Towards a Theory of Multi-Channel Banking Adoption amongst Consumers

Kunal Patel and Irwin Brown
Department of Information Systems
University of Cape Town
South Africa
Irwin.brown@uct.ac.za

Abstract: Multi-channel retail banking is a novel banking approach, one which encompasses traditional banking approaches as well as modern Internet-based banking innovations. The main objective of the study is to investigate the factors that influence the choice and adoption of a particular banking channel, from amongst available options. This study is conducted within an interpretivist paradigm under the guidance of an inductive grounded theory 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 individuals who have bank accounts. The gathered data was analysed employing the techniques available through grounded theory methodology. The theory reveals that prior to using a particular banking channel for a specific transaction, consumers sub-consciously or consciously perform an evaluation of available and known channels, and then make a choice. Various factors influence this choice, such as comparative advantages of one channel over another, compatibility with personal preferences and the transaction being performed, and the time and place. After usage, consumers assess the satisfaction of the banking experience before deciding whether to continue using a certain channel for a specific transaction, or choosing an alternative.

Keywords: Multi-channel; Electronic banking, Internet banking, Mobile banking, Technology Adoption; Grounded Theory

1. Introduction

Banks have evolved from the traditional walk-in facility towards multimedia, privatised institutes (Aladwani, 2001). Being early adopters of technology, banks are continually searching for new and innovative electronic banking products and services (Calisir & Gumussoy, 2008). The recent growth in Internet and cell phone diffusion has transformed the landscape of the financial services industry, allowing for banking to be conducted with an anytime, anywhere philosophy (Dandapani, 2004; Lichtenstein & Williamson, 2006).
Banks offer many different channels to access their banking and other services. These '*channels*' refer to the medium employed by the consumer to interact with the bank (Laukkanen, 2007). These include banking halls, banking from point of sales (POS) terminals in retail stores, ATM banking, telephone banking (e.g., via Interactive Voice Response [IVR] technology), PC-based Banking, and the newer electronic channels of Internet banking, Mobile banking or cell phone banking and even Television banking (Binda, 2005). The latter three are applications of their respective commerce groupings, Electronic Commerce, Mobile Commerce and Television Commerce respectively.

Much of the research into the diffusion and adoption of electronic banking has focused on a single channel per study (e.g., Internet banking or cell phone banking, etc.) (Baptista & Oliveira, 2016, Hanafizadeh et al., 2014, Shaikh & Karjaluoto, 2015). Some studies have attempted to compare channels and their usage (Laukkanen, 2007). Consumers, however, interact with banks through a single or combination of channels of their choice depending on technology availability, consumer access, needs, preferences etc. (Black et al., 2002; Simons & Bouwman, 2005; Sousa et al., 2015). This phenomenon is referred to in this study as multichannel banking. Not much is known about the concept of multichannel banking, and factors influencing multichannel banking usage behaviour. Without a clear understanding of this behavior, banks are less able to determine an appropriate strategy for multichannel banking, leading to lost opportunities to optimize service offerings, and inappropriate allocation of scarce resources. This study will use a theory-building approach to develop an understanding of multichannel banking from the perspective of consumers. The main objective is to investigate the factors that influence the choice and adoption of a particular banking channel, from amongst available options. More specifically, the study aims to address the following research questions:

- How do consumers decide which channel to use for a particular banking service?
- What factors influence the adoption of multi-channel banking by consumers?

Reference this paper: Brown I and Patel K "Towards a Theory of Multi-Channel Banking Adoption amongst Consumers" *The Electronic Journal Information Systems Evaluation Volume 19 Issue 3 2016, (pp137-157)* available online at www.ejise.com

The review of relevant literature is addressed in the next section. Following on from that, the research design is explained. The section after that presents the results and their analysis followed by a discussion of the results and their implications. Limitations of the research and recommendations for future research are also discussed before the paper is concluded.

2. Conceptual Background

In the early 2000s, several pundits predicted the demise of brick-and-mortar branch banking and the rise of virtual banking using the Internet as the medium (Scott, 2002). The predictions have not been realised. Banking halls continue to be used, especially by those who prefer the personal relationships forged with the bank personnel (Mols et al., 1999). In addition, the need for customers to withdraw cash obviates the need for channels such as banking halls, ATMs, and banking services available through POS terminals in retail stores. Channels such as telephone banking, Internet banking, mobile banking and television banking are used over and above these channels.

Whilst Internet banking is fairly well-established across the globe given widespread Internet diffusion (Hanafizadeh et al., 2014), the popularity of mobile banking is a more recent phenomenon, especially in developing countries (Shaikh & Karjaluoto, 2015). With mobile phones increasingly being used for data services and not only voice services, a market for mobile banking was born. This form of banking allows consumers to access most traditional Internet banking services, such as bill payments and viewing accounts, through their mobile phones. In its simplest form mobile banking allows consumers to receive information, via SMS, about their account balances (Mallat et al., 2004). Shaikh & Karjaluoto (2015) highlight three typical channels for access to mobile phone banking, namely through short message service (SMS), mobile browsers (making use of the wireless application protocol – WAP) and mobile software applications (Apps) on smartphones. Cavus & Chingoka (2015) in addition note the use of unstructured supplementary service data (USSD), a SMS-based service that uses menus to deliver banking functionality. The continued expansion of mobile networks, penetration rate of mobile phones and use of banking services over the Internet has allowed mobile banking to maintain its strong growth (Rusu & Dospinescu, 2005, Shaikh & Karjaluoto, 2015).

2.1 Multichannel banking

In its simplest form the multichannel concept represents the use of two or more approaches (channels) to complete some known task (Sousa et al., 2015; Zaharia & vom Strombeck, 2003). 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 (Fernández-Sabiote & Román, 2015; Pinches et al., 2004). Since approximately 75% of consumers utilise more than one channel, the multi-channel approach is assumed to be beneficial (Riggins, 2004; Zaharia & von Strombeck, 2003).

In terms of banking, multi-channel refers in this study to the usage of more than one of the available banking channels (Laukkanen & Lauronen, 2005; Laukkanen, 2007; Liao et al., 1999). 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. Usage would depend on which channel the consumer opts to utilise at a given point in time (Carroll et al., 2003; Scarborough & Grieser, 2006). The usage of multiple channels enable banks to extend their reach, increasing their capacity to communicate with more consumers (Laukkanen, 2006; Laukkanen, 2007). To maintain consumer trust it is imperative to provide a familiar environment and consistent service across these channels (Scarborough & Grieser, 2006).

The introduction of more channels may yield differing consumer attitudes and intentions toward a banking channel, as they decide which channel(s) to use (Shaikh & Karjaluoto, 2015). 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) (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) to satisfied and innovative consumers (Fernández-Sabiote & Román, 2015; Lichtenstein & Williamson, 2006).

2.2 Electronic banking adoption research

A large amount of research has been conducted on consumer electronic banking adoption (Montazemi & Qahri-Saremi, 2015). Most of these studies research one specific channel, most often Internet banking or

mobile banking (Baptista & Oliveira, 2016). Base adoption models employed are many and varied, e.g. Technology Acceptance Model (TAM); Theory of Planned Behaviour (TPB); Innovation Diffusion Theory (IDT) and so on (Hanafizadeh et al., 2014; Martins et al., 2015). Rather than using existing theories as a basis, some studies have inductively developed theories (e.g., Brown et al., 2005). Some of these theories, and studies employing them, are shown in Table 1 below.

Table 1: Base Theories in Electronic Banking Adoption Research

Base Theory	Exemplar Studies
Technology Acceptance Model (TAM) (Davis, 1989)	Eriksson, Kerem & Nilsson (2005)
Theory of Planned Behaviour (TPB)	Hernandez & Mazzon (2007)
Innovation Diffusion Theory (IDT) (Rogers, 2005)	Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé & Sanz-Blas (2009) Bradley & Stewart (2002)
Combined TAM and TPB (C-TAM-TPB)	Lee (2008) Luarn & Lin (2005)
Decomposed TPB	Shih & Fang (2004) Hernandez & Mazzon (2007) Jaruwachirathanakul & Fink (2005)
TAM-TPB-IDT	Tan & Teo (2000)
Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)	Martins et al. (2015) Cheng, Liu, Qian & Song (2008) Abu-Shanab (2005)
Inductive	Brown et al. (2005)

Factors identified as influences on electronic banking adoption are numerous as can be seen from base theory diversity in Table 1. Most of these can be captured through the use of the TAM-TPB-IDT theory (Venkatesh et al., 2003), or some variant, as was done by Tan & Teo (2000). Tan & Teo (2000) categorised factors as either attitudinal, social influence or perceived behavioural control. Attitudinal factors include the relative advantage of using a banking channel, its compatibility with consumer values, needs and experiences, its perceived complexity, and the perceived risk of use. Subjective norm and trust in the electronic banking channel are typical social factors, whilst self-efficacy and facilitating conditions are typical behavioural control factors. In the context of mobile banking, mobility has been identified as an additional factor of influence, and several other studies have highlighted cost as an issue too (Luarn & Lin, 2005).

A few studies have attempted to compare channel adoption and usage. Primarily the comparison has been between Internet banking and mobile banking (Laukkanen, 2007), while others have compared Internet banking with other banking channels (Calisir & Gumussoy, 2008) like telephone banking (Sundarraj & Wu, 2005). Some studies have looked at electronic banking holistically as a single phenomenon, and not by channel (Liao & Cheung, 2003; Laukkanen, 2007). No studies were found that examined multichannel banking adoption specifically as defined in this paper (Sousa et al., 2015). The overall aim of this research is to fill this gap by conducting an inductive study to investigate the phenomenon of multichannel banking adoption. An inductive approach is justified since no prior theory had been found that could explain multichannel banking adoption.

3. Research Methodology – Grounded Theory Methodology

In order to inductively develop a theory of multichannel banking adoption, a grounded theory approach was followed (Urquhart, et al. 2010). Strauss & Corbin (1990, p. 240) state that '…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….'. Research using grounded theory methodology (GTM) has been conducted using both positivist and interpretivist investigative stances. In this study the aim was to generate a better understanding of multichannel banking adoption through the exploring the perspectives of banking customers. Hence an interpretive stance was adopted. Strauss & Corbin (1998) acknowledge the subjectivity inherent in analysing data through GTM, hence their approach to GTM was employed (Hughes & Jones, 2003). Three key principles often adhered to in GTM studies are (1) the principle of emergence; (2) theoretical sampling and (3) constant comparative analysis. These will be discussed in turn.

3.1 Principle of Emergence

The principle of emergence aims to ensure that both the theory and research design emerge and are not pre-determined. This principle can be adhered to by researchers being constantly aware of the need to allow concepts and theory to emerge from data (Urquhart et al., 2010). There is a danger of GTM research being reduced to deductive confirmation of existing theory, especially where researchers have conducted exhaustive literature reviews in the domain of interest (Suddaby, 2006). In this study, the researchers had conducted extensive prior studies on technology adoption, but had not been immersed in any literature concerning the multi-channel concept. This prior knowledge may be perceived as limiting the emergence principle by some GTM proponents. However, those that employ the Strauss and Corbin (1990) approach to GTM see no problem with this. For example, Boudreau & Robey (2005) state that "*this [Strauss and Corbin] version allows for the potential of prior theory, literature, and personal and professional experiences to guide researchers' data analysis (Strauss and Corbin 1994)*".

3.2 Theoretical Sampling and Data Collection

In GTM, sampling is driven by the need to build theory (Glaser, 1992). Unlike with other sampling approaches where a pre-defined number of research subjects are often targeted, with GTM where and when to sample is driven by theory-building. Sampling continues until a state of saturation is researched with the theory, i.e. no new major categories emerge from further data gathering. In this study, in keeping with GTM tenets, sampling, data collection and data analysis proceeded together. Data was collected through semi-structured interviews with electronic banking customers. Basic questions were asked concerning customer perspectives on the "what", "how", "why", "who", "where" and "when" of multi channel banking. Asking these questions enabled all aspects of theory to be addressed (Whetten, 1989).

A state of saturation was achieved after eight interviews had been conducted. This was evident as no new major categories emerged in the last few interviews, and all confirmed the major set of categories identified though earlier interviews. This number may seem small when viewed from a positivist perspective, as it may be perceived as insufficient for generalisation purposes. In interpretive research, however, and indeed in GTM, the form of generalisation employed is not statistical generalisation, but generalisation from empirical data to concepts and theory (Lee & Baskerville, 2003). Data from these participants was sufficient for this purpose. The only criteria for selecting respondents were that they be electronic banking users. The first respondent was selected purposively as a known electronic banking user. Thereafter respondents were selected based on the concepts that evolved through the previous interviews so as to allow for the representativeness of these concepts. The interviewees were asked if they knew of any others that had similar or different experiences that would be willing to be 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 not. The majority of the respondents were under 40 years of age. All the respondents interviewed were currently holding an active bank account, whether they were personal accounts or joint accounts. All respondents made use of banking halls or POS terminals in retail stores, ATMs and Internet banking, with two also making use of telephone banking (the interactive voice response [IVR] variety), and two others also making use mobile phone banking. Before any coding could take place the interview data was transcribed.

3.3 Constant Comparative Analysis and Coding Procedures

Constant comparative analysis is the major strategy used in discovering grounded theory. In this process, data is broken down into incidents, and these compared for similarities and differences. While doing so the question of what concept or property of category the data represents is asked (Glaser, 1992). The aim is to assign a common meaning to multiple data incidents, which become a concept (Locke, 2001). For example, a respondent mentioned concerning mobile banking: "Cellphones get stolen a lot…", and another with respect to ATMs stated: "you always have to look over your shoulder...". Both data incidents were deemed to reflect the Security concern with electronic banking. As concepts emerge and are named these are compared to other incidents in data, leading to the definition of properties (characteristics) of the concept, and their dimensionality (Glaser, 1992). As such, there is a constant iteration between naming and comparing data incident to data incident, and data incident to concept, and concept to concept (Locke, 2001). Once a concept has emerged from data, the process is extended to comparing the concept with existing known concepts from literature. So, in the case of the Security concern concept, a comparison with literature reveals similarity with Perceived Risk, identified as a deterrent to electronic banking (Tan & Teo, 2000). Strauss & Corbin (1998)

defined three major coding procedures for carrying out this principle. Firstly, *open coding* is the process by which concepts are identified and labeled, and properties and their dimensionality are established. Where there are many related concepts, these may be grouped into higher order categories. This is exemplified in this study by Table 7, which shows a range of concepts grouped under the Comparative Advantage category. *Axial coding* aims at identifying relationships between the core category and those around its axis. These relationships are captured in the theoretical story line in Section 4.2 below. A paradigm model can be employed to further abstract concepts and relationships (Strauss & Corbin, 1998). It indicates 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. Contextual conditions reflect the environment the phenomenon is within. This arrangement of concepts is evident in the developed theory in Figure 1 below. *Selective coding* is the process of refining the grounded theory, trimming away excess categories that may not relate sufficiently to the core category.

4. Data Analysis and Results

Through application of GTM principles and coding procedures, the theory depicted in Figure 1 below emerged. The stages leading to the establishment of the theory can be broadly defined as (1) concept identification (outcomes of open coding); (2) relationship identification and story line (outcomes of axial/selective coding). These two steps were not necessarily sequential as in the process of identifying a concept, its relationship to other core variables was also identified. Literature related to the emergent concepts will be weaved in to the discussion of the concepts, as is a common practice in GTM studies (Strong & Volkoff, 2010).

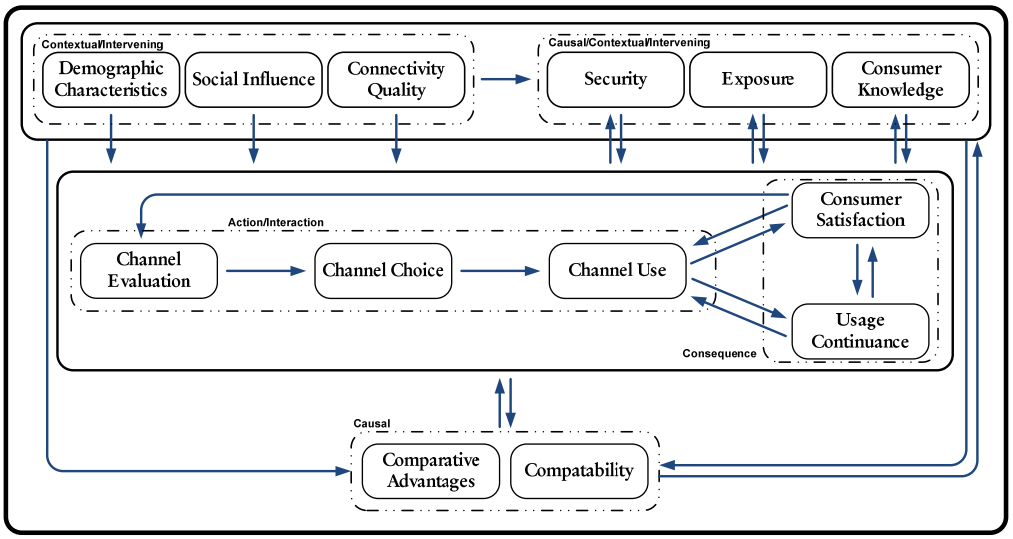

Figure 1: Theory of Multi-Channel Banking Adoption

4.1 Concept Identification

Figure 1 shows that 13 major concepts emerged from the data. After each interview data was transcribed and analysed. Data incidents were identified, and in subsequent interviews compared against other data incidents and against literature concepts. Properties of these concepts were then elucidated together with any associated dimensionality. Each concept in Figure 1 will be briefly discussed in turn, starting with the core action/interaction sequence of Channel Evaluation, Channel Choice, and Channel Use, which gives rise to the consequences of Consumer Satisfaction and Usage Continuance/Discontinuance. The various causal and contextual conditions which affect this process are then discussed.

4.1.1 Channel Evaluation

Consumers are faced with a variety of channels to perform a specific banking task. The data shows that either consciously or sub-consciously, consumers carry out an evaluation of channels as a first step in deciding which channel to use.

Table 2 shows details of how the channel evaluation category emerged. It is apparent that users employ various heuristics and decision criteria using a very natural decision-making process. This initial evaluation step was apparent too in a study by Weimann et al. (2013), who showed that virtual teams in software

development projects firstly engage in a selection process prior to using a specific technology for a task. Mwangi & Brown (2015) illustrate how such natural decision-making processes can be investigated using a technique called ethnographic decision tree modelling. Using this modelling technique they evaluate how SME owners in Kenya make decisions concerning registration for a mobile payment service. This approach could be used to further explore the issue of individual technology evaluation decisions prior to adoption.

Table 2: Supporting Evidence for Concepts of Channel Evaluation

Concept	Supporting Evidence
Evaluation	*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.*
	Well ***if I didn't have good internet access I would be more inclined to go for [SMS-based] 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*
	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.***

4.1.2 Channel Choice

The choice of channel is influenced by the consumer evaluation of the available channels and their respective requirements at a specific point in time. The Channel Choice concept was made up of 4 major properties as shown in Table3, and discussed next.

Cash Based: 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 comes from the bank employees of the banking hall, or point of sale cashier in a retail store. The electronic interaction occurs at an ATM.

Web Based: A web based choice allows the consumer to choose a fixed or mobile web medium with which to interact with the bank, such as a laptop or desktop PC. There are different types of web access available for consumers to aid their banking experience. The technological medium at the consumer's disposable will influence the access type available.

Mobile Based: A mobile based choice allows the consumer to select from a range of mobile media, such as smart phones, PDAs, cell phones, and i-phones. Like the web-based options the technological medium influences the access type available. For smart phone users there is even further choice between accessing a bank account through SMS-based banking, the mobile Internet, or via a smart phone app.

Multi-Channel: The consumers opt for multiple channels to obtain the best possible relationship with their bank, dependent on their current banking need. They are able to conduct the same services with different channels even if their preferred channel is unavailable at any time. *Channel migration* was a key property of multi-channel choice, and reflected 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 at a specific point in time. The migration from channel to channel is influenced by the consumer's needs, and preference for certain channels.
There has been little research on multi-channel banking (Laukkanen, 2007), although the concept of multi-channel retailing is well-established in marketing literature (Riggins, 2004; Zaharia & von Strombeck, 2003).

Table 3: Supporting Evidence for Concept of Channel Choice

Property *[Dimension]*	Supporting Evidence (sample)
Cash Based *[Human - Electronic]*	*Well Ok,* ***I kind of shy away now from ATM's*** *and I was vehemently against internet banking kind of 180°.*
Web Based *[All Internet Types]*	***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*
	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…***
Mobile Based *[All Mobile Types]*	***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.***
Multi-Channel *[Multi - Single]*	*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.***
	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.*
	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***

4.1.3 Channel Use

Channel use occurs after the consumer's experiences and choices have been taken into consideration. The channel(s) used is dependent on the consumer's current requirements. 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 less pre-determinable as there are multiple options available to achieve the same outcome. Two properties of Channel Use were evident in the data - Extent of Use, and Frequency of Use, as shown in Table 4.

Table 4: Supporting Evidence for Concept of Channel Use

Property *[Dimension]*	Supporting Evidence (sample)
Extent of Use *[Extensive – Restrictive]*	***Well mostly internet banking****, going to* ***lean towards that the most now*** *because it's the easiest*
	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*
Frequency of Use *[Frequent – None]*	*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*
	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.*

Extent of Use: The dimensionality of extent of use ranges from *extensive* to a *restrictive*. An extensive use of a 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: A greater frequency of usage would indicate the consumer's satisfaction of the channel(s). A lesser frequency of use could indicate that a channel is used in only a limited way due to issues such as availability of the channel or customer location. For example, if away from a PC/laptop, then a mobile-based option may be more frequently used.

The technology adoption literature has established use as the dependent variable, with attributes such as extent of use, frequency of use, intensity of use, and length of use (Tan & Teo, 2000; Venkatesh et al, 2003). The emergence of the Use concept is hence as expected.

4.1.4 Consumer Satisfaction

Consumer satisfaction emerged as a key concept. Allowing the consumer to have real-time access to their banking details through multiple channels enhances the chance 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 5
User satisfaction is well-researched in IS literature, even in the context of electronic banking (Liao & Cheung, 2008; Lee & Chung, 2009). Its importance in this study therefore corroborates with previous research on electronic banking.

Table 5: Supporting Evidence for Concepts of Consumer Satisfaction

Concept *[Dimension]*	Supporting Evidence
Satisfied with Channel *[Satisfied - Dissatisfied]*	***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.*
	***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**.*

4.1.5 Usage Continuance

Usage 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, or find more convenient they may replace one that they are currently using with the newer channel. Evidence supporting the conceptual properties of Usage Intensity and Years of Usage is displayed in Table 6 below.

Table 6: Supporting Evidence for Concept of Usage Continuance

Property *[Dimension]*	Supporting Evidence
Intensity of Use *[Intense - Moderate]*	*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...*
Years of Usage *[Many – Few]*	*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.
	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.*

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.

Rogers (2005) in the innovation diffusion theory highlights the decision to either continue or discontinue use of an innovation as a key consequence, which provides backing for the finding in this study. Bhattacherjee (2001) makes the case for assessing user intentions to continue using a system (continuance intention), especially in the context of post-adoption studies, where an innovations is fairly well-diffused already. Consumer satisfaction is shown to be a key determinant of continuance intention by Bhattacherjee (2001). The findings here are then in line with those of Bhattacherjee (2001), whose focus was e-commerce services in general and not specifically electronic banking.

4.1.6 Comparative Advantage

The category of Comparative Advantage was the most conceptually dense category, consisting of five concepts as in Table 7 below. This category is defined similar to the Relative Advantage concept of Innovation Diffusion Theory, i.e. it is the belief that advantage is gained by using a channel(s) over other means of performing the same tasks (i.e. other channels) (Rogers, 2005). Based on the results, this category has high explanatory power in the context of the overall grounded theory. This is due to the concepts having a significant impact on all other concepts, ultimately resulting in influencing the consumer's choice.

Table 7: Supporting Evidence for Category of Comparative Advantages

Concept	Property *[Dimension]*	Supporting Evidence
Cost	**Bank Charges** ***[High - Low]***	*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*
		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*
	Internet Charges ***[High - Low]***	*Well, I [wouldn't] like to say anything bad about [Telco XXX], but we need to put a bomb under [Telco XXX], because* ***the extortion that is going on and the unfair business practices*** *that [Telco XXX] are subjecting us to.* ***Internet access is extremely expensive****, compare relatively to other countries. There is a whole bunch of reasons why [Telco XXX] should be wiped from the planet.*
	Travel Cost	*Banking hall is* ***inconvenience looking for parking standing in***

Concept	Property *[Dimension]*	Supporting Evidence
	[High - Low]	***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*
Ease of Use	**Ease of Use** *[Easy - Hard]*	*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.*
		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*
	Technology Limitations *[Many - Few]*	*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***
Location	**Location of Channel** *[Safe – Unsafe]*	*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*
		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.*
	Distance to Channel *[Near - Far]*	*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*
Safety	**Channel Safety** *[Safe - Unsafe]*	***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…***
		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.***
Convenience	**All Hours** *[All Hours of the Day]*	***… access to things 24 hours a day …***
		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*
		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*
	Saves Time *[Quick - Slow]*	*The bank offered it to us; I thought it would be* ***quicker than writing out a cheque****.*
		… ***from standing in queues to all of a sudden instant, you can do it at your own pace,***
	Convenient *[Convenient - Inconvenient]*	*Banking hall is inconvenience looking for parking standing in queues, ...*
		I found it fine, ***Convenient [short laugh]. Didn't have to go to the bank or wait in the queues***
		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.***

Customers compare channels with regards to a number of issues that include what is convenient at a specific point in time, what is most cost effective, and easy to use; their location relative to the channel (e.g. ATM location); the perceived safety of channel use at a point in time; and the actual time. Not all considerations

come into play every time a channel choice is made, but these concepts represent some of the key factors considered. Many of these concepts have been defined as influences on electronic banking adoption, e.g. Cost is demonstrated as an influence by Luarn & Lin (2005); as is Location by Sousa et al. (2015), Ease of Use by Gu et al. (2009) and Perceived Risk (akin to Channel Safety and location Safety) by Martins et al. (2015). In this study, consumers are shown to carry out a comparative analysis across these factors before selecting which channel to use for a particular banking channel.

4.1.7 Compatibility

This category refers to the compatibility between channel and the accumulated banking experiences of the consumer and the respective channel(s). Its key role as an influence on consumer decisions is supported by innovation diffusion theory (Rogers, 2005), as well as studies in IS (Karahanna et al. ,2006) and electronic banking specifically (Tan & Teo, 2000). 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. Table8 shows the evidence that supports the significance of compatibility as a key category.

Table 8: Supporting Evidence for Concepts of Compatibility

Concept	Property *[Dimension]*	Supporting Evidence
Channel Apprehension	**Apprehensiveness** *[High - Low]*	***Apprehensive about internet banking, not comfortable with security and computer viruses an all sorts of things like that.***
		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...*
Comfortable	**Comfortable** *[Comfortable – Uncomfortable]*	*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*
		It would be internet banking … Because it is an environment I am ***familiar with and comfortable with.***
Consumer Experience	**Internet Banking Experience** *[Good - Bad]*	*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.***
		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.*
	Channel Experience *[Good - Bad]*	*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.*
		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...*
Consumer Needs	**Need for Cash** *[Cash – No Cash]*	*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.*
		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.*
	Need for Payment Method *[Human - Electronic]*	*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.*
		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*

Concept	Property *[Dimension]*	Supporting Evidence
		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
	Need for Real-Time Information ***[Real-Time - Delayed]***	*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.*
		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****...*
	Need for other Service ***[All Other Services]***	*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****.*
		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...***
Preference	**Channel Preferred** ***[Throughout all Banking Channels]***	*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.*
		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***

Compatibility has been expressed in literature as containing three major dimensions – compatibility with values; needs and experiences respectively (Tan & Teo , 2000). Similarly in this study there were several dimensions - levels of apprehension concerning a channel, comfort with its use and consumer preference correspond with the value dimension of compatibility. Prior experience with a banking channels corresponds with the experience dimension, and the consumer banking needs corresponds with the needs dimension of the literature-defined compatibility concept.

4.1.8 Exposure

Exposure looks at the exposure of the channels and the technology to the consumer. Table 9 provides some supporting quotes for the concepts that define the category of exposure. This category has concepts of availability, and general exposure.

Table 9: Supporting Evidence for Concepts of Channel Exposure

Concept	Property *[Dimension]*	Supporting Evidence
Availability	**Channel Availability** *[Available - Not Available]*	***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*
		And it was the same with ATM banking, because I think ***they started appearing on campuses*** *and then…*
	Technology Availability *[Available - Not Available]*	*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***
		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*
General Exposure	**Channel Exposure** *[Good - Bad]*	*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'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.*
		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*

The availability of a channel to consumers will affect its adoption. Where customers have no Internet access, for example, they will not be able to utilise it. This is, however, dependent on location, as where this access is available, Internet banking again becomes an option. As technology becomes more readily available to consumers, different options 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; WiFi) more widely available the chance of multi-channel banking adoption increases.

The greater the exposure to banking channels, the more aware the consumer becomes of the channel(s) services and attributes. The greater the exposure to the Internet, for example, the more likely the consumer will take an active interest in exploring the possibilities of an Internet based banking channel. Exposure has been previously identified as a key factor influencing the consumer decision to adopt or not adopt mobile banking (Brown et al, 2005), and is akin to the concept of observability in innovation diffusion theory (Rogers, 2005).

4.1.9 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 (Brown & Venkatesh, 2005). 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 Table10.

Table 10: Supporting Evidence for Concepts of Consumer Knowledge

Concept	Property *[Dimension]*	Supporting Evidence
Awareness	**Awareness of Site Tampering** *[Aware - Unaware]*	***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 emails asking to confirm***

Concept	Property *[Dimension]*	Supporting Evidence
		your account details.
		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'.***
	Channel Awareness *[Aware - Unaware]*	*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****.*
		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****, ...*
	Technology Awareness *[Aware - Unaware]*	*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*
		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.***
Channel Knowledge	**Channel Convergence** *[Knowledgeable - Unknowledgeable]*	*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.***
		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 ...*
	Knowledge of Services *[Knowledgeable - Unknowledgeable]*	***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****.*
	Knowledge of Technology *[Knowledgeable - Unknowledgeable]*	*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****.*
		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.*

4.1.10 Security

The security 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 Table11. Identifying these security concerns and measures allows the consumer to become more accepting about the banking channels. The importance of this concept has been highlighted in previous studies such as Tan & Teo (2000) who identified perceived risk as a negative influence on Internet banking adoption.

Table 11: Supporting Evidence for Concepts of Security

Concept	Property *[Dimension]*	Supporting Evidence
Security Threat	**Electronic Threat** *[Low - High]*	*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...*
	Information Threat *[Low - High]*	*Cellphones get stolen a lot**. I don't like the idea of keeping any sensitive information**, anything like that on my cellphone*
		*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?'***
Perceived Security	**Perceived Lack of Security** *[Unsecure - Secure]*	*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*
Security Measures	**Security Measures** *[Active - Inactive]*	*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 ...*
		*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.*
		*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.*
Physical Threat	**Card Theft** *[Safe - Unsafe]*	*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*
		*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.***
	Physical Theft *[Safe - Unsafe]*	*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.***
		*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*

4.1.11 Social Influence

Social influence is defined as the perceived importance the consumer places on the input of other referents such as colleagues or family (Brown & Venkatesh, 2005). 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**12. As with Brown & Venkatesh (2005) two major social influences are family sources and secondary sources such as newspapers. Interestingly peer influence did not emerge as an influence, as it did in the Brown & Venkatesh (2005) study on technology adoption in the home.

Table 12: Supporting Evidence for Concepts of Social Influence

Concept	Property *[Dimension]*	Supporting Evidence
Social Influence	**Family Sources** *[Good - Bad]*	*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***
		*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.*
	Secondary Sources *[Good - Bad]*	*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...*
		*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].*

4.1.12 Connectivity Quality

This category is concerned with the quality of connectivity to the Internet or other network, such as for SMS-based cell phone banking. 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 any banking channel. Evidence supporting the concepts of this category can be found in Table13. In the electronic banking literature, this concept has been assessed as part of the facilitating conditions needed to support consumers (Tan & Teo, 2000). Takieddine & Sun (2015) too examined the impact of Internet access and speed in Internet banking at a country level.

Table 13: Supporting Evidence for Concepts of Connectivity Quality

Concept	Property *[Dimension]*	Supporting Evidence
Access	**Internet Access** *[Good - Bad]*	*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*
		*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 ...***
	Type of Access *[All types of Access]*	*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.*
		*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.*

4.1.13 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 **1**4. These concepts

are taken as moderating influences in most electronic banking studies, such as those based on UTAUT (Cheng et al., 2008).

Table 14: Supporting Evidence for Concepts of Demographic Characteristics

Concept *[Dimension]*	Supporting Evidence
Age *[Young - Old]*	*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?'*
	*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*
Occupation *[Experience - Inexperience]*	*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***
	*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.*

4.2 Theory Story Line

When using GTM, theory may be presented as a set of propositions, or a running theoretical discussion (story line). In this paper we chose to present the theory as a story line depicting the main processes and relationships implied.

The theory in Figure 1 illustrates that when presented with a banking need, a consumer starts by evaluating a range of banking channels before making a choice of which one to use. The evaluation and choice of channel is driven by various factors such as prior exposure to and knowledge of the available channels, the security of the channel, given the consumer's location and the time of day, the Internet or cell phone connectivity quality at that point in time, compatibility of the channel with personal preferences and the intended transaction (e.g. cash withdrawal is only possible with certain channels), as well as comparative analysis of the advantages of one channel over the other in terms of factors such as ease of use, convenience, and channel and consumer location. Factors such as demographics and social influence also play role in the choice decision. These various factors consciously, or unconsciously inform the consumer choice decision, which leads then to the usage of the channel to perform the intended banking transaction.

Thereafter, based on the experience with using the channel, perceptions of satisfaction are formed, which could lead to the consumer decision to continue using a channel or discontinuing its use for a specific type of transaction, and re-evaluating the choice (e.g., the experience of setting up a payment beneficiary through cell phone banking may be perceived as unsatisfactory by a consumer, leading to the decision to choose PC-based Internet banking the next time round).

This process of channel evaluation, choice, usage and assessment of satisfaction with the banking experience is an ongoing perpetual process, which is executed in a sub-conscious state, the more experience a consumer gains with various banking channels. Users form preferences for certain channels, for certain transactions, over time (e.g. PC-based Internet banking to pay bills, and cell phone banking to view a banking statement). Given the dynamism of the banking environment, through social influences or other forms of exposure, consumer become aware of new alternatives, which they may then choose to try (e.g., a smart phone purchase may lead to the discovery of a smart phone app to do banking, which may subsequently be evaluated as a more convenient way of checking banking statements than through conventional cell phone banking). This new channel may then become the preferred method for viewing bank statements, as compared to through the micro-web browser of a cell phone.

5. Discussion and Implications

Most existing theory around electronic banking is of the variance type, depicting factors influencing usage intentions (and less often actual usage) (Hanafizadeh et al., 2015; Tan & Teo, 2000). It draws typically from existing technology adoption theory such as TAM or UTAUT (Martins et al., 2015). This study has extended knowledge in this domain by employing an alternative approach, i.e. the grounded theory methodology which delivers theory reflective of the as-lived experiences and practices of people. The multi-channel banking adoption theory developed in this study captures not only the variance factors influencing adoption, as per previous studies, but also important processual elements. The process of evaluation leading to choice of a specific channel, and then subsequent usage have not previously been captured in adoption studies. The closest corollary to this is the finding by Weimann et al. (2013) who highlight how a selection process precedes the decision to use a specific technology in virtual software development team work.

Existing research on electronic banking has tended to focus on the adoption of single channels (Luarn & Lin, 2005), typically Internet banking or mobile banking. A few studies have attempted to compare usage across these channels (Calisir & Gumussoy, 2008; Sundarraj & Wu, 2005). Some studies have looked at electronic banking holistically, and not by channel (Liao & Cheung, 2003; Laukkanen, 2007). The reality is that consumers often use more than one channel – i.e. they exhibit multi-channel usage behaviours, but very little theorising around this phenomenon has taken place. This study contributes to knowledge by filling this gap and explaining multi-channel banking adoption.

Factors previously identified as influences on adoption of electronic banking such as perceived usefulness, compatibility, perceived ease of use, social influence, cost, etc. were apparent in our theory, hence providing confirmation of previous findings. As well as this, the association between user satisfaction and continuance intentions was apparent providing support to the work of Bhattacherjee, (2001). Our study also extends knowledge by showing how these factors act as criteria to compare the various channel options before a choice is made. Hence they are more than merely factors influencing usage of a single channel. The theory we developed makes a contribution as is expected from grounded theory studies. As notes Glaser (1992):

> "Grounded theory, we have found, typically transcends, organises and synthesises large numbers of existing studies. This is a contribution to be sure, since the two prime attributes of theory are achieved: parsimony and scope… The contribution in well-worked areas is usually not a new concept or pattern, since these are usually saturated. **It is the basic social processes that are missing which grab together so much into a conceptual grasp**" (p. 34- 35).

6. Conclusion

Consumers are faced with a plethora of channels when wanting to conduct banking transactions. These vary from the traditional banking hall to ATMS, and more recently to PC-based Internet banking, mobile banking, and TV banking. In the category of mobile banking furthermore are various options such as SMS-based banking, web-based banking through mobile web browsers, and more recently banking via smartphone apps (Cavus & Chingoka, 2015). How consumers make sense of these options, and make a decision as to which channel to use, for what transaction, and when, has been largely unexplored in the electronic banking literature. Existing research on electronic banking adoption is inadequate to explain this phenomenon as it is predominantly focused on researching factors influencing adoption of one type of channel, typically Internet or mobile banking (Hanafizadeh et al., 2014, Shaikh & Karjaluoto, 2015). Furthermore many of these studies are based on variance theories, and do not offer sufficient causal explanation of adoption as a process. The contribution of this paper is to present a theory which explains multi-channel banking adoption behaviour using the novel technique of grounded theory to highlight both processual and causal conditions. The theory reveals that prior to using a particular banking channel for a specific transaction, consumers sub-consciously or consciously perform an evaluation of available and known channels, and then make a choice. Various factors influence this choice, such as comparative advantages of one channel over another, compatibility with personal preferences and the transaction being performed, and the time and place. After usage, consumers assess the satisfaction of the banking experience before deciding whether to continue using a certain channel for a specific transaction, or choosing an alternative.

Future research can build on these findings by conducting quantitative studies to confirm and validate the theory. Alternatively techniques such as ethnographic decision tree modelling can be employed to further uncover the decisions informing consumer choice (Bailey & Ngwenyama, 2013, Mwangi & Brown, 2015). Banks are continually innovating to offer consumers new ways to conduct banking transactions. Hence the issue of multi-channel banking will remain a persistent issue requiring further research attention.

References

Abu-Shanab, E. A. (2005). "*Internet banking and customers' acceptance in Jordan: The unified model's perspective*", Ph.D., Southern Illinois University at Carbondale, United States – Illinois.

Aladwani, A.M. (2001). "Online banking: a field study of drivers, development challenges, and expectations", *International Journal of Information Management*, Vol. 21, pp. 213 – 225.

Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C. & Sanz-Blas, S (2009). "The role of consumer innovativeness and perceived risk in online banking usage", *International Journal of Bank Marketing*, Vol. 27, No. 1, pp. 53 – 75.

Bailey, A., & Ngwenyama, O. (2013). "Toward entrepreneurial behavior in underserved communities: An ethnographic decision tree model of telecenter usage", *Information Technology for Development*, Vol. 19, No. 3, pp. 230-248.

Baptista, G. and Oliveira, T. (2016). "A weight and a meta-analysis on mobile banking acceptance research", *Computers in Human Behavior*, 63, pp.480-489.

Bhattacherjee, A. (2001). "Understanding information systems continuance: An expectation –confirmation model", *MIS Quarterly*, Vol. 25, No. 3, pp. 351 – 370.

Binda, J. (2005). "Selected problems of e-economy in banking", *Banking Services and Payment Systems*, pp. 1494 – 1525, [Online], Available: http://www.opf.slu.cz/pb2000/2005/proceedings/2005_p12.pdf [2008, December 22].

Black, N.J., Lockett, A., Ennew, C., Winklhofer, H. & McKechnie, S. (2002). 'Modelling consumer choice of distribution channels: an illustration from financial services", *International Journal of Bank Marketing*, Vol. 20, No, 4, pp. 161 – 173.

Boudreau, M.C. & Robey, D. (2005). "Enacting integrated information technology: a human agency perspective". *Organization Science*. Vol. 16. No. 1, pp. 3–18.

Bradley, L. & Stewart, K. (2002). "A Delphi study of the drivers and inhibitors of Internet banking", *International Journal of Bank Marketing*, Vol. 20, No. 6, pp. 250 – 260.

Brown, I., Gordon, C., Janik, N. & Meyer, M. (2005). "Investigating Adoption/Non-Adoption of Cell Phones for Financial Transactions in South Africa", *Proceedings of the 16th Australian Conference on Information Systems*, 29 November – 2 December, Sydney, Australia, 8 pp.

Brown, S. A., & Venkatesh, V. (2005). "Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle", *MIS Quarterly*, Vol. 29, No. 3, pp. 399-426.

Calisir, F. & Gumussoy, C.A. (2008). "Internet banking versus other banking channels: Young consumers' view", *International Journal of Information Management*, Vol. 28, pp. 215 – 221.

Carroll, J., Howard, S., Peck, J. & Murphy, J. (2003). "From adoption to use: the process of appropriating a mobile phone", *Australian Journal of Information Systems*, Vol. 10, No. 2, pp. 38 – 47.

Cavus, N. & Chingoka, D.N.C. (2015). "Information technology in the banking sector: Review of mobile banking", *Global Journal of Information Technology*, Vol. 5, No., pp.62-70.

Cheng, D., Liu, .G., Qian, C. & Song, Y. (2008). "Customer acceptance of Internet banking: Integrating trust and quality with UTAUT model", *Service Operations and Logistics, and Informatics*, Vol. 1, pp. 383 – 388.

Dandapani, K. (2004). "Success and failure in web-based financial services", *Communications of Association for Computing Machinery*, Vol. 47, No. 5, pp. 31 – 33.

Davis, F.D. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of computer technology", *MIS Quarterly*, Vol. 13, No. 3, pp. 318 – 341.

Eriksson, K., Kerem, K. & Nilsson, D. (2005), "Customer acceptance of internet banking in Estonia", *International Journal of Bank Marketing,* Vol. 23, No. 2, pp. 200 – 216.

Fernández-Sabiote, E., & Román, S. (2015). "The multichannel customer's service experience: building satisfaction and trust". *Service Business*, 1-23. DOI 10.1007/s11628-015-0276-z.

Glaser, B.G. (1992). "*Emergence vs. Forcing Basics of Grounded Theory Analysis*', Mill Valley, California: Sociology Press.

Gu, J., Lee, S., & Suh, Y. (2009). "Determinants of behavioural intention to use mobile banking", *Expert Systems with Applications*, Vol. 36, No. 1, pp. 11605-11616.

Hanafizadeh, P., Keating, B. W., & Khedmatgozar, H. R. (2014). "A systematic review of Internet banking adoption". *Telematics and Informatics*, 31(3), 492-510.

Hernandez, J.M.C. & Mazzon, J.A. (2007). "Adoption of Internet banking: proposition and implementation of an integrated methodology approach", *International Journal of Bank Marketing*, Vol. 25, No. 2, pp. 72 – 88.

Hughes, J. & Jones, S. (2003) "Reflections on the use of grounded theory in interpretive information systems research". *ECIS 2003 Proceedings*. Paper 62 [WWW document] http://aisel.aisnet.org/ecis2003/62.

Jaruwachirathanakul, B. & Fink, D. (2005). "Determinants for adoption of Internet banking in Thailand", *Journal of Internet Research*, Vol. 15, No. 3, pp. 295 – 311.

Karahanna, E., Agarwal, R., & Angst, C. M. (2006). "Reconceptualizing compatibility beliefs in technology acceptance research". MIS Quarterly, pp. 781-804.

Laukkanen, T. & Lauronen, J. (2005). "Consumer value creation in mobile banking services", *International Journal of Mobile Communications*, Vol. 3, No. 4, pp. 325 – 338.
Laukkanen, T. (2006). "Customer perceived value of e-financial services: a means-end approach", *International Journal of Electronic Finance*, Vol. 1 No. 1, pp. 5 – 17.
Laukkanen, T. (2007). "Customer preferred channel attributes in multi-channel electronic banking", *International Journal of Retail & Distribution Management*, Vol.35, No. 5, pp. 393 – 412.
Lee, M.C. (2008). "Factors influencing the adoption of Internet banking: An integration of TAM and TPB with perceived risk and perceived benefit", *Electronic Commerce Research and Applications*, 12 pp.
Lee, A.S. & Baskerville, R.L. (2003;). "Generalising generalisability in Information Systems research", *Information Systems Research*, Vol. 14, No. 3, pp. 221 – 243.
Lee, K. & Chung, N. (2009). "Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective", *Interacting with Computers*, Vol. 21, 385-392.
Liao, Z. & Cheung, M.T. (2003). "Challenges to Internet banking", *Communications of the ACM*, Vol. 46, No. 12, pp. 258 – 250.
Liao, S., Shao, Y.P., Wang, H. & Chen, A. (1999). "The adoption of virtual banking: an empirical study", *International Journal of Information Management*, Vol. 19, pp. 63 – 64.
Lichtenstein, S. & Williamson, K. (2006). "Understanding consumer adoption of Internet banking: An interpretive study in the Australian banking context", *Journal of Electronic Commerce Research*, Vol.7, No. 2, pp. 50 – 66.
Locke, K. (2001). "*Grounded Theory in Management Research"*. Sage, London.
Luarn, P. & Lin, H.H. (2005). "Toward an understanding of the behavioural intention to use mobile banking", *Computers in Human Behaviour*, Vol. 21, pp. 873 – 891.
Mallat, N., Rossi, M & Tuunainen, V.K. (2004). "Mobile banking services', *Communications of the ACM*, Vol. 47, No. 5, pp. 42 – 46.
Martins, C., Oliveira, T., & Popovič, A. (2014). "Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application". *International Journal of Information Management*, Vol. 34, No. 1, pp. 1-13.
Mols, N.S., Bukh, P.N.D. & Nielsen, J.F. (1999). "Distribution channel strategies in Danish retail banking", *International Journal of Retail & Distribution Management*, Vol.27, No. 1, pp. 37 – 47.
Montazemi, A. R., & Qahri-Saremi, H. (2015). "Factors affecting adoption of online banking: A meta-analytic structural equation modeling study". *Information & Management*, Vol. 52, No. 2, pp. 210-226.
Mwangi, B.J. and Brown, I. (2015). "A decision model of Kenyan SMEs' consumer choice behavior in relation to registration for a mobile banking service: A contextual perspective. *Information Technology for Development*, Vol. 21, No. 2, pp.229-252.
Pinches, N., De Francesco, L. & Onoufriou, M. (2004). "Setting the agenda: An operational environment for multi-channel 'on demand' banking", *IBM Banking Solutions*, [Online], Available: http://www-03.ibm.com/industries/financialservices/doc/content/bin/fss_bpm_operational_environment_3.pdf [2008, June 24].
Rogers, E. M. (2005). "*Diffusion of Innovations*". Simon and Schuster.
Riggins, F.J. (2004). "A multichannel model of separating equilibrium in the face of the digital divide", *Journal of Management of Information Systems*, Vol. 21, No. 2, pp. 161 – 179.
Rusu, D. & Dospinescu, O. (2005). "Mobile banking services in Romania", *Banking Services and Payment Systems*, pp. 1617 – 1638, [Online], Available: http://www.opf.slu.cz/pb2000/2005/proceedings/2005_p12.pdf [2008, June 29].
Scarborough, M. & Grieser T. (2006). "Enabling channel transformation: Integrated channel and enterprise system management", *Financial Insights White Paper.* Sponsored by HP, Available: http://h20229.www2.hp.com/solutions/fsi/ar/fsi_ar_channel_trans.pdf [2008, December 17].
Scott, I. (2002). "Internet banking. The future is not what it used to be". *ITWeb*, http://www.itweb.co.za/sections/features/internetbanking/feature020610.asp. Accessed 20 June, 2002.
Shaikh, A. A., & Karjaluoto, H. (2015). "Mobile banking adoption: A literature review". *Telematics and Informatics*, Vol. 32, No. 1, pp. 129-142.
Shih, Y. & Fang, K. (2004). "The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan", *Journal of Internet Research*, Vol. 14, No. 3, pp. 213 – 223.
Simons, L.P.A. & Bouwman, H. (2005). "Multi-Channel service design process: challenges and solutions", *International Journal of Electronic Business*, Vol. 3, No. 1, pp. 50 – 67.
Sousa, R., Amorim, M., Rabinovich, E., & Sodero, A. C. (2015). "Customer Use of Virtual Channels in Multichannel Services: Does Type of Activity Matter?" *Decision Sciences,* Vol 46, No. 2, pp. 623-657.
Strauss, A., Corbin, J. (1990). "*The Basics of Qualitative Research: Grounded Theory Procedures and Techniques*", Sage Publications, Inc.
Strauss, A. & Corbin, J. (1998). "*The Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*", (2nd Ed.), London: Sage.
Strong, D.M. and Volkoff, O. (2010). Understanding organization-enterprise system fit: a path to theorizing the information technology artifact. *MIS Quarterly*, Vol. 34, No. 4, pp.731-756.
Suddaby, R. (2006) "From the Editors: what grounded theory is not". *Academy of Management Journal* Vol. 49, No. 4, pp. 633–642.

Sundarraj, R.P. & Wu, J. (2005). "Using information-systems constructs to study online- and telephone-banking technologies", *Electronic Commerce Research and Applications*, Vol. 4, pp. 427 – 443.

Tan, M. & Teo, T.S.H. (2000). "Factors affecting the adoption of Internet banking", *Journal of the Association for Information Systems*, Vol. 1, Article 5, pp. 1 – 44.

Takieddine, S., & Sun, J. (2015). "Internet banking diffusion: A country–level analysis". *Electronic Commerce Research and Applications*. http://dx.doi.org/10.1016/j.elerap.2015.06.001.

Urquhart C., Lehman H. & Myers, M. (2010) "Putting the 'theory' back into grounded theory: Guidelines for grounded theory studies in information systems", *Information Systems Journal*, 20, 357-381.

Venkatesh, V., Morris, M.G., Davis, G.B. & Davis, F.D. (2003). "User acceptance of information technology: Toward a unified view", *MIS Quarterly*, Vol. 27, No 3, pp. 425 – 479.

Weimann, P., Pollock, M., Scott, E. and Brown, I. (2013). "Enhancing team performance through tool use: How critical technology-related issues influence the performance of virtual project teams", *IEEE Transactions on Professional Communication*, Vol. 56, no. 4, pp.332-353.

Whetten, D. (1989). "What constitutes a theoretical contribution?" *Academy of Management Review*, Vol. 14, No. 4, pp. 490 – 495.

Zaharia, S. & von Strombeck, P. (2002). "Key success factors of Tchibo's multi-channel strategy in German retailing", *European Retail Digest*, Vol. 36, pp. 46 – 51.