INFORMED CONSENT

What type of consent will be obtained from study participants?

- o (Oral consent)
- o Written consent
- o Anonymous survey questionnaire (covering letter required, no consent form needed)
- o Other (specify): _____

How and where will consent/permission be recorded?

Consent will be recorded on audio material at location of interview

If subjects are minors or mentally incompetent, describe on a separate page how and by whom permission will be granted?

5. CONFIDENTIALITY OF DATA

What precautions will be taken to safeguard identifiable records of individuals? Please describe specific procedures to be used to provide confidentiality of data by you and others, in both the short and long run. This question also applies if you are using secondary sources of data.

All Recorded material will be kept with the researcher(s). No other persons will have access to this material.

6. RISK TO PARTICIPANTS

Does the proposed research pose any physical, psychological, social, legal, economic, or other risks to study participants you can foresee, both immediate and long range? (tick one)

□ Yes ☑ No

If yes, answer the following questions on a separate page:

1. **Describe in detail the nature and extent of the risk and provide the rationale for the necessity of such risks**
2. **Outline any alternative approaches that were or will be considered and why alternatives may not be feasible in the study**
3. **Outline whether and why you feel that the value of information to be gained outweighs the risks**

7. INTENDED DISSEMINATION OF RESEARCH FINDINGS

Have you discussed authorship issues with your co-researchers or supervisor? (tick one)

☑ Yes □ No

If yes, what did you agree?

At least two journal publications. Researcher to be principal author.

PLEASE ATTACH THE FOLLOWING DOCUMENTS TO YOUR APPLICATION
1. A full copy of the research proposal 2. Any consent form that will be signed by the participants or read to them (if any) 3. Any interview schedules, cover letters, forms, instruction sheets, survey questionnaires or other material that will be used in the study.

I certify that that the material contained herein is truthful and that all co-researchers and supervisors are aware of the contents thereof:

Applicant's signature: _____ Date: _____

For Ethics committee representative only
Recommendation:
Signature:
Date:

For Ethics committee CHAIRPERSON only
Recommendation:
Signature:
Date:

APPENDIX H

LIST OF FINALISED CONCEPTS AND THEIR RESPECTIVE CATEGORIES

Category [# of concepts]	Sub-Category	Concept	Nature
Channel Evaluation [1]	Evaluation	Weighing up of Options	Action/Interaction
Channel Choice [5]	Fixed Channel	Cash Based	Action/Interaction
	Fixed/Mobile Channel	Internet Based	
	Mobile Channel	Mobile Based	
	Migration	Channel Migration	
	Multi-Channel	Multi-Channel	
Channel Use [2]	Channel Usage	Extent of Use	Action/Interaction
		Frequency of Use	
Consumer Satisfaction [1]	Satisfaction	Satisfied with Channel(s)	Consequence
Usage Continuance [2]	Continued Usage	Intensity of Usage	Consequence
		Years of Usage	
Comparative Advantages [11]	Convenience	Convenient	Causal
	Costs	Bank Charges	
		Internet Charges	
		Travel Cost	
	Ease of Use	Comparative Ease of Use	
	Limitations	Technology Limitations	
	Location	Distance to Channel	
		Location of Channel	
	Safety	Channel Safety	
	Time	All Hours	
		Saves Time	
Compatibility [9]	Channel Apprehension	Apprehensiveness	Causal
	Channel Specific Experience	Internet Banking Experience	
	Compatibility	Comfortable	
	Consumer Needs	Need for Cash	
		Need for other Service	
		Need for Payment Method	
		Need for Real-Time Information	
	General Experience	Channel Experience	
	Preference	Channel Preferred	
Exposure [3]	Availability	Channel Availability	Causal/Contextual/Intervening
		Technology Availability	
	General Exposure	Channel Exposure	
Consumer Knowledge [6]	Awareness	Awareness of Site Tampering	Causal/Contextual/Intervening
		Channel Awareness	
		Technology Awareness	
	Channel Knowledge	Channel Convergence	
		Knowledge of Services	
		Knowledge of Technology	
Security [6]	Perceived Security	Perceived Lack of Security	Causal/Contextual/Intervening
	Physical Threat	Card Theft	
		Physical Theft	
	Security Measures	Security Measures	
	Security Threats	Electronic Threat	
		Information Threat	
Connectivity Quality [2]	Access	Internet Access	Contextual/Intervening
		Type of Access	
Social Influence [2]	Social Norms	Family Sources	Contextual/Intervening
		Secondary Sources	
Demographic Characteristics [2]	Age	Age	Contextual/Intervening
	Occupation	Occupation	

(Extracted from the TDB – Concept Classification, pp. 72-73)