

**AN INVESTIGATION INTO THE STRATEGIC CHALLENGES FACING DIGITAL BANKING
CHANNELS IN SOUTH AFRICA, A CUSTOMER CENTRIC APPROACH**

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DECLARATION

“I, Benjamin Appalsamy, hereby declare that:

- ✓ The work in this paper is my original work;
- ✓ All sources used or referred to have been documented and recognised, and;
- ✓ This research report has not been previously submitted in full or partial fulfillment of the requirements for an equivalent or higher qualification at any other recognised educational institution.”

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ABSTRACT

Electronic banking (hereafter referred to as digital banking), has not been fully embraced by local South Africans, in comparison to larger more established banking industries of the world. Despite the research literature available on e-commerce, much is still unknown about digital banking drivers in developing countries such as South Africa. In particular how clients feel about this form of banking and what the strategic challenges that require resolution for local consumers and banks to both benefit from this symbiotic relationship.

Arguably, digital channels are the future of banking globally as the autocatalytic nature of the internet and mobile devices continue to fuel digital transformation. In order for local banks to leverage this area of technological evolution, customer perceptions about this service platform, particularly the areas that were targeted for this investigation need to be prudently considered from a customer perspective for future corrective measures that need to be undertaken and ultimately solve for customer satisfaction.

Many South Africans have been early adopters of digital banking services, however many are still wary of this form of banking. A “magic pill” for implementation was not sought after, but rather a learning approach to embrace the opinions and perceptions of consumers.

The research approach for this study primarily followed a qualitative approach and the primary data was collected using a single measuring instrument in the form of a self-administered web questionnaire. This comprised of a series of open and closed questions and other prompts for the purpose of gathering information from respondents.

The research effort focused on specifically analysing the following problems/objectives:

- ❖ To determine what customers primarily want from digital banking channels, in terms of the core themes identified.
- ❖ To establish the drivers which are most important to customers.
- ❖ To investigate the perceptions of service via digital banking channels.

The study was therefore aimed at identifying customer satisfaction determinants that will result in an increase in adoption and usage of digital banking channels in South Africa.

The primary data gathered indicates that banks need to make sure that the fundamentals such as fraud prevention security are in place to ensure that objectives are met. Thereafter, customer satisfaction can be achieved through various other secondary drivers such as incentivisation and education which can also influence an increase in adoption and usage. However, it also appears that there are uncontrollable macro dependencies e.g. cost and accessibility of the internet which will aid the evolution of the digital banking industry in South Africa.

Undoubtedly consumers are seeking more innovative solutions from their bankers given the growing nature of consumerism and it becomes a case of survive and thrive or become extinct in an industry that is highly competitive given the borderless boundaries of the financial services sector on the digital banking global stage.

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CHAPTER 1

1. Problem in context, Problem statement and Objectives

1.1 Introduction

Electronic banking (hereafter referred to as digital banking), has not been fully embraced by local South Africans, in comparison to larger more established banking industries of the world that has experienced explosive growth (Akinici, Akoy & Atilgan, 2004). Despite the research literature available on e-commerce, much is still unknown about digital banking in developing countries such as South Africa (Auta, 2010: 215). In particular, how clients feel about this form of banking and what the strategic challenges that requires resolution for consumers and banks to mutually benefit from this symbiotic cost saving relationship (Sathye, 1999).

Arguably, digital channels are the future of banking globally as the autocatalytic nature of the internet and mobile devices continue to fuel digital transformation. A fundamental shift is occurring from conventional banking to digital banking powered primarily by the internet (Basel Committee – Electronic Banking Group, 2000: 11). In order for First National Bank (FNB) to leverage this area of technological evolution, customer perceptions about this service platform, in particular the targeted areas for investigation should be prudently considered from a customer perspective for future corrective measures that need to be undertaken and ultimately solve for customer satisfaction (King, 2010).

South Africans have been early adopters of digital banking, however many consumers are still wary of this form of banking. This security consciousness of consumers across the globe is awakening the banking giants to take notice of the evolving nature of consumerism relevant to technology and innovation that is metamorphosing the financial services industry (Lee and Turban, 2001).

1.2 Background and problem in context

Digital banking has become a popular alternative of conducting banking in the twenty first century. Technology and innovation in many industries as well as banking is what drives daily business activities. This alternative platform has revolutionised the financial services industry in recent times both locally as well as internationally (Kerem, Lustsik, Sorg & Vensel, 2003). By definition, digital banking is an electronic connection between bank and customer to prepare, manage and control financial transactions (Salehi and Zhila, 2008).

Arguably, whilst customers have become accustomed to the convenience of digital banking channels as suggested by Nath, Schrick & Parzinger (2001) , so to have the fraudsters in wanting to penetrate this new found area of exploitation with phishing scams being at the heart of loopholes. Phishing (also referred to as brand spoofing) can be described as a scam whereby phishers send out e-mails to random databases to deceive consumers into divulging sensitive information e.g. user names and passwords under the pretence that it is originating from the legitimate source (Singh, 2007). This is evident in the local industry analysis reflected in figure 1.1.

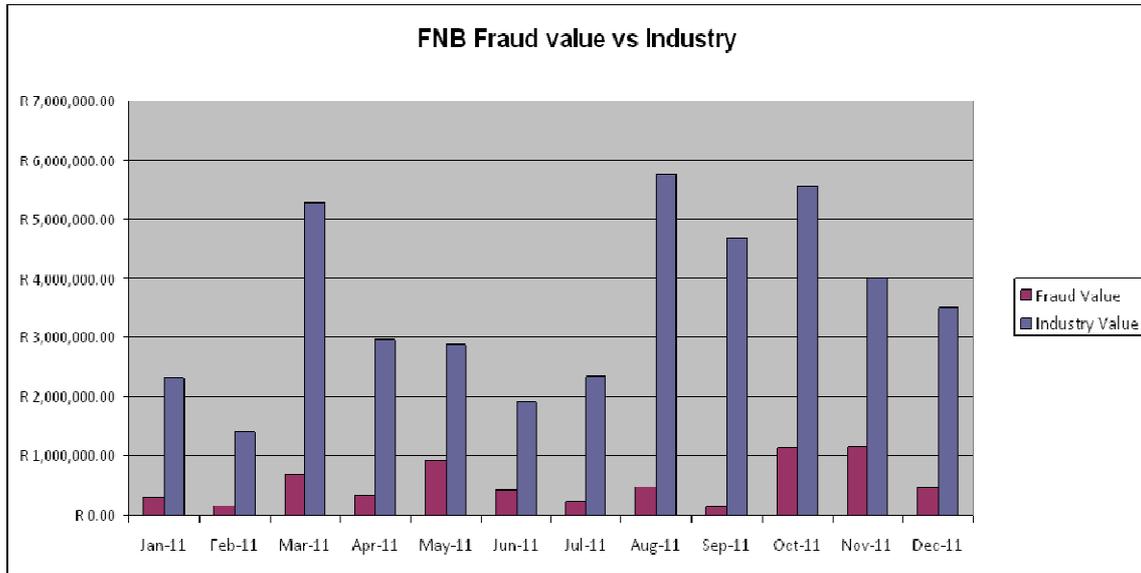


Figure 1.1: Local Industry fraud trends for 2011 (Source: SABRIC, 2011)

Online banking within FNB as with most local banks is still embryonic, and is directed at copying local strategies to ensure technological and heuristic relevance in the quest for competitiveness. This typically is aimed at getting the basic digital functionality right, aligned to what competitors are doing e.g. cancel and order a new credit card online with courier delivery tracking i.e. a customer being fully empowered to fulfill banking requests by themselves.

Whilst this laggard strategy is maintaining local banks on a pendulum swinging par (figure 1.2), it is not necessarily delivering competitive differentiating services which are core to success (Parasuraman, Zeithaml & Berry, 1985; 1988). This is typically aligned to perceptions based on the platforms layout and relevance of information, aesthetics, navigation, speed of transaction processing which are key service differentiators (Yang, Peterson & Cai, 2003).

FNB achieved the best Buzz Barometer rating for Online Banking but Nedbank's VoC score was higher

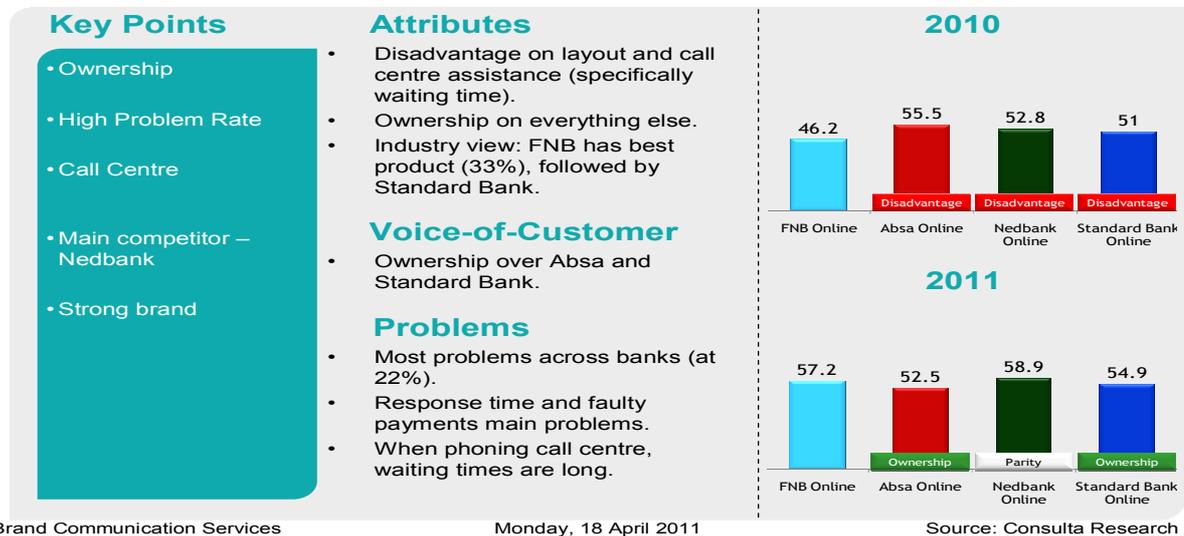


Figure 1.2: Service comparatives for Online banking amongst local banks (Source: Consulta Research, 2011)

Consumers in recent times are demanding an easy to use, convenient platform that is available when they are ready to engage with the bank, whether this is for new purchases or transaction usage (Jun and Cai, 2001). The historical era of when bank's enjoyed the comfort of power leverage through conventional channels, are quickly disappearing given the acceleration of technological complexity and the rapidly evolving nature of digital banking services (Basel Committee – Electronic Banking Group, 2000: 3).

Today, customers have become more intolerant of banks especially where there is a need for instant gratification, powered by the technological age which has spilled over into the financial services world through digital banking (Ismail and Panni, 2009). Customers no longer subscribe to traditional banking hours and are seeking lower banking costs and convenience which are attributes that are achievable through digital banking (Sathye, 1999).

As tough economic pressures and competitive differentiation continue to rise in the battle for customers through the most cost effective manner, banks both locally and internationally are looking at leveraging their self service channels to improve profitability by reducing reliance on costly conventional distribution channels i.e. branches, both in terms of transactability and new customers (Reid and Levy, 2008). This swing toward electronic channels was evident locally (figure 1.3) which revealed a noticeable improvement in overall banking transactions fueled primarily by increases in credit card and electronic payments (Ernst & Young – Financial Services Index, Quarter 1 2011).

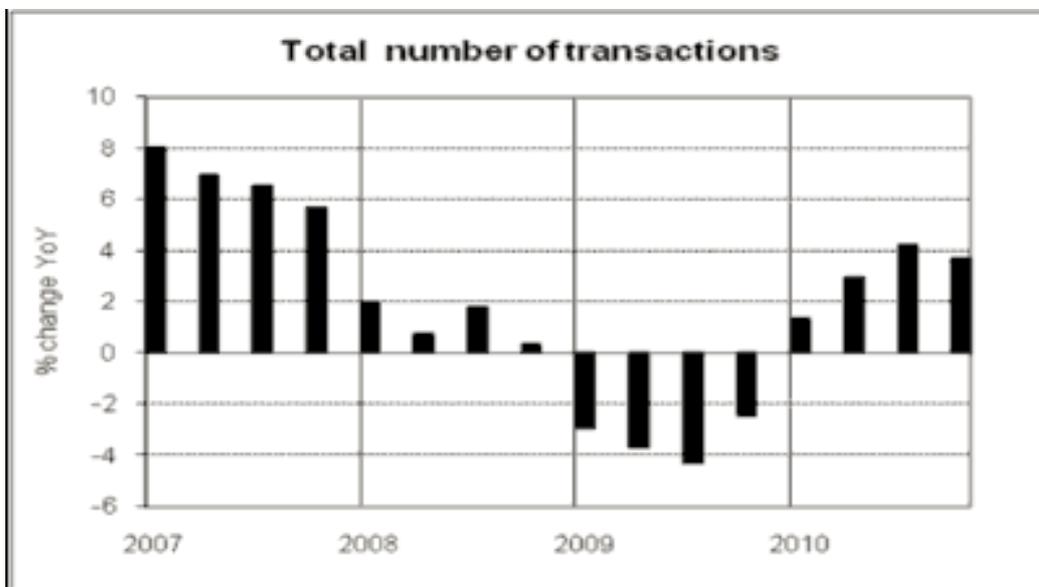


Figure 1.3: Movement of banking transactions (Source: SA Reserve Bank, Q 1 2011)

Safeguarding the privacy of a customer's financial information and profile are essential ingredients in the recipe for acceptance and adoption of digital banking channels (Nath, *et al.*, 2001). This was evident with the .com and internet bubble burst experienced in the late 1990's by the likes of eBay and Amazon which gave rise to public key cryptography and fueled the digital encryption age. There are various local legislative interventions such as the Consumer Protection Act 68 of 2008, Electronic Communications Act and Protection of Personal Information Act 1 April 2005, which are examples of relevance that aim to address shortcomings.

Clients are concerned with protection of their personal data and hence both security and privacy are key drivers of trust (Lee and Turban, 2001). The future impact of legislative protection of customers was reinforced at the 2007 International Banking Conference by the Institute of Bankers in South Africa, figure 1.4 below.

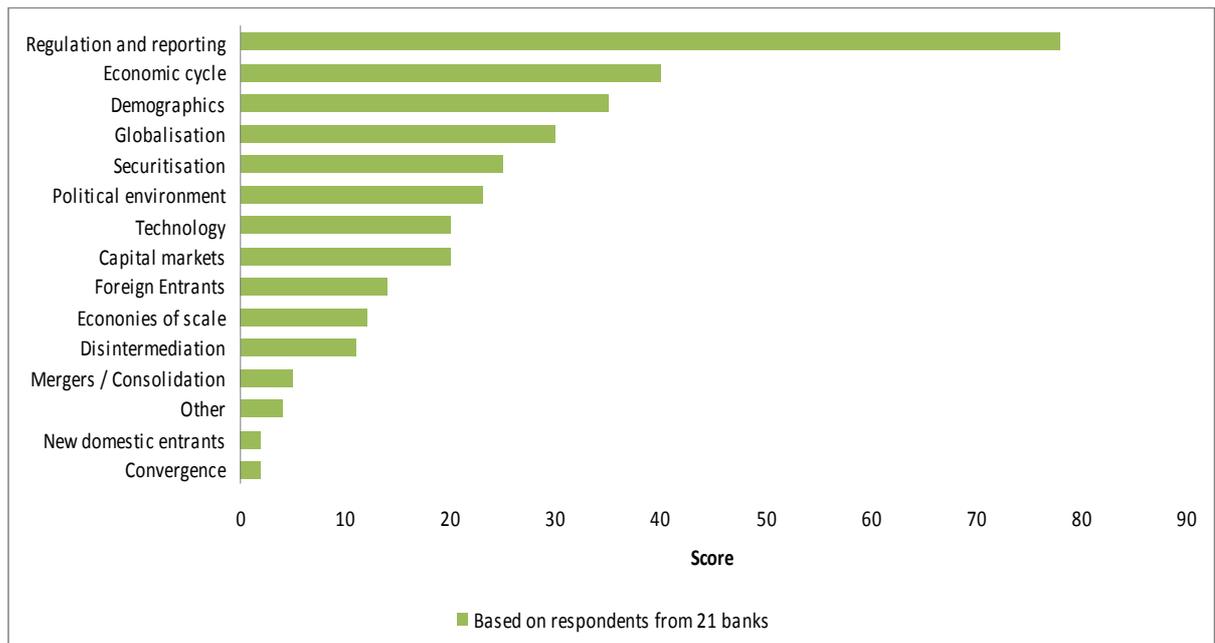


Figure 1.4: Major drivers of change (Source: PWC Strategic & Emerging Issues in South African Banking, 2007 Edition)

Digital banking was developed to enable convenience for customers but also facilitates economic benefits for banks given the ease of virtualising services (Kerem, *et al.*, 2003). Optimal economic benefits that are apposite for the organisation and not necessarily in tune with the priorities of the market are resulting in strategic drift (Johnson, 1992).

1.3 Problem review

There is a myriad of challenges that the financial services industry faces as the digital banking platform matures. Chuang and Hu (2011: 3) suggest that there are six key dimensions, namely; transaction technicalities, decision-making convenience, interactive interrogation, speciality information, security and exploration. In an attempt to unpack the local nuances further from a customers' standpoint, brainstorming sessions were conducted within the organisation. The potential key drivers and common constructs that will lead to optimal customer satisfaction are reflected in table 1.1;

Table 1.1: Potential customer satisfaction drivers (Source: FNB results from internal organisation brainstorming discussions, 2011)

Challenges	Drivers	Themes
What is needed to increase the activation rate of online banking relative to registrations?	<ul style="list-style-type: none"> ✓ Fraud prevention ✓ Protection of personal information ✓ Ease of activating online banking ✓ Education ✓ Incentivisation/Reward 	<ul style="list-style-type: none"> Security Security Simplicity Convenience Convenience
Is the customer experience intuitive?	<ul style="list-style-type: none"> ✓ Relevance of information ✓ Availability of information ✓ Easy of use ✓ Visual appeal 	<ul style="list-style-type: none"> Simplicity Convenience Simplicity Simplicity
Can the organisation improve acquisition volumes of new customers via digital channels?	<ul style="list-style-type: none"> ✓ Process efficiency ✓ After sales service 	<ul style="list-style-type: none"> Simplicity Convenience
What are the key legislative impacts on digital channels?	<ul style="list-style-type: none"> ✓ Confidentiality of customer data 	<ul style="list-style-type: none"> Security
Is the functionality adequate relative to conventional channels?	<ul style="list-style-type: none"> ✓ Enhanced cost efficiencies 	<ul style="list-style-type: none"> Convenience

The common themes from a customers' perspective that emerged which require further exploration, gravitates toward **security, convenience and simplicity**. In embracing the customer centric approach, understanding the challenges faced by digital banking channels which need to be prioritised for resolution as to what the drivers are moves from an output/ organisational approach to understanding the key inputs/ customers' views that will ultimately deliver on the desired outcome of optimal customer satisfaction via digital banking channels .

In a nutshell, the investigation was aimed at understanding the key drivers for customers (in order of priority) that will lead to optimal customer satisfaction and result in an increase in adoption and usage of digital banking, thereby solving for the strategic challenges of the organisation as well as the customer. The critical drivers were as follows:

✓ **Security**

- Fraud Prevention
- Protection of personal information
- Confidentiality of customer data

✓ **Convenience**

- Education
- Process efficiency for new account opening
- Relevance of information
- Incentivisation/ reward
- After sales service
- Enhanced cost efficiencies

✓ **Simplicity**

- Ease of activating online banking profiles
- Availability of information
- Ease of use/ navigation
- Visual appeal

1.3.1 Risk Management Landscape

Fraud Prevention

The custodians of corporate governance for risk management on behalf of FNB, a division of the First Rand Group lies with the Legal Risk and Compliance Department (LRCD) of FNB Online. The group dictates the core parameters of acceptable governance; however it is the role of LRCD within online to operationalise risk management alignment with elements of customisation given the uniqueness of electronic channels.

In the context of digital banking, the core responsibilities include prevention of electronic fraud, protection of customer information/ confidentiality of data, management of third party commercial agreements, business continuity and information technology general controls/ infrastructure control.

Locally in S.A, banks are only now embracing strategies such as PKI (Public Key Infrastructure) and theory aligned to privacy of personal information was explored further as well as ethical linkages aligned to invasion of customer privacy (April and Cradock, 2000). The key aspect here is that whilst business strategies such as fraud prevention are key economic drivers for the business, a greater threat is aligned to reputation risk if fraudsters were to hack into databases, functionality etc. (Singh, 2007). In terms of FNB, there has been an increase of 25% from 2010 to 2011 of fraud grievance cases against the bank that have been submitted to the ombudsman. This presents a material problem for the organisation if there is a ruling against the bank for negligence either by way of process or system compromise. In most instances thus far (cases still pending), FNB has prevented this through negotiated settlements.

The introduction to stop paying for fraudulent phishing claims was implemented in April 2010 and the bank now faces a potential reputational backlash if cases are not resolved with benefit to customers and hence the continued impact of fraud write-off's as is evident in figure 1.5 below and currently is 3% of total operational costs.

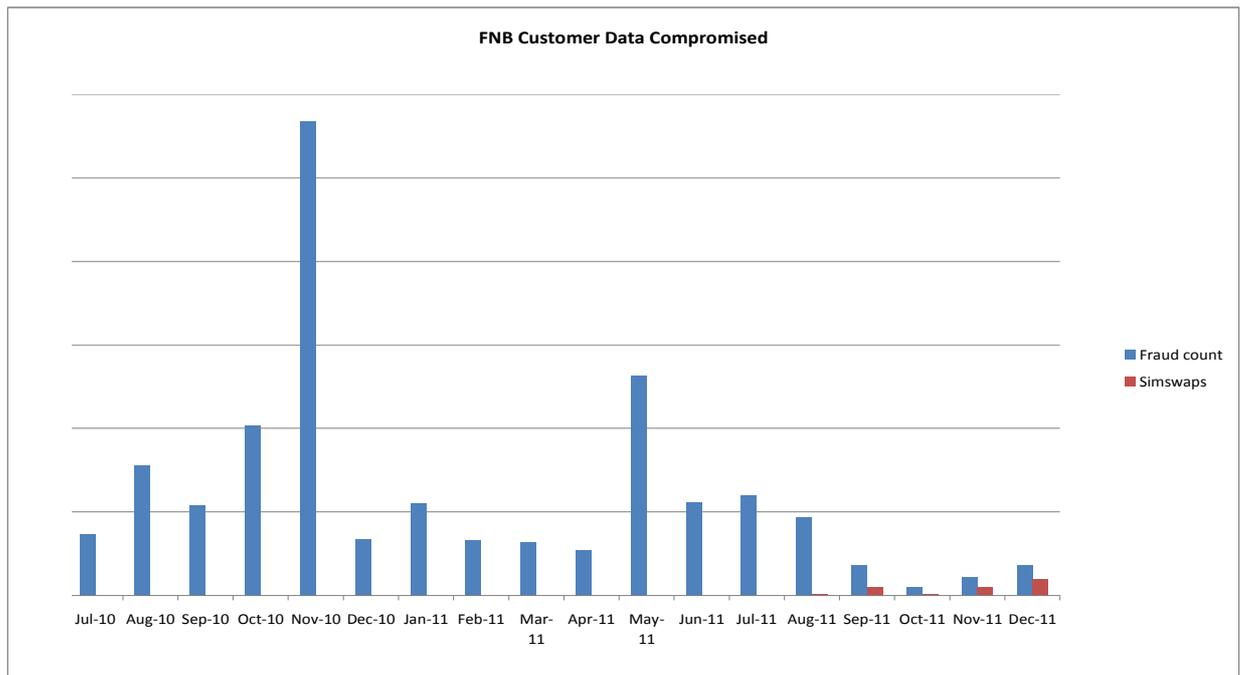


Figure 1.5: FNB fraud payout trends for 2010/2011 (Source: FNB Online internal secondary data, 2011)

In considering aspects such as the PKI imperative, it emerges that deployment of this functionality at FNB is dependant on other departments/ segments “sponsoring” the cost and prioritisation of development. This is primarily due to the federal organisational structure that FNB operates under and digital banking channels are regarded as “cost recovery” centres and hence if security solutions are not a priority of other departments/ segments, cutting edge solutions are not implemented given the lack of resource support. This is a key bottleneck in the system of deploying prioritised customer centric security solutions.

Whilst FNB fraud is tightly controlled as was evident from figure 1.1, the losses incurred by FNB are a fraction of what customers have to bear given the onerous position of preventing phishing belonging to the customer. *“Opponents of online banking say that online banking involved heavy risk to the consumers - 86% of all attacks are directed at the home users’ against 14% at the financial houses, Zvomuya (2007) and the industry has rushed to get online without appropriately confronting issues that could compromise its integrity” (Singh, 2007: 2).*

The phishing trends relevant to FNB are reflected in figure 1.6 below and what is important to note is not the trend but absolute numbers of phishing attacks on customers.

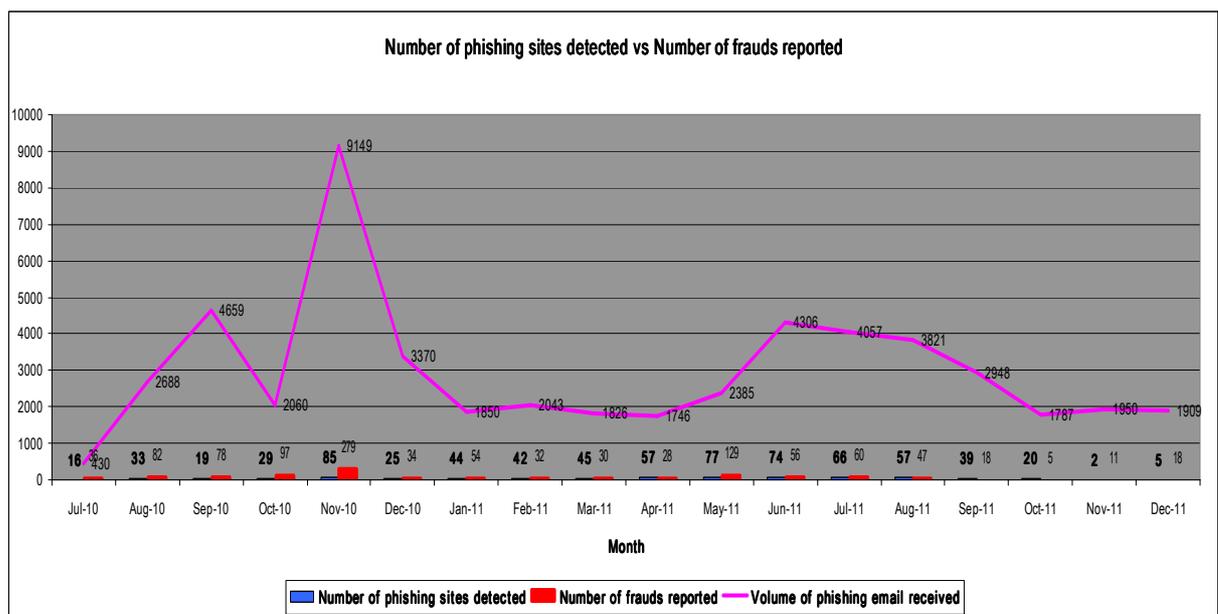


Figure 1.6: FNB phishing trends for 2010/2011 (Source: FNB Online internal secondary data, 2011)

The phishing attacks are normally perpetrated through links in e-mails and currently FNB has no authentication solutions to prove the legitimacy of e-mails emanating from the organisation. This presents a fundamental gap in the quest for robust fraud prevention.

Protection of personal information and confidentiality of customer data

The prevention of fraud, specifically through compliance with the protection of personal information given the intensity of legislative enhancements as well as consumerism which fuels the pace for secure digital banking systems, remains a key objective of FNB. FNB is cognisant of this and are ready to embrace the evolution however, when it comes to proactive embracement of legislation, the organisations' appetite appears to be lagging. This is primarily due to the magnitude of re-aligning legacy systems to conform to requirements such as records management of electronic data aligned to ECT Act of 2002. This coupled with compliance and risk mitigation to relevant legislation as a business imperative also appears to be secondary to the strategic agenda of digital banking channels. It must however be re-enforced that the company is not adverse to the need for change but rather the timing to implement the change, given other business priorities and resource constraints. FNB's alignment to the regulatory universe is reflected in the table below;

Table 1.2: FNB compliance to digital banking relevant legislation (Source: FNB Online internal secondary data, 2011)

Applicable laws and regulations	Impact	Control Effectiveness
Electronic Communications and Transaction Act 25 of 2002	H	R
National Payment System Act 78 of 1998	H	A
Protection of personal information Bill 9 of 2009	H	R
Consumer Protection Act of 2008	H	R

Key:

H	High
M	Medium
L	Low
A	Acceptable
R	Room for improvement
U	Unacceptable

1.3.2 Customer Centric Convenience

Education

Arguably, all local banks are pursuing similar strategies to migrate customers to digital channels. In the context of FNB as well as with the industry there is currently no self help tutorials/ education that assists customers in understanding exactly what the digital banking capability is or how to perform certain transactions. Banks are skeptical on divulging the exact parameters of their digital banking operations for two main reasons, namely, competitor piracy and fraud. This creates a gap in that whilst the intent for migration of customers is clear, educating customers on the use of functionality is a manual process whereby a customer is required to contact a call centre for assistance.

Process efficiency for new account opening

Acquisition of new clients via digital channels shows improvement as reflected in figure 1.7 which has primarily been achieved through aggressive marketing as well as efficiencies in the online account opening processes, however the channel still only contributes 5% within the overall distribution mix. Whilst elements of straight through processing are available for new accounts, there are still manual interventions in the overall process, which detracts from the convenience of account opening online. An example of this is that all supporting documentation for a new account still needs to be faxed into the bank for finalisation of the new account purchase with no document uploading capability. Other elements such as debit order switching is a function that is provided online to simplify the account opening process, but still involves a manually driven back end process. Relative to the number of new accounts that are being opened online, it becomes evident that customers are still being inconvenienced by having to either call at a branch to verify documents or fax these to the bank. This is evident in figure 1.7 below.

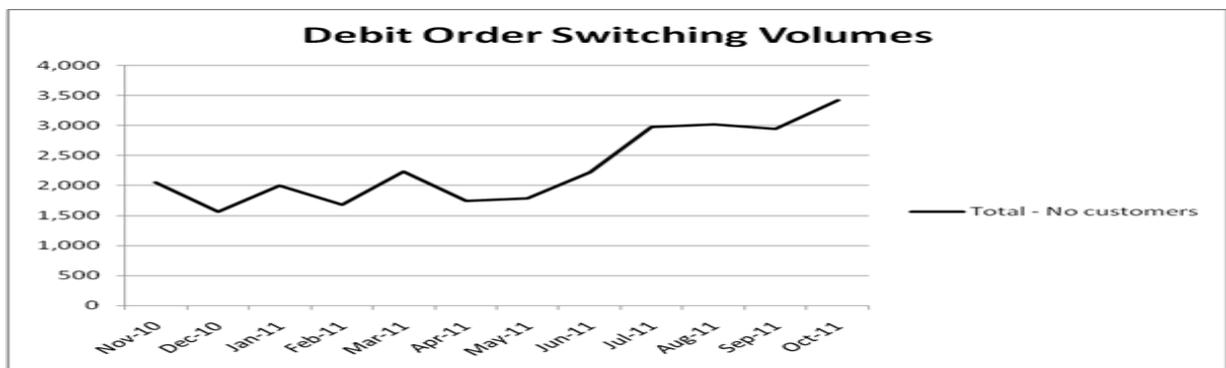
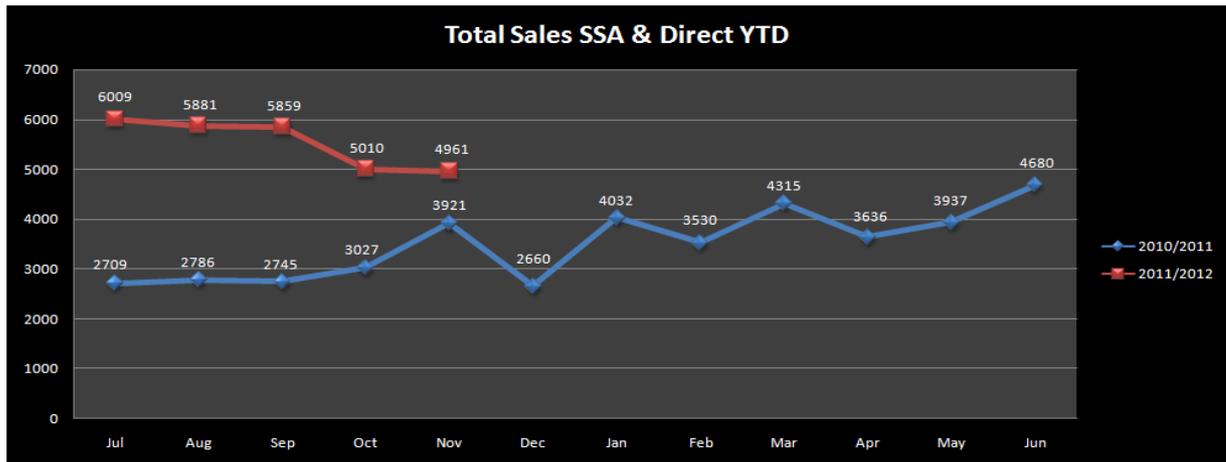


Figure 1.7: YOY new customer acquisition sales trend vs. customers availing of debit order switching option (Source: FNB internal secondary data, 2011)

Relevance of information

A further potential contributing factor to low acquisition via the digital channels for FNB could be as a result of the relevance of information provided via the channel. This is typically aligned to a strong product push methodology adopted by the organisation which sometimes becomes an information overload (figure 1.8). In addition, for this particular example, application for the account is deeper within the navigational structure and not easily accessible for the client.

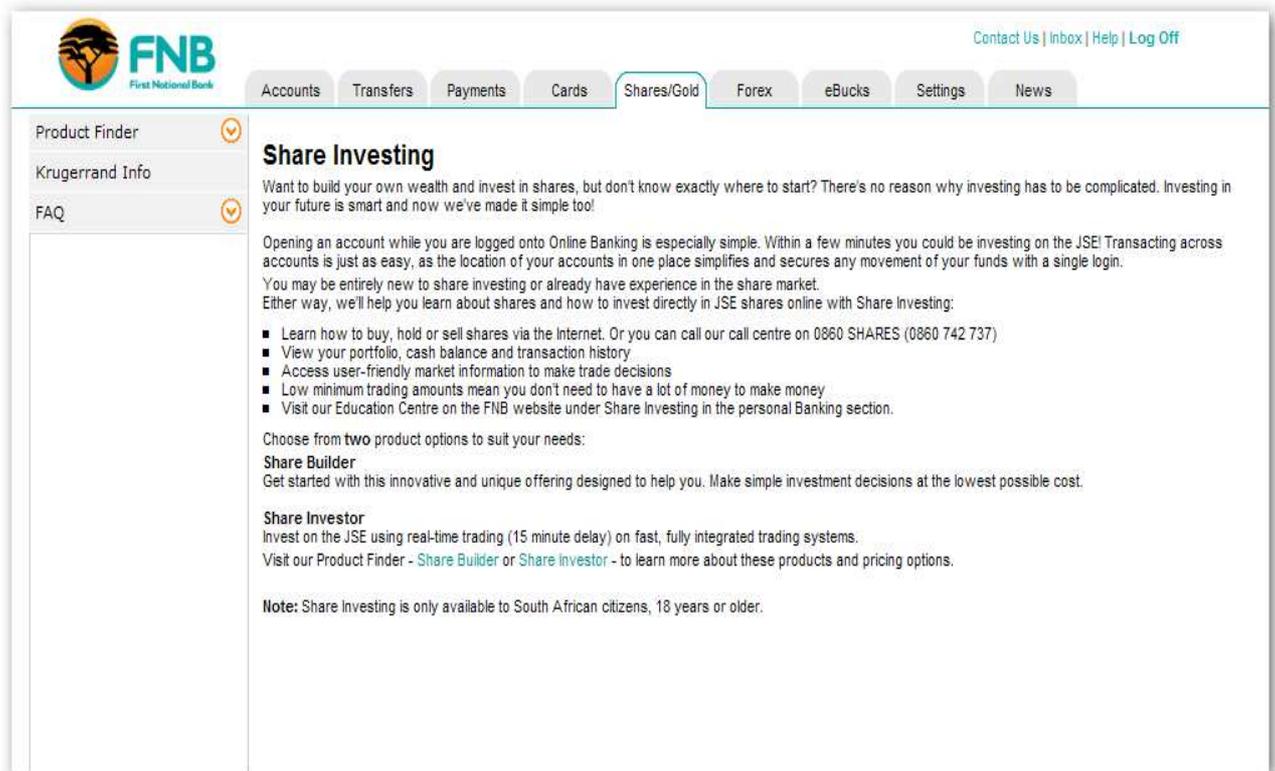


Figure 1.8: Screen shot of a tab within Online banking (Source: FNB Online internal secondary data, 2011)

Incentivisation/ Reward

FNB, as with most other local banks offer their digital banking services as a free product. In reality, the cost pertaining to these channels are embedded in other core product banking fees. In addition, there is no incentive mechanism that encourages the increased usage via digital channels as is the case with other core products such as credit cards whereby customers are rewarded through various reward programmes such as eBucks, ABSA rewards etc. This could also be a contributing factor which has resulted in a fairly static 20% market share gain for FNB's digital channels as can be seen in figure 1.9 below.

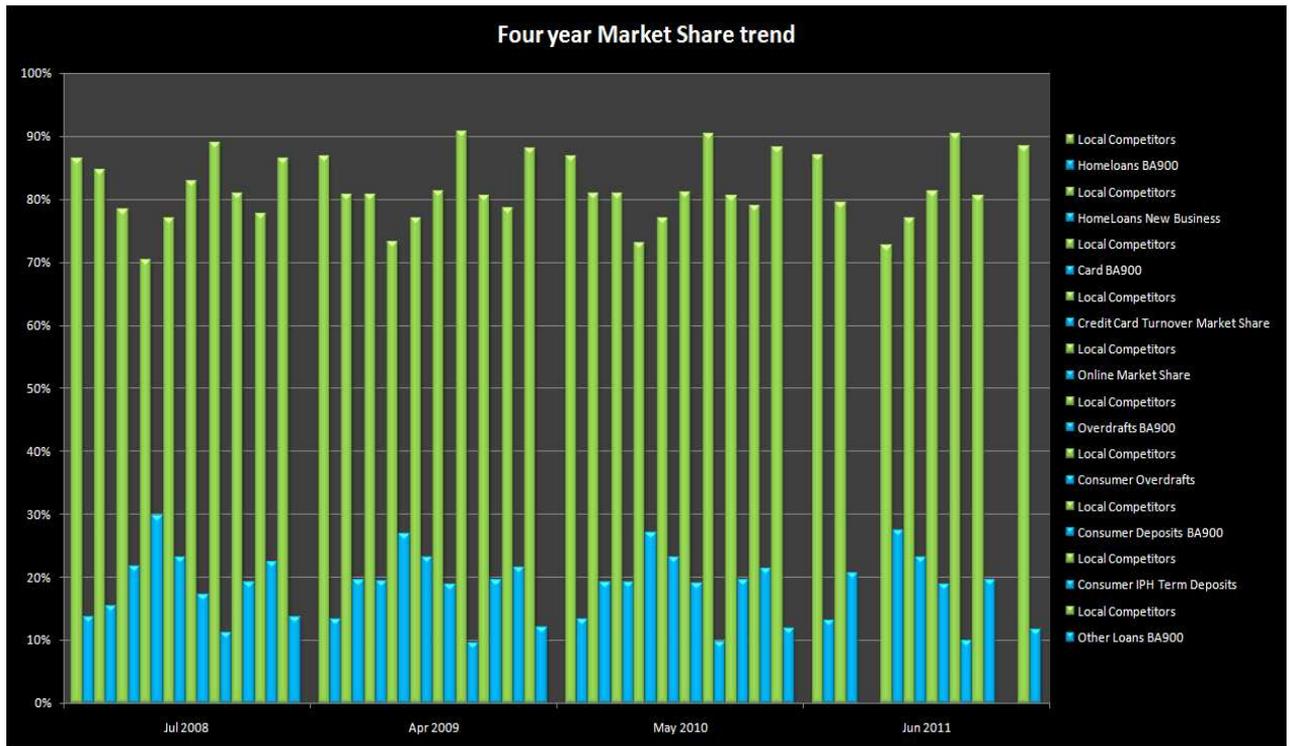
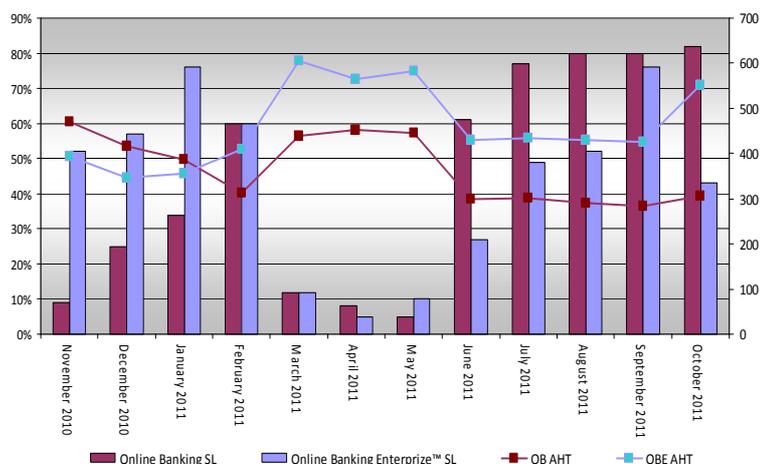


Figure 1.9: Four Year Market Share trend (Source: SA Reserve Bank BA 900 and FNB internal secondary data, 2011)

After sales service and cost efficiencies

Despite the market share challenges, retaining the customers that FNB has is key to achieving optimal cost efficiency for the organisation as well as for customers. A key aspect here relates to servicing the existing customer base which is handled through the call centre. Substantial improvements have been made to the processes within the last calendar year, however, this area still remains an opportunity to drive improved customer perceptions which could aid retention goals. The service level that is targeted within digital banking is 80%.

This in essence means that from all calls received, 80% must be resolved to customer satisfaction. Figure 1.10 below highlights key challenges that are still being faced in the business segment (Online Banking Enterprise).



Calls Handled		
MONTH	Online Banking Enterprize™	Online Banking
Sep-2011	21,580	100,888
Oct-2011	21,159	94,684

Calls Received		
MONTH	Online Banking Enterprize™	Online Banking
Sep-2011	22,709	105,136
Oct-2011	26,546	97,191

Figure 1.10: Digital banking channel – Call centre statistics (Source: FNB Online internal secondary data, 2011)

1.3.3 Simplicity of the experience

Ease of activating online banking profiles

A customer is fully empowered to register for online banking via the website. However, when it comes to activating the Online profile, this moves from a self service function to a manual process i.e. a customer has to phone into a call centre prior to utilising the functionality available via digital banking channels. This process has primarily been instituted for verification processes in an attempt to curb fraud. However, it could also be resulting in lower take up and leverage via digital banking channels as is evident in the drop off from registration/enrolment to activation depicted in figure 1.11 below.

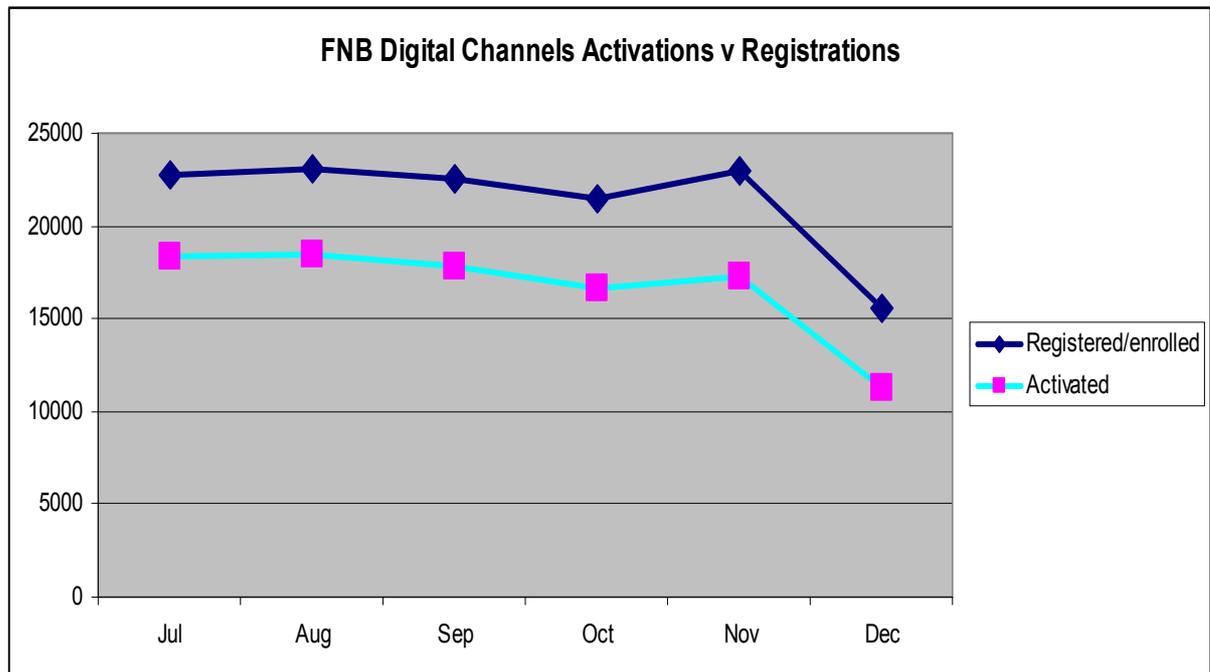


Figure 1.11: FNB digital channel Activations vs. Registrations (FNB Online internal secondary data, 2011)

Availability of information, navigation and visual appeal

No robust customer centric studies have been conducted and new functionality is normally deployed with an economic mindset. This generally is as a result of high level SWOT's that are conducted amongst the local banks and new functionality is deployed to ensure industry competitiveness. The previous usability studies completed were targeted specifically at the home page and not the banking component. The sample used for this study was small (32 participants) with no specific targeted parameters such as a demographically representative sample. The previous study depicted in figure 1.12 below, indicates that there is misalignment to customer needs versus what the organisation believes is adequate and relevant.

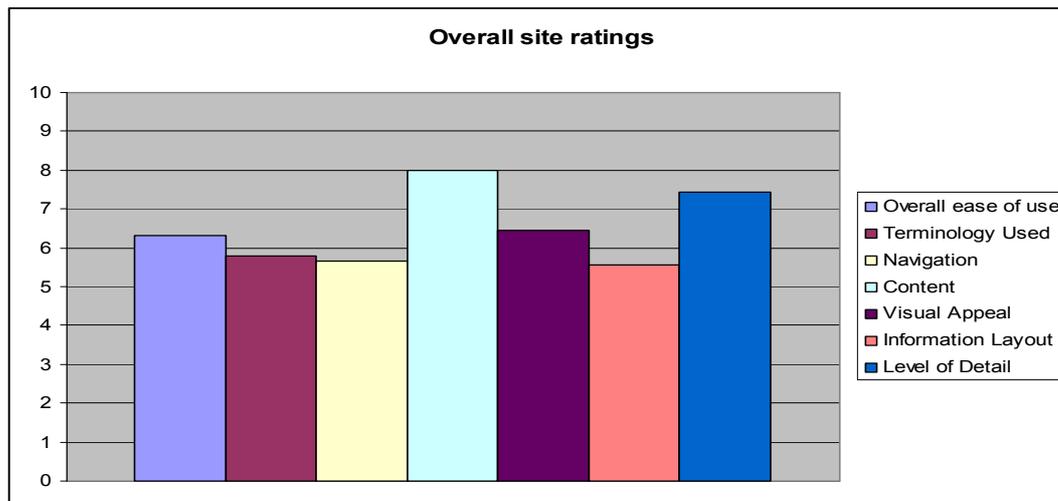


Figure 1.12: Overall FNB. Co.za usability survey (Source: FNB Online internal usability studies, March 2011)

The findings reveal fairly average results specifically in terms of overall ease of use, terminology, navigation and information layout. The key deficiency exists in the navigation through the site and whilst this does not pertain to ease of use inside banking, it is a leading indicator for the need to simplify the site structure overall. In addition, the results show evidence of the misalignment from an information perspective, specifically in the context of terminology as well as the layout of information.

1.4 Research/ Problem statement

Digital banking has been a widely researched topic for many years and undoubtedly will continue into the future given the link between technology and innovation. However, the literature on strategic challenges facing South African banks is limited.

Hence, this study focused on the key drivers of customer satisfaction which must be addressed in order of priority that will increase adoption, usage and acquisition through digital banking channels.

The problem statement is:

Customer satisfaction can be achieved by implementing the key drivers which will lead to an increase in adoption and usage of digital banking channels in S.A.

1.5 Research objectives

The data for this study was collected using a measuring instrument in the form of a self-administered web questionnaire which comprised of a series of questions and other prompts for the purpose of gathering information from respondents and adopted a five-point Likert scale proposed by Cant, Gerber-Nel, Nel & Kotze (2003: 113), ranging from strongly disagree to strongly agree .

The survey was targeted at collecting significant, accurate and relevant data and was completed within a month from commencement. The primary data collected was targeted at obtaining customer's opinions and perceptions about the key drivers and themes discussed above. The aim was also to establish if there is a relationship between the independent and dependant variables in the population. For this study the dependant variable was digital banking customer satisfaction and the independent variables included the following;

- ✓ Fraud prevention
- ✓ Privacy of personal information
- ✓ Speed of transaction processing
- ✓ Simplicity in purchasing banking products online
- ✓ Usability and functionality
- ✓ Accessibility
- ✓ Incentivisation

The research objectives were as follows;

- ❖ To determine what customers primarily want from digital banking channels in terms of the themes identified.
- ❖ To establish the drivers which are most important to customers.
- ❖ To investigate the perceptions of service via digital banking channels.

1.6 Limitations and delimitations

The primary limitation anticipated was obtaining a fair representation in demographical mix of the responses for the questionnaires that was sent out, specifically gender and age. A further limitation that was expected was a biased view of the respondents given the fact that most participants would be existing First National Bank clients that avail of digital banking services. In an attempt to overcome the obstacles such as the one's mentioned above, secondary research such as literature and data that is already in existence was also explored. In addition, to overcome the bias, a research house was employed with the specific intent to sample customers and obtain their views from all four major banks across the industry as well as ensuring a prudent mix in terms of demographics. This was purely for the distribution to the research company's networks, at the writers own cost, in attempting to obtain a fair representative sample.

The analysis and interpretation of findings was undertaken by the writer. In addition a further key limitation that was anticipated was the randomness of the sample as the population that was surveyed was targeted at clients that avail of digital banking services and hence only a small proportion of the banking community was assessed. To overcome this challenge the questions were constructed with a view of understanding what will increase usage of existing consumers as well as what will increase adoption for new customers.

1.7 Delineation

The purpose of the study was not to review risk management, heuristics or enhanced functionality in its totality, but rather to test for key drivers of consumer satisfaction with a view of presenting the facts from a customer standpoint. In addition the intent was not to seek out a “magic pill” for implementation for the primary drivers but rather a learning approach to embrace what S.A customers perceive is important.

1.8 Value and importance of the study

Unraveling the concerns of clients regarding digital banking channels will help FNB prioritise, develop and improve technologies to ensure that customer satisfaction is informed by quality banking services of what customers want and need. This is aligned to learning that can be deployed from the investigation in the organisation to compliment the strategic goals of FNB such as increasing adoption and usage of digital banking channels as well as to drive increased acquisition through self-service channels.

Despite the findings, some of which may be practical for implementation and other findings which may not be, the enrichment through the journey was applicable to both the organisation as well as customers. Hence, it is plausible to accept that the risk of undertaking this investigation was low from the context of findings that may or may not contribute to resolving challenges, but rather highlighted a diverse view of issues that are of relevance in an emerging digital banking economy such as South Africa.

1.9 Summary

The main purpose of this chapter was to identify and unpack the strategic challenges facing digital banking channels in South Africa with specific emphasis on the industry in general. The problem statement, main objectives as well as other key concepts were presented. Chapter two focuses on the organisation and unraveling the strategic challenges with specific emphasis on FNB through the use of business models and theory.

CHAPTER 2

2. Problem analysis

2.1 Introduction

Chapter one provided an explanation of the key themes and concepts that was used in the study. The research statement, objectives, significance of the research as well as limitations and delineation was presented. The main purpose of the study was to identify the key customer satisfaction drivers and themes (in order of priority) that will lead to increased usage and adoption of digital banking channels in South Africa.

In this chapter the key constructs and concepts identified will be explored in more depth through the use of applicable business models and theory to determine the route causes of the phenomena within the organisation discussed in chapter one. It is worth noting at this point that the management theory/ models which have been used, overlaps across the constructs and have been applied holistically across the themes where appropriate.

Cant, Brink & Brijball (2002) propose that customer satisfaction leads to loyalty, which in turn increases the likelihood of retention through a perception of value. The focus on relationships between digital banking channels and customers via the internet is critical given the intensity of competition in this environment both locally and internationally.

2.2 Risk management landscape

On reflection of the analysis through the various detailed discussions with peers that are accountable for this function/ department within FNB Online as well as dialogue with colleagues across the broader group, what emerges is a sound foundation of corporate governance within digital banking channels. However, there is certain hygiene management deficiencies identified which are hampering cohesive and synchronised momentum.

The three environments model suggested by Stapleton (2003: 85) with assessment of external/ far environment, specifically the uncontrollable STEEP factors (social, technological, economic, environmental, political) has been reviewed in conjunction with the macro-environment model of Fahey and Narayanan (1986) as cited in the text by Bakhru (2010: 10), to unpack some of the far environmental factors that are infused with the near environment and has both a direct and indirect influence on digital banking at FNB, figure 2.1. This in essence suggests that the evolution of digital banking is ultimately influenced and propelled by technological, regulatory, economic and social factors.

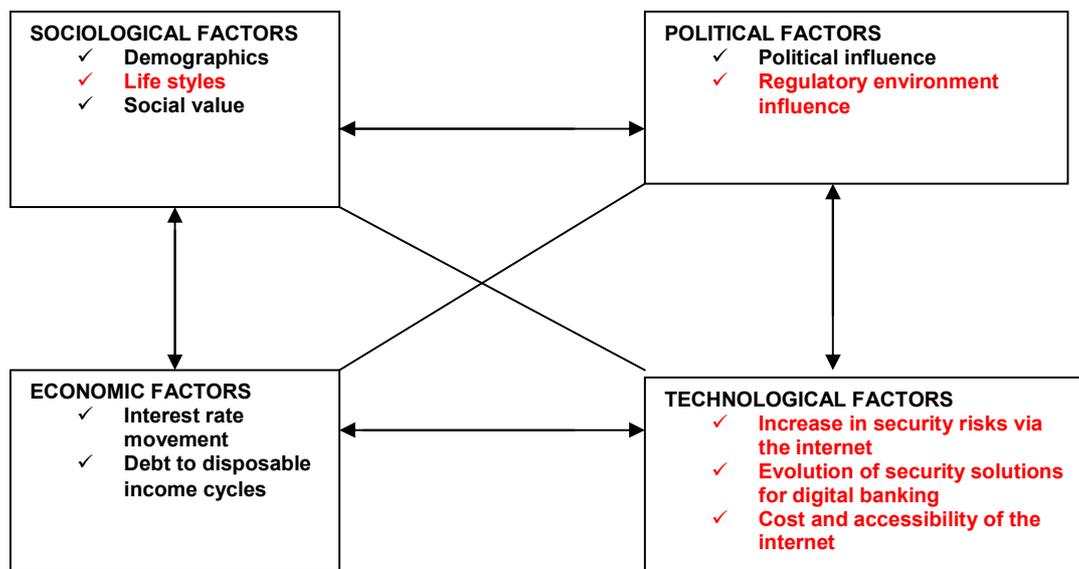


Figure 2.1: Macro-environment influences (Source: adapted from Fahey and Narayanan, 1986)

The value in the model from a strategic perspective is that solving for sociological factors such as lifestyles aligned to consumer needs and wants e.g. convenience, cannot be initiated in isolation without considering interdependent macro factors such as the technological factors or regulatory environment. The model reveals linkages between the far environmental factors and according to Fahey and Narayanan (1986) the far environment and its influence on the organisation can only be unraveled with a systems view i.e. the interconnectedness on the factors.

In reflecting on FNB, it is plausible to deduce that there is some form of common ground. Customers, given their fast paced lifestyles require convenience for their banking engagement. FNB wants to migrate customers to self service channels and leverage of efficiencies offered through the technological environment. The misalignment exists at a deeper level i.e. customers want to achieve their lifestyle objectives, but concerns related to safety of their money, simplicity of the experience and convenience are infused with high level sociological needs. FNB wants to leverage efficiencies through this channel to satisfy shareholder returns and hence satisfying customer needs optimally appears to be a secondary objective. An example of this is through the deployment of minimal functionality to contain costs and result in optimal profitability. This is where the 'system' is out of sync.

2.2.1 Increase in security risks via the internet and evolution of security solutions

Amtul (2011: 3-6) suggests that there are four key levels of security to protect banks against vulnerabilities, namely; identification and authentication, digital certification, encryption, and biometrics. In reflecting on the current FNB scenario in terms of security measures in place (table 2.1), it becomes apparent that there is room for improvement.

Table 2.1: Levels of security (Source: adapted from Amtul, 2011:4)

LEVEL OF SECURITY	IMPLEMENTATION STATUS
1. Identification and authentication	✓
2. Digital certification	x
3. Encryption	x
4 Biometrics	x

Key:

✓	Yes
x	No

FNB has other security mechanisms in place that are an enhancement to level 1 (user name and password) and this is behavioural tracking/ smart block. In essence, behavioral tracking identifies a number of variables which are unique to a user e.g. IP address and if there is a high failure rate of matching variables, transactions are not allowed to proceed. In considering aspects such as the PKI imperative, it emerges that deployment of this functionality at FNB is dependant on other departments/ segments “sponsoring” the cost and prioritisation of development. The federal structure and the nuances related to the online cost recovery model were discussed in chapter 1.

Each segment/ product house negotiates a budget for development capacity annually based on the projects they envisage deploying through the digital channels. This capacity in development weeks is then converted into a cost budget and once this is exhausted, no further development is undertaken for that particular stakeholder. This in essence means that if a project such as the PKI solution is outside the scope of projects planned, this is not implemented as it would erode into existing development capacity for planned projects, which would require certain trade-off’s on revenue generating initiatives. The key constraint relates to scarce resources i.e. there is only so much of development that the IT team can produce and there is a limited cost allocation by product houses/ segments within a given fiscal year.

In addition, security enhancements carry a cost burden which is embedded into core products. Currently the organisation does not differentiate with a pricing model for security enhancements specific to Online with a large competitor offering security enhancements free of charge without increasing banking fees. In the context of the financial services sector it is plausible to deduce the industry make up as follows;

Table 2.2: The spectrum of industry structures (Source: adapted from Grant, 2002)

	PERFECT COMPETITION	OLIGOPOLY	DUOPOLY	MONOPOLY
Concentration	Many Firms	A few firms	Two firms	One firm
Entry and exit Barriers	No Barriers	Significant barriers		High barriers
Product differentiation	Homogeneous product (Commodity)	Potential for product differentiation		
Information availability	No impediments to information flow	Imperfect availability of information		

In reflecting on the industry, it becomes apparent that the financial services sector in S.A is operating as an oligopoly, dominated by the four major banks. This allows the bank's to be more profit driven, given the limited nature of competition and arguably evident with the FNB security pricing methodology discussed above i.e. if the organisation is unable to pass on the cost of developing security systems to the customer, there is no business case for the implementation of enhanced security measures and resources are deployed into alternative revenue generating projects.

In considering the views of Grant (2010) in respect of the authors innovation and technology intense linkage model (figure 2.2), reveal opportunities for customers to be the primary benefactor of technology and innovation as opposed to organisational capitalism e.g. innovative security enhancement costs should in

certain circumstances be absorbed by the business for long term profitability leverage, which is currently not the case at FNB.

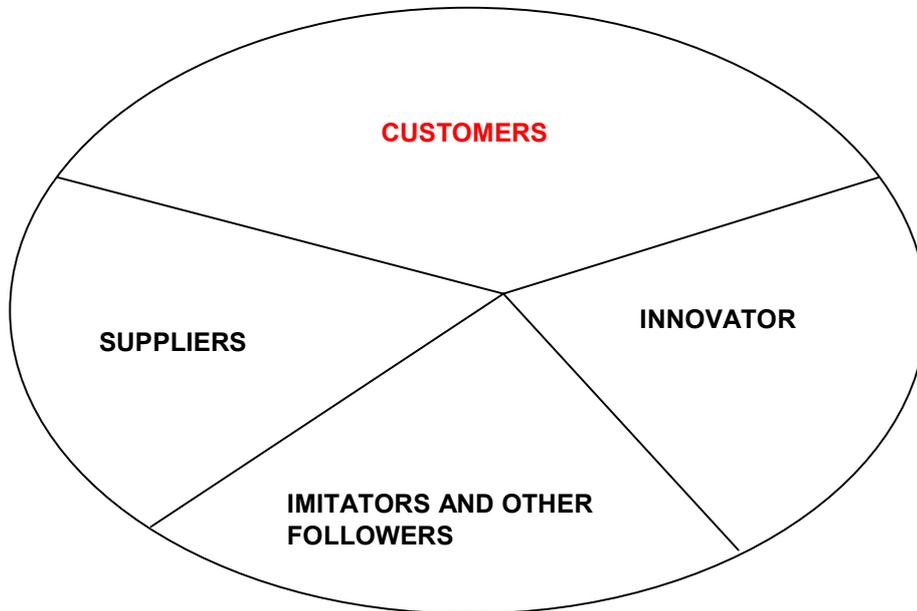


Figure 2.2: Appropriation of value, who gets the benefit from innovation? (Source: adapted from Grant, 2010)

In the context of digital banking channels, arguably, whilst innovation is core to the culture at FNB, new security strategies are focused toward economic goals i.e. the mitigation of fraud/ losses from an organisation commercial perspective as opposed to implementing prudent customer centric security solutions.

2.2.2 Legislative influence on digital banking channels

Aldas-Manzano, Lassala-Navarre, Ruiz-Mafe & Sanz-Blas (2009), proposes that violation of consumer privacy is an important barrier to electronic transactions that requires focus. Locally, the key legislative impacts of data confidentiality that relate to digital banking directly are the following; Protection of personal information bill 9 of 2009 and the Consumer protection act of 2008.

FNB's alignment to the regulatory requirements is reflected in the table below;

Table 2.3: FNB compliance to digital banking relevant legislation (Source: FNB Online internal secondary data, 2011)

Applicable laws and regulations	Impact	Control Effectiveness
Electronic Communications and Transaction Act 25 of 2002	H	R
National Payment System Act 78 of 1998	H	A
Protection of personal information Bill 9 of 2009	H	R
Consumer Protection Act of 2008	H	R

Key:

H	High
M	Medium
L	Low
A	Acceptable
R	Room for improvement
U	Unacceptable

In terms of FNB, a key inhibitor that needs to be overcome is the IT department (a dominant department) who views the LRCD “merely as a support function”. Hence, the alignment to core legislation normally becomes a secondary objective to revenue generating projects. The strategic apex that prioritises projects for implementation is driven at a segment and product house level and the federal structure drives a strong philosophy of shareholder returns. This bottom line gazing approach, is to a degree misaligning to the key emerging threats that could result in reputational risk and is somewhat misaligning to the strategic planning systems advocated by Grant (2010: 197-200).

2.3 Customer centric convenience and Simplicity of the experience

Casala, Flavian & Guinaliu (2008) suggests that banks offer more or less standardised services and are increasingly seeking out differentiation strategies that can influence customer satisfaction and loyalty. This view is supported by Hallowell (1996) whereby the author affirms the importance and link of customer satisfaction and an organisations performance in the long run. The service quality dimensions in respect of convenience and simplicity was assessed in the context of the service-quality gap model developed by Parasuraman, Zeithaml & Berry (1985) which is reflected in figure 2.3 below.

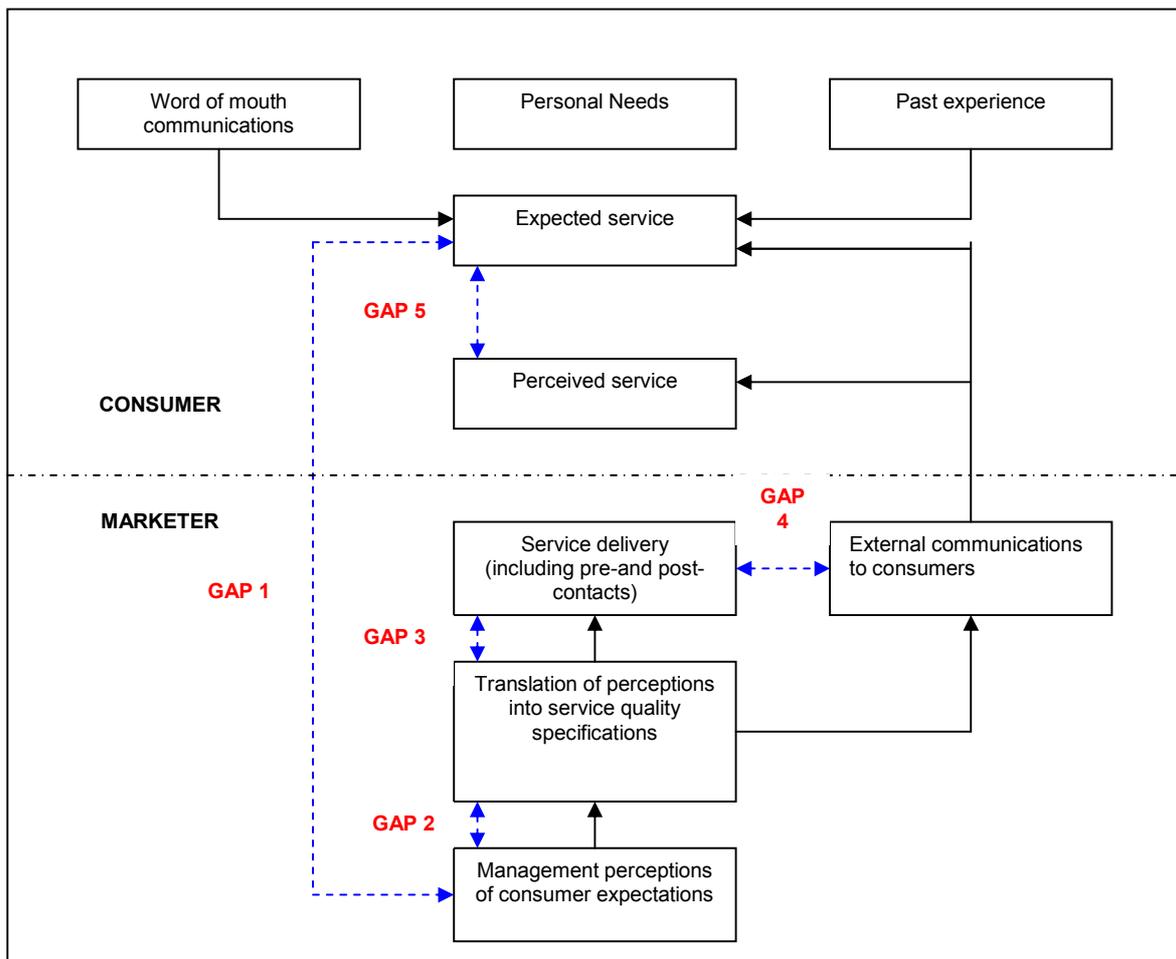


Figure 2.3: The service quality gap model (Source: adapted from Parasuraman, Zeithaml & Berry, 1985)

2.3.1 Gap 1

Education, information and ease of use

FNB is structured as a federal model, with each segment and product house having its own CEO. Each of these business units has its own marketing department with the resultant approach of marketing being singular product focus as apposed to a broader customer pull strategy. The information available via digital banking channels reflects this silo approach. A strong product push methodology is adopted and information related to products is somewhat cumbersome with a 4-5 step process/ clicks to get to the core information in terms of attributes of products. There is also a re-direct mechanism out of core product pages to access information such as pricing parameters. The complexity aligned to finding information could be a frustrating experience for customers who would expect simplicity and convenience during engagement with this channel. This is a critical barrier to overcome as this is the initial phase of research by a customer prior to the purchase of a product.

Bank jargon and improper language remains at the heart of the problem in respect of information. An example of this is when errors are encountered for new account opening reflected in figure 2.4 below;

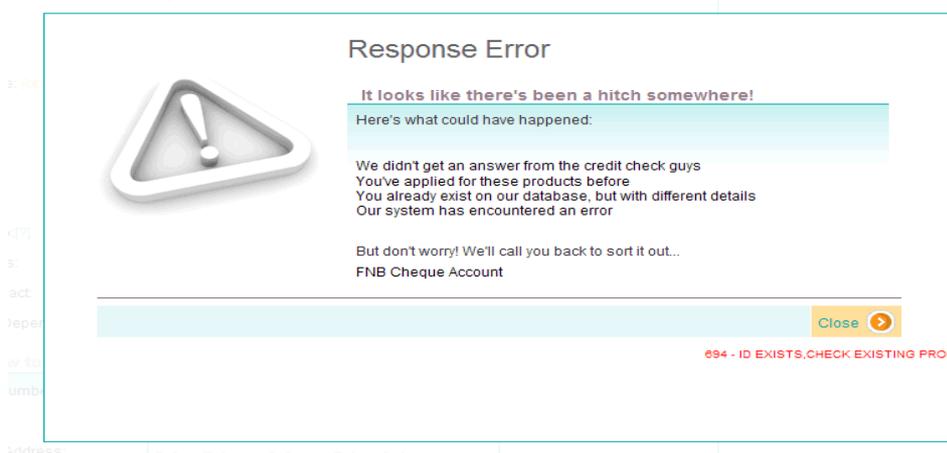


Figure 2.4: Example of an error message for new account opening (Source: FNB Online internal secondary data, 2011)

The content currently on the website is also strongly aligned to business requirements primarily influenced by the product push methodology. This often results in a reactive approach by digital channels to eliminate redundant or conflicting/ stale information. The site also lacks education on usage of products, including online banking, together with education on aspects such security being at a very high level as can be seen in figure 2.5 below.

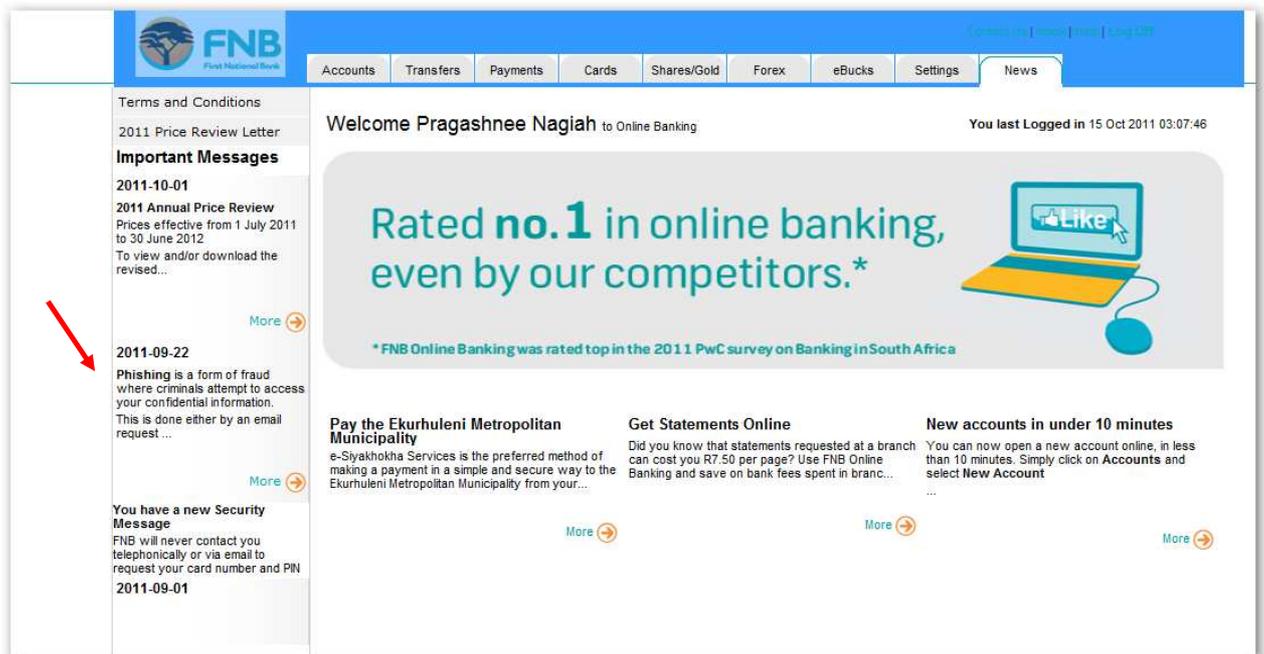


Figure 2.5: Example of education parameters in digital banking channels (Source: FNB Online internal secondary data, 2011)

2.3.2 Gap 2

Ease of activating online profiles, after sales service and enhanced cost efficiencies

The call centre servicing online banking receives approximately 120 000 calls per month. Recently the business has implemented a substantial charge for customers that require their passwords to be re-set.

This has been implemented to primarily reduce the number of calls pertaining to this category and drive customers toward the self help functionality available online. This punitive measure has been instituted with a view of managing the strained capacity within the call centre environment. The lack of reliable tracking i.e. numbers pertaining to call categories and the accuracy of the information is key to this dilemma. Hence, the appropriate staffing of the call centre is not possible until the business intelligence is improved. This has a direct impact on customer perceptions in terms of call holding times, costs incurred and simplicity when the need arises to engage “physically” with the channel.

The resolution of customer enquiries with regard to the consumer segment is sound as was evident in figure 1.10, however the after sales service pertaining to the business segment is still significantly low. This is due to the complex nature of business segment enquiries. Given the focus on cost reduction/ cost containment, low skilled and temporary staff are employed to manage this segment and is resulting in negative customer sentiment.

2.3.3 Gap 3 and Gap 4

Process efficiency for new account opening

Much has been done by the organisation in recent times to improve the account opening process via online and the company has capitalised on efficiencies through above the line advertising namely “open an account online in under 10 minutes”. Gronroos (1984) as cited in the text by Lindridge, Woods, Ali & Dibb (2008: 38), suggests that there are two key service expectation dimensions, namely the technical quality (service outcome) and the functional quality (service process). The author further advocates that functional quality is highly important to consumers.

In considering the online account opening process, what emerges is that the technical quality of account opening lives up to promises by the organisation as can be seen in the evidence presented in figure 2.6 below.

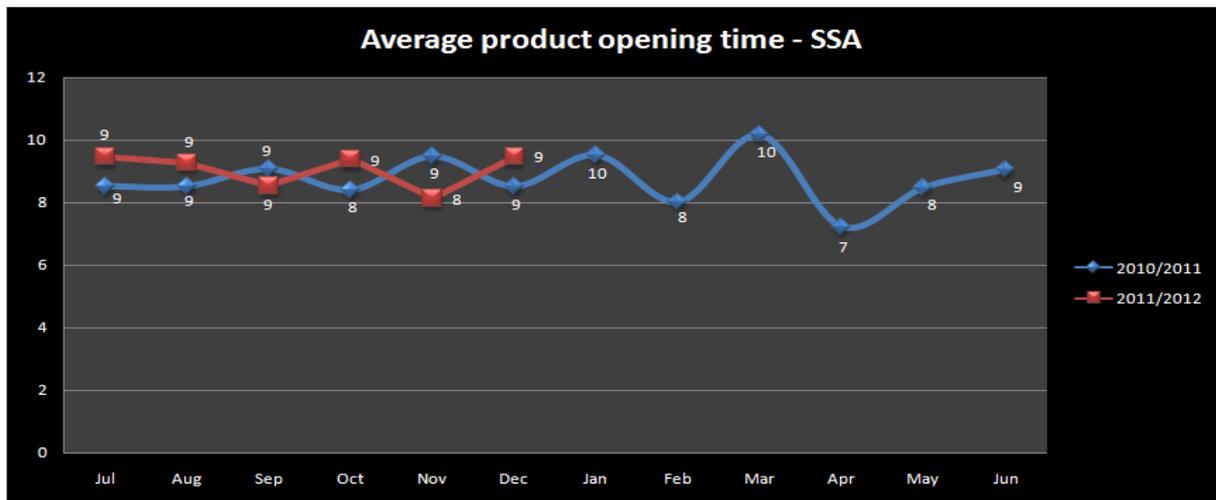


Figure 2.6: Average account opening time via digital channels (Source: FNB Online internal secondary data, 2012)

The bottleneck emerges in the manual fulfillment processes post the online interaction. Advertising standards authority (ASA) complaints have recently been escalating where customers are challenging the advertising pertaining to account opening. What emerges is that the fulfillment processes such as debit order switching and support documentation is manually driven through product houses and is out of the sphere of control by online. These manual service breakdowns are resulting in service failures and negative perceptions of the overall process.

2.3.4 Gap 5

Expected versus perceived service

FNB online was recently voted as “number one in online banking” by competitors within the industry (PwC – Strategic and emerging issues in South African banking - June, 2011) and whilst this is an excellent accolade for the organisation, the company has also fallen prey to the “voice of customers”.

This was evident in the recent local Sunday Times top banking brands survey for 2011, whereby FNB dropped to third place, after having enjoyed top spot status in 2010 (Figure 2.7).

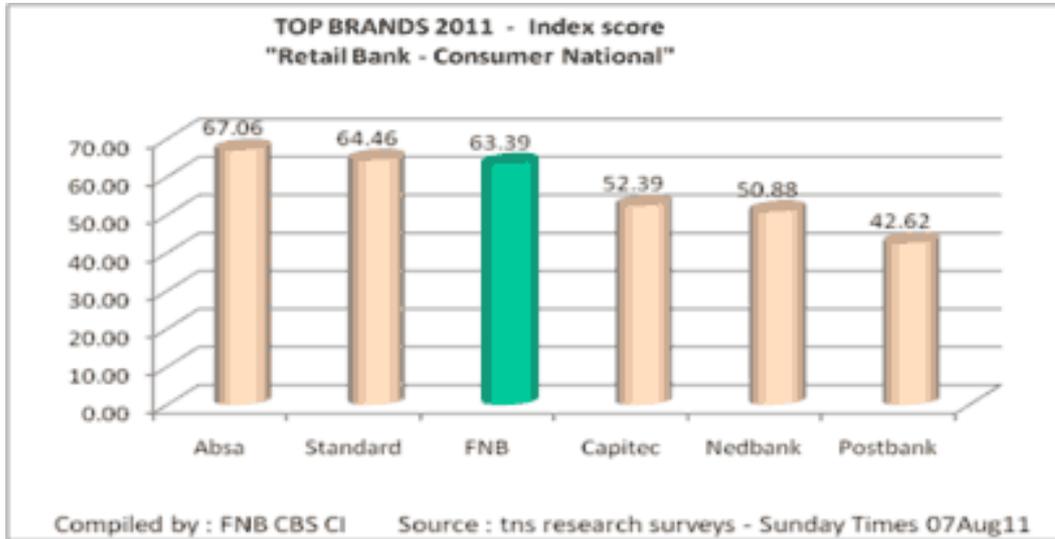


Figure 2.7: Best South African Banking Brands (Source: TNS research surveys – Sunday Times, August 2011)

Whilst it is prudent to note that this is an overall survey of the brand and not specific to digital channels, it is an indicator of customer perceptions.

FNB achieved the best Buzz Barometer rating for Online Banking but Nedbank's VoC score was higher

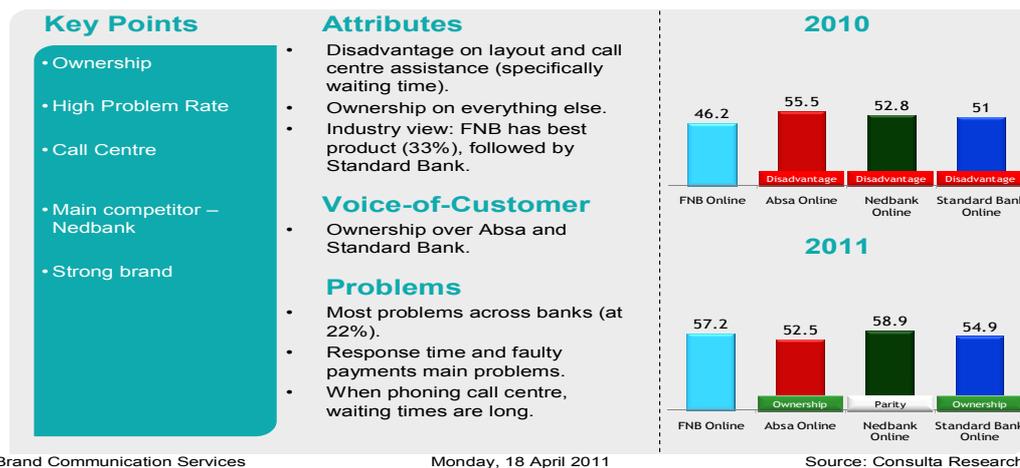


Figure 2.8: Service comparatives for Online banking amongst local banks (Source: Consulta Research, 2011)

In respect of digital banking specifically (figure 2.8), there is a strong link to overall brand perceptions. This coupled with evidence presented in chapter one, it is plausible to acknowledge that there are areas of improvement for optimal customer satisfaction to become an enabler and achieve the objectives set out for the research of this paper.

2.4 Summary

The causes and consequences of customer satisfaction within digital banking channels remains a complex ecosystem. Throughout this chapter it becomes clear what is required to improve the overall experience of the customer, however the glue that binds these components remains customer centricity. It is only through this buy-in from the organisation that will result in the attainment and support of strategic goals of the company.

There are some key issues that have emerged from the analysis and these are as follows;

- ✓ There is a misalignment to customer expectations in terms of service quality solutions, processes and organisational drivers.
- ✓ Innovation is core to the culture of the company but cutting edge solutions are lagging.
- ✓ Scarce resources are impeding momentum and traction of virtual banking channels.

A critical paradigm shift is needed by FNB from traditional service and solution quality in the fast evolving digital era.

CHAPTER 3

3. Literature review

3.1 Introduction

Digital banking has not been fully embraced by local South Africans, in comparison to larger more established banking industries of the world that has experienced explosive growth (Akinci, Akoy & Atilgan, 2004). By definition, digital banking is an electronic connection between bank and customer to prepare, manage and control financial transactions (Salehi and Zhila, 2008). Despite the research literature available on e-commerce as well as electronic banking, much is still unknown about digital banking in developing countries such as South Africa (Auta, 2010: 215). This validity gap in the literature regarding the digital needs of consumers in developing countries has been echoed by Kassim and Abdulla (2006: 425), who claim that studies related to middle eastern markets remain under-researched.

Hence, it can be argued that South African nuances have not been explored in depth and the literature relevant to the challenges may or may not be conclusive in the local context. In particular, how clients feel about this form of banking and what the strategic challenges that requires resolution for consumers and banks to mutually benefit from this symbiotic cost saving relationship (Sathye, 1999). Digital banking provides value for customers, but also enables banks to cut costs and improve efficiency (Laukkanen, Sinkkonen & Laukkanen, 2008: 441).

A fundamental shift is occurring from conventional banking to digital banking powered primarily by the internet (Basel Committee – Electronic Banking Group, 2000: 11). Digital banking has become a popular alternative of conducting banking in the twenty first century.

Technology and innovation in many industries as well as banking is what drives daily business activities. This alternative platform has revolutionised the financial services industry in recent times both locally as well as internationally (Kerem, Lustsik, Sorg & Vensel, 2003). This evolution has been endorsed by Amato-McCoy (2005) who claims that digital banking has become the primary distribution channel for banks to market their products and services and is considered a critical profit and success lever (Gan, Clemes, Limsombunchai & Weng, 2006). Ganguli and Roy (2010: 168), affirms the shift from traditional channels that are becoming more redundant which is being fueled by the intensity of competition within the banking industry and organisations are seeking technology leverage to deliver virtual banking services. These new technologies have in the last decade or so, contributed significantly to the tremendous growth experienced in the industry (Barwise and Farley, 2005).

The gap between local competitors is negligible as banks offer similar products and services, hence the need for differentiation on specific criteria becomes crucial ingredients for influencing customer satisfaction and loyalty (Ganguli and Roy, 2010). This can only be achieved by a clear understanding of the priorities of consumers. Understanding the key drivers that are impacting on adoption has become a topical issue in the banking sector (Aldas-Manzano, Lassala-Navarre, Ruiz-Mafe & Sanz-Blas, 2009: 54). According to Rotchanakitumnuai and Speech (2003), the authors argue that historical studies have focused on positive aspects of digital banking, but limited research has been undertaken to establish the barriers of adoption.

Despite heavy investment by banks to improve their digital presence, many consumers are inactive or engage with this channel on a limited basis (Sarel and Marmorstein, 2003). Arguably, long term profitability and shareholder value through this medium can only be achieved through customer satisfaction which is the glue that galvanizes this recipe (Anderson, Fornell & Mazvancheryl, 2004).

3.2 Risk management landscape

Arguably, whilst customers have become accustomed to the convenience of digital banking channels as suggested by Nath, Schrick & Parzinger (2001) , so to have the fraudsters in wanting to penetrate this new found area of exploitation with phishing scams being at the heart of loopholes. Clients are concerned with protection of their personal data and hence both security and privacy are key enablers of trust (Lee and Turban, 2001). Wang, Wang, Lin & Tang (2003), are of the opinion that consumer perceptions about security and privacy could erode usage intention if customers are skeptical about credibility issues. Trust as a catalyst of customer commitment is key when engaging through digital channels as clients are aware of the risks aligned to this channel and even if the risk is low, perceived risk will negatively influence channel engagement (Kassim and Abdhulla, 2006: 429).

The secondary agenda by banks in developing countries in terms of data privacy and protection of information is re-enforced in the work done by Amtul (2011), whereby the author asserts a need for better protection of customer information and ethical linkages aligned to invasion of customer privacy is echoed by April and Cradock (2000). The key aspect here is that whilst business strategies such as fraud prevention are key economic drivers for the organisation, a greater threat is aligned to reputation risk if fraudsters were to hack into databases, functionality etc. (Singh, 2007).

Previous research on electronic banking reveals a direct relationship between perceived reputation and the foundation of trust (Casalo, Flavian & Guinaliu, 2008). Reduction in risk perception is key to adoption and usage and has been endorsed by Yoon (2002) who suggests that this fear of hackers and privacy compromises compounds the uncertainty for clients. Conversely, Gerrard, Cunningham & Devlin (2003), insinuates that the perpetuation of security and

data privacy risk in the news is what is distorting customer perception and the continued persistence of mistrust that is plaguing digital banking channels.

“Opponents of online banking say that online banking involved heavy risk to the consumers - 86% of all attacks are directed at the home users’ against 14% at the financial houses, Zvomuya (2007) and the industry has rushed to get online without appropriately confronting issues that could compromise its integrity” (Singh, 2007: 2).

This accusation by Singh (2007) of not unpacking and identifying the risk dimensions clearly is echoed in the work done by Littler and Melanthiou (2006) wherein the authors support the inadequate nature of work done in this context. Hence, the fear of customers with scrupulous characters obtaining sensitive information such as pin codes persists and is impacting on adoption and usage (Poon, 2008).

Mukherjee and Nath (2003), point out that ethics around data privacy and security has to do with shared value between consumer and organisation and is a vital component in digital banking uptake. This undoubtedly is a key pillar of success for digital banking and whilst this should be considered a non-negotiable, the key constraint in implementing customer centric security solutions is impeded by scarce resource as is the case with FNB. Pearce and Robinson (2003: 128) states that scarce resources are a function of the limited nature of resources and should be deployed in fulfilling customer needs.

IT resources within the organisation is aimed at this objective, however the tradeoff for security enhancements is directed at revenue generating projects. The ability to prudently deploy resources to gain competitive advantage through seeking out the most appropriate needs of customers’ and maintaining a market focus as apposed to the primary thrust of internal objectives, is critical for success (Segal-Horn, 2004: 177-183).

3.3 Customer centric convenience

Online banking within FNB as with most local banks is still embryonic. Consumers in recent times are demanding an easy to use, convenient platform that is available when they are ready to engage with the bank, whether this is for new purchases or transaction usage (Jun and Cai, 2001). Today, customers have become more intolerant of banks especially where there is a need for instant gratification, powered by the technological age which has spilled over into the financial services world through digital banking (Ismail and Panni, 2009).

Speed and convenience remains at the heart of this innovation and has been accepted by consumers as an evolutionary service platform (Klopping and McKinney, 2004). This alternative service delivery mechanism is available to consumers to carry out their banking transactions in addition to traditional banking channels (Akinci, *et al.*, 2004). The channel facilitates 24 hour accessibility at a lower cost with easier access (Ismail and Panni, 2009; Lee, Lee & Eastwood, 2003). Digital banking was developed to enable convenience for customers but also facilitates economic benefits for banks given the ease of virtualising services (Kerem, *et al.*, 2003).

Chuang and Hu (2011) propose that an understanding of what produces customer satisfaction through this service medium can result in higher levels of retention and attraction via this channel. Wong, Rexha & Phau (2008) argues against this view and embraces the perspective that traditional and digital banking channels should be viewed as complimentary. The authors suggest that customer trust in digital banking is a function of service experience within traditional channels and thus has a direct bearing on digital banking adoption and usage. There is further evidence to support this notion of acceptance of alternative delivery channels based on the research findings by Patricio, Fisk & Cunha (2003).

There is a myriad of challenges that the organisations face as the digital banking platform matures in the quest for optimal convenience. Chuang and Hu (2011: 3) suggest that there are six key dimensions, namely; transaction technicalities, decision-making convenience, interactive interrogation, specialty information, security and exploration. Laukkanen, *et al.*, (2008: 440) proposes a more basic stumbling block to digital banking embracement i.e. resistance to innovation.

The authors observe that adoption of innovation has been the focus of past studies whilst resistance of innovation as a barrier to adoption and usage is somewhat neglected and that through ignoring the non-adopter feedback, valuable information to overcome obstacles of resistance are being ignored. This is also advocated by Parasuraman (2000) who remarks that customers may not be ready and confident to embrace technology and that there is growing frustration amongst customers who are availing of technology driven service mediums. The greater the impact of change of an innovation on a consumer, the greater the likelihood of resistance will be (Ram and Sheth, 1989).

Gronroos (1984) suggests that there are two key service expectation dimensions, namely the technical quality (service outcome) and the functional quality (service process). The author further advocates that functional quality is highly important to consumers. The service received in the end to end process during customer engagement with digital channels is a critical aspect of e-service quality (Collier and Bienstock, 2006).

This implies aspects such as after sales service through call centres as well as the efficiency achieved through service processes and the successful conclusion of a transaction such as account opening via digital banking channels are of paramount importance.

The dilemma of managing customers' expectations throughout the value chain creates an interesting dichotomy for banks according to Yap, Wong, Loh & Bak (2009). The authors propose that whilst digital banking creates convenience for customers, the extent of physical interaction with the bank decreases as well as switching costs which may ultimately erode customer commitment (Sarel and Marmorstein, 2003).

To ensure the prudent management of service quality, Parasuraman, Zeithaml & Berry (1985) propose the 'gap model' which was discussed in chapter two, for identifying deficiencies in the service delivery chain. The authors propose that in the quest for high-quality service, these gaps must be closed in an attempt to facilitate positive behavior such as repeat patronage and positive word of mouth (Lindridge, Woods, Ali & Dibb, 2008: 18).

Digital banking presents clear benefits for clients who have the desire to reclaim independence over their financial affairs (Jayawardehena and Foley, 2000; Laukkanen, 2006). This presents a challenging environment for bankers where instantaneous feedback is not available regarding service quality and service failures remain trapped in the mind of customers who exit organisations if they are dissatisfied and not prepared to complain about the quality of service but rather exercise the power of choice. Service quality remains an essential ingredient in the recipe to exploit mutual benefits for banks and consumers in terms of time, cost and getting closer to the customer through this servicing mechanism (Natarajan, Balasubramanian & Manickavasagam, 2010: 2).

3.4 Simplicity of the experience

As tough economic pressures and competitive differentiation continue to rise in the battle for customers through the most cost effective manner, banks both locally and internationally are looking at leveraging their self service channels to improve profitability by reducing reliance on costly conventional distribution platforms i.e. branches, both in terms of transactability and new customers (Reid and Levy, 2008). Cristopher, Mike & Amy (2006) assert the importance of digital channels in the distribution mix of marketing and selling an organisations products in the quest for profitability.

This is typically aligned to perceptions based on the platforms layout and relevance of information, aesthetics, navigation, speed of transaction processing which are key service differentiators (Yang, Peterson & Cai, 2003). This view of understanding a users' experience and needs is re-enforced in the work done by Pyun, Scruggs & Nam (2002). The readiness of consumers to embrace digital banking channels may differ from user to user. Meuter, Ostrom, Bitner & Roundtree (2003), suggest that this may be as a result of technophobia with customers feeling uncomfortable with technology engagement for their banking affairs. This is primarily fueled by the complexity of the interaction which involves no personal engagement through this intangible service and has a direct bearing on adoption of digital banking services (Aldas-Manzano, *et al.*, 2009: 54). The authors further note that the profile of the consumer is also a key aspect of adoption. Consumer idiosyncrasies aligned to the individual dependencies such as capability and capacity has an influence on digital banking usage (Walker and Johnson, 2006).

This presents the challenge for banks to ensure an intuitive customer experience and to overcome concerns that consumers may have when engaging with digital banking channels from the comfort of their homes (Chuang and Hu, 2011).

Exploration is arguably the starting point of customer engagement in seeking specific information to fulfill certain needs. The research undertaken by Chuang and Hu (2011) revealed a link between the provision of easy to find specialty information and customer satisfaction. This pertains to usability and availability of information to facilitate customer empowerment, the former which is a crucial factor of digital banking maturity (Flavian, Guinaliu & Gurrea, 2006). Littler and Melanathiou (2006), asserts that despite the lower cost associated with digital banking, consumers also incur time costs associated with the effort of not being able to find relevant and useful information easily and this could be a further source of frustration.

In addition to the cognitive strain on consumers, a further area of frustration that is constraining digital banking adoption is website download speed (Aldas-Manzano, *et al.*, 2009). The South African paradox is detailed below. This is primarily due to banks wanting to aggressively capitalise on marketing initiatives via this channel which results in high resolution graphics and marketing messages in an attempt to acquire new consumers or cross sell to existing customers. Hence, it is plausible to deduce that effort expended when engaging with a banks website can influence a customers confidence in the channel (Casalo, Flavian & Guinaliu, 2008). Ease of use as one of the barriers of adoption has been validated in the work done by Ram and Sheth (1989).

The visual appearance of a banks website is also an important driver of usage and adoption, in particular the appearance of the website (Madu and Madu, 2002). The authors suggest that it is a key dimension of service quality and a driver of satisfaction. Casalo, *et al.*, (2008: 400) concluded in their research that usability is a core determinant of customer satisfaction, loyalty and positive word of mouth.

It becomes apparent that the intuitive experience and perceived ease of use has a profound impact with behavioural intention to embrace and adopt self service channels (Wang, *et al.*, 2003).

3.5 Key South African challenges

The South African context of digital banking adoption presents an interesting technology and financial services paradox. In 2009, the estimated South African internet users was about 4.6 million (about 10% of the population) and a key inhibitor of internet uptake is a function of accessibility through enablers such as fixed line and wireless broadband options (World Wide Worx, 2009). These low levels of internet penetration caused by limited/ lagging communication infrastructures are a key reason that is compounding e-commerce challenges in Africa (Mensah, Bahta & Mhlanga, 2005). South Africa considers access to communication as a fundamental right of all of its citizens (South Africa. Department of Communications, 2009).

According to the draft broadband policy for South Africa (September 2009), the government has re-enforced that accessibility is an essential component of social development (South Africa. Department of Communications, 2009). The conflicting agenda of this draft bill manifests with the risk that emerges with increasing broadband and the government acknowledges the need for a robust policy against cyber security risks as part of national security (South Africa. Department of Communications, 2009). This dichotomous relationship between speed and software piracy rate is resulting in procrastination of rollout plans (IT news Africa, 2009). This presents an interesting challenge for the local South African Government who has clear societal objectives but are cautious about the pervasive influences and security challenges that the internet may bring to local shores. In addition, to the security challenges, cost is also a key factor in developing countries (Brown, Letsididi & Nazeer, 2009).

Brown, Cajee, Davies & Stroebel (2003) assert that the high cost associated with access is the core reason for stagnation and low growth of internet users in South Africa. The options and variety of internet access mechanisms available to South African home users have been on the rise in recent years according to Brown, *et al.*, (2009), however the high telecommunication costs in South Africa is a primary inhibitor to an equitable spread of access across the local socio-economic groups.

Despite free market principles of competition by more than 200 Internet Service Providers (ISP's), the stagnation of the internet sector is primarily due to the expensive operating environment created by Telkom SA's dominance in the fixed line and bandwidth markets (The Internet Society of SA – ISOC-ZA, 2004). Whilst the launch of wireless broadband services in 2004 has aided modest growth, cost remains a key driver of access that has limited accessibility to the fortunate few and not really addressing the needs of the broader South African community which could be argued mostly live in rural areas (Brown, *et al.*, 2009). Brown, *et al.*, (2003) further propose that higher speed and therefore convenience is a key influencer of access choices with the resultant outcome of user compatibility. Speed of access is therefore a key consideration for most internet users (Brown, *et al.*, 2009). The greater the compatibility between the user and the technology, the more likely it is to be adopted (Tan and Teo, 2000). One of the influences for embracing electronic banking in South Africa was found to be compatibility (Brown, *et al.*, 2003).

Hence, it is plausible to deduce that internet access mechanisms will be a key leading indicator on behavioural influence to adopt digital banking (Ifinedo, 2006). Local banks are therefore faced with uncontrollable influences in the external environment which further compounds their digital banking objectives and to achieve these goals a mindset shift is needed to provide consumers with innovative products and services at lower costs and better value (PwC – The new digital tipping point, 2012: 3).

3.6 Summary

Given the technological pace and methods of conducting business in the twenty first century through mediums such as the internet, it can be assumed that digital banking will change the future of the financial services industry (King, 2010). Through embracing these aspects, service providers will be poised to increase their digital banking base in the future (Nath, *et al.*, 2001). The primary challenge is how banks will meet the demands of consumerism in a digitally evolved environment where there is no personal interaction and increased risk with a potential total restructure of the industry fueled by the internet (Basel Committee – Electronic Banking Group, 2000: 3).

Howcroft and Durkin (2000) argue that digital banking will never fully replace traditional banking, and whilst this is plausible to acknowledge, the benefits for both banks and consumers far outweigh any thoughts of procrastination in solving for optimal customer satisfaction through this medium.

CHAPTER 4

4. Research Methodology and Design

4.1 Introduction

Chapter two resulted in the interrogation of the business problem and unpacking the key determinants of customer satisfaction within the organisation that may facilitate increased adoption and usage of digital banking channels in South Africa. Chapter three focused on the theoretical nature of academic views with the intention to further explore what customers want from this channel, the critical drivers of customer satisfaction as well as perceived nuances relating to service via traditional banking versus digital banking channels.

The purpose of this chapter is to present the framework of the research that was undertaken and specifically addresses the rationale for the choice of approach, critical components of the design as well as the methodology. The research methodology for this study primarily followed a qualitative approach. However, the quantitative approach was also used to compliment the qualitative method as they are not necessarily mutually exclusive (Lewis and Charlesworth, 2003: 23). Bryman (1989: 24-25) describes the emphasis of an individuals perspective which is the key differentiator between qualitative and quantitative approaches.

The analysis and interpretation for the results of this study is primarily presented through the descriptive statistical approach proposed by Taylor (2002) to identify trends/ frequency distribution regarding the themes and drivers of customer satisfaction.

4.2 Aim of the research

The research was undertaken through a survey that was targeted at collecting significant, accurate and relevant data and was completed approximately a month from commencement. The research effort focused on specifically analysing the following problems/ objectives:

- ❖ To determine what customers primarily want from digital banking channels, in terms of the core themes identified.
- ❖ To establish the drivers which are most important to customers.
- ❖ To investigate the perceptions of service via digital banking channels.

The study was therefore aimed at identifying customer satisfaction determinants that will result in an increase in adoption and usage of digital banking channels in South Africa.

4.3 Research approach and design choice

Coldwell and Herbst (2004: 35) describe 'research design as the glue that holds the research project together' and advocate that the design forms the structural framework of the research to be carried out. According to Zikmund (2006), conducting a research design provides a detailed plan which will guide and provide focus of a study. The two main research methods that are available to researchers are quantitative and qualitative.

The quantitative approach is based on scientific outcomes through statistical/ mathematical analysis. Lewis and Charlesworth, (2003: 20) suggest that in opting for this method, it is imperative to ensure that the appropriate variables are chosen which will enable the researcher to prove or disprove a particular hypothesis through logic and reason.

Verma and Beard (1981: 184) asserts the constraints of this method and advocate that hypothesis testing is normally a guide for validation as it is generally based on a 'gut feeling' of the researcher. The qualitative approach leans more toward a behavioral understanding of a certain phenomena and is descriptive in nature but as pointed out by Lewis and Charlesworth (2003: 21), people's opinions and attitudes can change.

The research approach for this study primarily followed a qualitative approach but also incorporated methodological as well as investigative triangulation principles and is descriptive in nature (Saunders, Lewis & Thornhill, 2003). Triangulation emerges as a concept specifically to address issues whereby there is a threat to reliability or validity, (Saunders, *et al.*, 2003). Lewis and Thornhill (2003), further suggest that through combining multiple methods e.g. the use of qualitative and quantitative methods with primary or secondary data gives rise to triangulation principles.

The quantitative methodology was used as a supplementary approach to the qualitative method. The intent was to interrogate the primary data, specifically to leverage off the inductive approach as suggested by Saunders, *et al.*, (2003: 85-87). The authors advocate that through the collection of data, a theory can be formed through the analysis and interpretation, which is an inverse approach of summarising what data is to be collected versus what the data could possibly reveal.

The aim was to establish if there is indeed a relationship between the independent and dependant variables discussed in chapter one through viewing consumers in a humanistic way (Saunders, *et al.*, 2003: 87).

The primary data for this study was collected using a measuring instrument in the form of a self-administered web questionnaire which comprised of a series of questions and other prompts for the purpose of gathering opinions and perceptions from respondents regarding the themes and adopted a five-point Likert scale to facilitate frequency analysis (Cant, Gerber-Nel, Nel & Kotze, 2003: 113).

The secondary data that is available within the organisation was aimed at further unpacking the problems identified to support the validity of the results obtained from the qualitative study. This typically incorporated historical behavioral trends that produced quantitative data analysis opportunities for trend analysis, to gain deeper insights regarding customer satisfaction levels, specifically to FNB. This was achieved through comparative variable analysis such as fraud trends versus new functional deployment of fraud prevention measures (Saunders, *et al.*, 2003: 350). In addition, historical customer uptake was analysed in relation to new functionality deployment such as heuristic enhancements to establish if there were any links between these variables.

The nature of the organisation, given the stringent requirement of shareholder return expectations as well as resource scarcity, demands a sound business case for project implementation trade-offs and hence the combined research approach to facilitate a factual presentation of the findings.

4.4 Data gathering tool and procedures

The primary data for this study was collected using a single measuring instrument in the form of a self-administered web questionnaire. This comprised of a series of open and closed questions and other prompts for the purpose of gathering information from respondents and adopted the five-point Likert scale as proposed by Cant, Gerber-Nel, Nel & Kotze (2003: 113) that varied from strongly disagree to strongly agree (Annexure A). The choice for the survey method was mainly due to the mix of the approaches chosen which in addition to providing insights on opinions this also generated some data that was used for the inductive hypothesis analysis (Saunders, *et al.*, 2003: 85).

In addition, the survey method was appropriate given the constraint of tight timelines for the completion of the study as well as work pressures and commitments. Whilst the web based questionnaire resulted in certain direct costs, the time management demands outweighed alternative methods such as interviews. The secondary data was obtained from corporate records within the organisation. The intention was to use existing relevant information to assist with providing supporting evidence around the chosen study, where applicable.

Cognisance to the main disadvantage of the possible low response rate that normally results from surveys as suggested by Taylor (2001: 49) was considered. However, follow up activities such as reminder e-mails were used to overcome potential low response rates (Taylor, 2001). In an attempt to further overcome response bias through the use of the Likert rating scale suggested by Cant, Gerber-Nel, Nel & Kotze (2003: 113), the scale was also inversed starting with strongly disagree and ending with strongly agree, incorporating the views advocated by Taylor (2003: 57). The choice for a rating scale was also embraced to aid frequency as well as inductive hypothesis analysis (Saunders, *et al.*, 2003: 85; 354).

4.4.1 Data gathering tool design

In formulation and construction of the questionnaire, aspects from chapter three was reviewed in particular the work done by Ganguli and Roy (2010: 174-175) as well as Casalo, Flavian & Guinaliu (2008). The literature of Ganguli and Roy (2010) was chosen given the close alignment to this particular study whereby the authors were testing technology based service quality dimensions of banking in India and the resultant impact on customer satisfaction and loyalty. The work done in respect of website usability as a driver of customer satisfaction was also of particular importance (Casalo, *et al.*, 2008: 404).

The survey questions were adapted by leveraging of the advice provided by Laxton (2004) as cited in the text by Coldwell and Herbst (2004: 25-91) to ensure relevance within the local banking sector. The full adaptation and customisation of specific questions derived from the literature are reflected in table 4.1 below, in no particular order or categorisation as this was structured based on additional pilot studies and input received (Annexure A). In an attempt to ensure simplicity and understanding of the questions, an additional pilot study was re-conducted with a small sample of 10 individuals outside the organisation to ensure that the questions were clearly understood by non-bank employees and no significant need for revision of the questions were noted.

Table 4.1: Questions used in the web based survey instrument (adapted from literature review, 2011-2012)

Question	Theme	Key Literature Reference
✓ If I was a victim of bank fraud i.e. a loss of funds without consent, I would continue to make use of electronic channels.	✓ Security	(Singh, 2007); (Yoon, 2002); (Wang, Wang, Lin & Tang, 2003)
✓ There is good security offered through electronic banking channels.	✓ Security	(Kassim and Abdhulla, 2006)

Question	Theme	Key Literature Reference
✓ My bank provides sufficient education about fraud prevention through electronic banking channels.	✓ Security	(Casalo, Flavian & Guinaliu, 2008); (Yoon, 2002); (Poon, 2008); (Singh, 2007); (Amtul, 2011)
✓ I believe that bank security through electronic banking channels is better now than it was in the past.	✓ Security	(Poon, 2008); (Wang, Wang, Lin & Tang, 2003)
✓ I believe that through using electronic banking channels, my bank charges should be cheaper.	✓ Convenience	(Ismail and Panni, 2009; (Lee, Lee & Eastwood, 2003)
✓ If I were rewarded with an incentive e.g. rewards programme to bank through electronic channels more frequently, this would increase my usage.	✓ Convenience	(Chuang and Hu, 2011)
✓ My bank provides sufficient education/ training on how to use electronic banking channels.	✓ Convenience	(Casalo, Flavian & Guinaliu, 2008); (Yang, Peterson & Cai, 2003); (Pyun, Scruggs & Nam, 2002); (Ganguli and Roy, 2010)
✓ My bank offers the ability to open banking accounts through electronic banking channels.	✓ Convenience	(Chuang and Hu, 2011); (Cristopher, Mike & Amy, 2006)
✓ The process to open bank accounts through electronic banking channels is simple.	✓ Convenience	(Chuang and Hu, 2011); (Cristopher, Mike & Amy, 2006); (Flavian, Guinaliu & Gurrea, 2006); (Littler and Melanthiou, 2006); (Gronroos, 1984)
✓ I am more satisfied with the level of service I receive from the bank when using electronic banking channels compared to visiting a branch.	✓ Convenience	(Gronroos, 1984); (Collier and Bienstock, 2006); (Parasuraman, Zeithaml & Berry, 1985); (Natarajan, Balasubramanian & Manickavasagam, 2010)
✓ Accessibility and convenience are key factors for me to continue/ start using electronic banking channels.	✓ Simplicity	(Jayawardehena and Foley, 2000; (Laukkanen, 2006); (Casalo, Flavian & Guinaliu, 2008); (Jun and Cai, 2001)
✓ My bank provides me with all the functionality/ services necessary to only bank through electronic banking channels with no need to go into a branch.	✓ Simplicity	(Gronroos, 1984); (Collier and Bienstock, 2006); (Parasuraman, Zeithaml & Berry, 1985); (Natarajan, Balasubramanian & Manickavasagam, 2010)

Question	Theme	Key Literature Reference
✓ The information available through electronic banking channels is easy to understand.	✓ Simplicity	(Casalo, Flavian & Guinaliu, 2008); (Yang, Peterson & Cai, 2003); (Pyun, Scruggs & Nam' 2002); (Ganguli and Roy, 2010)
✓ The information available through electronic banking channels is relevant to my needs.	✓ Simplicity	(Casalo, Flavian & Guinaliu, 2008); (Yang, Peterson & Cai, 2003); (Pyun, Scruggs & Nam' 2002); (Ganguli and Roy, 2010)
✓ Overall, I am satisfied with the electronic banking services offered by my bank.	✓ Simplicity	(Singh, 2007); (Yoon, 2002); (Casalo, Flavian & Guinaliu, 2008); (Yang, Peterson & Cai, 2003); (Ganguli and Roy (2010)
<p>✓ What would be the most important factor to start/ continue transacting via electronic channels such as the Internet and/or Cell phone banking?</p> <p>(Please select your preferences by order of priority of 1 to 3)</p> <ul style="list-style-type: none"> ○ Ease of access ○ Ease of use ○ Education ○ Incentives ○ Security to prevent fraud ○ Simplicity in opening bank accounts ○ Speed of transaction processing ○ Privacy of personal information ○ Other 	<p>✓ Security</p> <p>✓ Convenience</p> <p>✓ Simplicity</p>	(Singh, 2007); (Yoon, 2002); (Casalo, Flavian & Guinaliu, 2008); (Yang, Peterson & Cai, 2003); (Ganguli and Roy, 2010)

The key intent of the questionnaire was to obtain data based on the opinions/ perceptions of local banking consumers that are crucial for optimal customer satisfaction.

4.4.2 Data gathering procedure parameters

In an attempt to unpack the strategic challenges facing banks through customer centricity, the following data gathering approach was embarked on;

- ✓ Primary data collection (external)
- ✓ Secondary data collection (internal)
 - Customer service survey
 - Behavioral changes in usage and adoption specific to digital banking

Primary Data

The primary data for this study was collected through the use of the survey method.

Secondary data

- ✓ Customer service survey

This survey relates specifically to an online banking internal survey where customers were probed on a survey “at log-out”. The question was rated purely on a confidence score of 1 to 10. The question was “Based on your interaction with Online banking, what is the likelihood that you will refer a friend or family member to FNB”. The key limitation of this particular secondary data was that it was generalistic in nature i.e. overall banking services and did not necessarily encapsulate digital banking drivers *per se*. Whilst the survey produced a substantial number of responses, a further limitation is that it may not be reflective of the total digital banking population given the time constraints of individuals that may not have been prepared to complete the survey.

Whilst there were certain constraints with the data, it was still relevant to facilitate triangulation principles to assess the satisfaction levels of customers within FNB.

✓ Behavioral changes in usage and adoption specific to digital banking

The aim through assessment of this secondary data was to establish the possible association in the growth of new customers with the deployment of new functionality. In addition, the intent was also to assess whether there is a reduction/ increase in usage aligned to specific fraud trends in the business with an intervention such as the introduction of behavioral tracking to minimise fraud discussed in chapter two. A review was also undertaken of growth in new consumers to establish if there was any relationship to interventions such as usability and heuristic enhancements.

4.5 Characteristics and scope of the sample

Webster (1985) as cited in the text by Coldwell and Herbst (2004: 74) defines a sample as 'a finite part of a statistical population whose properties are studied to gain information about the whole'. In considering this definition it becomes clear that the purpose of sampling is to serve as a dipstick about a certain phenomenon with the key to a sample being representative; it must be underpinned by randomness. Taylor (2001: 59) defines a sample as being random when 'every item in the population had an equal chance of being chosen'.

The non-probability, convenience sampling technique proposed by Cant, Gerber-Nel, Nel & Kotze (2003) was chosen for this study. However, certain quota sampling parameters as suggested by Taylor (2001: 62) was incorporated specifically to obtain an even spread of customers with the major restraint being placed on age, gender and income.

The population sample for this study included people from different ages ranging from 20-56+ as well as diverse gender, race and income mixes. The key reason for the choice of age and income variables was to target the economically active population.

The intention was to exclude income bands and racial groups from the questionnaire to enhance the likelihood of a higher response rate. An eventual distribution of 378 questionnaires was achieved based on resource constraints with an unexpected positive response rate of >60% within the local banking industry was achieved. The method of contact was via e-mail that integrated into a free survey website namely 'surveybuilder.com'. to assess customer opinions about the key enablers of digital banking satisfaction and sought to address all of the objectives identified.

The activities to increase the response rate were discussed earlier and will be further elaborated on later in this paper. In an attempt to overcome the potential sample challenges i.e. no overall industry view, a research house was employed with the specific objective to sample customers and obtain their views from all four major banks across the industry as well as ensuring a prudent mix in terms of demographics. This was purely for the distribution to the research company's database, at the writers own cost, to ensure a prudent sample from the industry.

The analysis and interpretation of the findings was undertaken by the writer. The survey was conducted through a link via e-mail and all collected data was only accessible to the writer via appropriate password and sign on authentication. Hence, the research house had no access to the respondent data. The briefed criteria for the sampling were as follows;

Demographics

- Age (20-56+).
- Language (English speaking – because the survey was in English).
- Race (even split).
- Gender (even split).
- Income (based on LSM >7).

Banking

- Must have an active bank account.
- Must bank with one of the major banks in South Africa.

Geographic spread

- Must be an even split between all provinces in South Africa (if possible).

Physiographical

- Experience with internet / technology (i.e. different levels of tech savvy).
- Even split between users who make use of a Cell phone to access the internet and those who use a PC (if possible).

The purpose of the study was explained to the respondents (Annexure A) and no risk to anonymity or confidentiality was envisaged given the password protection of the survey results and the findings that was only accessible to the writer. The research house was re-reimbursed per completed survey received.

4.6 Data analysis approach

A conceptual model was adapted to ensure congruence with the tool, research objectives and problem statement through integration of the themes, attributes and drivers which are reflected in figure 4.1 below.

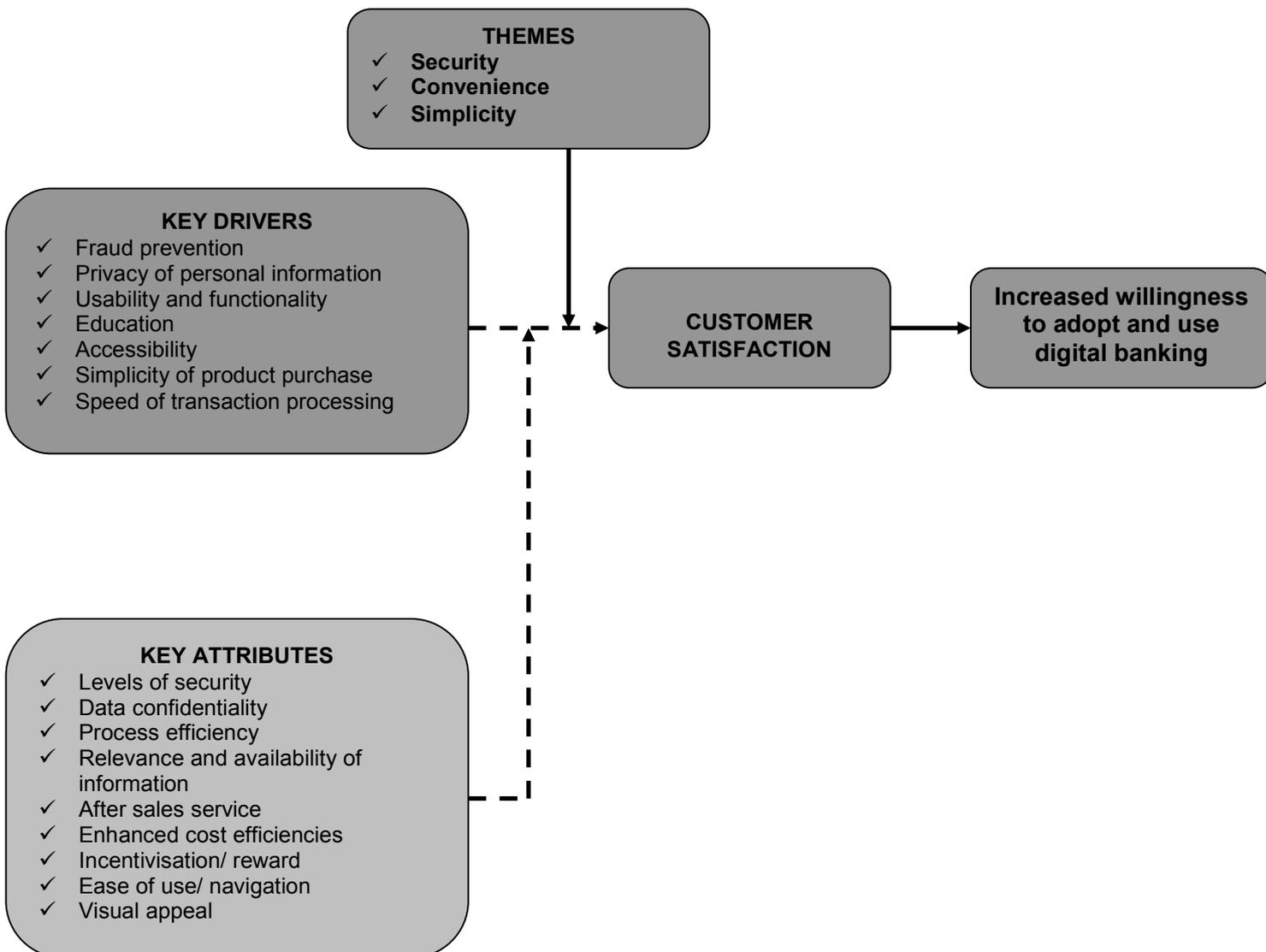


Figure 4.1: Conceptual model for research framework (Source: adapted from Yap, Wong, Loh & Bak, 2009)

The main analysis approach for both primary and secondary data that was adopted for this study was the descriptive or exploratory method (Taylor, 2002).

The author proposes that this approach is used to describe and summarise raw data. The technique employs a wide variety of visual representation incorporating graphs and tables.

4.7 Technical and quality issues

The research had incorporated prudent consideration of the key technical parameters to ensure reliability, validity and ethics of the research that was undertaken.

4.7.1 Reliability and validity of data

Reliability

Data is considered reliable if it is without bias (Lawton, 2003) and equally important, if it is consistent (Laxton, 2004). Hence, it is plausible to deduce that reliability is improved if sampling bias and sampling errors are minimised. Given the nature of qualitative responses in that it is assessing people's perceptions and attitudes, Lewis and Charlesworth (2003: 19) assert that these opinions can change and therefore this is a drawback of the qualitative approach. If one accepts that reliability can be improved through reducing sampling bias and sampling errors then it is plausible to accept that there are ways of overcoming this disadvantage. In the context of this study, the following activities were pursued to ensure enhancement of reliability;

- Careful construction and design of the questionnaire incorporating the suggestions by Taylor (2001, 51-57).
- Pilot studies were re-done to ensure simplicity of the questions incorporating structured sections, with participants that are not bankers.

- A sample size that is as large as possible, given resource constraints was chosen as well as the inclusion of customers from more than one banking institution.
- Activities to increase the response rate were considered and rigorously pursued e.g. follow up e-mails.

Validity

Leedy and Ormrod (2005: 28) suggest that validity is concerned with the effectiveness of the measuring instrument. According to Laxton (2004), validity is indicative of the accuracy of data obtained from a sample and can be categorised into internal and external validity.

Internal validity

There are several factors that possibly could undermine internal validity, and the key inhibitors relevant to this study are reflected below (Laxton, 2004);

- ✓ Respondents dropping out of a study or not completing the questionnaire;
- ✓ Bias in the selection of the sample group.

External validity

The factors that possibly could undermine external validity, in the context of this study relate to the following (Laxton, 2004);

- ✓ Nature of study participants;
- ✓ Time-period or place at which the study is conducted.

To enhance the validity of the study, the following was done:

- Consciously attempting to minimise bias in the selection of the sample group through inclusion of as many different types of the possible banking population.

- Improving the questionnaire layout and ensuring that the instrument had comprehensively assessed the chosen area of investigation. This was achieved through the use of both open and closed probes in attempting to understand what is important to customers and their perception of the environment.
- Triangulation principles through the use of secondary data from within the organisation as a supplement to the primary data obtained from the field research.

4.7.2 Overcoming potential bias

Laxton (2004) proposes that sampling bias is the tendency to choose certain individuals over others for inclusion in a sample group. The sample group is thus not reflective of the target population. To overcome potential bias, the sample was targeted to ensuring that a fair mix which is representative of the demographics of South African's e.g. an even mix of race, age and gender. In practice and aligned to the purpose of this study, customers with an active bank account was necessary as they would be engaging in banking activities.

The reason to conduct the study through electronic survey, whilst it is acknowledged that this was not truly random given the considerable exclusion of possible banking clients through electronic access restrictions, was purely based on the key constraint of time. However, this also had advantages in that issues such as bias and ethical issues that may have emerged through an interview research method were minimised. It is however acknowledged that the data and analysis could have been enriched through the interview method by understanding how people feel through body language assessment, specific reasons of responses, etc.

4.7.3 Ethical issues/ confidentiality

Permission was granted by the organisation to pursue the area of research as well as a confidentiality agreement that is in place with Unisa to prevent leakage of sensitive internal information that is not in the public domain without the prior consent of the organisation. The aspects of overcoming confidentially related issues aligned to the research company were discussed earlier. To ensure that research ethics were aligned to Unisa's guidelines, in addition to the above, the following was instituted;

- ✓ Respondent confidentiality and anonymity was communicated, respected and protected.
- ✓ Integrity was applied to the presentation of the findings in terms of factual representation of the research results with no manipulation of data in any form or context.

4.7.4 Generalisability

Given the approach for the study, it is accepted that broad generalisation to the overall banking population cannot be extrapolated in totality (Laxton, 2004). However, it is plausible to acknowledge that through researching across the major S.A banks, specifically the targeted sample criteria, it is a fair assumption that the research revealed the key determinants that are of importance to South African's which are enablers of customer satisfaction in the digital banking sphere.

4.8 Summary

This chapter focused on the research design and methodology concepts that were undertaken. Theoretical definitions and considerations were also discussed as well as the importance of the technical and quality issues to facilitate validity and reliability of the area of research was duly considered. Information regarding the questionnaire design in particular the development of the instrument was elaborated on. In the next chapter, the findings obtained from the research undertaken has been analysed and presented in the format incorporating the techniques suggested above.

CHAPTER 5

5. Research results

5.1 Introduction

The research methodology and design components were discussed in the previous chapter. The content of this chapter focuses on the presentation and analysis of the results obtained from the research undertaken. To understand the perceptions and opinions of what will improve customer satisfaction and lead to an increase in adoption and usage of digital banking channels, the qualitative approach was the spearhead method to obtain the relevant primary data. The primary data gathered has been organised and structured to provide meaningful information to unpack the determinants of perceived value from a customer standpoint. The secondary data was obtained from organisation reports that are most applicable to the study and have been segmented into two key sections namely; internal customer service survey and behavioral changes in usage and adoption based on certain organisational events/ interventions.

5.2 Presentation of biographical information

A total of 378 questionnaires were distributed with the study resulting in 246 completed questionnaires being received with a response rate of 65% being achieved. The high response rate is attributed to rigorous follow up processes such as follow up e-mails as well as the pay for performance parameters contracted with the outsourced research house i.e. remuneration for fully completed questionnaires only. This coupled with the intentional exclusion of race and income bands may also have contributed to the higher response rate. The population sample for this study included people from different ages ranging from 20-56+ as well as diverse gender, race and income mixes.

The key reason for the choice of age and income variables was to target the economically active population.

The results of section A of the questionnaire are summarised in table 5.1 below.

Table 5.1: Biographical mix

VARIABLE	RESPONSE FREQUENCY	PERCENTAGE
AGE		
▪ 20-25	25	10%
▪ 26-35	91	37%
▪ 36-45	90	37%
▪ 46-55	23	9%
▪ 56+	17	7%
GENDER		
▪ Male	114	46%
▪ Female	132	54%
BANKING INSTITUTION		
▪ ABSA	79	25%
▪ Capitec	16	5%
▪ First National Bank	92	30%
▪ Nedbank	48	15%
▪ Standard Bank	75	24%
▪ Other	0	0%
MAKING USE OF ELECTRONIC CHANNELS		
▪ Yes	231	94%
▪ No	15	6%

From the table above it becomes evident that there is an equitable mix of the targeted sample, albeit somewhat skewed toward users of electronic channels.

The make up of the respondents from the various banks is considered acceptable to formulate an industry view amongst South African banks. Majority of the respondents indicated that they currently make use of electronic channels i.e. 94%, with a small minority at 6% not availing of digital banking facilities. It is acknowledged that the sample is not representative of the total banking population given that majority of South African's do not transact electronically, however for the purposes of this research paper it is plausible to accept that an understanding of customer perceptions about digital banking in South Africa is achievable through the results from the sample obtained.

5.3 Primary results analysis and findings

The analysis relevant to the applicable themes and drivers are discussed below. To further enrich the data obtained, the responses were summed into the applicable theme groupings to improve the quantity for frequency analysis. In addition, the extremities to the neutral point i.e. strongly agree/ agree as well as strongly disagree/ disagree were also logically grouped and is graphically depicted as indicators of satisfaction and dissatisfaction respectively.

The rounding up principle has been applied to percentages and only significant findings relevant to the objectives have been graphically highlighted through the descriptive technique suggested by Taylor (2002). The objectives set out for this research paper were as follows:

- ❖ To determine what customers primarily want from digital banking channels, in terms of the core themes of security, convenience and simplicity.
- ❖ To establish the drivers which are most important to customers.
- ❖ To investigate the perceptions of service via digital banking channels.

5.3.1 Security

The results reveal that majority of customers are both satisfied with the level of security offered by banks (63%) as well as continuance with electronic banking in the case of fraud being perpetrated i.e. 42% of consumers would continue to make use of digital banking services, which is depicted in figure 5.1 and 5.2 respectively. The concern emerges with the detractors that would stop using electronic banking (29%) as well customers whose change in usage behavior is unknown also at 29%, if they were defrauded.

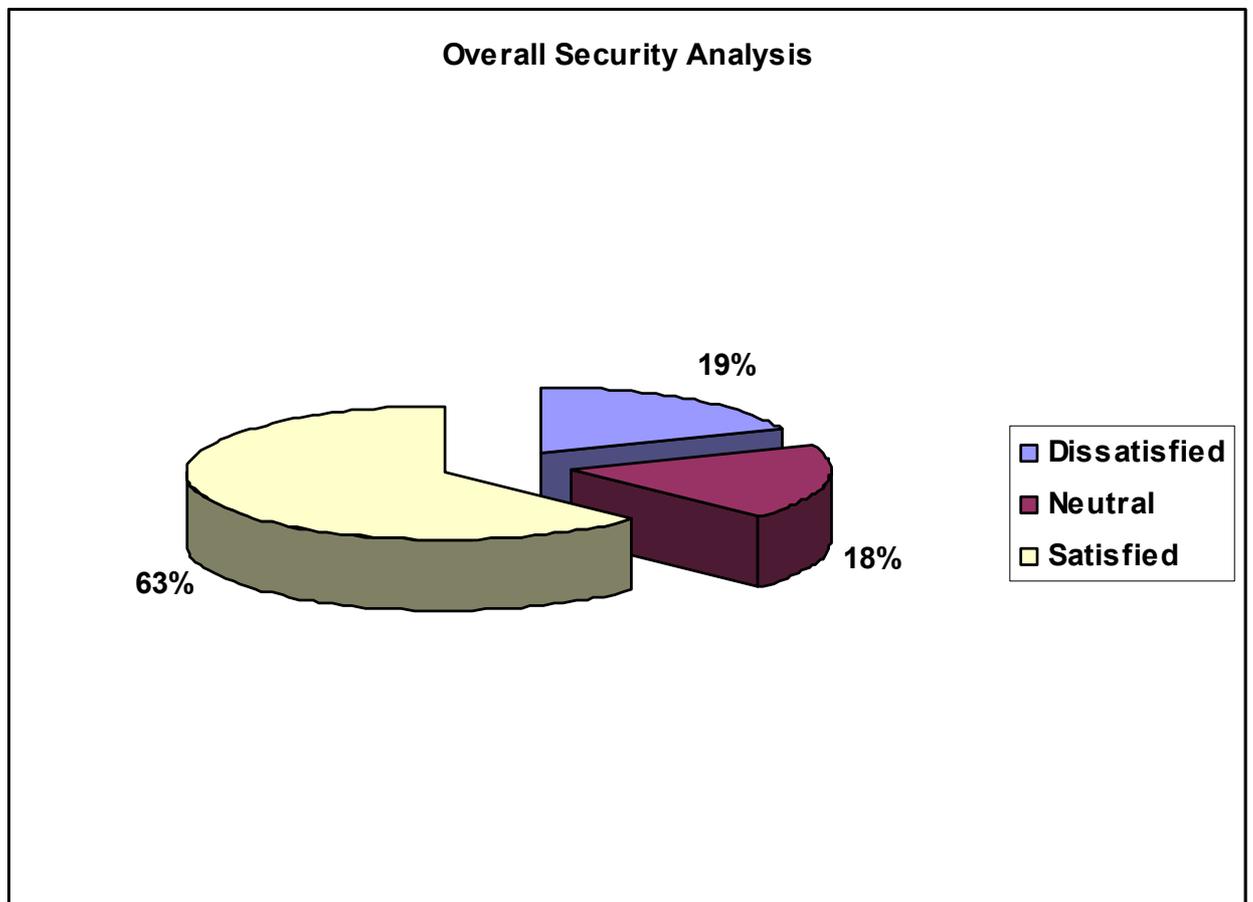


Figure 5.1: Overall security analysis

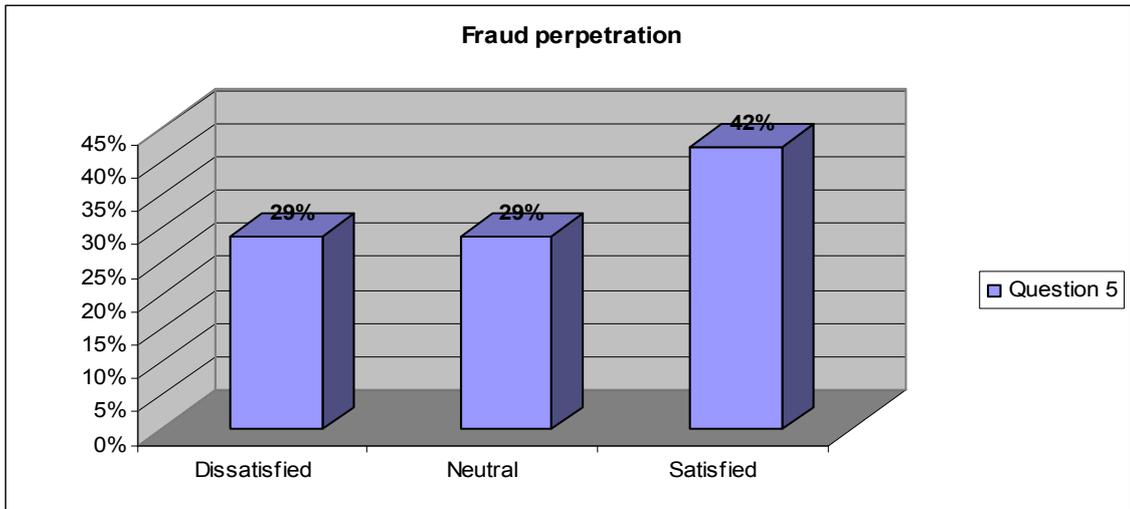


Figure 5.2: Fraud perpetration

The key differentiator of the critical security driver exists in the protection of personal information. Majority of customers (48%) claim that they would stop using electronic banking if their personal information was compromised. Only 22% of consumers feel they would continue to use electronic channels and 30% remains unsure of the impact that personal data breaches would have on the digital banking behavior as can be seen in figure 5.3 below.

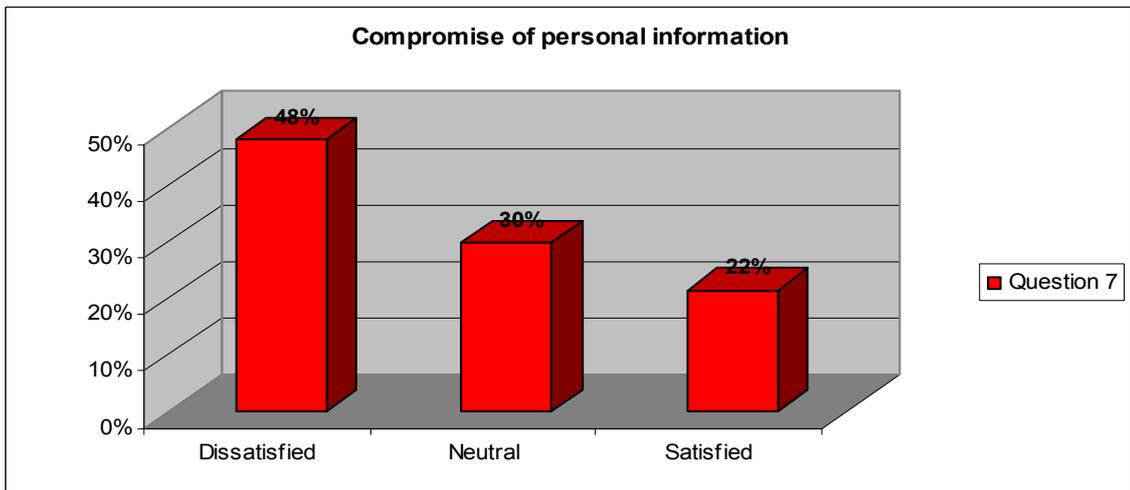


Figure 5.3: Compromise of personal information

Whilst the above is indicative of the uncertainty of clients when interacting with digital channels, majority of clients in general believe that security has been improved when compared to the past and this is evident in figure 5.4 below.

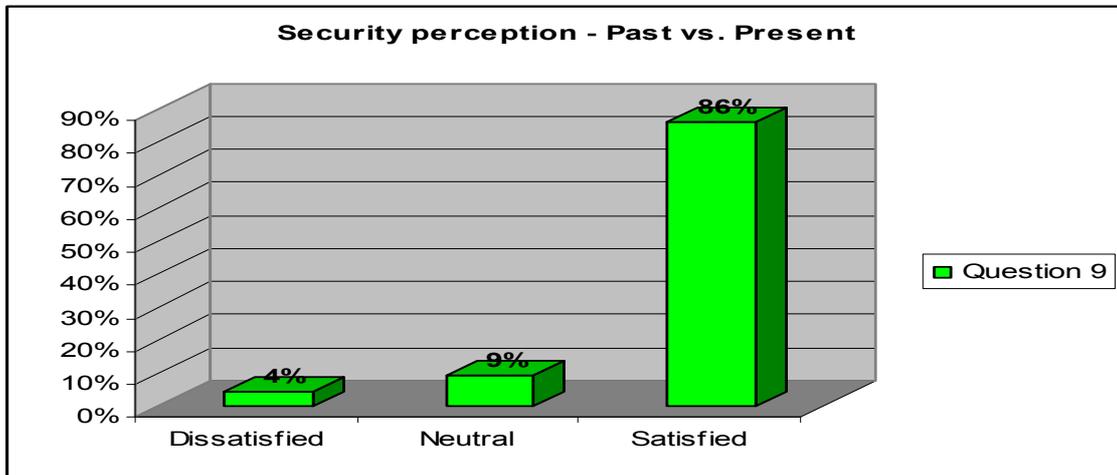


Figure 5.4: Perceptions of changes in security

There also appears to be a link between the opinions about the current level of security offered which is re-enforced by 80% of consumers feeling that the education offered by banks is sufficient to prevent fraud (figure 5.5). Only 9% stated that they do not believe that there is adequate education around fraud prevention and 11% were uncertain about the education specific to fraud prevention.

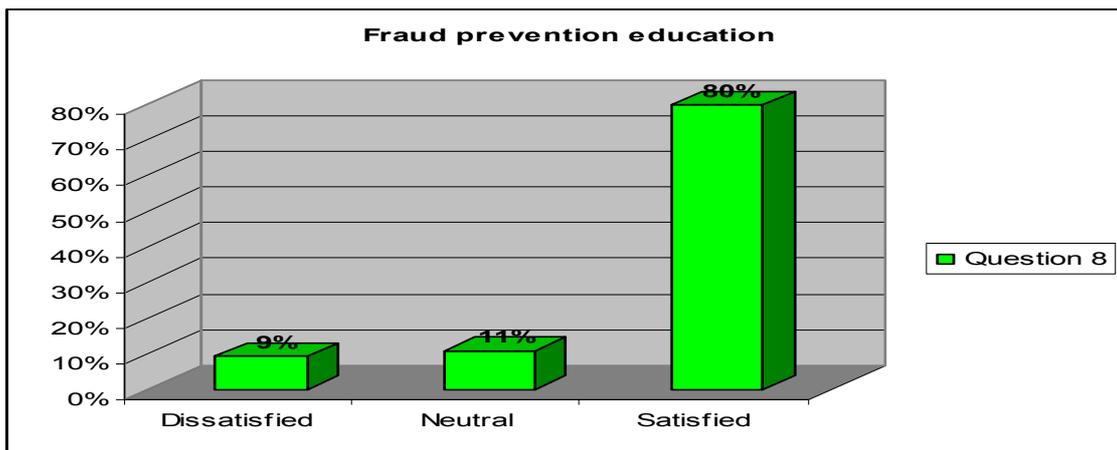


Figure 5.5: Fraud prevention education

The frequency of positive and negative responses for questions 5, 7, 8 and 9 has been interrogated further to assess the proportion of importance based on the absolute numbers to validate findings and the results are presented below.

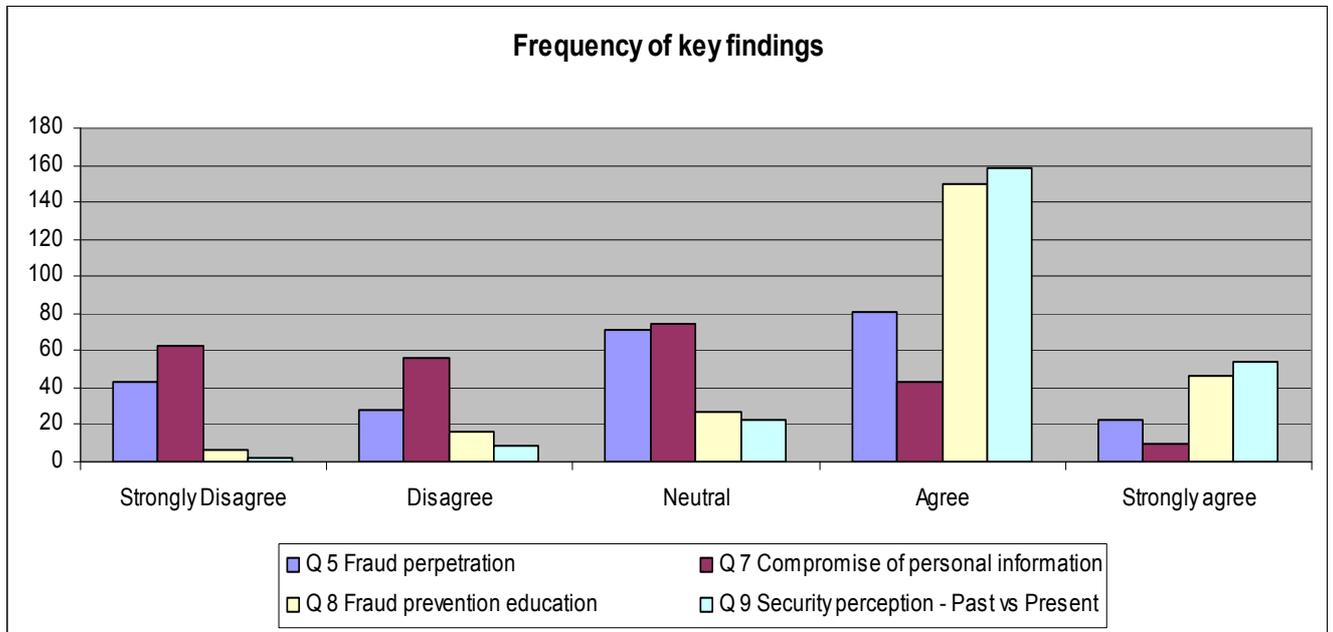


Figure 5.6: Frequency of significant security drivers

The analysis above reveals that question 8 and question 9 reflect the highest numbers of positive sentiment. This indicates a consumers desire to have the fundamentals in place when it relates to security. Conversely question 5 and question 7 show disparate views of negativity and uncertainty on how consumer behavior would change in the event of them being defrauded or if their personal information were to be compromised. The distribution based on the security theme drivers is further highlighted in figure 5.7 below. In reflection on the dispersion relationship between a consumer actually being defrauded or theft of personal information, in relation to perceptions, it would appear that the satisfaction levels are directly related to reality i.e. customers are comfortable with adequacy and education about security up until a point where they become a victim which could have a material affect on usage behavior.

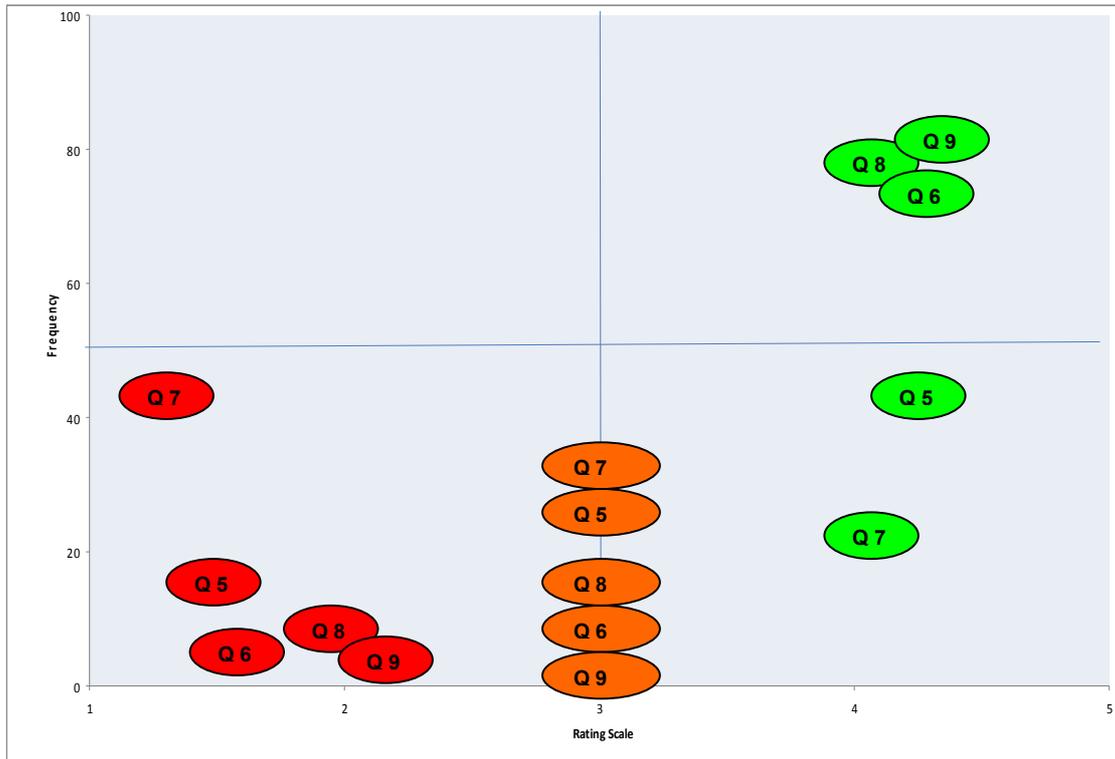


Figure 5.7: Approximated dispersion of security drivers

Key:

1	Strongly disagree	Q 5	Fraud perpetration
2	Disagree	Q 6	Perception about the adequacy of security
3	Neutral	Q 7	Compromise of personal information
4	Agree	Q 8	Fraud prevention education
5	Strongly agree	Q 9	Security perception – Past vs. Present
Red	Negative		
Orange	Neutral		
Green	Positive		

As an example, this surfaces when one consider the high level of positive sentiment related to question 6 (84%) versus the swing of uncertainty and negative response (question 7) if a customers personal informal is actually compromised (78%) which reveals a radical change in behavior should the event become a reality and would change perceptions about security adequacy and education.

5.3.2 Convenience

Two thirds of the customers within the industry appear to be satisfied with the convenience drivers in general which is reflected in figure 5.8 below. In addition there was a unanimous perception (figure 5.9) by clients with 96% believing that their bank charges should be cheaper through using electronic channels.

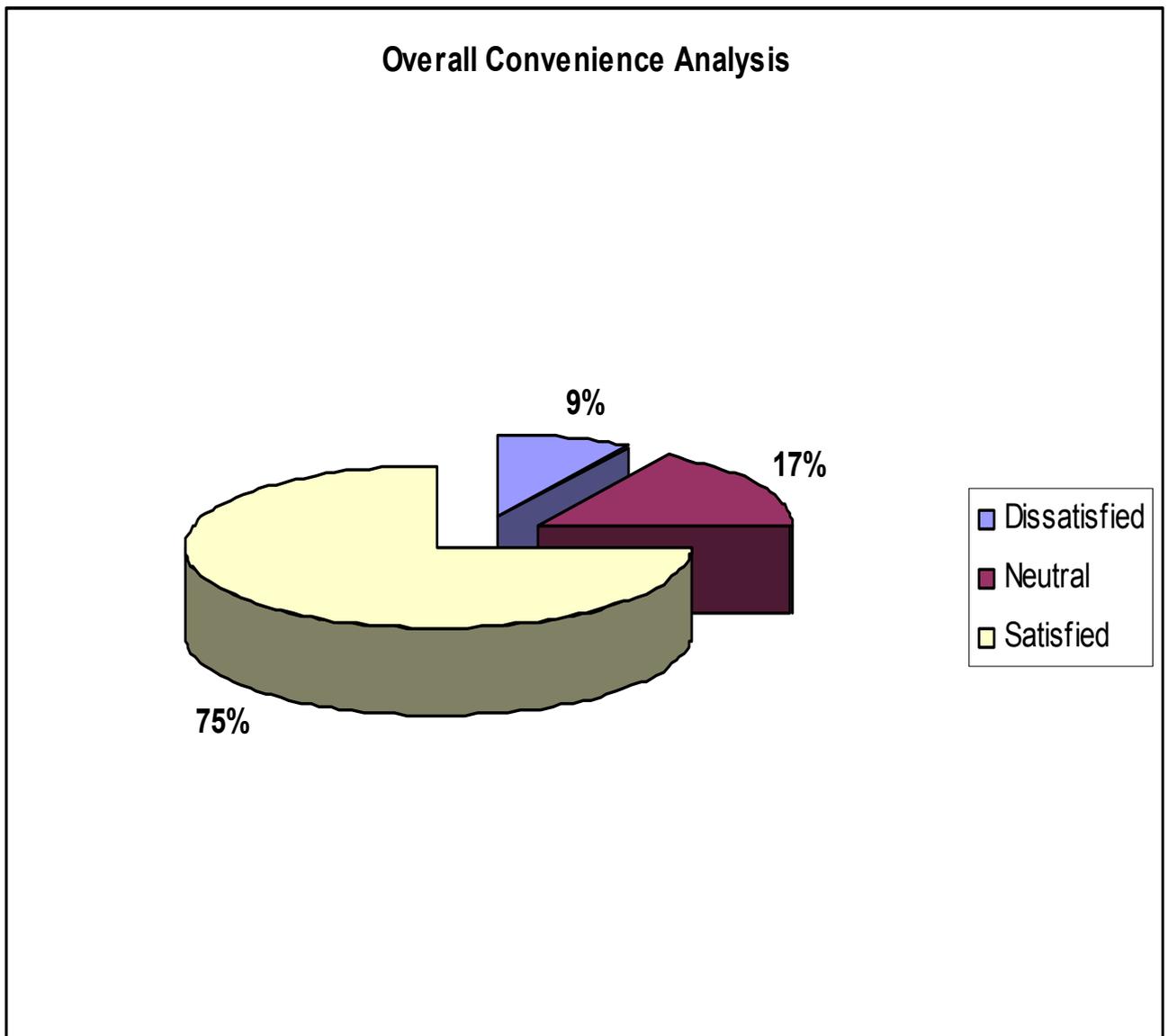


Figure 5.8: Overall convenience analysis

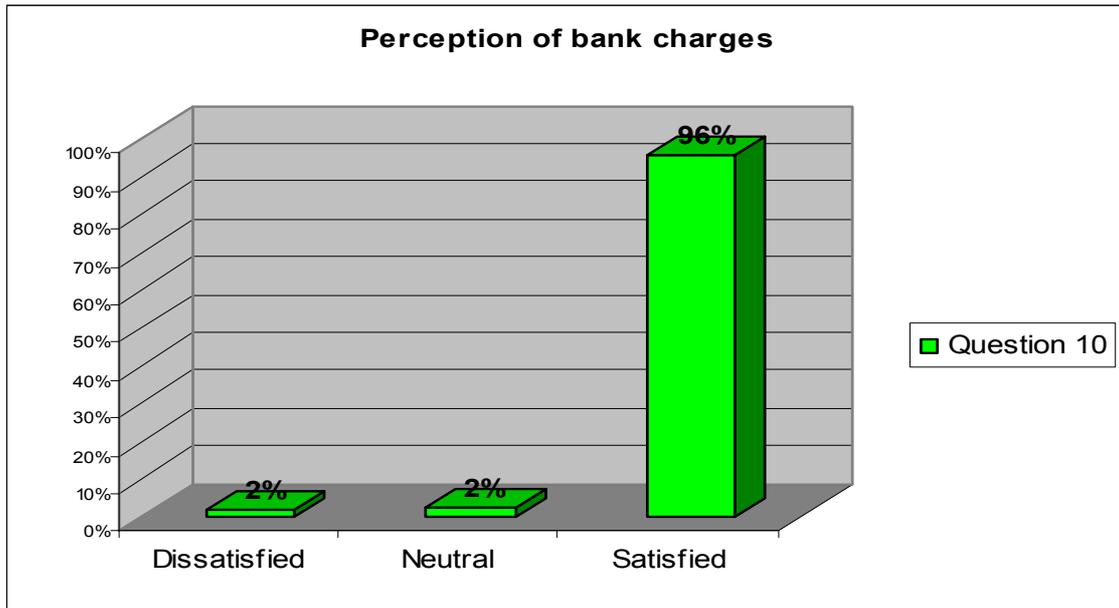


Figure 5.9: Value for money

Similarly aligned to this tangible value expected by clients, 91% stated that they would increase their usage frequency if they were rewarded through an incentive such as a rewards programme to bank more frequently online, reflected in figure 5.10.

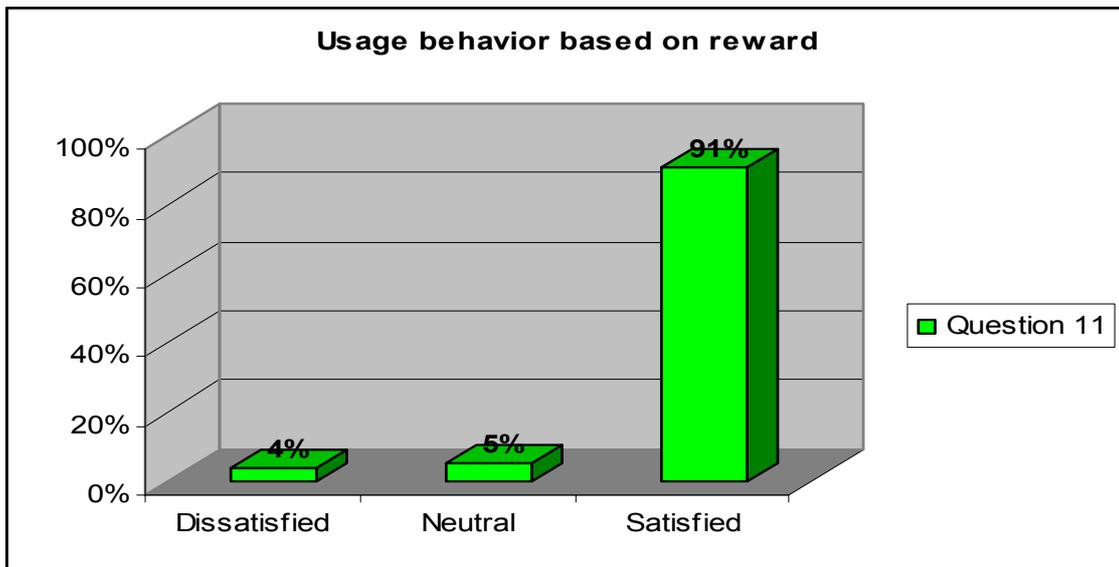


Figure 5.10: Usage behavior based on reward

Conversely to the findings based on fraud prevention education, only 66% believed that there is sufficient education/ training on how to use electronic banking channels. Fifteen percent of consumers were uncertain and 20% believed that this was not the case.

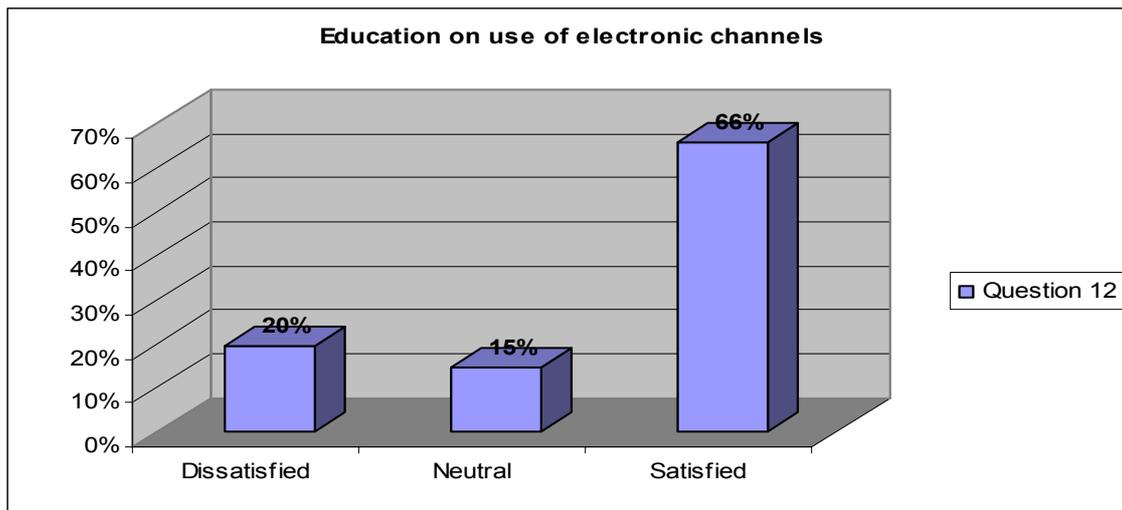


Figure 5.11: Usage education of digital channels

This presents a potential need to up skill customers regarding how to use different functionality that has been deployed into the channel. If one were to consider that a third of customers are still uncomfortable or unsure of the uses of electronic channels, equipping customers with the necessarily skills/ know how appears to be an issue that needs to be prudently considered.

In respect of purchasing financial products online (question 13), 62% of clients felt that this functionality was available with 28% being uncertain and 10% believing that this option is not available via digital banking channels. On testing the process experienced to open accounts online (question 14), 50% of customers felt that this was a simple process but interestingly 40% said they did not know and 10% were not in support of the convenience of the processes. The 50% gap of neutral customers and those that are not in support of the convenience of the process re-enforces the earlier statement for the possibility of education being a key driver of usage of digital banking services on offer.

However, this may also be indicative of the functional quality deficiency element of service expectation dimensions that were discussed as a possible service quality gap in chapter two (Gronroos, 1984).

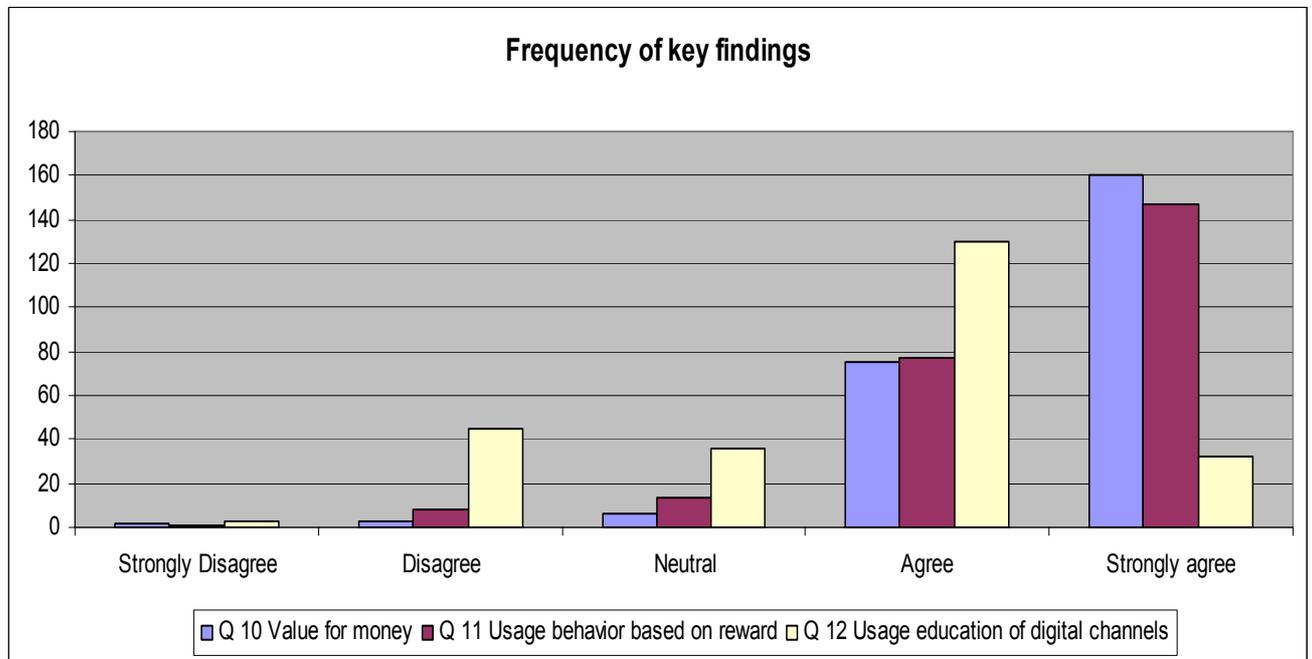


Figure 5.12: Frequency of significant convenience drivers

Figure 5.12 above clearly depicts customer views emerging in tangible value expected through the use of this channel by way of reduced banking fees and rewards that are influencers of behavior to utilise digital banking channels, evident in questions 10 and 11 positive responses.

The dispersion of all the convenience drivers is further graphically displayed in figure 5.13 below. In reflecting on the dispersion analysis below, specifically the education component, what emerges is that customers are not fully *au fait* with the various services/ functionality available via digital banking channels and this could be a function of not knowing what is available or not knowing how to use what is available. Clearly consumers have a desire for self service (question 15) as is evident with positive sentiment of 84% being more satisfied with digital service.

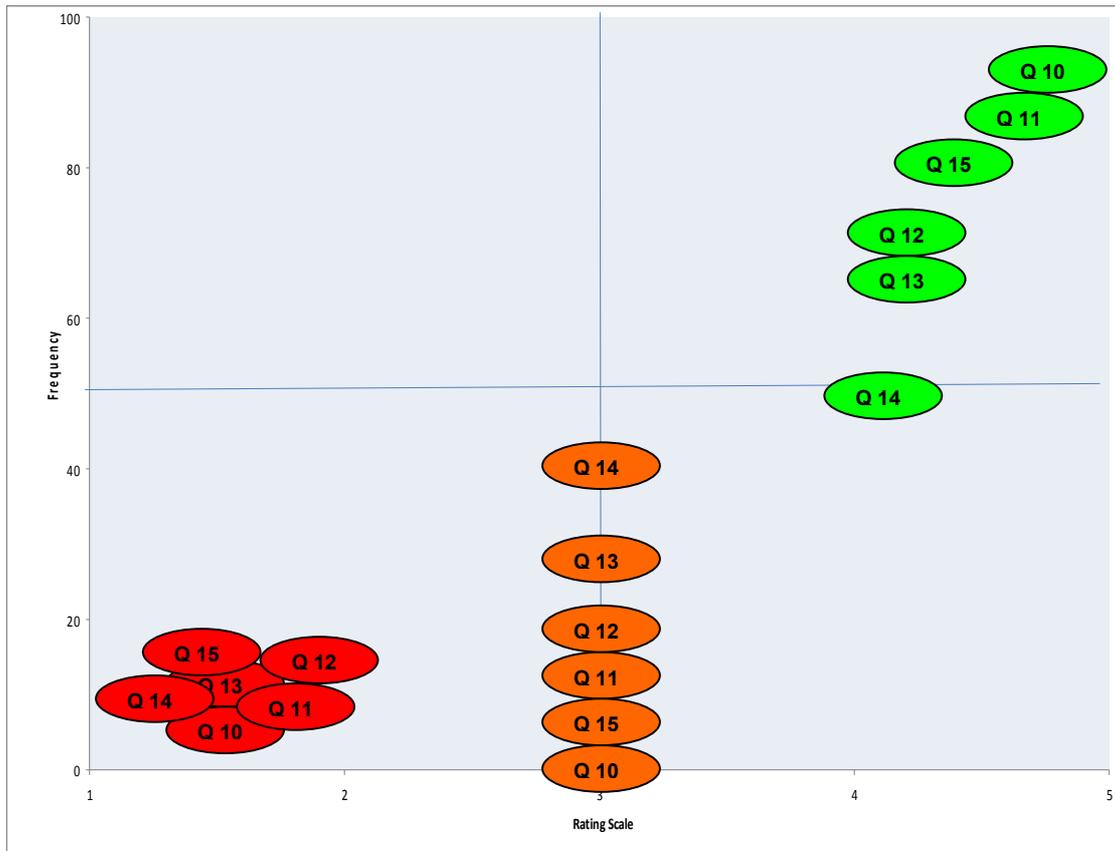


Figure 5.13: Approximated dispersion of convenience drivers

Key:

1	Strongly disagree	Q 10	Bank charges should be cheaper by using digital channels
2	Disagree	Q 11	Reward incentives as a driver to increase usage
3	Neutral	Q 12	Usage education on how to use digital banking channels
4	Agree	Q 13	Ability to open banking accounts
5	Strongly agree	Q 14	The process to open banking accounts via digital channels
Red	Negative	Q 15	Service between digital channel vs. branch engagement
Orange	Neutral		
Green	Positive		

As an example, in linking this to the high number that is aware of purchasing bank accounts online of 62% (question 13), to the drop off (question 14) with those that do not find the process user friendly (50%), the gap that emerges shows a strong relationship in the need for education of services/ functionality to be a conduit for consumer gratification that prefer the level of service received through digital banking channels vs. branches (question 15).

5.3.3 Simplicity

In respect of the three themes identified it becomes clear that simplicity is not an issue for clients when engaging with digital banking channels and this is evident in figure 5.14 below.

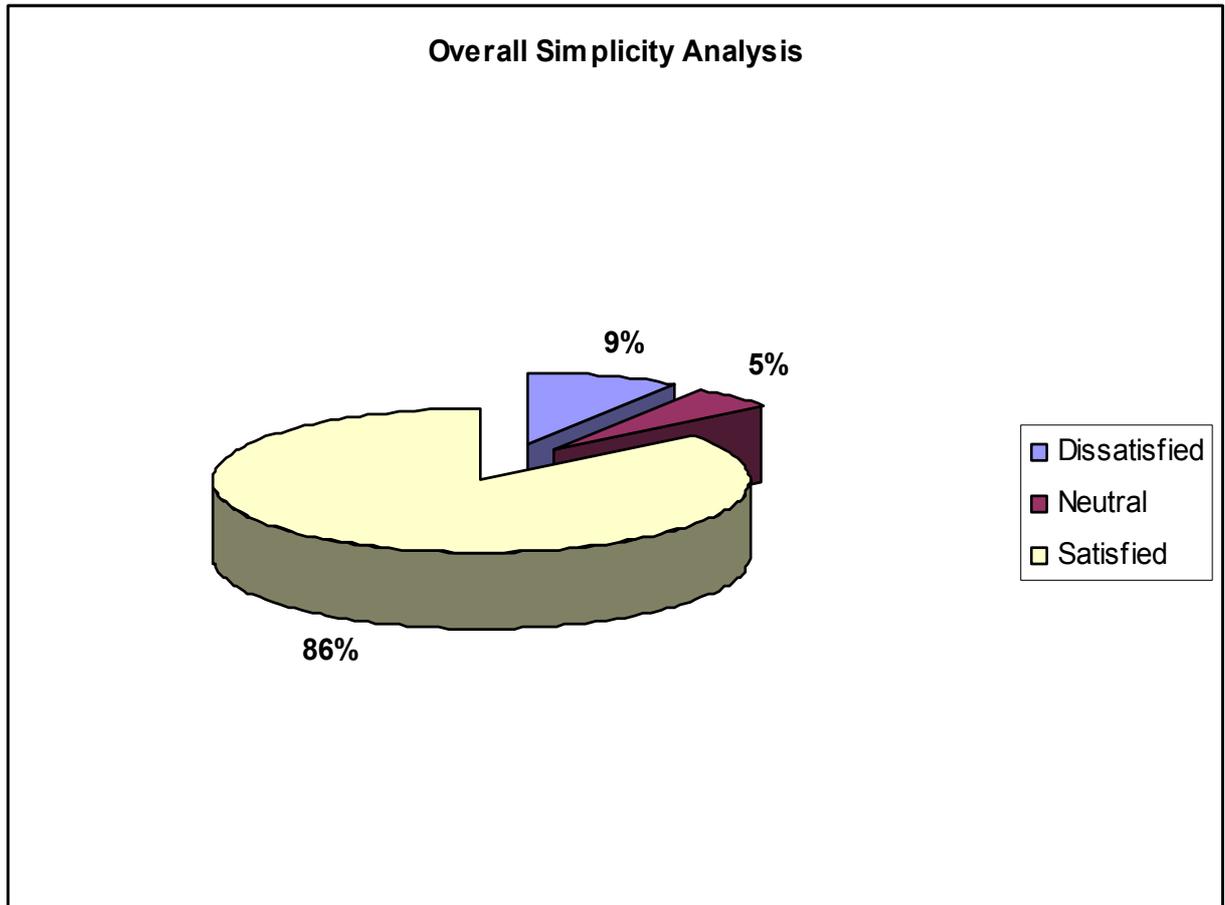


Figure 5.14: Overall simplicity analysis

A vast majority of customers (97%) have stated that accessibility and convenience is a key enabler for the use of electronic channels, evident in figure 5.15 below. This confirms the South African macro challenges of accessibility costs and speed constraints discussed in chapter three and a key issue in the quest for increased usage and adoption of digital banking in the S.A market.

Customers also perceive that the information via digital banking channels is easily accessible, understandable and relevant to their needs with majority of customers confirming this at 80%, 85% and 90% respectively.

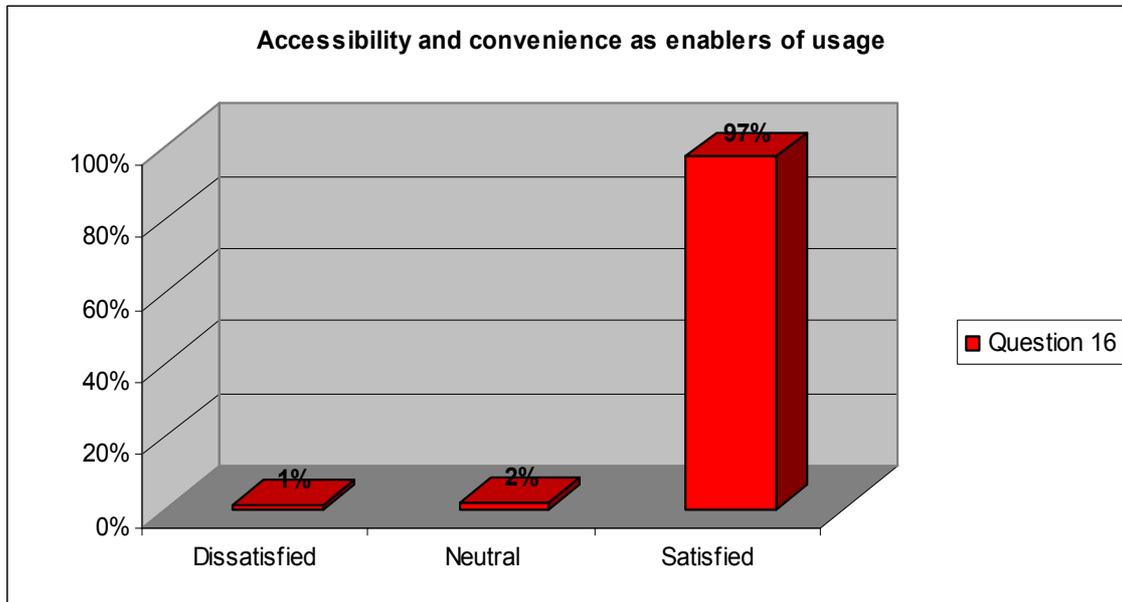


Figure 5.15: Usage enablers

In probing the services offered through digital banking channels relative to conventional channels, whilst the vast majority (71%) stated that there is no need to go into a branch, only 20% of the 71% strongly agreed that this was the case.

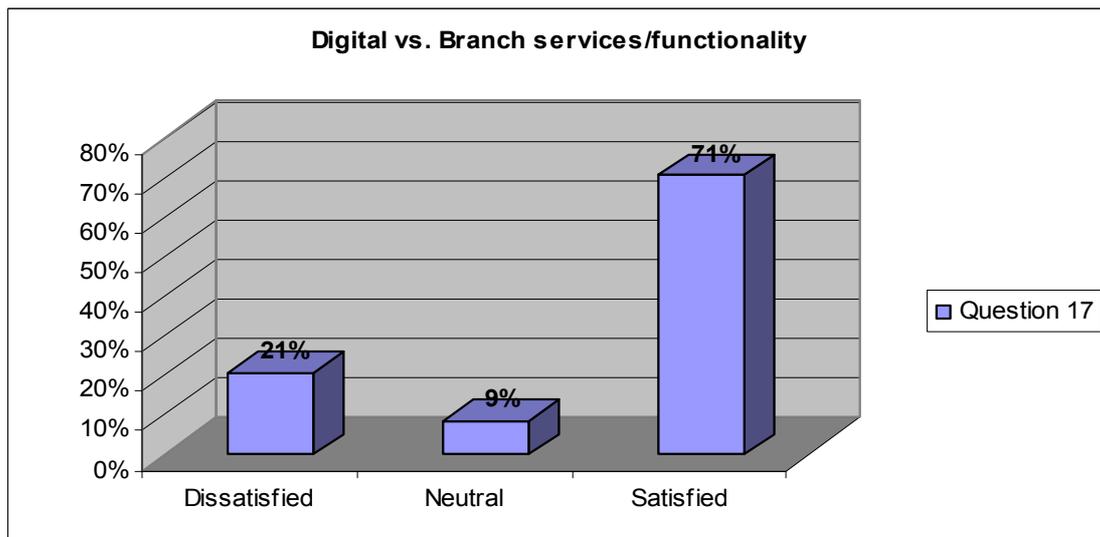


Figure 5.16: Services available between conventional and digital channels

Twenty one percent of consumers did not subscribe to this notion and 9% were uncertain on whether all functionality/ services available via traditional banking channels were also available via digital banking channels as can be seen in figure 5.16 above.

In essence approximately a third of consumers are not convinced about the parity of services on offer. Whilst this may be a function of poor communication of digital banking services available, it is a key gap that is worth noting.

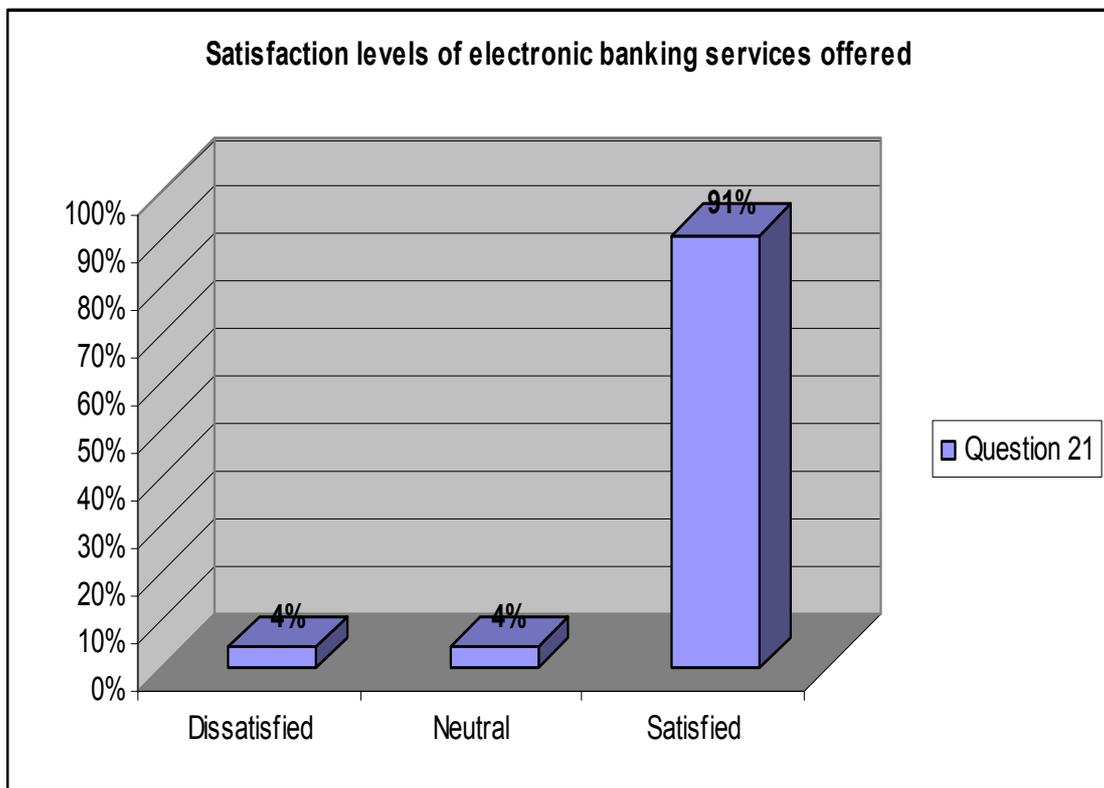


Figure 5.17: Satisfaction levels of electronic banking services offered

Majority of customers at 91% (figure 5.17) did however believe that they are more satisfied with the level of services they receive from a bank when using electronic banking channels.

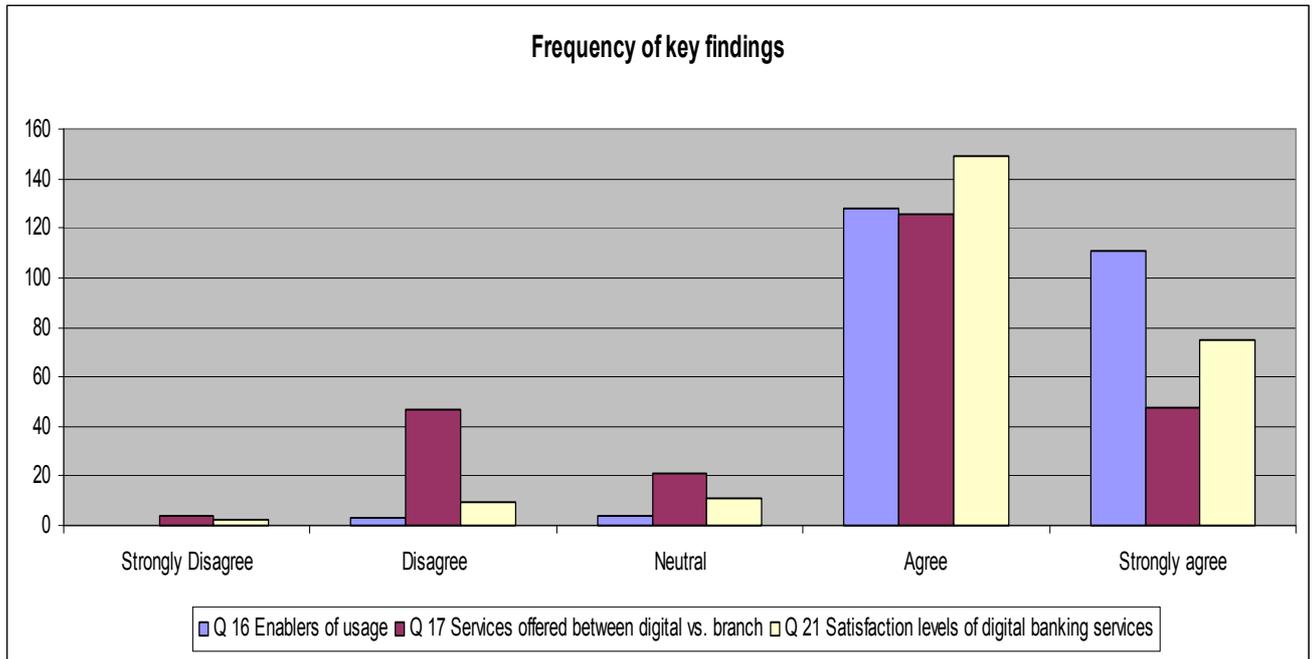


Figure 5.18: Frequency of significant simplicity drivers

Figure 5.18 above reveals that more functionality can be deployed into digital channels to further alleviate the need for a customer to call into a branch evident in the negative and neutral responses of question 17. Whilst customers are satisfied with the electronic banking services offered by their banks, clearly the influence of accessibility remains a critical determinant of usage and adoption.

The dispersion of all the simplicity drivers is further graphically displayed in figure 5.19 below. In reflecting on the dispersion spread in particular the link between consumer satisfaction (91% positive sentiment) about what is on offer vs. the 30% perception of whether the full suite of services offered through branches are available via digital channels, the potential gap that emerges is that it could be a function of communication, education or the need to ramp up the viable services available via digital banking channels.

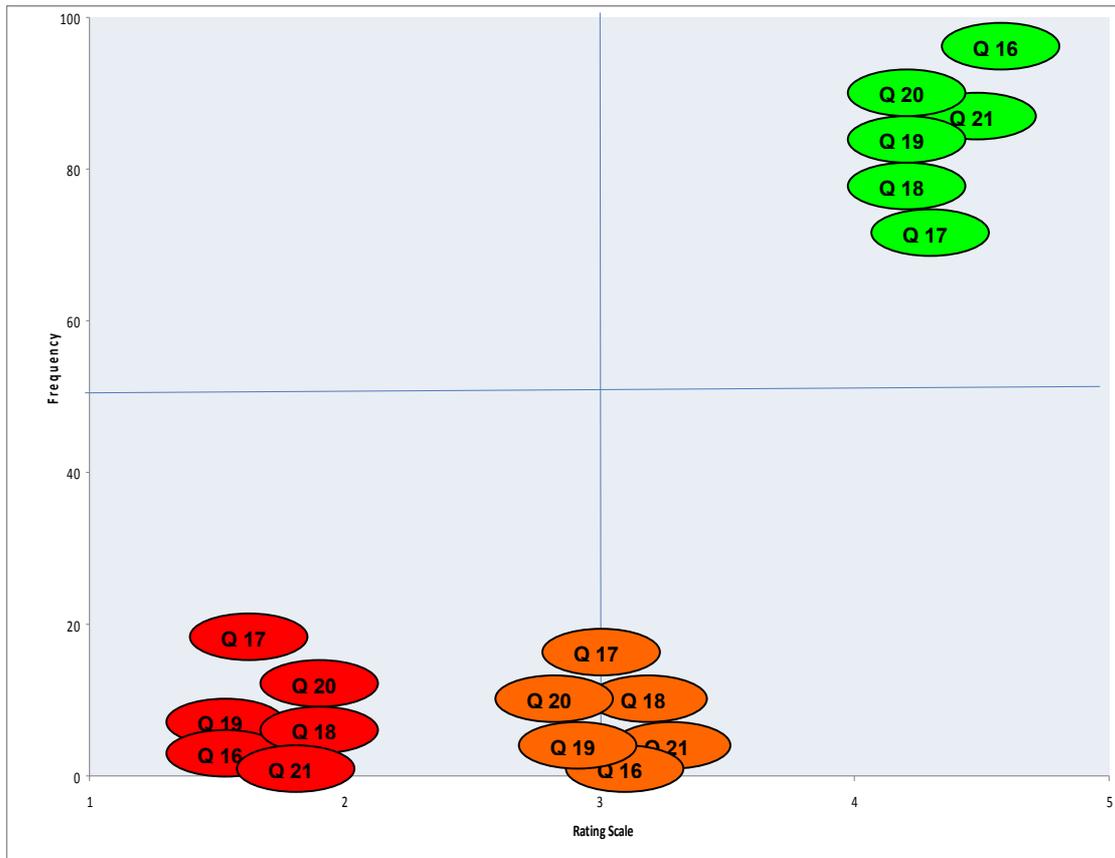


Figure 5.19: Approximated dispersion of simplicity drivers

Key:

1	Strongly disagree	Q 16	Accessibility and convenience as enablers of usage
2	Disagree	Q 17	Digital banking services/ functionality vs. branches
3	Neutral	Q 18	Simplicity in locating the transactional services available
4	Agree	Q 19	User friendliness of information available
5	Strongly agree	Q 20	Relevance of information available
Red	Negative	Q 21	Overall satisfaction of services offered via digital banking
Orange	Neutral		
Green	Positive		

Accessibility and convenience at 97% surpassed all other drivers probed during the research which is core gap worth noting. However, whilst this may be a short term uncontrollable, migrating existing electronic users onto functionality that is already available may be a more pressing issue for banks to focus on.

5.3.4 Prioritisation of drivers

In testing the most important factors of transacting via electronic channels in order of priority, the response frequency was reviewed in absolute numerical values as well as unpacking the intensity of priority with the following having emerged;

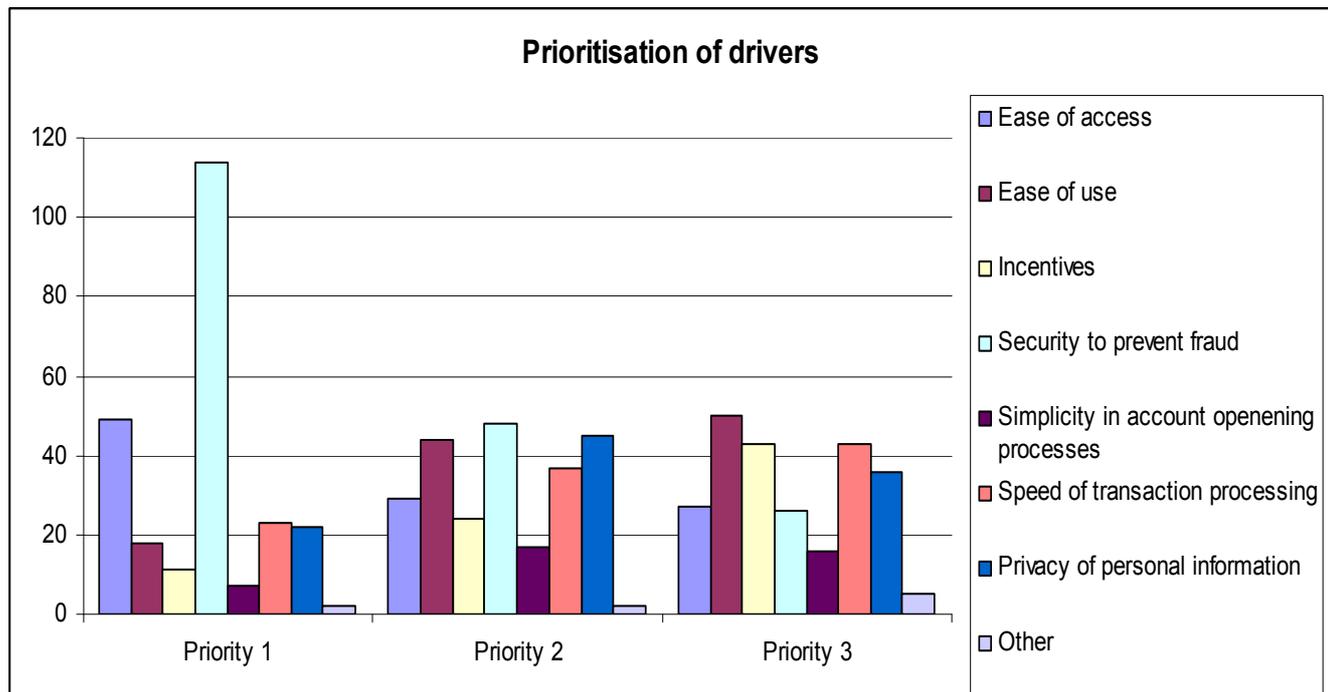


Figure 5.20: Prioritisation of drivers

Table 5.2: Driver prioritisation

QUESTION 22	EASE OF ACCESS	EASE OF USE	INCENTIVES	SECURITY TO PREVENT FRAUD	SIMPLICITY IN OPENING BANK ACCOUNTS	SPEED OF TRANSACTION PROCESSING	PRIVACY OF PERSONAL INFORMATION	OTHER
Priority 1	20%	7%	4%	46%	3%	9%	9%	1%
Priority 2	12%	18%	10%	20%	7%	15%	18%	1%
Priority 3	11%	20%	17%	11%	7%	17%	15%	2%
Total (n)	105	112	78	188	40	103	103	9

Based on the findings it becomes clear that the main priority for customers is security to prevent fraud reflected at 46%. In analysing the frequency of responses for this driver, it emerges that an overwhelming 188 respondents across the prioritisation variables see this as an important factor to start/ continue transacting via digital banking channels. The critical drivers in order of importance are graphically reflected in figure 5.21 below.

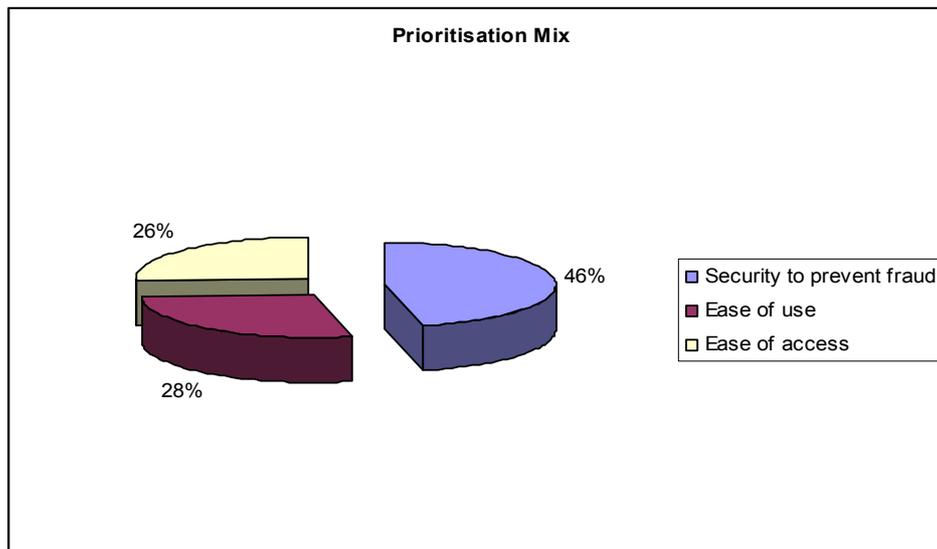


Figure 5.21: Prioritisation mix of drivers

It becomes apparent from the results above that the hygiene factors, namely security to prevent fraud, ease of use and accessibility are key drivers of digital banking adoption and usage. In addition, it would appear that the other drivers may have an influence e.g. speed of transaction processing and protection of personal information, although these appear to be latent needs for South African consumers of electronic banking services.

In further reflection on the data gathered, it is plausible to accept that once these hygiene factors are in place, consumers are more open to innovations such as incentives and requirements of transaction speed which become evident in the growth of response frequency from priority 1 to priority 3 that is reflected in figure 5.20 above.

In further interrogating the data from an inductive hypothesis perspective, it is plausible to accept that there is a relationship between all the drivers identified and customer satisfaction, albeit at different intensity levels and this is reflected in the summative view of response frequency depicted in figure 5.22 below.

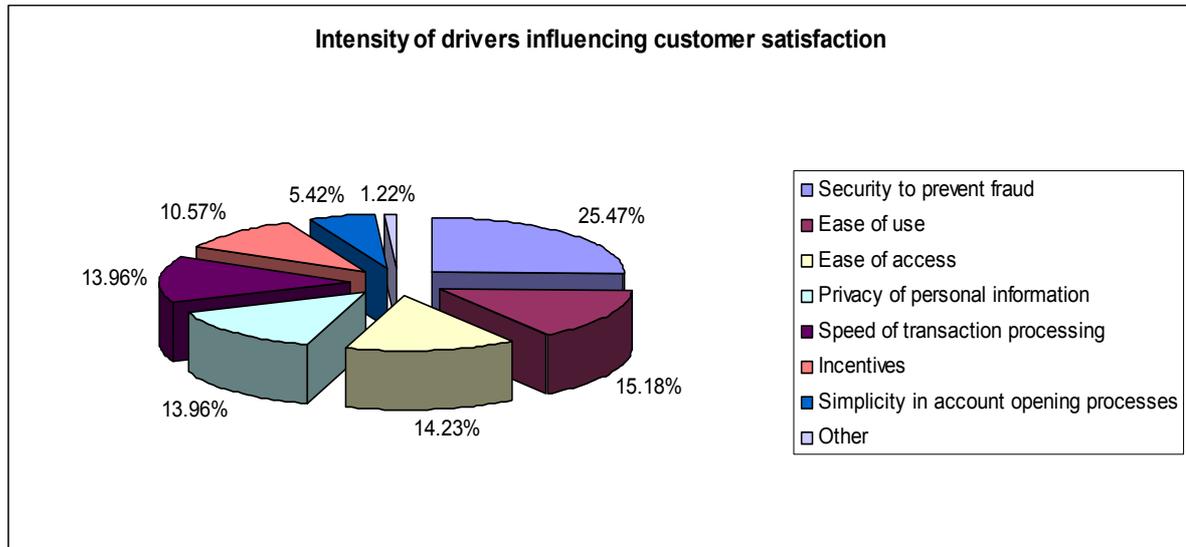


Figure 5.22: Relationship intensity of customer drivers to customer satisfaction

In reflecting on the results of the primary data, it becomes clear that security is of paramount importance, followed by ease of use and ease of access which addresses the objective of what customers want from digital banking. In reviewing the intensity of driver influence on customer satisfaction, it emerges that once the fundamentals are in place, there is no clear cut differences in what consumers view as important drivers. The results have also revealed that that consumers are more satisfied with service when engaging with electronic channels versus traditional branches, however there are gaps in educating customers on what is available and how to leverage functionality that will result in cheaper banking costs. It also becomes clear that once the hygiene factors have been addressed, customers are more open to innovations such as incentivisation which are beneficial to consumers by increasing value for money and for banks through addressing innovative mechanisms to increase usage.

5.4 Secondary data analysis

The secondary data for this study, as previously mentioned are segmented into two key sections, namely, customer service survey as well as behavioral changes in usage and adoption aligned to specific heuristic and fraud interventions. The secondary data relevant to these sections have been obtained from corporate records. The key intent for the secondary data analysis is premised on unpacking the objective of service perceptions via digital banking to identify common threads that are evident in the primary data, specific to particular trends or drivers that has emerged through the secondary data that has been analysed. The primary motive for the secondary data interrogation was to identify potential links to the primary data that may aid triangulation validation i.e. to establish the tolerance levels of customer perceptions of service (third objective) in relation to defective functionality deployment trends.

It is acknowledged that there were certain limitations to the secondary data for the service survey such as non-representative sample as well as a generalistic dipstick of services offered and the value of the channel as perceived by consumers of FNB. However, given the specific relationship to interventions and resultant influence on behavior, it plausible to acknowledge that possibly they would reveal links that re-enforce the primary data collected.

The secondary data analysis aligned to the heuristic and fraud prevention interventions is intended to validate the prioritisation of the second core theme i.e. ease of use and whether previous interventions materialised into tangible benefit for the channel through behavioral changes that result in either positive or negative movement in transactional volumes, online enrolments, activations or reduction in fraud trends.

5.4.1 Customer satisfaction survey

A comparison of customer views that are banking at FNB was undertaken in an attempt to identify whether production defects/ deployment of new functionality with errors, impacts the perception of service via the digital channel. Whilst it is acknowledged that this was a general perception of consumers and not necessarily aligned to unpacking the drivers, it is a useful indicator to validate the findings based on service received via digital banking channels.

1 Question Survey : Based on your interaction with FNB Online Banking, what is the likelihood that you would **recommend** FNB to friends, colleagues and associates?

JULY			AUGUST		
0	5,583	2.67%	0	3,491	3.85%
1	1,704	0.81%	1	1,016	1.12%
2	1,576	0.75%	2	906	1.00%
3	1,947	0.93%	3	1,090	1.20%
4	2,378	1.14%	4	1,279	1.41%
5	8,225	3.93%	5	4,251	4.68%
6	9,625	4.60%	6	4,662	5.14%
7	15,879	7.58%	7	7,408	8.16%
8	35,135	16.78%	8	14,887	16.40%
9	35,288	16.85%	9	14,338	15.80%
10	92,067	43.97%	10	37,445	41.25%
Grand Total	209,407	100.00%	Grand Total	90,773	100.00%

0 - 7 : 22.4%

8 - 10 : 77.6%



0 - 7 : 26.55%

8 - 10 : 73.45%



Figure 5.23: Internal customer service survey (Source: FNB Online survey, November 2011)

New functionality is deployed once a month and as can be seen from figure 5.23 above, there was a drop of 4.15% of the core promoter level category of 8-10. In an attempt to unpack whether there was any relationship to defects of new

functionality deployed, an analysis was performed on the production incident trend and it emerges that there were significant issues related to an increase in defects as can be seen in figure 5.24 below over the period at which the survey was undertaken.

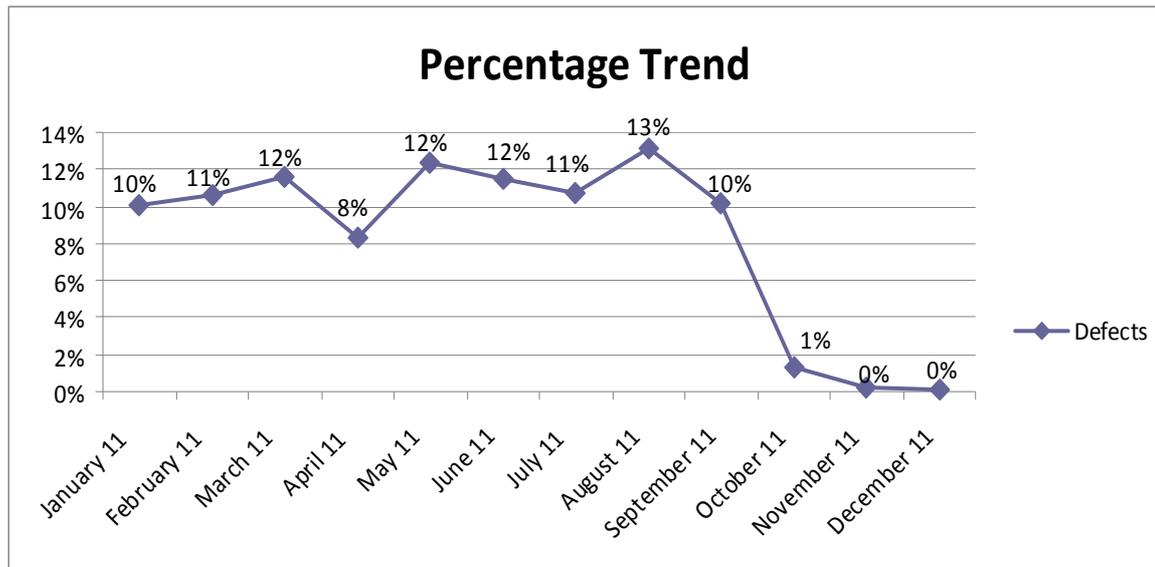


Figure 5.24: Defects in new functionality deployed (Source: FNB Online internal secondary data, 2011)

Whilst the drop in perceptions was not significant, it is an indication of the intolerance of customers when it comes to errors experienced during engagement with the channel. A further study was also conducted in February 2012 by the Online division with a small sample of thirty customers that were telephonically contacted who had moved from Nedbank to FNB. This dipstick also used a confidence scale of 1-10 and the results are reflected in figure 5.25 below. The key limitations of this secondary data were as follows;

- Not fully representative of ex Nedbank clients;
- Memory or recall bias;
- The time frame when customers switched i.e. if it was too short this may not be an accurate representation of their experiences;
- Resentment and reason for switching may have influenced the responses.

	Range of Functionality	FNB	Nedbank	Difference
1	Design and Usability	7.5	6.7	+ 0.8
2	Range of Functionality	8.5	6	+ 2.5
3	Online Security	8.5	7	+ 1.5
4	Availability of the site	9	8	+ 1
5	Ease of Navigation	7.5	7.3	= 0.2
6	Ability to access the website from multiple devices	8.7	7.1	+ 1.6
7	Speed of the site	8.4	7.1	+ 1.3
8	Clarity of instructions and application	7.6	7	+ 0.6
9	Service and support for Online Banking	8.5	5.8	+ 2.7
10	Your overall satisfaction with Online Banking	8.5	6.4	+ 2.1

Figure 5.25: Internal customer service survey (Source: FNB Online survey, February 2012)

The key findings from the perceptions of the clients reveal that FNB dominates in all categories with strengths in security, service and support from call centres and availability of the site. The areas needing improvement of this comparable sample is clarity of instructions and ease of navigation.

The findings from the assessment of this secondary data support the notion that customers are seeking convenience as well as a desire to have the hygiene factors taken care of such as security and a channel that is free from defects. If this is not the case, it can result in switching behavior of customers to banks where they believe that they would have their core digital banking needs met.

5.4.2 Behavioral changes in usage and adoption specific to digital banking

Heuristics enhancement impacts

The radar below indicates the various usability enhancements that were made over the last calendar year and the impact that these changes such as ease of use as well as simplicity and convenience have had on financial volumes as well as new customers for online banking which are depicted in figures 5.26 and 5.27 below.

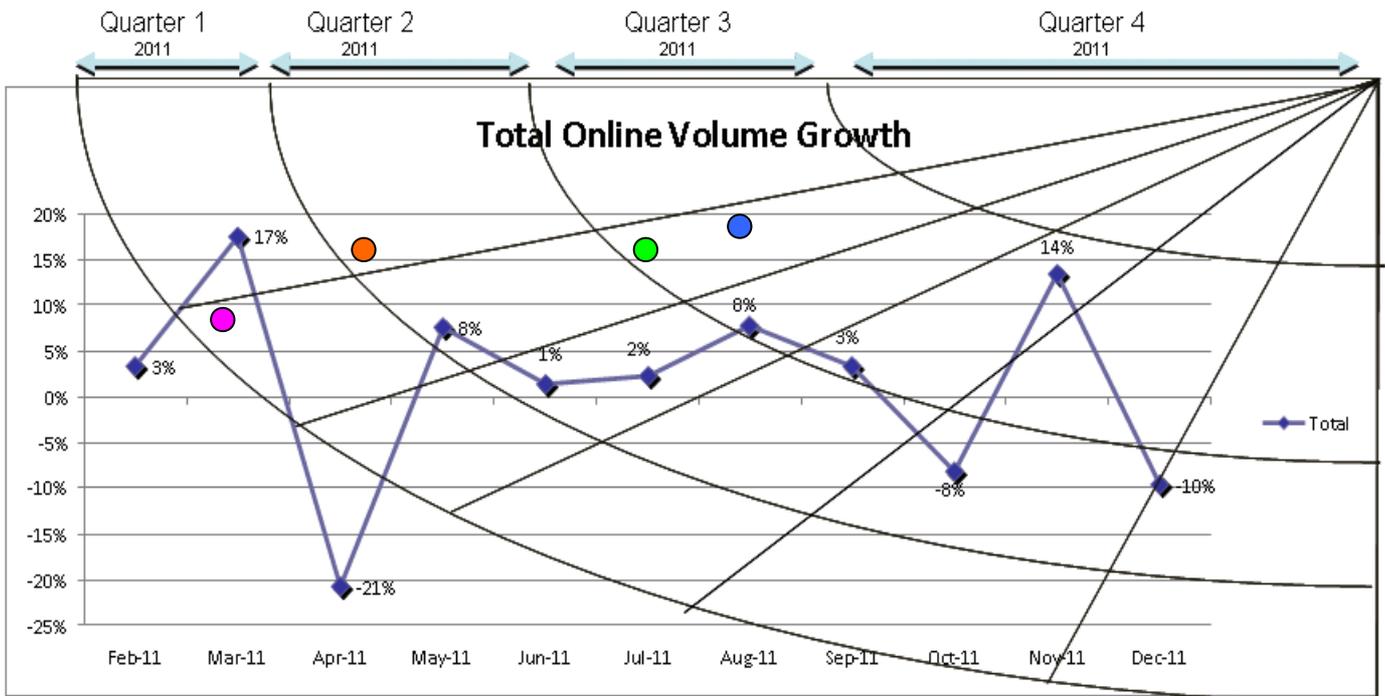


Figure 5.26: Usability enhancements and impact on transactional volumes (Source: adapted from FNB internal secondary data, 2012)

Key: Timing of intervention vs. bottom line impact

TYPE OF INTERVENTION	TIMING OF INTERVENTION
Banking redesign – look and feel	March ●
Enhancement to branch search for card delivery	April ●
Simplification of Navigation	July ●
Time out message changed to overlay for more	August ●

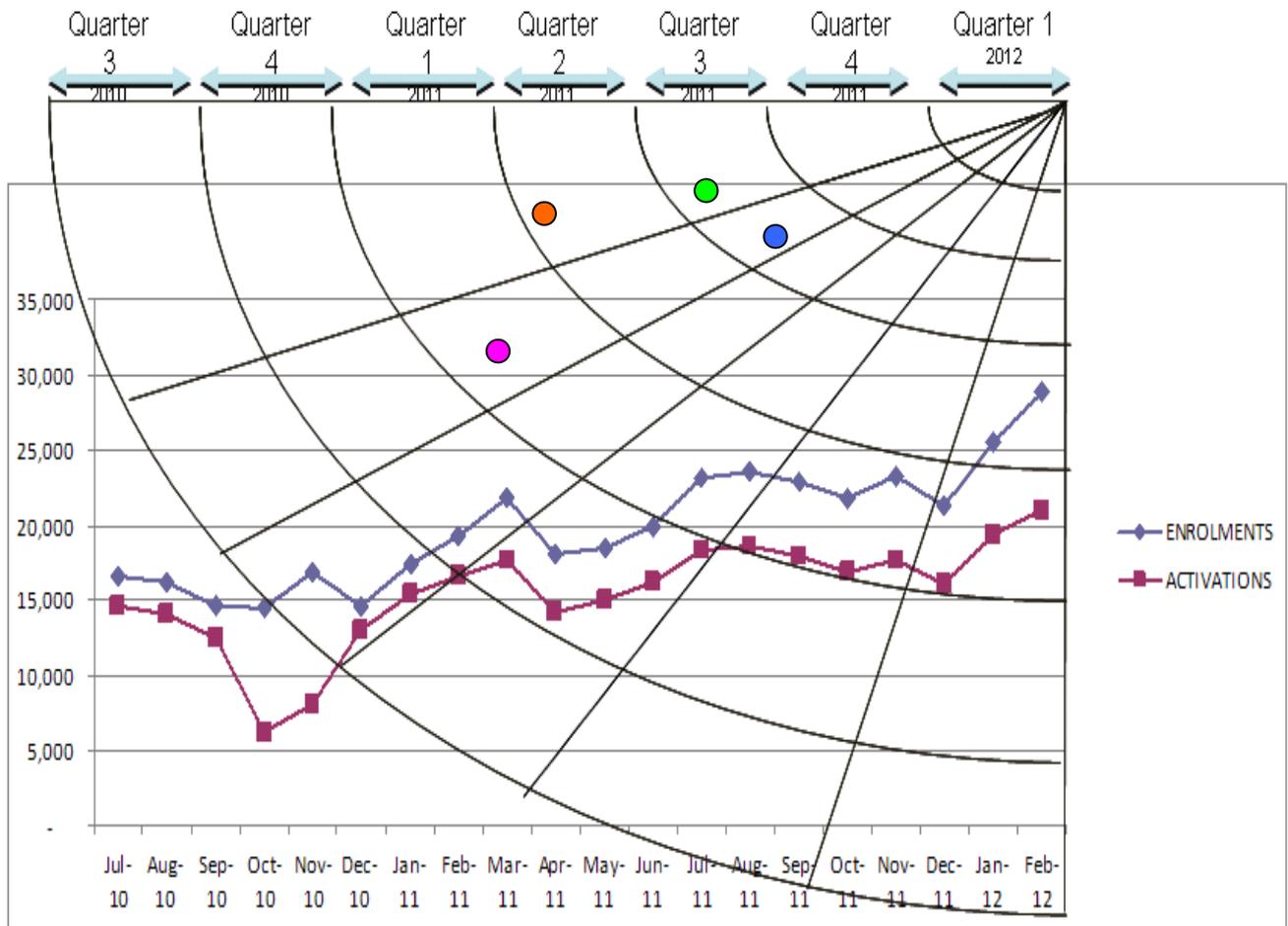


Figure 5.27: Usability enhancements and impact on new online enrolments and activations (Source: adapted from FNB internal secondary data, 2012)

Key: Timing of intervention vs. increase in adoption of new enrolments and activations

TYPE OF INTERVENTION	TIMING OF INTERVENTION
Banking redesign – look and feel	March ●
Enhancement to branch search for card delivery	April ●
Simplification of Navigation	July ●
Time out message changed to overlay for more prominence	August ●

In analysing the information above, it is prudent to ignore the seasonality troughs for the months April and December. However, what emerges is that the two

interventions to enhance ease of use through look and feel as well as navigation enhancements that were implemented in March and July has had a positive influence on both transactional volumes and online banking uptake respectively. This signal's the direct link between tangible interventions such as usability changes that can have a positive effect on the bottom line.

Fraud intervention impacts

Figure 5.28 below depicts a key change to a fraud preventative measure, namely behavioral tracking that was discussed in chapter two and the resultant impact on fraud losses.

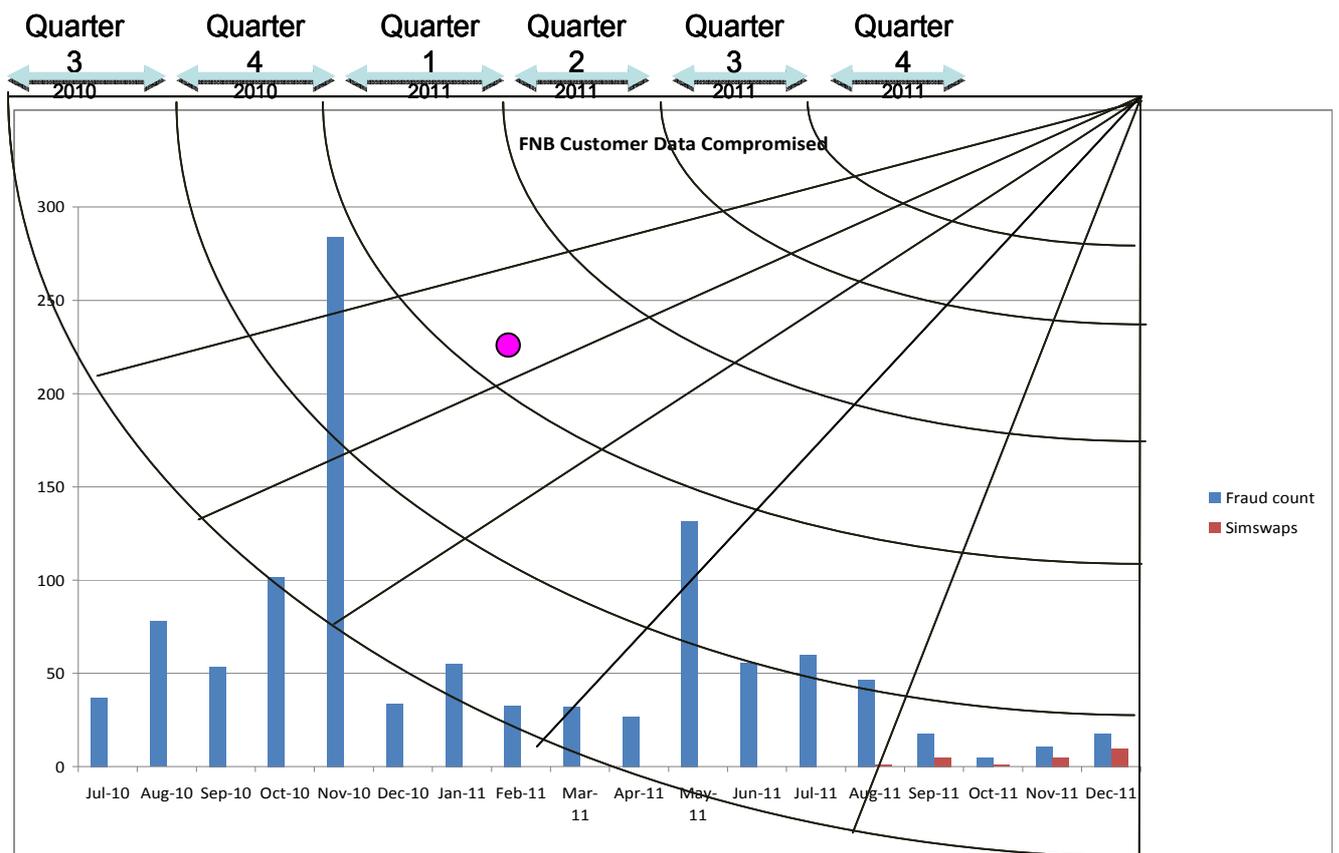


Figure 5.28: FNB Fraud volume impact 2010-2011 (Source: adapted from FNB internal secondary data, 2012)

The behavioral tracking fraud preventative intervention was introduced mid January 2011. In essence, behavioral tracking identifies a number of variables which are unique to a user e.g. IP address and if there is a high failure rate of matching variables, transactions are not allowed to proceed. It becomes evident that in the initial three months of implementation, there was a reduction in the number of frauds perpetrated in comparison to historical trends. However, it can be argued that this is still a level one (Amtul, 2011: 3-6) fraud prevention intervention that only contributes as an enhancement to authentication. The trends thereafter depict growth in the number of frauds which may be indicative of fraudsters still being able to obtain sensitive customer data to fraudulently transact on a consumers account.

In reflection of the secondary data analysed, it emerges that whilst the primary data reflected that customers are more satisfied in dealing with digital banking channels in stead of branches, negative customer experiences can have an immediate direct influence on service perceptions (figure 5.23) through the channel with a resultant knock on effect on bottom line tangibles.

It also became apparent through the secondary data analysis that ease of use can in fact positively have an influence on adoption and usage as was evident in figure 5.26 and 5.27. This validates the primary data obtained in support of objective one whereby ease of use has a direct bearing on channel behavior.

In considering the existing security interventions that are in place for FNB and the primary need of consumers for security to prevent fraud (objective one), it becomes clear that current security reveals opportunities for enhancement as was evident in the discussion related to figure 5.28.

5.5 Summary

The primary data gathered indicates that banks need to make sure that the basics are in place to ensure that objectives are met. Whilst the individual banks were not interrogated for nuances related to specific organisations, it becomes evident that the local industry trends are consistent with international findings discussed in chapter three. From the analysis of the data collected, the following observations can be made:

Security

- There is a consistent perception that security is the most important factor for consumers.
- Majority of customers would be intolerant of engaging with digital banking channels if their personal information were compromised.
- Security to prevent fraud, ease of use and ease of access are the three prioritised primary drivers to enable increase in usage and adoption of digital banking channels.

Convenience

- Customers expect value for money when engaging through this channel.
- Educating customer on how to use electronic banking presents an opportunity for enhanced engagement.
- Customers are generally more satisfied with engaging with electronic banking channels as apposed to conventional channels.

Simplicity

- Accessibility is core to digital banking usage for consumers.

General

- The secondary drivers are of significant importance only if the prioritised drivers' are met.

Considering the above observations, it is plausible to deduce the following issues relevant to the objectives;

- ❖ To determine what customers primarily want from digital banking channels, in terms of the core themes of security, convenience and simplicity.
 - Customers want security for the protection against fraud of their finances, followed by an easy to use platform that is accessible which can result in an increase in adoption and usage.

- ❖ To establish the drivers which are most important to customers.
 - Once the above fundamentals are in place, consumers are more open to innovations such incentives that will increase usage. In addition, educating consumers on what is available and how to use the services and functionality on offer will also lead to increased levels of satisfaction.

- ❖ To investigate the perceptions of service via digital banking channels.
 - Clients are more satisfied with the service they receive when engaging with digital channels and this is driven by the need for self service and instant gratification. However, clients are intolerant of service failure via this channel through issues such as defective functionality and these inefficiencies can negatively influence the opinions about service levels via this platform with a resultant impact on the bottom line.

In the following chapter the results will be reviewed in the context of the research objectives and key literature review with the intent to propose certain recommendations. This may assist banks within the local banking industry to increase their adoption and usage rates of digital banking channels with South African consumers and address the strategic challenges that are of mutual benefit.

CHAPTER 6

6. Recommendations and conclusion

6.1 Introduction

The previous chapter revealed the findings from the research undertaken and was analysed and interpreted in the context of the three objectives set out for this paper. The pertinent results of each category of the questionnaire were presented through the use of various graphical representations and incorporated an assessment of the significant findings.

The purpose of this chapter is to reflect on the accuracy of the research statement i.e. *“Customer satisfaction can be achieved by implementing the key drivers which will lead to an increase in adoption and usage of digital banking channels in South Africa”*. The intent is also to review the key findings in comparison to international research that was reviewed and suggest recommendations based on the study that was undertaken.

6.2 Comparison of findings to the literature reviewed

What has emerged from the local study in comparison to international literature available on the topic was close alignment to the commonality of needs of consumers across the globe. In reflecting on the work done by Casalo, *et al.*, (2008: 404), it becomes evident that website usability is a core driver of customer satisfaction as was evident with the local study with ease of use featuring in the top three priorities of critical drivers for usage. The shift of local consumer behavior aligned through the move from conventional channels to a desire for self gratification through digital channels also reveals close alignment to the work

presented by Ganguli and Roy (2010). The number one priority of local consumers also mirrors international consumer needs for security, in particular the safeguarding of personal information as was suggested by Nath, *et al.*, (2001).

The key nuance that has emerged in interpreting the local results pertains to the issue of accessibility, which in comparison to more established first world countries remains a critical challenge that needs to be overcome and is somewhat a macro-uncontrollable given the challenges faced within the South African market context and echoed by the likes of Brown, *et al.*, (2009). The leading indicator of low internet penetration fueled by high costs associated with access is contributing to the lagging effect of modest usage and adoption of digital banking in S.A.

6.3 Research statement reflection

In critical reflection of the results relative to the research statement, it is plausible to acknowledge that customer satisfaction can indeed be achieved by implementing the key drivers. The gap exists on whether there would be a radical improvement in adoption and usage of digital banking given the macro dependencies aligned to accessibility remains questionable.

In addition, it was also clear from the research results that customer satisfaction is firstly achieved through ensuring that the fundamentals such as security must be in place. Thereafter, customer satisfaction can be achieved through various other secondary drivers such as incentivisation which can also influence an increase in adoption and usage.

The macro dependency of accessibility warrants further research in the context of the South African market which may present opportunities for leveraging the

penetration of digital banking into the broader society of S.A banking consumers. The key addition to the body of knowledge that has emerged from this study pertains to the holistic nature of needs aligned to customer satisfaction in the digital banking context. This in essence reveals that there are no “magic pills” to radically improve usage and adoption within the South African market, but rather a combination of fundamentals that need to be in place which can be complimented with innovative strategies such as incentivisation.

In reflecting on the research statement i.e. “*Customer satisfaction can be achieved by implementing the key drivers which will lead to an increase in adoption and usage of digital banking channels in South Africa*”, it becomes clear from the analysis and interpretation of the results that the statement is only partially true.

6.4 Problems encountered in the study

The main problem encountered in the study was linking the secondary data to interventions, to aid validity through triangulation. This was mainly due to the fact that there could have been other factors that was positively influencing bottom line indicators such as aggressive above the line marketing that may have resulted in brand affinity or co-incidental factors such as the maturing of users that have banked with FNB for a number of years and have become more *au fait* with the services when engaging with the platform.

6.5 Recommendations

Recommendation 1

Further research is required to determine whether the rollout of self-service branches or leverage through third-party retailers would improve accessibility through broadening the distribution network and making digital banking more accessible for the South African market.

Recommendation 2

A fine balance needs to be struck with the implementation of prudent security solutions such as encryption and biometrics to address the fundamental priorities of South African consumers. This may incorporate the need for the organisation to absorb upfront costs such PKI tokens with the benefits emerging in the long run for the company.

Recommendation 3

Implementation of a rewards programme that encourages increased usage via digital banking channels for specific services that would improve the tangible value for customers.

Recommendation 4

Implementation of customer intuitive education modules e.g. videos and interactive games to accelerate user knowledge and competence of services offered.

6.6 Conclusion

Based on the analysis undertaken in chapter five as well as the findings from international literature reviewed, it becomes apparent that there are opportunities for improvement within the local banking sector. To ensure that the strategic goals of the organisation to migrate consumers to cost effective distribution channels such digital banking are met, local banks must first and foremost embrace a customer centric approach to solving for the strategic challenges as perceived by consumers of services.

Undoubtedly consumers are seeking more innovative solutions from their bankers given the growing nature of consumerism and it becomes a case of survive and thrive or become extinct in an industry that is highly competitive given the borderless boundaries of the financial services sector on the digital banking global stage.

LIST OF REFERENCES

- Akinci, S., Akoy, S. & Atilgan, E. 2004. 'Adoption of internet banking among sophisticated consumer segments in an advanced developing country', *International Journal of Bank Marketing*, 22 (3): 212-232.
- Aldas-Manzano, J., Lassala-Navarre, C., Ruiz-Mafe, C. & Sanz-Blas, S. 2009. 'The role of consumer innovativeness and perceived risk in online banking usage'. *The International Journal of Bank Marketing*, [online], 27 (1). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 05 November, 2011]
- Amato-McCoy, D. 2005. 'Creating virtual value', *Journal of Bank Systems and Technology*, 1 (22).
- Amtul, F. 2010. 'E-Banking security issues – Is there a solution in biometrics?' , *Journal of internet banking and commerce*, 16 (2): 3-6.
- Anderson, E.W., Fornell, C. & Mazvancheryl, S.K. 2004. 'Customer satisfaction and shareholder value', *Journal of Marketing*, 68 (4): 172-185.
- April, K.A. and Cradock, J. 2000. *E-business: Redefining the corporate landscape in South Africa*. Durban, South Africa: Butterworth Publishers (Pty) Ltd.
- Auta, E.M. 2010. 'E-Banking in developing economy: Empirical evidence from Nigeria', *Journal of Applied Quantitative Methods*, 5 (2): 215.
- Bakhru, A. 2010. *Analysing the External Environment: study guide for MBA B820*. Milton Keynes: Open University.

Barwise, P. and Farley, J.U. 2005. 'The state of interactive marketing in seven countries-interactive marketing comes of age', *Journal of Interactive Marketing*, 19 (3): 67-80.

Basel Committee – Electronic Banking Group. 2000. *Electronic Banking Group and White Paper Initiatives*. Washington D.C

Brown, I., Letsididi, B. & Nazeer, M. 2009. 'Internet access in South African Homes-A pre-liminary study on factors influencing customer choice', *Electronic journal on information systems in developing countries*, 38 (2): 1-13.

Brown, I., Cajee, Z., Davies, D. & Stroebel, S. 2003. 'Cell phone banking- Predictors of adoption in South Africa – an exploratory study', *International journal on information management*, 23: 391-394.

Cant, M.C., Brink, A. & Brijball, S. 2002. *Customer Behaviour, A Southern African Perspective*. Cape Town: Juta and Co Ltd.

Cant, M., Gerber-Nel, C., Nel, D. & Kotze, T. 2003. *Marketing Research*. 2nd ed. Pretoria: Van Schaik Publishers.

Casalo, L.V., Flavian, C. & Guinaliu, M. 2008. 'The role of satisfaction and website usability in developing customer loyalty and positive word-of-mouth in the e-banking services'. *The International Journal of Bank Marketing*, [online], 26 (6). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 05 November, 2011]

Charlesworth, J., Lawton, A., Lewis, J., Martin, V. & Taylor, P. 2003. *Toolkit 1 and Toolkit 2: study guide for MBA B736*. Milton-Keynes: Open University.

- Christopher, G.C., Mike, L. & Amy, W. 2006. 'A Logit Analysis of Electronic Banking in New Zealand', *International Journal of Bank Market*, 24: 360-383.
- Chuang, C.C. and Hu, F. 2011. 'An Empirical Study of Customers' Perceptions of E-Banking Services Based on Time Usage'. *Journal of Internet Banking and Commerce*, [online], 16 (2). Available at: <http://www.arraydev.com/commerce/jibc/> [Accessed 05 November, 2011]
- Coldwell, D. and Herbst, F. 2004. *Business Research*. Cape Town: Juta and Co Ltd.
- Collier, J.E. and Bienstock, C.C. 2006. 'Measuring service quality in e-retailing', *Journal of Service Research*, 8 (3): 260-274.
- Ernst & Young. 2011. *The Financial Services Index, Banking*. South Africa: Ernst & Young Survey
- Flavian, C., Guinaliu, M. & Gurrea, R. 2006. 'The role played by perceived usability, satisfaction and consumer trust on website loyalty', *The International Journal of Information Systems Applications*, 43 (1): 1-14.
- Gan, C., Clemes, M., Limsombunchai, V. & Weng, A. 2006. 'A logit analysis of electronic banking in New Zealand', *International Journal of Bank Marketing*, 24 (6): 360-383.
- Ganguli, S. and Roy, S.K. 2010. 'Generic technology-based service quality dimensions in banking'. *The International Journal of Bank Marketing*, [online], 29 (2). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 07 January, 2012]

- Gerrard, P., Cunningham, J.B. & Devlin, J.F. 2003. 'The diffusion of internet banking among Singapore consumers', *International Journal of Bank Marketing*, 21 (1): 16-28.
- Grant, R.M. 2010. *Contemporary Strategy Analysis*, 7th Edition. West Sussex: John Wiley & Sons Ltd
- Hallowell, R. 1996. 'The relationship of customer satisfaction, customer loyalty and profitability: an empirical study', *International Journal of Service Industry Management*, 7 (4): 27-42.
- Horn, N. 2002. Legal issues in electronic banking. Studies in transactional economic law, volume 17. Kluwer Law International: The Hague, Netherlands. Ince, D. 2001. Encyclopedia.com: Dictionary of the Internet. Electronic mall – definition of electronic mall. [online]. Available: <http://www.encyclopedia.com/doc/1012-electronicmall.html>. [Accessed 09 April, 2011]
- Howcroft, B. and Durkin, M. 2000. 'Reflections on bank-customer interactions in the new millennium', *Journal of Financial Services Marketing*, 5 (1): 9-20.
- Ifinedo, P. 2006. 'Acceptance and Continuance intention of web-based Learning technologies (WLT) Use among university students in a baltic country', *Journal of Information Systems in Developing Countries*, 23 (6): 1-20.
- Ismail, H. B., and Panni, M. F. A. K. 2009. 'Factors affecting customer retention toward internet banking in Malaysia' *Journal of Information and Knowledge Management*, 8 (1): 35-43.

- IT News Africa 2009. *Cyber attacks may increase leading up to the 2010 Soccer World Cup 2010*, [online]. Available at:
<http://www.itnewsafrika.com/?p=2635.com>
[Accessed 24 January, 2012]
- Jun, M. and Cai, E. 2001. 'The key determinants of Internet banking services quality: A content analysis', *International Journal of Bank Marketing*, 19 (7): 276-291.
- Kassim, N.M. and Abdhulla, A.K.M.A. 2006. 'The influence of attraction on internet banking-an extension to the trust-relationship commitment model'. *The International Journal of Bank Marketing*, [online], 24 (6). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 07 January, 2012]
- Kerem, K., Lustsik, O., Sorg, M. & Vensel, V. 2003. The development of e-banking in an EU candidate country: An Estonian case. *Proceedings of International Atlantic Economic Society Conference, Vienna, March 11-17*.
- King, B. 2010 *Bank 2.0-How Customer Behaviour and Technology will change the future of financial services*. London: Marshall Cavendish.
- Klopping, I.M. and McKinney, E. 2004. 'Extending the technology acceptance model and the task technology fit model to consumer e-commerce', *Information Technology, Learning and Performance Journal*, 22 (1): 35-48.

- Laukkanen, P., Sinkkonen, S. & Laukkanen, T. 2008. 'Consumer resistance to internet banking-postponers, opponents and rejectors'. *The International Journal of Bank Marketing*, [online], 26 (6). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 07 January, 2012]
- Lee, E., Lee, J. & Eastwood, D. 2003. 'A two-step estimation of consumer adoption of technology-based service innovations', *The Journal of Consumer Affairs*, 37 (2): 256-282.
- Lee, M.K.O. and Turban, E. 2001. 'A trust model for consumer internet shopping', *International Journal of Electronic Commerce*, 6 (1): 75-91.
- Leedy, P.D. and Ormrod, J.E. 2005. *Practical Research: Planning and Design*. 7th edition. New Jersey: Prentice Hall.
- Lewis, J. 2003. *Becoming a Practitioner Researcher: study guide for MBA B736*. Milton-Keynes: Open University.
- Lindridge, A., Woods, J., Ali, H. & Dibb, S. 2008. *Service Marketing: study guide for MBA B825*. Milton Keynes: Open University.
- Littler, D. and Melanthiou, D. 2006. 'Consumer perceptions of risk and uncertainty and the implications for behaviour towards innovative retail services-the case of internet banking' *Journal of Retailing and Consumer Services*, 13 (6): 431-443.
- Madu, C.N. and Madu, A.A. 2002. 'Dimension of e-quality', *International Journal of Quality and Reliability Management*, 19 (3): 246-258.

- Mensah, A.O., Bahta, A. & Mhlanga, S. 2005. 'E-commerce challenges in Africa-Issues, constraints, opportunities'. *World summit on the information society, Tunis, 2005*. Economic commission for Africa
- Meuter, M., Ostrom, A.L., Bitner, M.J. & Roundtree, R. 2003. 'The influence of technology anxiety on consumer use and experiences with self-service technologies' *Journal of Business Research*, 56 (11): 899-906.
- Mukherjee, A. and Nath, P. 2003. 'A model of trust in online relationship banking', *International Journal of Bank Marketing*, 21 (1): 5-15.
- Natarajan, T., Balasubramanian, S.A. & Manickavasagam, S. 2010. 'Customer's choice amongst self service technology (SST) channels in retail banking-A study using analytical hierarchy process(AHP)'. *Journal of Internet Banking and Commerce*, [online], 16 (2). Available at: <http://www.arraydev.com/commerce/jibc/> [Accessed 07 January, 2012]
- Nath, R., Schrick, P. & Parzinger, M. 2001. Bankers' Perspectives on Internet Banking. *E-Service Journal*, [online], 1.1, 21-36. Available: http://muse.jhu.edu/journals/eservice_journal/v001/1.1nath.html [Accessed 02 April, 2011]
- Neethling, R. 2008. Internet banking – South Africa - Online banking & electronic banking on the internet, [online]. Available: <http://www.intoweb.co.za/articles-internet-banking.html> [Accessed 06 April, 2011]
- Parasuraman, A. 2000. 'Technology readiness index (TRI)-a multiple item scale to measure readiness to embrace new technologies', *Journal of service research*, 2 (4): 307-320.

- Parasuraman, A., Zeithaml, V.A. & Berry, L. 1988. 'SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality', *Journal of Retailing*, 64 (1): 12-40.
- Patricio, L., Fisk, R.P. & Cunha, J.F. 2003. 'Improving satisfaction with bank service offerings-measuring the contribution of each delivery channel', *International Journal of Bank Marketing*, 13 (6): 471-482.
- Pearce, J.A. and Robinson, R.B. 2003. *Strategic Management- Formulation, Implementation and Control*. Durban, New York: McGraw-Hill Companies, Inc.
- Poon, W.C. (2008). 'Users adoption of e-banking services-the Malaysian perspective', *Journal of Business and Industrial Marketing*, 23 (1): 59-69.
- PwC. 2011. *Strategic and emerging issues in South African banking*. South Africa: PwC
- PwC. 2012. *The new digital tipping point*. South Africa: PwC
- Pyun, C.S., Scruggs, L. & Nam, N. 2002. Internet Banking in the US, Japan and Europe, *Multinational Business Review*.
- Ram, S. and Sheth, J.N. 1989. 'Consumer resistance to innovation-the marketing problem and its solutions', *The Journal of Consumer Marketing*, 6 (2): 20-34.
- Rotchanakitumnuai, S. and Speech, M. 2003. 'Barriers to internet banking adoption-a qualitative study among corporate customers in Thailand', *International Journal of Bank Marketing*, 21 (6): 312-323.

- Salehi, M. and Zhila, A. 2008. 'Fraud detection and audit expectation gap Empirical evidence from Iranian Bankers', *International Journal of Business and Management*, 3 (10): 65-77.
- Sarel, D. and Marmorstein, H. 2003. 'Marketing online banking services- the voice of the customer', *Journal of Financial Services Marketing*, 8 (2): 106-118.
- Sathye, M. 1999. 'Adoption of internet banking by Australian consumers: An empirical investigation' *International Journal of Bank Marketing*, 17 (7), 324-334.
- Saunders, M., Lewis, P. & Thornhill, A. 2003. *Research Methods for Business Students*. 3rd ed. Essex: FT Prentice Hall
- Segal-Horn, S. 2004 *The Strategy Reader*. Blackwell Publishing.
- Singh, N.P. 2007. 'Online Frauds in Banks with Phishing'. *Journal of Internet Banking and Commerce*, [online], 12 (2). Available at: <http://www.arraydev.com/commerce/jibc/> [Accessed 05 November, 2011]
- South Africa. Department of Communications. 2009. *Draft broadband policy for South Africa*. Government Gazette, vol 531, No. 32578. Pretoria: Department of Communications.
- Tan, M. and Teo, T.S.H. 2000. 'Factors influencing the adoption of internet banking', *Journal of the Association for Information Systems*, 1 (5): 1-44.
- The Institute of Bankers in South Africa. 2007. *Trends in global banking and the role of centres of excellence* presented by Minisi, P.

- Walker, R.H. and Johnson, L.W. 2006. 'Why consumers use and do not use technology-enabled services', *Journal of Service Marketing*, 20 (2): 125-135.
- Wang, Y.S., Wang, Y.M., Lin, H.H. & Tang, T.I. 2003. 'Determinants of user acceptance of internet banking-an empirical research', *International Journal of Bank Marketing*, 14 (5): 501-519.
- Wong, D., Rexha, N. & Phau, I. 2008. 'Re-examining traditional service quality in an e-banking era', *International Journal of Bank Marketing*, 26 (7): 526-545.
- World Wide Worx 2009. *Internet access to double in next five years*, [online]. Available at: <http://www.worldwideworx.com/archives/150.htm> [Accessed 24 January, 2012]
- Yang, Z., Peterson, R.T. & Cai, S. 2003. 'Service quality dimensions of Internet retailing: An exploratory analysis', *Journal of Service Marketing*, 17 (7): 685-700.
- Yap, K.B., Wong, D.H., Loh, C. & Bak, R. 2009. 'Offline and online banking-where to draw the line when building trust in e-banking?'. *The International Journal of Bank Marketing*, [online], 28 (1). Available at: <http://www.emeraldinsight.com/0265-2323.htm> [Accessed 07 January, 2012]
- Yoon, S.J. 2002. 'The antecedents and consequences of trust in online-purchase decisions', *Journal of Interactive Marketing*, 16 (2): 47-63.
- Zikmund, W.G. 2006. *Business research methods*. 7th Edition. Thompson: USA.

Annexure A: Web based research questionnaire

Dear respondent

Thank you for your willingness to complete the questionnaire. The purpose of the survey is to obtain your input as part of a UNISA MBA dissertation to improve the services offered by banks through their **electronic banking channels, specifically Internet and Cell phone** banking to ensure alignment to **customer needs**. The survey should not take more than **10 minutes** to complete. The survey is anonymous and confidential. The answers you provide will be respected and used for research purposes only.

Please answer all the questions/ state your level of agreement by selecting the appropriate option. There are no right or wrong answers.

(Please tick one option only.)

Section A

Q1. What is your age?

20-25	<input type="checkbox"/>
26-35	<input type="checkbox"/>
36-45	<input type="checkbox"/>
46-55	<input type="checkbox"/>
55+	<input type="checkbox"/>

Q2. What is your gender?

Female	<input type="checkbox"/>
Male	<input type="checkbox"/>

Q3. Who do you bank with?

ABSA	<input type="checkbox"/>
Capitec	<input type="checkbox"/>
First National Bank	<input type="checkbox"/>
Nedbank	<input type="checkbox"/>
Standard Bank	<input type="checkbox"/>
Other	<input type="checkbox"/>

Q4. Do you currently bank electronically (making use of Internet and/ or Cell phone banking)?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Section B

Security

Q5. If I was a victim of bank fraud i.e. loss of funds without consent, I would continue to make use of electronic channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q6. There is good security offered through electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q7. If my personal information was "stolen" through electronic banking channels I would continue to make use of electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q8. My bank provides sufficient education about fraud prevention through electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q9. I believe that bank security through electronic banking channels is better now than it was in the past.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Section C

Convenience

Q10. I believe that through using electronic banking channels, my bank charges should be cheaper.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q11. If I were rewarded with an incentive e.g. rewards programme to bank through electronic channels more frequently, this would increase my usage.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q12. My bank provides sufficient education/ training on how to use electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q13. My bank offers the ability to open banking accounts through electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q14. The process to open bank accounts through electronic banking channels is simple.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q15. I am more satisfied with the level of service I receive from the bank when using electronic banking channels compared to visiting a branch.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Section C

Simplicity

Q16. Accessibility and convenience are key factors for me to continue/ start using electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q17. My bank provides me with all the functionality/ services necessary to only bank through electronic banking channels with no need to go into a branch.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q18. It is easy to find the transactional services I am looking for through electronic banking channels.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q19. The information available through electronic banking channels is easy to understand.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q20. The information available through electronic banking channels is relevant to my needs.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Q21. Overall, I am satisfied with the electronic banking services offered by my bank.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Section D

Main preference

Q22. What would be the most important factor to start/ continue transacting via electronic channels such as the Internet and/ or Cell phone banking?

(Please select your preferences by order of priority from 1 – 3)

Note: 1 being the most important

Ease of access	<input type="checkbox"/>
Ease of use	<input type="checkbox"/>
Education	<input type="checkbox"/>
Incentives e.g. reward programmes	<input type="checkbox"/>
Security to prevent fraud	<input type="checkbox"/>
Simplicity in opening bank products through electronic banking channels	<input type="checkbox"/>
Speed of transaction processing	<input type="checkbox"/>
Privacy of personal information	<input type="checkbox"/>
Other (if so, please explain below)	<input type="checkbox"/>
Other - explanation	

**Thank you for sharing your opinions with me.
I appreciate your feedback.**
