EFFECTIVE IMPLEMENTATION OF E-BANKING AND ITS IMPACT ON BANK PERFORMANCE: THE CASE OF FIRST NATIONAL BANK OF BOTSWANA.

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DECLARATION OF ORIGINALITY

I, **BOTSHELO VIOLET THLAJOANE** declare that this dissertation is my own work, except as indicated in the acknowledgements, the text and references. It is being submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the North-West University. It has not been previously submitted for any degree or any examination at any other university or institute.

Signature:.....

Date: 20 March 2014.

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This dissertation is dedicated to my daughter Lebo who believed in me and gave me the encouragement to carry on when I was on the edge of quitting; to my husband for not giving up on me; and to my sister -this is for you.

ABSTRACT

E-banking, which entails carrying out banking transactions without visiting a bank (brick and mortal), is now globally the norm of banking practice and enables banks to improve service delivery; attract customers; provide services at low cost; and stay competitive.

The study assessed the effectiveness of implementation of electronic banking (e-banking) at First National Bank Botswana (FNBB). The objectives of the study were: to evaluate the effectiveness of e-banking implementation against management work process at FNBB; to examine factors influencing its implementation with consequences for bank performance; to assess the impact of e-banking on bank performance; as well as to recommend measures for overcoming constraints to effective e-banking implementation and increase its adoption by FNBB customers.

A quantitative research design with a survey questionnaire as the main research instrument of data collection was used to collect data from FNBB managers and individual customers. The data was analysed through a exploratory data analysis technique which helped to summarize and present the data. The data was presented through tables, charts and descriptions. The major statistical tool of analysis was SPSS.

The findings indicated five dynamics or forces of change prompting implementation of e-banking at FNBB. These are external political and economic factors facilitating ease entry into the profitable market and inducing competitive rivalry; the need to reposition the bank and gain competitive advantage; the foreseeable inability of the 'conventional branch banking model' to help FNBB use it as a suitable means of extending banking to the estimated 57% of 'potential unbanked customers'; the small size of the market which was currently overbanked and not being able to accommodate many full-service commercial banks; and globalization compelling banks to adopt e-banking services to enhance high service delivery that transcended customer satisfaction.

The findings of the study show that implementation of e-banking was ineffective and has resulted in FNBB not realising the benefits and outcomes. This in turn has resulted in low adoption of e-banking products by customers. The failure to effectively use the models and critical success factors of best practice in change management, has contributed to ineffective

implementation. The seven most important factors that have contributed to ineffective implementation of e-banking were determined. These are: the lack of an effective change management programme for e-banking; security issues; the lack of a comprehensive customer education campaign; the use of the traditional way of marketing e-banking; bank staff that is not conversant with e-banking product features to market it effectively; the lack of structures in retail banking halls for staff to meet and help customers; the lack of knowledge on e-banking products and services offered; trusting manual banking more than e-banking; and feeling more secure to use manual banking.

In order to overcome constraints to effective e-banking implementation and increase its adoption by FNBB customers currently and in future, so as to realise optimum benefits and goals and objectives at FNBB, the following measures are recommended to FNBB management: make use of external experts such as project management and change management consultants to support implementation efforts; undertake a market survey with a view to segment for the e-banking products, infuse their views on implementation, assess the level of awareness and readiness to use these products; develop a customer education campaign prior to implementation; strengthen operations management capacity in terms of technological capability and infrastructure; and form a taskforce for addressing all issues related to e-banking. Particular attention should be paid to challenges and lessons learnt and to prepare a report to management. Further investigation should also help to clarify why only three e-banking products - ATMs, point of sale and mobile phone banking are often used while the other four – Internet, card-less (e-wallet), on-line payments and on-line banking are least used.

Key Words: Effective implementation, e-banking, FNBB, Botswana.

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1 CHAPTER 1:INTRODUCTION

1.1 BACKGROUND INFORMATION

The proliferation of and rapid advance in technology-based systems, especially those related to the Internet, are leading to fundamental changes in how companies interact with customers. Banks have also taken advantage of this proliferation by introducing electronic channels through which they can interact with their customers and offer their products and services (Parasuraman&Zinkhan, cited in Ibrahim et al., 2006).E-banking, which is concerned with electronic service delivery of banking services, helps banks to attract more customers, improve customer perceptions and encourage loyalty (Ibrahim *et al.,* 2006).

E-banking, which became popular in the late 1980s and referred to the use of a terminal, keyboard and TV or monitor to access the banking system using a phone line (Whiteley, 2000), has to date been accepted worldwide as the most efficient way in which banks and customers can interact and transact without any physical contact. In view of this, Khalfan, et al. (2006) subscribe that banks are gradually becoming more aware of the importance of e-banking in this era, with the Internet now emerging as a key competitive arena for the future of financial services. This e-banking revolution has also been felt in Botswana where most banks are steadily applying it.

This study was motivated by the need to find a solution to the problem of ineffective application of e-banking at First National Bank of Botswana (FNBB). This is in view of the fact that e-banking, which was designed as a strategy for improving customer service and maximising income to the bank, seems not to have benefited both the bank and its customers due to ineffective application. The study therefore assesses the effectiveness of e-banking implementation at the bank and its impact on its performance.

A review of the banking industry in Botswana shows an emerging trend of usage of e-banking as most of the local commercial banks have introduced e-banking as a strategy for bolstering their competitive advantage in the last ten years. E-banking products and services in use so far include automated teller machines (ATMs); Internet or online banking; mobile or cell phone banking; short messaging services (SMS); on-line payments; point-of-sale, etc. Currently, banks known for using e-banking are FNBB; Barclays; Standard Chartered;

Stanbic; Bank of Baroda; Banc ABC; and Bank Gaborone (Banking Supervision Report, 2010).

FNBB was established in Botswana in September 1991. It is 70% owned by First Rand Bank of South Africa, while 30% is owned by the public on the Botswana Stock Exchange. In 1992, it took over the operations of the Bank of Credit and Commerce Botswana (BCCB), which was under Bank of Botswana administration and operated five branches (FNBB Corporate Profile, 2008). Currently, the bank operates through a network of 19 branches country-wide, with 122 ATMs, 39 mini-ATMs, and 3,300 point-of-sale devices. It has a complement of 1,042 employees (FNBB Operations Report, 2011).

Over the years, FNBB has made substantial investment in e-banking technologies which resulted in offering a wide range of e-banking products and services on the local market. Consequently, the bank has earned itself a reputation of being the most innovative, technologically advanced and the leader in e-banking services in the industry. The bank introduced e-banking so as to offer convenient and efficient services to its customers; reduce transactional costs; and speed up service delivery by reducing persisting long queues in its banking halls. The purpose was to use e-banking to differentiate itself from competitor banks which introduced similar products in later years and thus gain competitive advantage (FNBB Operations Report, 2011; Banking Supervision Report, 2010). A current review of e-banking application at FNBB has however revealed that the bank is facing challenges and problems, largely attributed to ineffective application. As a result, e-banking has continued to perform poorly with only a few customers adopting it. For instance, out of a total number of 335,184 retail customers with cell phones, only 40.0% had adopted mobile banking and only 8.3% had registered for Internet banking until December 2011 (FNBB Bankwide VSI Report, December 2011). This represents an extremely low level of adoption.

According to initial interviews held with a few managers involved with e-banking services at the bank, the low adoption rates are due to both internal and external factors which have and still contribute to ineffective application of e-banking technologies and innovations at FNBB. The internal factors include lack of effective internal marketing; not using the best-practice marketing strategies for e-banking; lack of solid structures in place to ensure that employees and customers are advised on the products; lack of knowledge of e-banking services; and lack of awareness of benefits to be derived from using e-banking. The external factors on the other

hand include limited numbers of computers and Internet used by customers; inconsistency of Internet up-times; heavy reliance on manual banking due to the fact that a lot of customers are still conservative and perceive use of electronic based products as risky.

The above constraints appear to have contributed to low adoption of e-banking products by FNBB customers which ultimately led to continued long queues in the banking halls at month ends, failure to provide high service quality, lack of compelling competitive advantage over competitors and thus difficulty in attracting complex customers to the bank. It is against this background that this study was undertaken to assess the effectiveness of implementation of e-banking and its impact on bank performance at FNBB. The study also sought to establish what factors have influenced implementation of e-banking and the consequences for bank performance. This evaluation of effectiveness of implementation also involved the application of best practice models for successful implementation of e-banking and benchmarking the extent to which FNBB conformed to or deviated from them in its e-banking implementation process. This formed a basis for recommendations to improve on effective application and adoption of e-banking.

1.2 PROBLEM STATEMENT

FNBB has been implementing e-banking as a strategy for offering convenient, quick and efficient services to its customers since 2002; reducing transactional costs; speeding up service delivery; and reducing persisting long queues. By doing this, the bank hoped to attract and retain many customers, maximise income, differentiate itself and gain competitive advantage in the local market in line with changing global banking business trends. Their aim therefore was to move their customers from "bricks to clicks", a strategy to reduce long queues in the banking halls, whilst generating increased revenue through volume driven e-banking transactions.

However, although e-banking is undoubtedly an effective strategy for achieving the above world-class banking goals, it is the ineffective application of this strategy which has been and still is a major source of concern. The research problem under investigation is therefore the "*ineffective application of e-banking at FNBB*". This has resulted in:

- Low rates of adoption of e-banking products and services by its customers.

- A low vertical sales index of 3.122 products per customer.
- Long queues in banking halls resulting in poor service delivery.
- Low customer satisfaction; with a consequence of low return on this investment.

The purpose of the study is to investigate difficulties experienced by FNBB which make effective e-banking implementation impossible and to make recommendations to management on measures for improving on its application as to result in optimum benefits to both customers and the bank. The study attempts to alleviate the problem of scarcity of such studies.

1.3 OBJECTIVES OF THE STUDY

The general objective of the study is to assess the effectiveness of implementation of e-banking and its impact on bank performance at FNBB.

Specific research objectives of the study are to:

- Assess the effectiveness of e-banking implementation at FNBB;
- Identify factors influencing implementation of e-banking and the consequences for bank performance;
- Assess the impact of e-banking on bank performance at FNBB.

1.4 RESEARCH QUESTIONS

The research question is:

To what extent can effective implementation of e-banking result in high rates of adoption of e-banking products and services; increased vertical sales index; improved customer service; increased revenues; improved operational performance and competitiveness at FNBB?

The investigative questions are:

- How effective is e-banking implementation at FNBB?
- What factors influence the implementation of e-banking at FNBB and what have been the consequences for bank performance?
- What is the impact of e-banking on bank performance at FNBB?

1.5 SIGNIFICANCE OF THE STUDY

As a pioneer study in this direction, it is anticipated that the findings will be useful to management who should be keen to know how effective their strategies are applied in the organisation and what the need for improvement is. In view of time and resources expended to implement strategies such as e-banking, it is imperative to become informed and this study aimed at doing just that. It is also interesting to assess the extent to which strategies such as e-banking conform to or deviate from theoretical and conceptual models of best practice particularly with respect to implementation, sustainability, managing the change process, people involvement etc. - areas which are often sources of failure of most strategies in organisations and which contribute to ineffective adoption. By documenting constraints and other experiences through secondary research, this study is expected to provide learning material including reflections which will be of help in introducing similar performance improvement initiatives in the future.

1.6 RESEARCH METHODOLOGY OUTLINE

This study has adopted a quantitative research design to address the current problem at FNBB. This research design, which is in line with the positivism paradigm, involves using a quantitative survey for collecting views from two samples of managers and customers of FNBB. The research methodology has involved the collecting of primary data through self-administered questionnaires and document review methods (Chapter 4).

1.7 ORGANISATION OF THE STUDY

This study is organised into six chapters. Chapter 1 introduces the study and defines the scope of the research. Chapter 2 reviews the local banking industry and analyses the marketing environment of FNBB. While Chapter 3 discusses the theoretical and empirical literature underlying the subject of e-banking and implementation, Chapter 4 presents the research methodology used the study. In Chapter 5, research results are presented and analysed with initial interpretation. Finally, Chapter 6 evaluates the research findings in the light of the literature review and with reference to the whole study, including conclusions and recommendations.

2 CHAPTER 2: OVERVIEW OF THE IMPLEMENTATION OF E-BANKING AND ITS IMPACT ON BANK PERFORMANCE IN BOTSWANA

2.1 INTRODUCTION

This chapter provides an overview of the local banking industry and analyses the marketing situation facing commercial banks. It also discusses the usage of e-banking in these banks and the associated implementation challenges that they face. The discussion progresses under sections and sub sections.

2.2 OVERVIEW OF THE LOCAL BANKING INDUSTRY

The banking industry is an increasingly important sector of Botswana's economy both in terms of its contribution and in supporting the development of other sectors of the economy for example, the banking sector, which has grown by 11.2% on average from 1994 to 2009, contributes to a 100% increase in GDP from 3% to 6%. This growth results in a significant increase in assets and allocation of credit to the economy. It is therefore not surprising that the sector has been a driving force in the growth of the Botswana Stock Exchange (BSE) in recent years, where it has dominated market capitalisation (Botswana Financial Sector, 2011).

According to the Banking Supervision Report (2010), the banking sector has continued to be profitable, well capitalized and in compliance with minimum capital adequacy requirements (15%), with all banks observing prudential requirements and maintaining healthy liquidity positions. The source adds that even in the face of the global financial crisis, the sector has been largely resilient to its external shocks and continues to perform satisfactorily. It is this profitability and the obtained conducive political and macroeconomic environment which have contributed to the growth of the sector with many new banks and other non-bank financial institutions entering the local market and thus resulting in intense competition. This has influenced the current marketing situation facing local banks as analysed in 2.3 below.

2.3 CURRENT MARKETING SITUATION FACING BANKS

The local banking market is characterised by fierce competition due to its attractiveness in terms of profitability and ease access to entry. The reform and liberalisation measures

adopted by the Botswana Government over the past two decades had a positive impact on banking competition, including the removal of direct controls over interest rates or credit allocation; unrestricted product pricing; liberalisation of exchange controls permitting banks to open foreign currency accounts and offer foreign currency loans. However, the Bank of Botswana imposes restraints on the level of bank charges. Equally, the subsequent abolition of exchange controls in 1999 permitted residents to open bank accounts outside the country to hold a full range of offshore financial assets, thereby exposing local banks to more competition(Botswana Banking Sector Overview Report, 2009).

The above developments define the current local banking market with several new banks established apart from the big three ones - Barclays, Standard Chartered and FNBB. These new banks include Stanbic (1992), Bank of Baroda (2000), Bank Gaborone (2006), Capital Bank (2008), ABN Amro (2009) and BancABC (2009). National Development Bank (NDB)still awaits approval of legislation that will enable it to transform into a commercial bank(Mmegi, May 2012). Although these banks offer the same traditional retail banking services, competition has increased further during 2009 with the conversion of BancABC to a commercial bank and its intention to roll out a retail network in branches in the large cities and towns (BancABC Report, 2011).

2.4 EMERGENCE AND USE OF E-BANKING IN LOCAL BANKS

A general review of the banking market reveals that local banks have been actively introducing e-banking based products and services to beat competition and delight customers, with FNBB typically the frontrunner in this regard. This has provided customers with more banking services to choose from, hence customers are now developing an insatiable appetite for efficient service. It has compelled financial institutions to move fast to a more radical transformation of their business systems and models by embracing Internet banking (Ovia, 2001).

According to the Banking Supervision Report (2010), factors prompting local banks to adopt e-banking technologies include the need to improve service delivery; effect prompt utility bill payments; reduce transaction costs and offer competitive rates; and reduce congestions in the banking halls and hence improve service quality. Another strategic factor is highlighted by the Botswana Banking Overview Report (2009): The 'conventional branch banking model'

had become unlikely to be a suitable means of extending banking to an estimated 57% of 'potential customers' who were 'unbanked' since it would be too costly in terms of infrastructure and personnel. In view of this, e-banking, in the form of a mobile banking platform which provides a way of reaching large numbers of customers on a low unit cost basis, and provides a wide range of services including bill payment, account transfers and Government transfers, was considered to be most appropriate. Therefore banks should consider investing in e-banking. With the limiting reality of a small size of the market being flooded with many banks and allied financial institutions, the Botswana banking market may not be big enough to accommodate many full-service commercial banks - adopting innovative strategies like e-banking appears to be an imperative.

Globalization has also left banks with no choice but to adopt electronic banking services to enhance high service delivery that transcends to customer satisfaction, if they really want to stay competitive in the business race, let alone be profitable. E-banking technological developments involving the use of cell phone banking and e-money also have implications for the traditional banking model and enable some banking and money transmission services to be conducted by other entities. All small banks are now advancing to offer e-banking and hence catching up with the larger ones. To enable the banks to keep and retain customers, they will have to review and develop new service strategies such as multiple products offering to facilitate accessibility to various accounts (especially where mortgage is in place) to deter customers from switching banks. E-banking channels of service delivery are especially useful in increasing this vertical sales index of products per customer, which is as low as 3.122 for FNBB (Section 1.4).

Commenting on the rationale for using e-banking in Botswana, Mobarek (2009) observes that as customers become more sophisticated, it becomes essential for banks to consider the use of technology to respond to their continuously changing requirements; however, delivery channels lack in meeting the demands of the customers by not making them aware of e-banking and using obsolete or not too up-to-date technology. With the aid of technology, some banks bolstered their competitive advantage through the introduction of new products, which included cell phone/Internet banking, short messaging services (SMS) alerts and services aimed at providing banking services to the unbanked sections of the population (Banking Supervision Report, 2010).

2.5 THE EXTENT OF APPLICATION OF E-BANKING IN LOCAL BANKS

Although most banks apply some form of e-banking (Sections 1.3, 1.4 and 2.4), the extent of use varies significantly. Whilst FNBB became the first bank to apply e-banking in 2002, others followed later - Barclays, Standard Chartered, Stanbic, Bank of Baroda, Bank Gaborone, Capital Bank; and Banc ABC. Only brief outlines for each of the six banks follow, while details are available in Appendix 1.

2.5.1 First National Bank of Botswana (FNBB)

The FNBB Annual and Operations Reports (2010-2012) and Mmegi Newspaper (2010-2012) provide information on various e-banking products and services that have up-to-date been offered by the bank, namely, Internet banking, cell phone banking, on-line banking, point of sale, e-wallet, and ATMs.

2.5.2 Barclays Bank Botswana (BBB)

Barclays has been providing banking services in Botswana for almost 60 years. It operates 52 branches including Sales and Service Centres, and 101 ATMs. The bank has quite a number of e-banking channels and products aimed at diverting customers from the traditional "brick and mortar" in an effort to make life much easier and provide convenience to customers. The services currently offered include cell-phone banking; Internet banking; online service with 24-hour access to cash management, account servicing, foreign exchange and treasury deposits; SMS alert and e-statement; and ATMs (BBB Report, 2008).

2.5.3 Standard Chartered Bank Botswana (SCBB)

SCBB provides consumer and wholesale banking products and services. It also provides various services, including mobile banking (the most popular), online banking, and e-statement services. Mobile banking, which was introduced in 2009, offers the following services: making a balance enquiry; requesting a mini-statement; transferring funds across SCBB accounts; paying utility bills; requesting a new chequebook; getting alerts for any transaction on customer account; and topping up phones with airtime (Standard Chartered Bank, 2012).

2.5.4 Stanbic

According to (Stanbic Bank Botswana, 2012), Stanbic Bank's extensive global footprint and state-of-the-art systems offer various services. The new Business Online platform allows customers to make payments to third parties; transfer funds between accounts in the customer's personal portfolio; view, print and download balances and statements and make adjustments to her/her own account properties.

2.5.5 Bank Gaborone

E-Pula Internet banking allows a customer to manage his/her finances online securely in the convenience of his/her home or office. It offers the following services: payments within personal accounts; payments within Bank Gaborone Accounts; payments to local banks; viewing account balances; standing orders within Bank Gaborone Accounts and local banks; and requesting account statements for up to three months history and transaction history for up to 12 months (Bank of Botswana, 2009; Bank of Gaborone, 2012)

2.5.6 Capital Bank

The bank began operations in 2008 following the issuance of its banking license by the Bank of Botswana. Capital Bank introduced Internet banking in 2009 and Visa Debit Cards in 2010. The bank offers all customers access to SMS and e-alerts services. For any transaction that hits a customer's account, he/she receives an SMS on a cell phone and an email the moment it happens. This service is offered free of charge to all account holders for peace of mind and security (Capital Bank Electronic banking, 2012).

On the basis of Section 2.5 and Appendix 1, it can be concluded that there is notable progress in the implementation of e-banking by all banks in Botswana, although at different levels of implementation. FNBB has implemented the widest range of e-banking products by far, demonstrating market leadership. This is followed by Barclays, Standard Chartered and Stanbic banks, which could be assessed to be in second position; with Bank Gaborone in third and Capital Bank in fourth position (lowest level) of implementation. Nevertheless, this emerging trend towards application of e-banking products and services in Botswana banks has serious implications and challenges for current and future banking practice. Firstly, the introduction of several e-banking products is likely to induce a high level of competition in the local market. Secondly, this entails a revolution from 'traditional banking', the

predominant norm of most individual and corporate customers in Botswana, to 'electronic banking'. This, as initial findings have indicated (Section 1.3 and 1.4), will be an enormous challenge for banks to migrate their customers from "bricks to clicks", since it will call for a radical paradigm shift in both customers and banks to adopt e-banking. It underscores the significance of effective implementation of e-banking in order to result in high adsorption rates resulting in a positive impact on bank performance.

2.6 THE E-BANKING IMPLEMENTATION CHALLENGES IN BANKS

As revealed in Section 1.3 and 1.4, e-banking implementation continues to be a challenge at FNBB with factors constraining it. This has resulted in dismal performance for these technological innovations. It not a pleasant development when one considers that FNBB is the most reputable e-banking technology leader in the market from which other banks ought to learn. However, this study also has initially indicated that even other banks have been facing implementation challenges. For instance a recent study by Zibochwa (2011) found that although the total number of retail customers registered to use mobile banking at Barclays Bank was 23,240 in December 2010, only 13,944 (or 60%) of these customers have started using it or were active. What was even more worrying was that both the registered and active individual customers represented only 16% and 10% of the total retail customer base of 145,000 respectively, and that it had occupied close to one and half years to get those numbers (BBB Mobile Banking Report, 2011). Lastly, the high frequency of system-down time at Standard Chartered bank negatively impacts on effective application of e-banking channels such as ATMs and on-line banking (Researcher's findings).

Based on the preliminary findings and secondary research in Sections 1.3, 1.4 and 2.5, it can safely be concluded that local banks have not yet realised their target goals for introducing e-banking thus preventing them from reaching full benefits to be derived from effectively implemented and fully adopted services. In all three situations, those concerned with e-banking services at the banks have attributed this suboptimal application of e-banking technologies to ineffective implementation. Thus permitting another conclusion that e-banking implementation is a serious challenge in Botswana's commercial banks and this should provide the rationale for carrying out this study. It is therefore important to evaluate the dynamics of the implementation process of e-banking with a view to finding a solution. By using FNBB as a case study, a bank with a comparatively longer history of e-banking

usage in the sector, it is anticipated that this investigation will provide a scope for in-depth examination of the implementation process for e-banking and how it has impacted on bank performance, as well as factors which have and still continue to constrain effective implementation with consequences for bank performance. This will enable findings to be generalised to other banks.

2.7 CONCLUSION

This chapter has presented an overview of the banking industry in Botswana with various levels of applications of e-banking in six local banks, namely FNBB, Barclays, Standard Chartered, Stanbic, Bank Gaborone and Capital Bank. Although a clear trend towards e-banking application by all banks is emerging, one major challenge they face is low usage by customers, suggesting this could be due to ineffective implementation. Thus while e-banking channels of service delivery are slowly gaining ground in Botswana, active usage of these innovations is minimal. This is slowing down migration of most customers from the "bricks to clicks" way of doing banking business, implying that most of these customers still rely on traditional or manual banking. It is therefore on the basis of this background that it is imperative to investigate problems and help to find solutions. A literature review is the focus of chapter three.

3 CHAPTER 3: LITERATURE REVIEW

3.1 INTRODUCTION

This chapter discusses the literature underpinning the subject of implementation of e-banking and bank performance. It is structured into six sections: the concept of e-banking; e-banking implementation and change management; the change model; factors influencing implementation of e-banking and the consequences for bank performance; the impact of e-banking on bank performance; studies on the application of e-banking, and a conclusion. The chapter progresses under different sections and subsections.

3.2 THE CONCEPTUAL AND THEORETICAL FRAMEWORK OF ELECTRONIC BANKING (E-BANKING)

There are various definitions of e-banking, each encompassing its different applications and uses. Al-Abed (2003) provides a broad definition of e-banking as an umbrella term by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. He continues to identify terms which all refer to one form of electronic banking or another: personal computer (PC) banking; Internet banking; virtual banking; online banking; home banking; remote electronic and phone banking. PC banking and Internet or online banking are the most frequently used designations.

Nisture (2003) characterizes e-banking as the provision of banking products and services through electronic delivery channels, adding that though regarded as a new phenomenon, e-banking has been available for quite some time through the use of automatic teller machines (ATMs) and transactions done over the telephone. Yuvaraniand Scholar (2009) define electronic banking as the automated delivery of new and traditional banking products and services directly to customers through electronic interactive communication channels. They further describe the applications of e-banking as those systems that allow a financial service provider's customers to access their accounts, perform business transactions and obtain financial information through a public or private network such as the Internet. Customers can usually access these e-banking services through electronic devices such as their personal computers or laptops, personal digital assistants, ATMs, kiosks or touch tone telephones.

3.3 CONCEPTUAL CLARIFICATION

Concept clarification gives operational definitions to key concepts as they are used in the study. According to Katzenellenbogen, Joubert *et al* (1997:51), all key terms referred to in the research title must be identified and defined. This ensures that anyone reading the report has the same understanding. In the current research title "The Dynamics of the Implementation of E-Banking and its Impact on bank performance: The Case of First National Bank of Botswana", the following key terms have been defined within the context of the study:

Dynamics

This refers to forces or processes that produce change inside a group or system (Cambridge University Press, 2008); which in this case are those forces or processes of change associated with e-banking implementation at FNBB.

Impact

Impact refers to the effects and ramifications of the implementation of e-banking.

Implementation

It refers to the execution and application of the systems in a strategic context.

E-Banking

It means the use of electronic banking systems to carry out banking transactions, as a strategy to improve service delivery. The study will make use of the following terms to express e-banking:

1) Internet banking.
2) Online banking.
3) Automated teller machines (ATMs).
4) Mobile or cell phone banking.
5) Electronic funds transfers.
6) Short messaging services (SMS).
7) On-line payments.
8) Point-of-sale (POS).

E-Banking adoption

It is the process by which customers and the bank accept and start using e-banking technologies in accessing banking services.

First National Bank of Botswana (FNBB)

This is one of the three biggest commercial banks in Botswana, having set up office in 1991 through acquisition of Zimbank and Financial Services. It became the first bank in Botswana to introduce e-banking, and has continued to lead the industry on technology.

Bank Performance

This is measured in terms of the customer service the bank provides to its customers.

Bank Customers

This refers to both personal and business customers who use and hold accounts with FNBB.

Through the years the Internet has continued to play a decisive role in the use of e-banking services. As a result many authors have formulated definitions of Internet banking, a component of e-banking. Ongkasuwan and Tantichattanon (2002) define Internet banking as a banking service that allows customers to access and perform financial transactions on their bank accounts from their web-enabled computers with Internet connection to banks' websites. This service further enables customers to perform banking services such as transfers and payments, accessing their bank balances and statements and obtaining a transaction history on all accounts linked to their respective banks. Similarly, Hamid, *et al.* (2007) define Internet banking or online banking as the use of the Internet as a remote delivery channel of banking system services via the World Wide Web. They further describe it as a system that not only allows customers to gain access to their accounts, but also general information on bank products at any time of the day through their personal computers or other devices through the use of Web browser software.

As mentioned previously, e-banking encompasses a variety of services. Kolodinsky, Hogarth and Hilgert (2004) give an example of various e-banking services available to consumers ranging from ATMs, direct deposits, automatic bill payments (ABP), electronic transfer of funds (ETF) and PC Banking. Cracknell (2004) further describes these e-banking technologies available to consumers in detail, to include:

- Personal Digital Assistants (PDAs) which are small hand held computers.
- ATMs: These are associated with mag-stripe or smart cards and they provide banking facilities such as accepting client deposits, dispensing cash and a host of other functions as provided by each bank.

- Mag-stripe cards such as debit cards use magnetic stripe technology that offers their carriers online access to their accounts through the use of point-of-sale (POS) devices.
- Smart cards which have a machine readable chip which is able to store transaction records embedded in them.
- Mobile phone banking allows consumers to perform transactions by using their phone devices, either through a menu driven service or through a short message service or text messaging system.

A review of these applications shows that banks in Botswana are attempting to apply them in their work processes although they face implementation challenges (Chapter 2)

3.4 E-BANKING IMPLEMENTATION AND CHANGE MANAGEMENT

As noted in Chapter 2 and Section 3.2, e-banking adoption, which entails the process by which customers and the bank accept and start using e-banking technologies in accessing banking services, requires a paradigm shift from a 'traditional' or 'manual' to a 'digital or 'electronic' banking practice. Such a change has implications for strategic change management with great impact on both the bank and customers. In view of this, any implementation process for e-banking should ideally incorporate change management if it has to be effective. This is because implementing e-banking technologies result in significant changes in work processes of the bank with consequences for employee and bank performance, and for customer relationships with the bank. Subsequently, this requires a broad involvement of top leadership and management and staff in the implementation and management process for e-banking.

According to Bratton and Gold (2007:6), managing change "involves helping others to envision the future; communicating the vision, diagnosing and changing mind-sets and mental models, setting clear expectations for performance, and developing the capability to recognise people and allocate resources". They also observe that it appears that poor change management is at the heart of failure for many interventions aimed at bringing about improvements in many organisations.

Burnes (2004) documents that change management entails thoughtful planning and sensitive implementation; and consultation with and involvement of the people affected by the change,

which in case of FNBB are employees, customers and other stakeholders connected to e-banking. He however cautions that the change management process is often complicated by organisations that wait for things to go real bad before initiating change. Therefore for change to be successful, it must not be forced on people and it must be realistic, achievable and measurable. In view of this, Burnes (2004) advises that before starting any organisational change, the following four questions must be addressed:

- "What do we want to achieve from this change?"
- "Why and how will we know that the change has been achieved?"
- "Who is affected by this change and how will they react to it?"
- "How much of this change can we achieve ourselves, and what parts of the change do we need help with?"

These aspects also relate strongly to the management of personnel and therefore bear essential outcomes in the organisation's competitive stand.

These four questions should be relevant in e-banking implementation at FNBB. In order to ensure that the desired change is reached through e-banking, that is, to assist and encourage channel migration among customers to result in high adoption of e-banking, it is important to consider some best practice change management models used in literature, known to facilitate effective implementation. The Change Model by Hedge and Pulakos (2002) is presented as an example (Section 3.4).

3.5 THE CHANGE MANAGEMENT MODEL AND CSFs

This theoretical model of strategic change was suggested by Hedge and Pulakos (2002) who argue that there is no one best methodology for the design and implementation of change that is applicable to all situations. The Change Model is presented in Appendix 2.The application of the Change Model is explained when the implementation process is considered with respect to critical success factors (CSFs) for e-banking implementation, as given by Freeman (2003). According to him, the e-banking implementation process requires a well-defined plan that would provide effective uptake by consumers as well as reliable security controls, all encompassed in a strategic plan. This implementation process which he refers to as a strategic intelligence gathering, analysis and strategic formulation process, is broken down into steps or CSFs. These CSFs have been applied to FNBB (Appendix 2).

A critical review of Figure 3.1 and the CSFs reveals a relationship, that is, the CSFs can be effectively applied within a change model which provides a framework for implementing e-banking. This means assigning the CSFs tasks and processes to the four phases of initiating, planning, implementing and institutionalising change to e-banking, with associated roles and responsible categories of people for managing the change process during implementation. This should result in effective implementation of e-banking. Thus matching FNBB's change process of implementation of e-banking with Figure 3.1 and CSFs should reveal the extent to which FNBB's change process conformed or deviated from the Change Model. More deviations should indicate implementation gaps signifying ineffectiveness since adoption and application should be low, that is, low acceptance of change. For Botswana banks, this should manifest in most customers continuing to use traditional banking.

3.6 THE IMPACT OF E-BANKING ON BANK PERFORMANCE

The impact that e-banking applications have on banks and customers should be seen in terms of benefits and advantages accrued to them when these innovative products and services are adopted. These underscore the significance of e-banking.

3.6.1 Benefits to banks

Globally, technology has advanced to a level that most organisations are able to position themselves into in order to effectively gain a competitive advantage through its use. Within the banking industry, e-banking technology continues to confer many advantages to banks that adopt it. According to www.ehow.com, the six advantages of e-banking specifically for banks include the following:

- It is free – as most e-banking/online services are free, there is no monetary reason for banks not to partake in electronic/online banking.
- Anytime, anywhere – e-banking is available to the bank's customers 24 hours a day every day, giving customers easy access to their accounts and more satisfaction with their financial service provider.
- Dependable files – e-banking provides better administrative organisation for the banks as they can access a complete list of their transaction histories.
- Everyone is on the same page – both customers and banks can access the same account information, thus ensuring that all parties are equally informed.

- It keeps everyone honest – with e-banking, all business practices are above board and alerts can be sent to individuals or groups should any suspicious activity take place.
- Never fall behind – not only are banks at the forefront of innovative enterprise through e-banking, the technology enables businesses to stay away from committing careless errors that may cost the business money in the long run.

Luštšik (2003), who examined the benefits of e-banking to the banking industry in Estonia, conformed local banks had benefited from it. Firstly, banks had benefited from better branding and responsiveness to the financial market. Secondly, banks offering e-banking services were also considered leaders in the banking field through their implementation of technology. He adds that just as for many businesses, the implementation of a new technology depends on its ability to generate profit; the banking sector is no different as many institutions have adopted e-banking as a way to further increase their profit margins (Luštšik, 2003).This is supported by Rexha, Kingshott and Aw (2003) who state that by encouraging businesses to use e- banking, financial institutions are able to save considerable operating and marketing costs which further provides banks with economies of scale.

3.6.2 Benefits to customers

Tan and Teo (2000) examined the benefits of using Internet banking for both individual and corporate customers. They found that from the consumers' perspective, Internet banking provides a very convenient and effective approach to manage personal finances as it is easily accessible 24 hours a day, seven days a week. For corporate customers, sophisticated cash management packages offered through Internet banking, provide them with up to the minute information, allowing for timely funds management decisions. Worku (2010), who examined the benefits of using electronic cards (e-cards), another application of e-banking, documents that e-cards, offer a wide variety of benefits to both the banks and the customers. These include:

- Dramatically reducing printing, mailing, and financial handling costs associated with processing transactions.
- Enhancing payment security by minimising theft or loss.
- Reducing undeliverable payments via electronic delivery to the card account.
- Preventing fraud through automated controls.
- Increasing customer satisfaction and enhance service to constituents.

- Ensuring continuity of service to cardholders in emergency or disaster situations.
- Improving operational efficiency and profitability of the issuing bank.

The Houston Chronicle (2012) further examined the importance of e-banking for small business owners, who acknowledged that they benefited as follows:

- Convenience to account holders: using Internet banking enabled customers to monitor the activities and usage of their accounts and perform basic transactions through the use of e-banking.
- Small business owners, employees and banking staff could access records of various business transactions such as deposits, cleared cheques and wired funds quickly through an online banking interface. This helped to ensure that all banking transactions were processed smoothly on a daily basis as opposed to waiting for monthly statements.
- E-banking led to increased productivity as automating routine bill payments minimised the need to physically visit the bank. The 24 hour access to e-banking also allowed customers to work as needed rather than during banking hours. Furthermore customers could use e-banking to resolve problems that could arise on their own without interacting with bank employees.
- E-banking lowered banking costs for the customers, including small business owners, as the need for more physical assistance with banking staff could lead to higher costs.
- The use of electronic banking reduced banking errors as payments could be automated, which reduced the potential for human error or mistaken information. Furthermore, electronic files and daily reviews of banking data could be used to ensure that no errors had been made.
- E-banking provided an electronic footprint of all transactions for customers, which reduced the possibility for fraudulent activity. For business owners, e-banking allowed for easy access of information for all accounting personnel, managers and business owners.

Based on Section 3.5, it can be concluded that if e-banking is effectively implemented, both banks and customers would derive immense value from this innovation. This would encourage the adoption of e-banking by both large and small businesses. Banks would also benefit from the use of e-banking as it would help them to achieve some of their service objectives such as:

- Reducing banking queues - as there would be fewer enquiries from the customers, less visits to the bank leading to inconvenience and more time to process office work.
- Customers would be able to work with up to date information as they would have easy access to their bank accounts and various banking services.

The secondary literature on benefits of e-banking application is very significant to this study as it should without any doubt present a challenge to the banking industry in Botswana and FNBB in particular, for which initial findings have revealed low usage of e-banking products and services, with implications of poor implementation, thus denying both customers and banks of the opportunities to access the enormous benefits. This provides a rationale for this investigation.

3.7 FACTORS INFLUENCING IMPLEMENTATION OF E-BANKING

Despite the clear benefits of e-banking (Section3.5), only a few banks have been able to effectively implement e-banking technologies at both global and local levels, which resulted in low adoption of e-banking products and services (Sections 1.3 and 1.4). Although factors influencing implementation of e-banking should consequently influence adoption, the author finds it necessary to distinguish between those factors that influence adoption by customers and those that broadly influence implementation.

3.7.1 Factors influencing adoption of e-banking

Sathye (1999) defines e-banking adoption as the acceptance and continued use of e-banking products, services and ideas. It is the process by which both customers and the bank accept and start using e-banking technologies to access banking services. In view of this; Kolodinsky *et al.* (2004) state that an understanding of the factors that influence the acceptance of new products would allow a business to create an environment that allows the business to fully benefit from technological advances that can be used by a majority of its customers instead of a few tech-savvy consumers. This therefore makes acceptance of the successful implementation of e-banking critical.

A study done by Tan and Teo (2000) further revealed that it was attitudinal and perceived behavioural control factors, rather than social influence, which played a significant role in influencing the adoption of Internet banking. They found that perceptions of relative

advantage, compatibility and risk toward using the Internet influenced adoption of Internet banking services. In addition, confidence in using such services as well as perception of Government support for electronic commerce, were also found to influence intentions to adopt e-banking.

3.7.2 Factors influencing implementation of e-banking

A review of literature reveals that three types of factors influence implementation of e-banking. These are:

- Strategic factors (Amiri & Amiri, 2012;Fitzgerald &Siddiqui, 2002; Turban, et al., 2000.
- Technical factors (Enos 2001; Liu and Arnett, 2000; Ward 2001; and Shah and Siddiqui, 2006).
- Operational factors (Mohammaditabar &Teimoury, 2008 and Shah &Siddiqui, 2006).

These factors are also viewed as critical success factors (CSFs) for effective implementation of e-banking and ought to be taken into account during implementation. The CSFs are briefly described below:

Strategic Factors

- Organisational flexibility: In their study, Fitzgerald and Siddiqui (2002) found organisational flexibility as a key factor in the strategic implementation process. This is to say, in terms of re-engineering the business process, an organisation has to be prepared for potential change to ensure that any newly introduced product or process allows for intervention and does not disrupt or impede the business in any way.
- Established brand name: A household name such as a specific bank gives customers added confidence to conduct business online (Yousafzai, Pallister and Fox all, 2003; and Yousafzai et al., 2005). Secondly, having an established brand name is important because customers' previous positive experiences with a bank make them more likely to trust it when a new online medium is introduced.
- Support from top management: Turban et al. (2000) state that support from top management is a key factor in the effective implementation of technological projects, including e-banking products.

- Availability of resources: According to Amiriet al. (2012), availability of human and financial resources is critical in all types of projects. In new technology projects such as Internet banking, shortage of readily skilled human resources can be a severe handicap.

Technical Factors

- Security of consumers' personal data: The bank has to ensure secure protection of consumers' personal data and safe transactions to prevent any fraudulent activity. Security is critical to the growth and success of electronic enterprise, including e-banking (Enos, 2001). The need for secure transactions is critical to the success of not only Internet banking but any e-commerce related website (Liu and Arnett, 2000).
- Systems and channels integration: Systems and channels integration is another factor that is critical to the successful implementation of electronic banking. As Ward (2001) and Shah and Siddiqui (2006) explain, instant delivery of certain services requires extensive integration of business processes and information systems. For example, if a middleware layer provides a common interface through which all existing systems within the bank are linked, disruption of this middleware layer in any way could affect all banking channels extensively.

Operational Factors

These factors relate to strategic capabilities in banks implementing e-banking channels to be able to meet and exceed peoples' raised expectations by using them. These relate to three aspects:

- Reducing the time it takes to deliver services from a couple of days delay to transfer funds from one account to another to a few minutes, indicates more efficient service through e-banking (Shah & Siddiqui, 2006).
- Fast response customer service: To meet expectations and requirements, customer support has to improve considerably, with all-time availability of customer services and increased choice available for customers to use whichever channel they prefer (Mohammaditabar &Teimoury, 2008).
- 24 hour availability of services: This is usually a higher expectation of customer service from the e-banking channels. In order to support 24 hour e-channels, customer service has to be available 24 hours a day, every day of the year with implementation

of e-banking technologies.As a result any e-banking technologies implemented but failing to meet and exceed customer expectations would automatically result in low adoption and thus become ineffective.

3.8 STUDIES ON APPLICATION OF E-BANKING IN SOME COUNTRIES

Various e-banking technologies are used across the world to make banking more efficient and profitable. This section examines the current applications of e-banking through a review of literature from some selected countries. Sarlak *et al.* (2009) investigated factors influencing implementation of e-banking in Iran, both those factors which constrained its successful implementation and those which accelerated its successful implementation. A survey questionnaire was used to collect data from a randomly distributed sample of experts and IT managers of 90 banks.

To effectively detect and classify these factors, the researchers applied a tri-radiate model. According to Mirzaei (cited in Sarlak *et al.*, 2009:3822), by using a Tri-radiate model, which is one of the logical models in classifying models, all organisational concepts, events and phenomena can be studied and analysed in the frame of the tri-radiate (co-structure, content and context) theoretical model. The co-structural dimension includes five factors: functional differentiation, specialisation, professionalism, formalisation and centralisation. The second dimension, content or human covers the human and its behaviour. Lastly, the contextual dimension includes environmental and extra-organisational factors and conditions surrounding the organisation. These include customers, Government, markets, and other environmental elements. The study therefore tested three hypotheses in the form of tri-radiate by ranking effective factors in successful implementation of e-banking. Thus the study sought to establish if there were meaningful relationships between co-structural, content and contextual factors with successful implementation of e-banking as banking system in Iran.

The findings revealed a significant relationship between the co-structure, content and context factors and successful implementation of e-banking products. Researchers discovered that the co-structural dimensions of e-banking were one of the main tools that a bank could use for effective implementation. Apart from the importance of these co-structural factors (functional differentiation, specialisation, professionalism, formalisation and centralisation) within the

bank, Sarlak *et al.* (2009) also determined that human influence within the bank was also critical for successful implementation. The support of top management, knowledge and training of staff and efficient customer service, were among some of the critical factors needed during e-banking implementation. Furthermore, they found that factors such as coordination with other banks, the local technological environment and customer accessibility to web based services should also be considered. From their findings, researchers concluded that these three main dimensions of co-structural, context and content factors were the ones that led to the successful implementation of e-banking in Iran.

Alam, Magboul and Raman (2010) examined the implementation of online banking in Sudan, focusing on the perceptions of bankers. Against the background of Sudan not being ready as a country to implement online banking yet despite the prominence of technology within the financial industry, the study sought to examine what obstacles were faced by the Sudanese banks in terms of implementation of online banking. The study was conducted using a survey of 25 Islamic banks in Khartoum, with questionnaires distributed to 100 branches of the chosen banks. The study found that none of the banks in Sudan provided online banking to their customers. The most common reason given was that Sudan lacked the infrastructure to support the implementation of online banking. The respondents stated that although the presence of foreign banks had brought about technological advances such as ATMs and smart cards, the country still required time to develop the infrastructure needed to catch up with the technological revolution. These findings further highlighted the Sudanese customers' perception of online banking and the lack of skilled and trained bank staff in the application and administration of online banking as hindrances to successful introduction of online banking. This study therefore showed the challenges that many developing nations face in terms of introducing technological products that could advance the country's banking industry.

Apart from the two studies on the emerging and developing counties, Kolodinsky *et al.* (2004) examined the adoption of e-banking technologies in the United States of America (USA). Rather than focusing solely on consumers that had either adopted e-banking technologies or those that had not, they chose to examine a spectrum of consumers ranging from those that were already using e-banking technologies, to those that were likely to use them, to those who would never use selected e-banking services. The study looked at the adoption of three different e-banking products: Automated Bank Payments (ABP), Phone

Banking (PB) and Personal Computer (PC) banking. The researchers hypothesized that those individuals with higher incomes, higher net worth or those with expectations of higher incomes in the future, were most likely to adopt e-banking technologies. They also hypothesized that younger individuals, those from married households, as well as individuals with higher levels of education were most likely to adopt e-banking technologies. Furthermore, researchers asserted that the easier and simpler e-banking was to use, the more likely it was to be adopted. Other characteristics of e-banking that they sought to examine were compatibility in the way consumers managed their finances, perceived risk, increased relative advantage and previous e-banking involvement. Data was collected through an extensive survey.

The main findings of the study are outlined below:

- In terms of socioeconomic variables, those with higher incomes had an increased probability to adopt new e-banking technologies within 12 months, or they were already using e-banking.
- Those who expected their incomes to rise were also more likely to adopt e-banking technologies or were already using Phone Banking and PC banking.
- Those that owned stock had an increased probability of intent to adopt e-banking technologies or were already using ABPs.
- Survey respondents below the age of 65 were less likely to adopt Phone Banking and PC banking while middle aged respondents were less likely to adopt PC banking than younger respondents who are 35 years of age or less.
- In terms of the characteristics of the e-banking technologies, they found that respondents who had more positive perceptions about the relative advantage and compatibility of e-banking technologies had a higher probability of adopting Automatic Bill Payment, Phone Banking, and PC banking.
- Those people who were less risk-averse toward e-banking technologies were more likely to adopt ABP and PC banking. Those who considered e-banking safe were more likely to adopt PC banking.
- Respondents who were already using other electronic banking technologies such as ATMs or direct deposits were more likely to use each of the three e-banking technologies in the study.

Furthermore, they found that although e-banking technologies could not be aggregated into a single category, if consumers saw an advantage to using a new technology there was an increased probability that they would adopt it. They found this to be the case for each of the three e-banking technologies that they examined.

This study confirmed the hypothesis that income and education play a large part in the likelihood of adoption of e-banking technologies but as researchers discussed - it also determined that there was a large market that was yet to be tapped. Kolodinsky *et al.* (2003) suggest that intervention by Government may lead to increased adoption by those people of a lower socioeconomic status. One example they present is the US Treasury's design for an electronic transfer account which is an entirely electronic account that provides consumers no option to use any non-electronic features. Another example given of previous intervention by the US Government was a law passed in 1996 that required federal benefit recipients to receive their benefits electronically.

From the three empirical studies examined above, it is observed that e-banking adoption and implementation is most successful when undertaken in more developed countries where the infrastructure exists to effectively use e-banking technologies. This is indicated clearly when the examples of Sudan and the USA are examined. In Sudan, the banking industry lacked the infrastructure needed to fully take advantage of the technological advancements available within the banking industry. The authors attributed this to previous political instability in Sudan. Due to the lack of a stable Government and a civil war, Sudan is still lacking the technological infrastructure to allow for growth in the e-banking field. When compared to the USA, Kolodinsky *et al.* (2004) indicated how Government intervention can influence development in e-banking. As mentioned previously, the US Treasury's design for an electronic transfer account shows the positive impact that a Government can have on e-banking adoption. Sarlak *et al.* (2009) provided an example of how effective implementation can be achieved through the use of the tri-radiate model that took into account co-structural, content and context factors. The example in Iran shows how successful implementation can be achieved through the support of management and effective training of bank staff. They further explained the importance of the local technological environment and the customer's ability to access web-based services as factors affecting implementation and adoption. All three case studies show variability in the use of e-banking in the world. As a growing

economy, Botswana has also demonstrated steady growth in the use of e-banking technologies. The latter is examined in the subsequent section.

3.9 STUDIES ON APPLICATION OF E-BANKING IN BOTSWANA

By examining e-banking application in Botswana, Mobarek (2009) investigated e-banking strategies and practices offered by selected banks, focusing specifically on customer satisfaction. She examined four e-banking delivery channels (ATMs, Internet banking, tele-banking and manual banking) offered by four commercial banks - Standard Chartered, FNBB, Barclays and Bank of Baroda. Mobarek (2009) collected her data by distributing 50 questionnaires to bank customers, by interviewing 2 senior and 3 junior bank staff members from each of the 20 banks involved and by interviewing 30 customers observed at ATMs.

From the analysed data, it was determined that preference of e-banking was the greatest in people aged between 18 and 25 years, with decreasing preference in the older age groups. It was also established that those people who held business occupations preferred e-banking to manual banking. Despite the high preference of e-banking, Mobarek (2009) found that most customers still felt the need to visit the bank branch twice a month on average. This suggested that some customers still did not trust or rely on e-banking and still felt more comfortable with a physical visit to the branch. The findings also showed less willingness to pay more for e-banking services while only 54% of respondents who held business occupations were willing to pay higher charges. More consumers viewed ATM usage as important while tele-banking was seen by most consumers as 'not important'. Internet banking was perceived as important by 78% of respondents, most of whom held a business occupation. The study further determined that many people in Botswana had a limited knowledge of e-banking, especially with regard to both Internet banking and tele-banking. This limited knowledge highlights the importance of effective implementation so as to inform consumers on the various e-banking products that are offered by the banks. Without effective implementation, adoption of e-banking would not be fully reached.

Based on this study, Mubarak (2009) concluded that the current e-banking delivery channels available to consumers were not meeting service demand by not making them aware of e-banking and using obsolete or not too up-to-date technology. She further concluded that a clear correlation was shown between age, occupation and the adoption of some e-banking

channels. She therefore suggested that banks in Botswana should explore all of the intricacies of e-banking technology as a way to generate adoption by consumers and increase customer satisfaction. There are similarities in the study on Botswana with those of other countries (Section 3.7). All studies highlight factors which can either hinder effective implementation of e-banking or enhance its implementation. This should enable banks in Botswana to draw even lessons and improve on implementation to ensure high usage or uptake by customers.

3.10 CONCLUSION

On the basis of the literature reviewed it can be concluded that e-banking implementation is a challenge to banks worldwide and this requires addressing all varying factors that either constrain or accelerate effective implementation. In doing so the best practice models of the change management process and CSFs should be used to support effective implementation of e-banking, which should result in high adoption. The secondary research results clearly provide a basis for Botswana to draw lessons on gaps to fill in order to improve on implementation and adoption of e-banking.

This case has established that there is low usage of e-banking products by individual customers at FNBB with a strong propensity to using traditional banking with negative implications on bank performance. It has also determined that ineffective application of e-banking is a significant problem at FNBB and has resulted in low adoption of on-line products and poor performance of these products in the market. This has denied FNBB an opportunity to access the huge benefits and opportunities associated with this innovation. The following sections discuss some aspects related to this problem in some detail. Chapter 4 discusses the methodology used by the study.

4 CHAPTER 4: RESEARCH METHODOLOGY

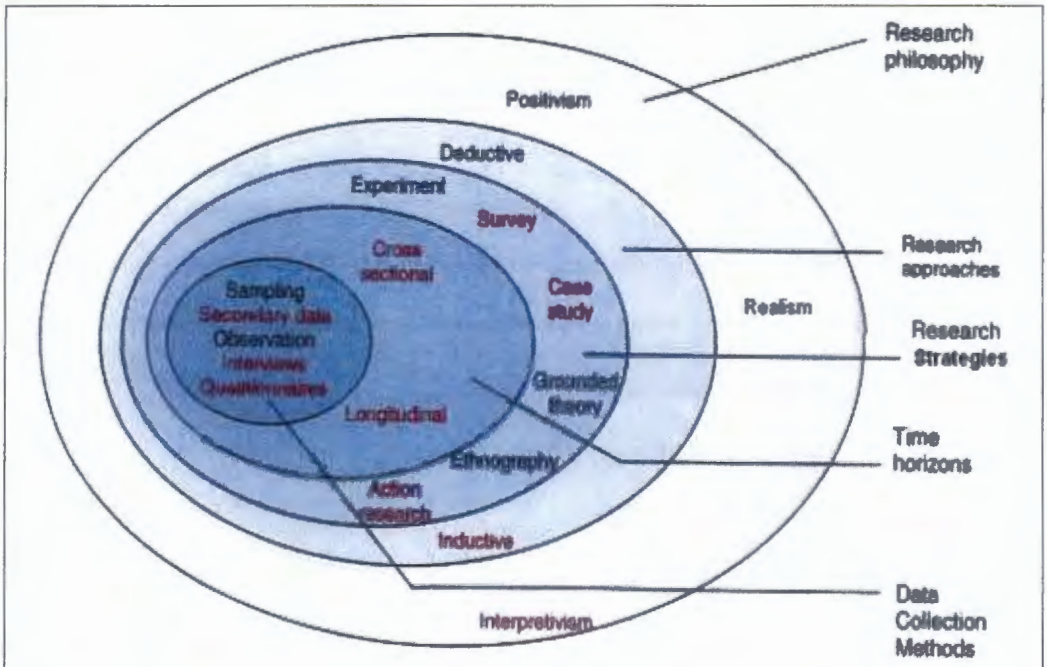
4.1 INTRODUCTION

In Chapter 3, literature relating to implementation of e-banking and bank performance with implications drawn for FNBB was reviewed. This Chapter describes and justifies the methodology which was used to collect data for the study. It is structured as follows: research onion; research philosophy, research design and strategies; methodology; types of data and collection methods; sampling scheme; questionnaire design; pilot study; data analysis and presentation; limitations of the study; ethical considerations; and conclusion.

4.2 RESEARCH ONION MODEL

Saunders, Lewis and Thornhill (2005) have adopted the research onion model to describe the research process a researcher follows in executing methodology (Figure 4.1).

Figure 4.1 Research Onion Model



Source: Saunders, et al., 2003 p.83)

Figure 4.1 shows the Onion Model. In applying this model, successive steps of methodology should be followed systematically just like peeling-off onion layers, beginning with the research philosophies, followed by research approaches, research strategies, time horizons,

and data collection methods. Thus the researcher has to evaluate alternatives he or she should use within each layer, considered appropriate to the study. For example, within the research philosophies layer, a researcher should consider whether to follow a positivism, interpretivism or realism paradigm which should also influence subsequent layers. Thus, the onion provides a useful framework to the researcher who uses a systematic research process in carrying out primary research. This also reminds the researcher to take a broad view of the research process and come up with the most appropriate methodology for a particular study. In view of this, the current study adopted the research onion model (Figure 4.1) as a road map to the research process in executing the methodology as described below.

4.3 RESEARCH PHILOSOPHY

Saunders *et al.* (2003) document that there are three known philosophical approaches available to the researcher: positivism, realism and interpretivism (Figure 4.1). They explain that a positivism approach takes a scientific approach which is normally deductive and considers relationships between variables; adding that a research with a positivism orientation mostly depends on measurements, statistics or processes associated with scientific methods. This research philosophy aims to generalise results to a larger population that ultimately leads to a deductive approach which according to Saunders *et al.* (2007) implies that theory must first be generated and then tested by empirical observations. The interpretivism (or phenomenological) philosophy, which denotes an alternative to the positive orthodoxy, is predicated upon the view that a strategy is required that respects differences between people and objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action (Bryman & Bell, 2007:19). Thus this paradigm stresses subjectivity, description, interpretation, and agency and essentially deals with human experiences (Denscombe, 2003). The realism (critical realism) which is basically an extension of the positivism approach, takes an ontological position that the world or universe exists regardless of what we think of it. This approach therefore takes an objective reality rather than a subjective one (Saunders *et al.*, 2003).

This research adopted a positivism philosophy to the study since it was primarily concerned with establishing relationships between variables: in terms of establishing a relationship between the change management process variables and implementation effectiveness; impact of e-banking on bank performance of FNBB; and factors positively or negatively influencing

implementation of e-banking at FNBB. Secondly, based on findings from samples of managers and customers obtained through a quantitative survey drawn from all FNBB branches country-wide, the positivism approach should facilitate the use of a deductive approach and generalisation of results to other local banks in Botswana. In view of this, the interpretivism approach was not appropriate since the study was not concerned with accommodating personal feelings and experiences of respondents or stressing differences in their opinions and interpretations.

4.4 RESEARCH DESIGN AND STRATEGIES

A research design is a basic plan for guiding the data collection and analysis of the research project (Hussey and Hussey, 1997). It is also defined as the overall research approach or the strategy taken, specifying the type of information to be collected, sources of data and collection methods (Katzenllenbogen that Jourbert, 1997:64). A research design can be quantitative (statistical or experimental in nature) by using mostly numerical data; qualitative (descriptive in nature)by using mostly exploratory and descriptive questions to obtain primary data, or a mix of the two (Katzenllenbogen, *et al.*, 1997). Relating this description of a research design to Section 4.3 means that adopting a 'positivist paradigm' naturally results in using a quantitative research design while using an 'interpretative philosophy' necessitates the application of a qualitative research design.

According to Hopkins (2008), the aim of quantitative research is to determine the relationship between an independent variable and a dependent or outcome variable in a population. He further classifies quantitative research designs into either descriptive (subjects usually measured once) or experimental (subjects measured before and after a treatment); adding that a descriptive research establishes only associations between variables, while an experimental study establishes causality. For an accurate estimate of the relationship between variables, a descriptive study needs a large sample of hundreds or even thousands of subjects, in order to reduce bias.

In this study, a descriptive quantitative research design was used. In order to effectively use the chosen research design, a researcher ought to select and apply appropriate research strategies. Saunders, Lewis and Thornhill (2009), who describe a research strategy as a plan used to address defined research questions (Section 1.7), also outline various research

strategies which can be employed in a study and each of them can be used for exploratory, descriptive and explanatory research. These include experiment; survey; case study; grounded theory; ethnography and action research (Figure 4.1). Two research strategies - survey and case study - were employed to support the quantitative research design in executing the methodology (Discussed in 4.5).

4.4.1 Survey Research

According to Saunders *et al.* (2007 and 2009), a survey research is a popular and common strategy in business and management research and is mostly used to answer the who, what, where, how much and how many, questions. They further contend that surveys are popular due to the three benefits their application confers. Firstly, they permit collection of a large amount of data from a sizeable population in a highly economical way. Secondly, the data collected can be used to suggest possible reasons for particular relationships between variables and produce models for their relationships. Thirdly, survey research can use a sample from which it is possible to generate findings representative of the whole population at lower cost than collecting data from the whole population. Gunter (2002:227) also understands a quantitative survey as advantageous because it generates results that can readily be generalised to the population from which the sample was drawn. Lancy (2001) provides two benefits of using a quantitative survey. Firstly, it enables a quantitative study to be carried out within a short period, thus making the researcher effective in collecting the necessary data. Secondly, by allowing minimum interaction and influence between the researcher and the subjects, this research strategy reduces personal bias that could affect the quality of the study. This study therefore used a survey research to effectively carry out the methodology with a view to realise the above benefits.

4.4.2 Case Study

Hussey and Hussey (1997:54) define a case study as "an extensive examination of a single instance of a phenomenon of interest" adding that "it focuses on understanding the dynamics present within a single setting", which in this case is FNBB. Using this case strategy facilitated an assessment of the dynamics of the implementation of e-banking and its impact on bank performance at FNBB.

As Figure 4.1 indicates, a research philosophy provides a framework for an appropriate research design and methodology for collecting data. Hussey and Hussey (1997:54) define methodology as the "overall approach to the research process, from the theoretical underpinning to the collection and analysis of data". They also outline questions that methodology ought to address and which a researcher should give answers to: What data was collected? Where was the data collected from? When was the data collected? How was the data collected? How was the data analysed? In short, methodology is a plan and framework of an investigation aimed at obtaining answers to research questions in order to achieve research objectives (Section 1.6).

In order to effectively apply the methodology, it is important to carefully select research strategies from which research instruments and methods are derived. In terms of methodology, the survey's research and case study strategies (See 4.4) facilitated its application. A survey questionnaire was deployed as a major research instrument for collecting primary data. While this quantitative survey instrument was used to collect views from two sample groups of FNBB managers and its customers, the case study approach defined the scope of the investigation and facilitated the selection of the sample groups which formed units of analysis. Thus a survey of these two sample groups was used to facilitate selection of samples for data collection. The following procedure was used in executing the survey:

Generated a sample frame of all employees at FNBB (Pop = N = 1,050).

Applied judgment sampling to select two sample frames of managers from Head Office (N_1 = 30) and 18 branches country-wide (N_2 = 18) making target populations. The overall target population was 48 (Pop = N_1 = 48).

Used census sampling to select the total sample of managers (n = 48).

Applied convenience sampling to select a sample of 180 individual customer respondents (n = 180) from 18 FNBB branches country-wide (10 per branch), since it was not possible to obtain a sample frame from which to pick samples. Thus a provisional population of 180 (Pop = N_2 = 180) was estimated.

Used branch marketing sales officials to administer questionnaires to customer respondents on behalf of the researcher who is at Head Office.

To qualify for selection in the survey, managers should have been serving for not less than 5 years and associated with e-banking, while individual customers should have been banking with FNBB for a minimum of 3 years and were aware of e-banking.

According to Denscombe (2003), advantages for using a survey method are: surveys produce data based on real-world observations; have wide and inclusive in coverage; produce quantitative data; and also produce data which can be obtained in a short period of time at a fairly low cost. Disadvantages include surveys having a tendency to empiricism as data is likely to lack detail and depth particularly with the use of postal questionnaires; and the degree to which the researcher can check the accuracy and honesty of the respondents being limited.

4.4.3 TYPES OF DATA AND COLLECTION METHODS

Since this is a quantitative research, most of the data collected was primary data with a small portion of secondary data. Primary data related to effectiveness of e-banking implementation; impact of e-banking on bank performance; and factors influencing implementation of e-banking and the consequences for bank performance at FNBB. Secondary data on the other hand provided quantitative statistics on usage and adoption rates for e-banking products and services, customer bases, system-down times for determining the effectiveness of application and implementation of e-banking. Three data collection methods employed in the research were a self- administered questionnaire, record inspection and interview.

4.5 SAMPLING SCHEME

4.5.1 Target Population

This is the collection of elements (objects) that possess the information sought by the researcher and about which inferences are made (Malhotra, 2004:315). In short, a target population defines all members with similar characteristics, and is denoted as Pop = N. For this study, the researcher's target populations were managers (N_1) and individual customers (N_2) from FNBB. Employing the methodology procedure given in section 4.5, the target populations were determined (Table 4.1).

Table 4.1 Distribution of target populations

No.	Org. Category	Target group	Notation	Target pop
1.1	FNBB HQ	Managers	N_{11}	30

1.2	FNBB Branches	Managers	N_{12}	18
	Sub Total		N_1	48
1.3	FNBB Branches	Individual Customers	N_2	180*
	Total Target Pop		**N**	**228**

* Estimated pop size

As Table 4.1 indicates, the target population for customers was unknown and was therefore estimated (Section 4.5). This happened because the target population was not available for customers due to confidential and ethical reasons. Thus the accessible population constituted bank customers who were found accessing products and services from FNBB branches during the survey as explained in 4.5.2.

4.5.2 Sampling Procedures

A sample is a subgroup of the subjects of the population selected for participation in the study. As large populations are often encountered during research, a sample is often selected for participation in the study. A sample that is representative of the study population is chosen as it is often too cumbersome and expensive to contact all members of the population of interest (Proctor 2005, p108).

Sampling can be carried out using probability or non-probability sampling methods. Non-probability or non-random sampling is the technique that does not use chance selection procedures, but rather rely on the personal judgment of the researcher (Burns & Bush 2001:292).A non-probability sample is described as one in which participants are selected in a purposeful way.

In this study, non-probability sampling methods namely, judgement, census and convenience were used to select samples. Judgement or purpose sampling was used to select manager respondents, since they were to be identified from their managerial roles and their awareness of e-banking and its implementation challenges at FNBB. Equally, census sampling was also used to select these manager respondents, because their subtotal target population were small (N_1 = 30, N_{12} = 18) giving an overall target population of 48 (N_1 = 48). Convenience sampling was used to select a sample of customer respondents. In this sampling method, only those available respondents who visited their banks or e-banking facilities (ATMs) to do their transactions and were willing to fill questionnaires, were considered. In order to ensure a

wider representation of these customer respondents from an estimated population of 180 (n = 180, 10 per branch) covering all 18 FNBB branches, census sampling was applied as it was conceived to increase external validity and allow for benefits of using a quantitative survey (Sections 4.4 and 4.5) to be realised. Applying these sampling methods resulted in the following populations and sample groups (Table 4.2):

Table 4.2 Distribution of target populations and samples

No.	Organisation Category	Respondent	Cases per Stratum (N) (Target Pop)	Cases in Sample (n) (Sample Size)	Sample Cases as a % of Stratum Cases (n/N)
1.1	FNBB HQ	Managers	30	30	100.0
1.2	FNBB Branches	Managers	18	18	100.0
	Sub Total		**48**	**48**	**100.0**
1.3	FNBB Branches	Individual Customers	180*	180	100.0
	Overall Sample		**228**	**228**	**100.0**

* Estimated pop. size

4.6 QUESTIONNAIRE DESIGN

As highlighted in 4.5, the main research instrument which was used in data collection was a survey questionnaire. According to Pierce (2009), a research instrument is defined as a survey, questionnaire, test, scale, rating, or tool and is designed to measure variable/s, characteristic/s, or information of interest, which often is a behavioural or psychological characteristic. Thus research instruments can be helpful tools to a research study. Accordingly, two related structured questionnaires that were designed for managers and customers of FNBB were constructed as tools for data collection for this study.

The questionnaire for managers had 12 questions while that of customers had 9 questions. Section A of both questionnaires focussed on the profiles of respondents (5 questions for managers and 6 questions for customers). Section B for managers with 7 questions focussed on e-banking implementation and bank performance; effectiveness of its implementation; factors influencing its implementation including implementation challenges and lessons learnt; and its impact on FNBB performance. Section B for customers with 3 questions

covered three aspects: reasons for not using e-banking; factors influencing implementation and adoption of e-banking; and impact of e-banking on FNBB performance.

The similarity of the questions in Section B (9 and 10 for managers and 8 and 9 for individual customers) facilitated cross-comparison of responses on how managers assessed extent of use e-banking; factors influencing its implementation; and benefits to FNBB in comparison to the assessments of customers. In terms of the structure, the customer questionnaire had 6 questions of fill-in or ticking demographic details applicable to them; 1 was objective (7) requiring subjects to select most appropriate responses; while 2 major questions were closed-ended (6, 8 and 9) involving the use of the Likert scale to assess the extent of agreement/disagreement with test items. The manager questionnaire included 5 fill-in or tick questions; 3 objective (6 to 8); 3 open-ended (8, 11 to 12); and 2 closed-ended (9 and 10) questions (Appendix 3).

4.6.1 PILOT STUDY

A pilot study is a smaller version of the proposed study and conducted to refine methodology (Burns & Grove 2003:43). A pilot study was conducted on 10 bank managers and 36 customers. The purpose of the pilot study was to identify problems with the research design and to give the researcher experience with participants, methodology and data collection. The pilot study occurred in the same setting and the same data collection and analysis techniques were used in the final study. During the analysis of the pilot results the researcher found that some questions required clarity and that the respondents chose to remain neutral on these. The researcher found that the data obtained from the pilot study was suitable for the research study and that the measuring instrument could be used in the research study.

4.7 DATA ANALYSIS

The exploratory data analysis technique was used to analyse collected data. This involved analysing and summarising data through descriptive statistical techniques such as frequency tables, graphical and percentage analysis, and statistical measures of mean and standard deviation. This helped patterns, trends and relationships which could not be apparent with the use of raw data. The technique also involved converting 'text numerical variables' to facilitate quantitative analysis of qualitative data (Hussey and Hussey, 1997). Two other

statistical techniques used were factor analysis for the Likert scale variables and comparison of the mean differences observed in assessed similar test items. Comments in open-ended questions were analysed for commonality of views. The major statistical tool of analysis was SPSS with supportive use of an Excel Spreadsheet which was used in chart construction. Data presentation was done through tables, charts and descriptions.

4.8 LIMITATIONS OF THE STUDY

4.8.1 Low response rates

Due to limited time and work schedules of managers as most of them were engaged in strategy sessions and had no access to their emails, it was not possible to collect all filled questionnaires. Equally, there was a challenge in collecting some questionnaires from customers who were located in branches away from Gaborone where the researcher depended on branch marketing sales officials to administer questionnaires (Section 4.5).This resulted in low response rates.

Table 4.3 Comparison of response rates for respondents

No.	Questionnaire	Sample Size	Number Issued	Number. Returned	Var.	Response Rate (%)
1.1	FNBB Managers	48	48	39	9	81.3
1.2	FNBB Customers	180	180	121	59	67.2
	Total	228	228	160	68	70.2

Table 4.3 reveals that the total number of questionnaires returned fell short of the required census sampling totals to produce a 100% response rate, the desired response rate. Although the manager response rate was higher than that of customers by 20.9%, it still was not impressive. These low response rates were considered to affect the internal and external validity of findings and thus were perceived as a problem; but given the fact that census sampling was used to pick samples, this was deemed to neutralise this impact of low response rates. In view of this, a lot of effort was put in by the researcher to expedite receipt including hand delivery of questionnaires to the respondents, particularly those who were located at Head Office.

4.8.2 Researcher's changed work schedule

The unexpected changed job role of the researcher to head a new business unit – Department of Corporate Transactional Services (DCTS) at Head Office, from her old role of branch manager, created challenges for research work in terms of limited time to do research since the new role involved the researcher in setting up the new business unit (DCTS) that was to immediately start operations with migration of customers from branches. Since this project was an executive one it had to be managed and implemented within the planned period, without a budget and in compliance with agreements to avoid unbudgeted costs. This new work role put pressure on the researcher who was also collecting data and hence the delay in administering questionnaires.

4.9 ETHICAL CONSIDERATIONS

All issues that might impact on ethics were considered and steps to prevent them were given priority. According to Welman and Kruger (2001), ethical considerations are eminent throughout at all stages of a research project, from recruitment of participants; during the intervention; through to the release of the results acquired from the research. The questionnaires were accompanied by a cover note explaining the reason for the questionnaire. More emphasis was on confidentiality of the information and their identities. The questionnaire excluded names and any information that could identify the respondents. The questionnaires and all information were treated with confidentiality and responses were personally handled by the researcher in a lockable office cabinet.

4.10 CONCLUSION

In this chapter, a description of the research methodology which was applied in data collection for the study has been done. On the basis of this chapter, it is concluded that the data collected provided adequate answers to the research questions, thereby meeting the study objectives. The fifth chapter analyses the data and presents the results.

5 CHAPTER 5: RESULTS AND ANALYSIS

5.1 INTRODUCTION

The general objective of the study is to assess the effectiveness of implementation of e-banking and its impact on bank performance at FNBB.

Specific research objectives of the study are to:
Assess the effectiveness of e-banking implementation at FNBB.
Identify factors influencing implementation of e-banking and the consequences for bank performance.
Assess the impact of e-banking on bank performance at FNBB.

The purpose of this chapter is to present the results of the investigation and analyse the data. It covers the profile of sample respondents and an analysis of results and interpretation.

5.2 PROFILE OF RESPONDENTS

The data was collected from two samples of managers and individual customers of FNBB (Tables 4.2 and 4.3). The sample of manager respondents totalled 48 while that of individual customers was 180. The two questionnaires were therefore given to these respondents who answered questions relating to e-banking implementation at FNBB.

5.2.1 Distribution of respondents and period of service/banking

Table 5.1 Distribution of respondents in total sample

No	Respondent Type	Freq	%
1.1	FNBB Managers	48	21.1
1.2	FNBB Customers	180	78.9
	Total Sample	228	100.0

Table 5.1 shows that 21% of managers and 79% of customers made up the total sample. In terms of bank location, manager respondents were distributed as shown in Table 5.2.

Table 5.2 Distribution of manager respondents by bank location

No	Bank Location	Freq	%
1.1	FNBB Head Office	12	30.8
1.2	FNBB Branches	27	69.2
	Total	39	100.0

Table 5.2 reveals that more than half (69%) of manager respondents were drawn from 18 branches distributed country-wide and 31% from Head Office.

Table 5.3 Manager respondents' period of service with FNBB

No.	Years	Freq	%
1.1	6-10	4	10.3
1.2	11-15	14	35.9
1.3	>15	21	53.8
	Total	39	100.0

Table 5.3 reveals that 10% of managers have been working for FNBB for 6 to 10 years; 36% between 6 and 10 years; and 54% for more than 15 years. A total of 100% have been with the bank for over 5 years.

Table 5.4 Customer respondents' period of banking with FNBB

No.	Years	Freq	%
1.1	≤ 5	47	38.8
1.2	6-10	36	29.8
1.3	11-15	25	20.7
1.4	16-20	10	8.3
1.5	≥ 20	3	2.5
	Total	121	100.0

Table 5.4 reveals that 39% of customer respondents have been banking with FNBB for up to 5 years; 30% between 6 and 10 years; 21% between 11 and 15 years; 8% between 16 and 20 years; and 2% for 20 and more years. On the whole, 61% have been banking with FNBB for over 5 years.

The findings in Tables 5.2 to 5.4 are very significant to this study. Firstly, the distribution of respondents shows a balanced and wide representation of managers and customer respondents of all FNBB branches in the country. This distribution of 79% of customer and 69% of manager respondents in FNBB branches country-wide was very important since the impact of the e-banking implementation was to be felt in retail branches where most of its products were delivered (Section 1.3 and 2.5.1) to individual customers. This big representation of both managers and customers facilitated objective and unbiased assessment of e-banking implementation effectiveness. Secondly, the inclusion of 31% of HQ based manager respondents was significant since it was these managers who were involved in the conception and implementation processes of projects such as e-banking, due to their operational and strategic roles in the organisation. Thirdly, the long period of service and banking of respondents have implications for enhancing validity and reliability of findings. Being aware of e-banking, both respondents were judged to have adequate experience and knowledge on issues relating to its implementation and bank performance. Lastly, the use of survey research questionnaires (Sections 4.3 and Section 4.4) ensured that a lot of data was collected using census samples. Based on this research approach, it was appropriate to use the findings of this study to generalise to the whole population of local banks in Botswana.

5.2.2 Characteristics of e-banking adopters for the Botswana Study

To assess the prevalence of demographic characteristics associated with e-banking adoption in the current sample (Sections 3.7 and 3.8), customer respondents were asked to tick in data related to them. Tables 5.5 to 5.7 summarise the results:

Table 5.5 Gender of customer respondents

No	Gender	Freq	%
1.1	Male	47	38.8
1.2	Female	74	61.2
	Total	121	100.0

Table 5.5 reveals that more than half (61%) of customer respondents were female and 39% male. These findings suggest that it is female respondents who carried out most of the banking transactions.

Table 5.6 Age-groups of customer respondents

No	Age-groups	Freq	%
1.1	18-25	24	19.8
1.2	26-35	31	25.6
1.3	36-45	40	33.1
1.4	46-55	20	16.5
1.5	56-65	6	5.0
	Total	121	100.0

As Table 5.6 indicates, 20% of respondents were aged between 18 and 25 years; 26% between 26 and 35, 33% between 36 and 45; 16% between 46 and 55; and 5% between 56 and 65 years. All in all, 46% of customers were 'youth' (18 to 35 years) and 54% 'middle aged' (36 to 65 years).

Table 5.7 Occupation type of customer respondents

No	Occupation Type	Freq	%
1.1	Employee	80	66.1
1.2	Business	4	3.3
1.3	Household	4	3.3
1.4	Student	21	17.4
1.4	Others	12	9.9
	Total	121	100.0

The results in Table 5.7 indicate that most of the respondents (66.1%) were in employment; followed by students (17.4%); others (9.9%); and by business and household occupations (3.3%). A total of 80% of customers fell in occupational categories of employee, business and student. The findings in Tables 5.5 to 5.7 are significant to this study and have implications for e-banking adoption. The gender, age group and occupational type are all characteristics associated with e-banking adoption (Kolodinsky *et al.*, 2004 and Mobarek, 2009) in Sections 3.7 and 3.8. The implication is that customer respondents in this study who possess these characteristics are expected to be well positioned to and susceptible adopting e-banking technologies. This also classifies them as appropriate to make objective assessment of e-banking performance.

5.2.3 Forms of banking used by most customers at FNBB

Customer respondents were asked to select from a list of three which form of banking they used: manual-banking; e-banking; and both e-banking and manual-banking. Their responses were cross-compared with those of manager respondents who also made the selection on behalf of customers (Table 5.8):

Table 5.8 Respondents' assessment of forms of banking used by customers

No.	Form of Banking Used	FNBB Customers		FNBB Managers	
		Freq	%	Freq	%
1.1	Electronic Banking	28	23.1	0	0.0
1.2	Manual Banking	24	19.8	11	28.2
1.3	Both Electronic & Manual Banking	69	57.0	28	71.8
	Total	121	100.0	39	100.0

Table 5.8 reveals that 23%, 20% and 57% of customer respondents assessed customers to be using e-banking, manual banking and both e-banking and manual-banking respectively; compared to 0%, 28% and 72% of manager respondents who assessed customers to be using e-banking, manual-banking and both e-banking and manual-banking respectively. Customer respondents were further asked to specify and assess the extent to which they used given e-banking services. The objective scale was used to facilitate this assessment:

Table 5.9 Objective Scale

SCALE	Not Used	Least Often Used	Often Used	Most Often Used
	1	2	3	4

The mean and standard deviation were computed using responses based on this scale. A higher mean score indicates that most respondents often or most often used e-banking services. A lower mean score on the other hand indicates that most respondents least often or not used the service. Table 5.10 summarises the results:

Table 5.10 Customer respondents 'assessment of their usage of e-banking

No	Test Item	1	2	3	4	N	Mean	SD
1.1	Internet banking	21%		45%	34%	54	2.93	1.09
1.2	Mobile phone banking	16%		10%	74%	58	3.43	1.09
1.3	On-line banking	16%	43%	26%	15%	50	2.41	.937
1.4	Card-less (e-Wallet)	36%	5%	21%	38%	53	2.60	1.32
1.5	On-line payments	16%	41%	28%	15%	55	2.43	.939
1.6	ATMs	5%		5%	90%	58	3.79	.695
1.7	Point of sale banking	11%	5%	10%	74%	58	3.48	.995

Table 5.10 reveals a pattern of results with two trends. The first one is characterised by consistently higher mean scores of above 3 in three test items (43%, 3 out of 7), indicating that customer respondents assessed customers to often use these e-banking products – ATMs, point of sale and mobile phone banking. The range of mean scores of between 3.43 and 3.79 confirms this 'often use' of these three e-banking products. The higher mean scores for these three test items were due to higher responses of between 84% and 95% for usage of the three products. The second trend indicates consistently low mean scores (lower than 3 but above 2) for the remaining four test items (57%, 4 out of 7), indicating that these customer respondents assessed customers to least often use these e-banking products – Internet, card-less (e-wallet), on-line payments and on-line banking. The range of mean scores of between 2.41 and 2.93 confirms the 'least often use' of these three e-banking products. The lower mean scores for the four test items were due to lower responses of between 41% and 79% for usage of the four products.

The findings in Tables 5.8 and 5.10 are very significant to this study and have implications for implementation and adoption of e-banking at FNBB. Firstly, Table 5.8 shows that only 23% of customer respondents assessed customers to be exclusively dependent on e-banking for their banking needs, thus confirming that the majority could not do without manual banking. If manager respondents' assessment (0%) is preferred due to appropriateness of methodology used (Subsection 5.2.1), their 0% assessment that no customers were exclusively using e-banking should even be more worrying and should indicate negative

customer perceptions of e-banking, such as difficulty in using e-banking; perceived risk; safety; trust or reliance on e-banking; limited knowledge as confirmed in Sections 3.7 and 3.8. This explains why the majority of customer and manager respondents (57% and 72%) assessed customers to be using both e-banking and manual banking.

The above findings are therefore supportive of preliminary investigations and defined the research problem, its consequences and challenges for e-banking implementation and adoption (Sections 1.3 to 1.4 and 2.6). This should be a worrying situation considering that FNBB has over the years been moving away from manual (old or traditional) banking through its "bricks to clicks" strategy of offering most of its products and services electronically. In other words, these findings suggest that FNBB is failing to migrate its customers to e-banking despite its technological leadership in the market. This should prompt an assessment of the effectiveness of implementation of e-banking at the bank.

5.3 ANALYSIS OF RESULTS AND INTERPRETATION

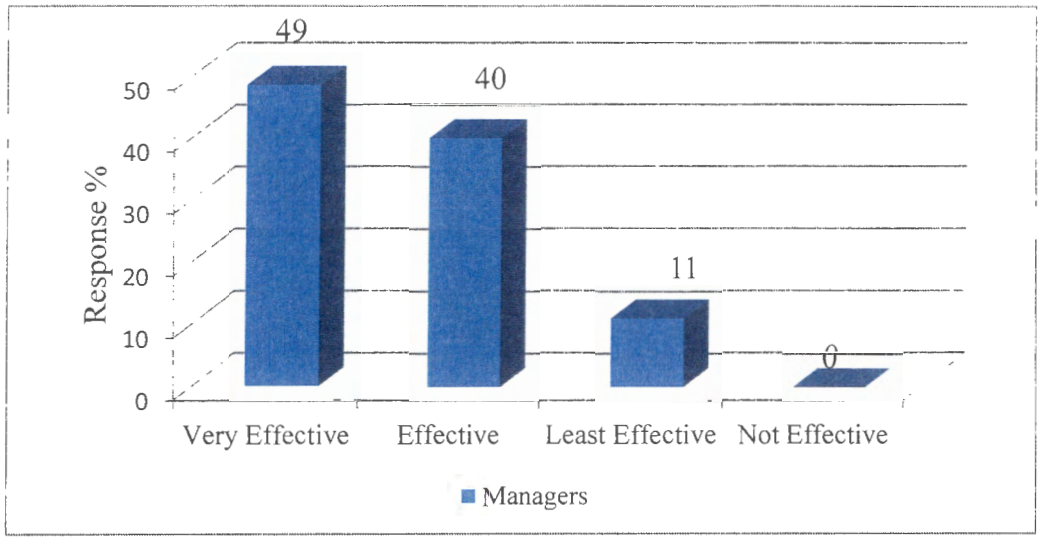
In this section, results are analysed and interpreted for each research question, deriving significances and implications from findings.

5.3.1 Research Question 1

How effective was e-banking implementation at FNBB?

The effectiveness of e-banking implementation at FNBB was assessed by manager respondents in (Figure 5.1):

Figure 5.1 Assessment of effectiveness of e-banking implementation



The figure reveals that 49% and 40% of respondents assessed the implementation of e-banking to have been 'very effective' and 'effective' compared to only 11% who assessed it to have been 'least effective'. A total of 89% assessed e-banking implementation to have been effective.

The extent to which identified categories of people were involved in the change process to ensure effective implementation of e-banking at FNBB was assessed by manager respondents. Figure 5.2 summarises the findings:

Figure 5.2 Assessing involvements of change agents change management process

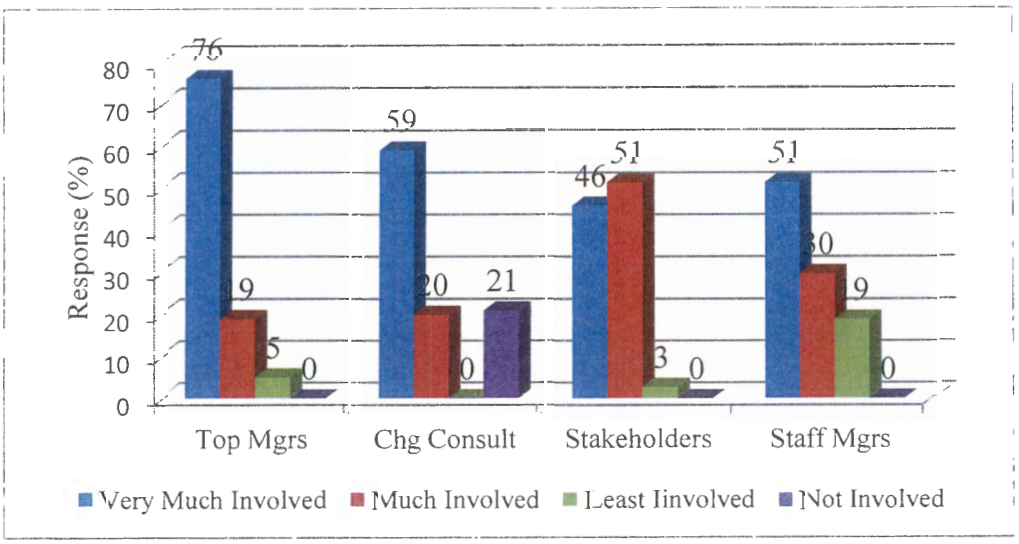


Figure 5.2 reveals that 76% of manager respondents assessed *top managers* to have been 'very much involved' in the change process to ensure effective implementation of e-banking at FNBB, compared to 19% and 5% who felt they were 'much involved' and 'least involved'. Overall assessment: 95% -'much involved'.

The results also reveal that more than half (59%) of the respondents assessed *change consultant/s* to have been 'very much involved' in the change process to ensure effective implementation of e-banking at FNBB, compared to 20% and 21% who felt they were 'much involved' and 'not involved'. Overall assessment: 79% -'much involved'.

The results further indicate that 46% of respondents assessed *stakeholders or implementers* to have been 'very much involved' in the change process to ensure effective implementation of e-banking at FNBB, compared to 51% and 3% who felt they were 'much involved' and 'least involved'. Overall assessment: 97% -'much involved'.

Lastly, results show that 51% of respondents assessed *staff managers* to have been 'very much involved' in the change process to ensure effective implementation of e-banking at FNBB, compared to 30% and 19% who felt they were 'much involved' and 'least involved'. Overall assessment: 81% - 'much involved'.

Summarising the results in Figure 5.2 reveals that on average, 58% of respondents assessed the above change agents to have been 'very much involved' in the change process to ensure effective implementation of e-banking at FNBB compared to 30%, 7% and 5% who felt they were 'much', 'least', and 'not' involved respectively. A total of 88% assessed the above change agents to have been 'much involved'.

The manager respondents were also asked to assess how effective branch managers have been in the implementation and adoption of e-banking at FNBB (Figure 5.3):

Figure 5.3 Assessment of effectiveness of branch managers

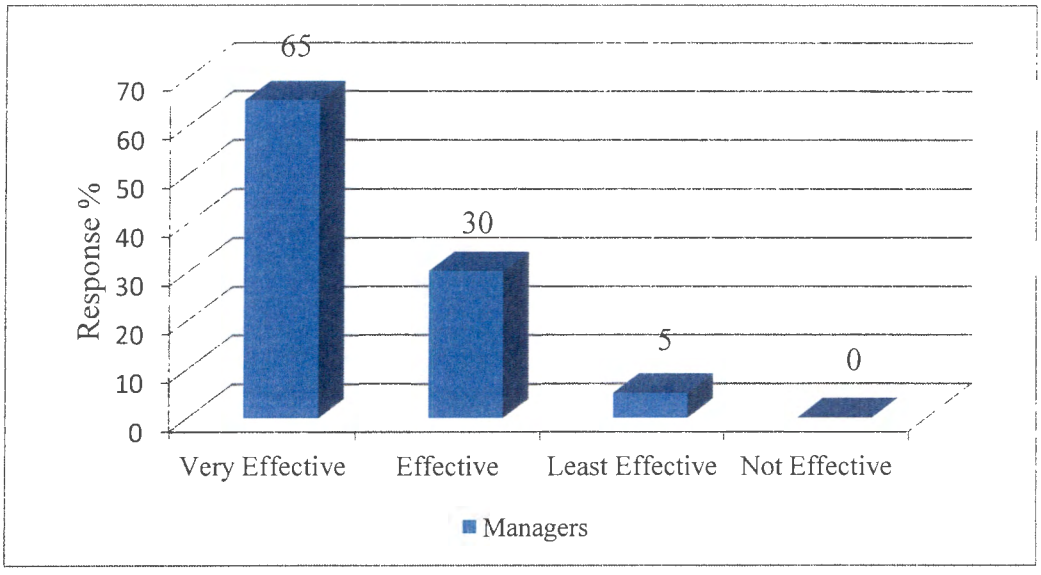


Figure 5.3 shows that 65% and 30% of respondents assessed branch managers to have been 'very effective' and 'effective' in the implementation and adoption of e-banking at FNBB compared to only 5% who assessed them to have been 'least effective'. Overall assessment: 95% -'effective'. The comments given to support their assessment are outlined below:

For those who assessed branch managers to have been 'effective'

(95%, n = 37):

They had to know the product before trying to sell it.

Because they had to sensitise both internal and external customers about e-banking.

Branch managers were key-personnel because they managed the relationship between customers and the bank and they also had to do the sales.

For those who assessed branch managers to have been 'least effective'

(5%, n = 37):

It is the view of the researcher that e-banking at FNBB has been in place much longer, however judging from the fact that even our employees took long to utilize e-banking products, the view is that it was not implemented as effectively as it would have been. Even the customer base could have been bigger and more educated about the products.

Management can do more to incentivise staff to aggressively sell e-banking solutions to customers.

Some do not have first-hand experience in actually using it and selling has therefore been slow.

Few Managers are involved in ensuring that all customers they interact with have e-banking.

Whilst the researcher was not completely familiar with the implementation of e-banking, it is apparent that implementation was before addressing awareness to FNBB staff and that created division and resistance from branch banking as it were unclear to them what it was they were selling to the customer.

A critical review of Figures 5.1 to 5.3 shows subjectivity in assessment by most manager respondents who assessed the e-banking implementation process to have been effective (89%), involving change agents (88%) and effectiveness of branch managers (95%); which, when considered in the light of comments by only 5% of respondents and findings in Tables 5.8 and 5.10, show a totally opposite situation of low adoption of e-banking. Viewed differently, these comments given by 5% of respondents justified ineffective implementation which has resulted in dismal performance of e-banking (Tables 5.8 and 5.10). Thus, the 95% of manager respondents over assessed FNBB management's capability to effectively implement e-banking, suggesting that most managers lacked understanding the application of e-banking by bank employees and customers. This may well suggest that managers, especially at branches, were not customer centric when marketing these e-banking products. To adequately address all issues related to Research Question 1, it was imperative to evaluate factors which influence e-banking implementation.

5.3.2 Research Question 2

What factors influenced implementation of e-banking at FNBB and what have been the consequences for bank performance?

To examine these factors, both manager and customer respondents were asked to assess the extent to which they agreed/disagreed with statements considered as factors influencing implementation. A Likert scale facilitated this assessment as shown below.

Table 5.11 Likert Scale

Scale	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
	1	2	3	4	5

The mean and standard deviation were computed using responses based on this scale. A higher mean score indicates that most respondents agreed with a given test item. A lower mean score on the other hand indicates that most respondents disagreed with it. Table 5.12 presents the results:

Table 5.12 Manager Respondents' assessment of factors

No	Test Item	1	2	3	4	5	Mean	SD
1.1	Use of traditional way of marketing e-banking	17%	20%	9%	34%	20%	3.20	1.43
1.2	Lack of effective change management programme for e-banking	6%	23%	5%	46%	20%	3.51	1.22
1.3	Not being conversant with e-banking product features made it difficult for bank staff to market it effectively	21%	10%	26%	28%	15%	3.08	1.36
1.4	Lack of structures in retail banking halls where staff and	20%	28%	8%	21%	23%	2.97	1.51

	customers could be advised on e-banking product and service features							
1.5	Lack of comprehensive customer education campaign on the use of cell phone banking and its benefits contributed to its low adoption after its implementation	18%	10%	26%	23%	23%	3.23	1.40
1.6	Lack of effective leadership in project management for implementation of e-banking	28%	13%	18%	28%	13%	2.85	1.44
1.7	Security issues–illegal use of computers and accounts	8%	13%	20%	51%	8%	3.38	1.07
1.8	E-banking not part of strategic planning at FNBB	40%	24%	22%		14%	2.22	1.36
1.9	Limited resources – software, hardware, skilled IT people, etc.	25%	8%	33%	31%	3%	2.77	1.22

Table 5.12 reveals a pattern of results with two trends, which are both characterised by consistently low and lower mean scores. The trend of low mean scores (lower than 4 but above 3) for five test items 1.1 to 1.3, 1.5 and 1.7 (55.6%, 5 out of 9), indicated that most respondents 'neither' agreed nor disagreed with these test items as influencing implementation of e-banking. The trend of lower mean scores (lower than 3 but above 2) for four test items 1.4, 1.6, 1.8 and 1.9 (44.4%, 4 out of 9) indicate that these respondents disagreed with the test items. Overall, the range of mean scores of between 2.22 and 3.51

confirms 'neither' or indecision (closer to 3) and disagreement (close to 2) with more varied standard deviation values of 1.07 and 1.51 about their means. The low and lower mean scores for the nine test items were due to lower responses of between 14% and 66% for agreement with these test items.

Table 5.13 Customer respondents' assessment of factors

No	Test Item	1	2	3	4	5	Mean	SD
1.1	Use of traditional way of marketing e-banking	3%	8%	27%	43%	19%	3.69	.968
1.2	Lack of effective change management programme for e-banking		10%	9%	59%	22%	3.92	.850
1.3	Not being conversant with e-banking product features made it difficult for bank staff to market it effectively	2%	28%	9%	42%	19%	3.46	1.16

1.4	Lack of structures in retail banking halls where staff and customers could be advised on e-banking product and service features	7%	13%	10%	42%	28%	3.70	1.21
1.5	Lack of comprehensive customer education campaign on the use of cell phone banking & its benefits contributed to its low adoption after its implementation		13%	8%	41%	38%	4.04	.995
1.6	Lack of effective leadership in project management for implementation of e-banking	2%	8%	43%	44%	3%	3.37	.776
1.7	Security issues–illegal use of computers and accounts		16%	32%	32%	20%	3.55	.990
1.8	E-banking not part of strategic planning at FNBB	5%	27%	60%	5%	3%	2.73	.759
1.9	Limited resources – software, hardware, skilled IT people, etc.	5%	44%	15%	26%	10%	2.91	1.14

Table 5.13 reveals results with three features. The first one is a higher mean score (higher than 4) for one test item 1.5 (11%, 1 out of 9), indicating that customer respondents agreed

with this test item that it contributed to low adoption e-banking after its implementation, thus confirming that the factor negatively influenced e-banking implementation and adoption at FNBB. The other two features show two trends with consistently low and lower mean scores. Low mean scores (lower than 4 but above 3) for six test items 1.1 to 1.4, 1.6 and 1.7 (66.6%, 6 out of 9) indicated most respondents 'neither' agreed nor disagreed with these factors as influencing implementation of e-banking. Lower mean scores (lower than 3 but above 2) for two test items 1.8 and 1.9 (22.2%, 2 out of 9) indicated these respondents disagreed with these test items as factors influencing implementation of e-banking. The range of mean scores of between 2.73 and 3.92 for eight test items confirms 'neither' or indecision (closer to 3) and disagreement (close to 2) with more varied standard deviation values of .759 and 1.21 from their means. These low and lower mean scores for the eight test items were due to lower responses of between 8% and 81% for agreement with these test items.

Although nine factors were assessed to have influenced implementation of e-banking at FNBB, it was possible to identify and compare the five most important factors which had the most influence on e-banking implementation from Tables 5.12 and 5.13. For this, a mean rating method through descending order was used (Tables 5.14 and 5.15).

Table 5.14 Ranking managers' assessed factors

No	Test Item	N	Rank	Factor Mean	SD	Scale
1.1	Lack of effective change management programme for e-banking	35	**1**	3.51	1.22	1-5
1.2	Security issues–illegal use of computers and accounts	39	**2**	3.38	1.07	1-5
1.3	Lack of comprehensive customer education campaign on the use of cell phone banking and its benefits contributed to its low adoption after its implementation	39	**3**	3.23	1.40	1-5
1.4	Use of traditional way of marketing e-banking	35	**4**	3.20	1.43	1-5

1.5	Not being conversant with e-banking product features made it difficult for bank staff to market it effectively	39	**5**	3.08	1.36	1-5

Table 5.15 Ranking customers' assessed factors

No	**Test Item**	**N**	**Rank**	**Factor Mean**	**SD**	**Scale**
1.1	Lack of comprehensive customer education campaign on the use of cell phone banking and its benefits contributed to its low adoption after its implementation	115	**1**	4.04	.995	1-5
1.2	Lack of effective change management programme for e-banking	115	**2**	3.92	.85	1-5
1.3	Lack of structures in retail banking halls where staff and customers could be advised on e-banking product and service features	115	**3**	3.70	1.21	1-5
1.4	Use of traditional way of marketing e-banking	115	**4**	3.69	.96	1-5
1.5	Security issues–illegal use of computers and accounts	97	**5**	3.55	.990	1-5

As Tables 5.14 and 5.15 reveal, both manager and customer respondents were unanimous in their assessment of factors influencing implementation of e-banking at FNBB, with four out of five test items common to both respondents (80%, 4 out of 5). In view of these findings in Tables 5.12 to 5.15 and earlier findings in Tables 5.8 and 5.10, customer respondents were asked assess the extent to which they agreed/disagreed with given statements as reasons for

not using e-banking. A Likert scale (Table 5.11) was used. Table 5.16 summarises the findings:

Table 5.16 Customer respondents' assessed reasons for not using e-banking

No	Test Item	1	2	3	4	5	N	Mean	SD
1.1	Lack of knowledge on e-banking products and services offered	8%	14%		11%	67%	36	4.14	1.42
1.2	It is more convenience to use manual banking	41%		8%	43%	8%	39	2.77	1.54
1.3	I trust in manual banking for all the transactions	7%	8%		31%	54%	39	4.15	1.25
1.4	I feel more secure to use manual banking	3%	10%		46%	41%	39	4.13	1.03
1.5	Manual banking is user-friendly	15%	8%	23%	46%	8%	39	3.23	1.20

Table 5.16 shows three reasons why customers were not using e-banking, which made them use manual banking. The higher mean scores of above 4 for three test items 1.1, 1.3 and 1.4 (60%, 3 out of 5) indicate that customer respondents agreed with these test items as constraints to using e-banking. This directly reduced its adoption rate and thus reflecting ineffective implementation.

In addition, manager respondents were asked to state what they considered as challenges confronting the bank in the implementation of new e-banking products. These are outlined below:

- Most customers especially in rural areas do not have computers, no special points where they live and they do not seem to want to try new things.
- Network availability is limited to certain parts of the country and this hampers usage of e-banking in those areas without network coverage.
- The network is very slow during busy times especially month ends.
- Mind-set and status quo - a lot of customers still prefer "old banking".
- Most customers do not have access to computers and Internet hence delay in the footprints.
- Lack of computer and information technology facilities.
- Low computer literacy among customers.
- Customers who do not confidence and trust in e-banking.
- Fear of the unknown or illiteracy in our markets/customers.
- Low adoption by customers - complaints of costs and charges associated with network providers.
- Communication barrier: skills and in-depth knowledge of e-banking products lack among bank staff hence making it difficult to market them. This makes e-banking training for bank personnel essential for successful implementation.
- Low access to business online banking payments since authorization is limited to one PC and system breakdown.
- Lack of computer equipment for other clients for on-line banking.

Lastly, manager respondents also stated what they considered to be key lessons learnt from e-banking implementation exercise at FNBB, as follows:

- Know which market segment appreciates which product. Since mass marketing does not work, FNBB has to sell the right products to the right market.
- The pull of the traditional way of doing banking is still strong. Push factors such as higher charges for using traditional banking channels must be introduced to compel customers to adopt more e-banking products.
- A lot of preliminary work and research need to be done prior to the launching of new products to ensure that the bank has all the resources needed to penetrate the market. There is no need for the bank to do follow up research after a new product launch. Engage customers and get their views.

- There is still a lot of education to be given to the customers, especially the rural folk. Customer service has been and still is the differentiator in committing customers to the banks. An aggressive education campaign needs to be undertaken.
- Before implementing a product, awareness should be run internally first in order to manage customer satisfaction.
- When the bank moved from manual salary payments without an alternative to cater for the transition, huge service related problems were experienced.

The findings in Tables 5.12 to 5.16 and associated comments are very significant to this study and have implications for e-banking implementation and adoption, as well as consequences for bank performance at FNBB. To begin with, these findings confirm earlier findings in Section 5.3.1 (b) in which comments justified ineffectiveness of e-banking implementation, effectively implying these factors (Tables 5.12 to 5.16), with challenges and lessons learnt ultimately providing complete root causes. It also provides justification for findings in Tables 5.8 and 5.10 and related analyses. It can therefore be argued that it is these factors and challenges which have prevented FNBB from realising its aim of migrating customers from "bricks to clicks" and reduce long queues in the banking halls, generating increased revenue through volume driven e-banking transactions (Section 1.4). This is on account of ineffective implementation which has resulted in low e-banking adoption and consequently affecting bank performance in terms of low revenues and poor, low service quality due to persistent long queues. This is also against the background of the existence of preconditions for e-banking adoption (Tables 5.5 to 5.7). With all this wealth of knowledge and experiences shared by manager respondents on challenges and lessons learnt indicating they were knowledgeable of the current implementation processes, it is unclear why they produced subjective assessments in Figures 5.1 to 5.3 and Tables 5.12 and 5.14.

On the basis of these findings in Sub-section 5.3.1 (b) and Tables 5.12 to 5.16 and related comments, it can be concluded that e-banking implementation at FNBB has been ineffective due to failure to manage factors associated with the change process. This has resulted in low adoption of e-banking products with the net result of less contribution to the bank's expected performance. It also concluded that all the constraining factors to e-banking implementation (Tables 5.12 and 5.15) are very significant regardless of their low mean ratings.

5.3.3 Research Question 3

What is the impact of e-banking on bank performance at FNBB?

In view of the findings of Research Questions 1 and 2, it was appropriate to address Research Question 3 so as to ascertain its impact. The impact was evaluated in terms of how FNBB had benefited and continued to benefit from e-banking. Both manager and customer respondents were asked to assess the extent to which they agreed/disagreed with given statements regarding the impact. The Likert scale (Table 5.11) facilitated the assessment - the results are shown in Tables 5.17 and 5.18:

Table 5.17 Manager Respondents' assessment of the impact of e-banking

No	Test Item	1	2	3	4	5	Mean	SD
1.1	Has enabled FNBB to acquire, retain & protect its market share.				44%	56%	4.56	.502
1.2	Has enabled FNBB to increase efficiency of the payment system and potentially expanded access to financial services to the un-banked customers			5%	39%	56%	4.51	.601
1.3	Has assisted and encouraged channel migration among its retail customers which has reduced queues in branches	5%	10%	21%	36%	28%	3.72	1.146
1.4	Has positioned FNBB as a technology-astute organisation				21%	79%	4.79	.409
1.5	Use of e-banking has been contributing to			5%	64%	31%	4.25	.554

	low transaction costs & accelerating channel migration							
1.6	Has enabled the bank to attract high-net-worth individuals and young professionals to open accounts with FNBB			5%	64%	31%	4.26	.549

Table 5.17 demonstrates a trend of consistently higher mean scores (higher than 4) for five test items 1.1, 1.2; 1.4 to 1.6 (83.3%, 5 out of 6), indicating that most manager respondents agreed thus confirming e-banking has had a positive impact on bank performance. In short, FNBB performed well with its implementation. These higher mean scores for the five test items were due to higher responses of between 95% and 100% for agreement. However, this was different with one test item 1.3 (16.7%, 1 out of 6) which registered a low mean score of 3.72, indicating a significant proportion of respondents neither' agreed nor disagreed (21%) and disagreed (15%) with the test item that FNBB had benefited from it. Thus the low mean score was due to a total low response of 64% who agreed with it.

Table 5.18 Customer respondents' assessment of the impact of e-banking

No	**Test Item**	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**
1.1	Has enabled FNBB to acquire, retain & protect its market share.	3%	3%	37%	42%	15%	3.64	.874
1.2	Has enabled FNBB to increase efficiency of the payment system and potentially expanded access to financial services to the un-banked customers	3%		16%	56%	25%	4.04	.718
1.3	Has assisted and	4%	33%	33%	17%	13%	3.03	1.084

	encouraged channel migration among its retail customers which has reduced queues in branches							
1.4	Has positioned FNBB as a technology-astute organisation			6%	59%	35%	4.29	.574
1.5	Use of e-banking has been contributing to low transaction costs & accelerating channel migration	4%	51%	24%	11%	10%	2.75	1.06
1.6	Has enabled the bank to attract high-net-worth individuals and young professionals to open accounts with FNBB			12%	54%	34%	4.22	.646

Table 5.18 indicates three patterns of results. The first one is of a higher mean scored (higher than 4) for three test items 1.2, 1.4 and 1.6 (50%, 3 out of 6), indicating that customer respondents agreed thus confirming e-banking has had a positive impact on bank performance in these three areas. The other pattern shows low mean scores (lower than 4 but above 3) for two items 1.1 and 1.3 (33.3%, 2 out of 6) indicated that most respondents 'neither' agreed nor disagreed with these two test items and that FNBB had benefited from them. The third pattern is characterised by one lower mean score of 2.75 for one test item 1.5 (16.7 %, 1 out of 5), indicating that customer respondents disagreed with this test item that FNBB had benefited from it with e-banking implementation.

A comparison of assessments in Tables 5.17 and 5.18 shows differences and similarities in perceptions of the impact of e-banking on FNBB performance as tabulated below:

Table 5.19 Comparative assessment of impact of e-banking

No.	Test Item	FNBB Managers	FNBB Customers
1.1	Has enabled FNBB to acquire, retain & protect its market share.	4.56 100%	3.64 57%
1.2	Has enabled FNBB to increase efficiency of the payment system and potentially expanded access to financial services to the un-banked customers	4.51 95%	4.04 81%
1.3	Has assisted and encouraged channel migration among its retail customers which has reduced queues in branches	3.72 64%	3.03 30%
1.4	Has positioned FNBB as a technology-astute organisation	4.79 100%	4.29 94%
1.5	Use of e-banking has been contributing to low transaction costs & accelerating channel migration	4.25 95%	2.75 21%
1.6	Has enabled the bank to attract high-net-worth individuals and young professionals to open accounts with FNBB	4.26 95%	4.22 88%

Table 5.19 shows the benefits FNBB has realised as a result of e-banking. Firstly, the results show that manager respondents' assessed FNBB to have benefited in five test items (83.3%, 5 out of 6) compared to three test items (50%, 3 out of 6) of customer respondents. Secondly, both respondents were unanimous in their assessment that e-banking had positively impacted on FNBB's performance in three areas 1.2, 1.4, and 1.6; but there was no consensus regarding the impact of e-banking on expected key benefits of e-banking that is migrating customers from "bricks to clicks" with a resulting customer base and revenue growth (test items 1.1 and 1.5); while both 'neither' agreed or disagreed or not sure with test item 1.3 that e-banking had assisted and encouraged channel migration among its retail customers which had reduced queues in branches. In view of findings in Tables 5.8 and 5.10; Section 5.3.1 (b); Tables 5.12 to 5.16 and related comments which have confirmed that FNBB has not performed well in terms of high adoption of e-banking technologies with negative

implications for customer service and enhanced financial performance, the assessment by customer respondents should be considered more valid and reliable than that of manager respondents. This again points to the tendency to exaggerate the benefits or impact of e-banking on FNBB by manager respondents. Thus a conclusion is drawn that e-banking has not significantly enhanced performance at FNBB. These findings are further discussed and evaluated in the next chapter, which also includes conclusions and recommendations.

6 CHAPTER 6: DISCUSSION OF FINDINGS

6.1 SIGNIFICANCE OF E-BANKING AND CHALLENGES OF USING IT

E-banking, which entails carrying out banking transactions without visiting a bank (brick and mortal) is now a norm of banking practice globally and enables banks to improve service delivery; attract customers; provide services at low cost; and stay competitive. By using a "bricks to clicks" strategy, banks should be able to migrate their customers from "old or traditional banking" to "new or electronic banking" with the aim of reducing the queues in the banking halls, whilst generating increased revenue through volume driven e-banking transactions. In this changing and competitive business environment such as that of Botswana, it is only when banks are developing new innovations such as e-banking products (Table 5.10) which aim to revolutionise the way they operate, that they can realise the great benefits like the ones FNBB and other competing banks envisaged to achieve when they started rolling out on-line products (Sections 1.4; 2.4; and 2.5). While this underlies the rationale for implementing e-banking, the reality on the ground shows that banks face daunting difficulties and challenges to effectively implement it with the end result of failure to adopt these products by both customers and bank staff themselves. The low adoption rates (such as those in Table 5.8 for FNBB) reflect resistance and preference for the status quo. This is despite numerous benefits accruing to both customers and banks (Section 3.5).

While implementation is an important management phase in any strategic management process an organisation gets involved in, it is more critical when it comes to implementing e-banking products. This is because implementing e-banking has many assumptions and implications which any bank management must consider in order to be effective and enable the organisation to derive benefits. Assumptions include for instance availability of ICT infrastructure and network; acceptable level of knowledge, skill and competency in ICTs, email, personal computer, Internet; e-banking product knowledge; learning to use products, etc. Implications involve a revolution in work processes from manual to digital ("bricks to clicks" strategy); overcoming adoption barriers, etc.; all making e-banking implementation complex and challenging; thus necessitating the need to apply best practice theoretical concepts and models in change management to be successful (Sections 3.3 and 3.4).

By effectively implementing technologically-based products like e-banking, banks in Botswana should be able to improve on service quality; efficiency and increase on market share; which should ultimately result in reduced long queues and increased customer satisfaction. The occurrence of long queues in banking halls has long been associated with poor quality of banking services . On the other hand, poor or ineffective implementation results in failure and denies organisations anticipated benefits and realisation of project goals and objectives. It is therefore imperative for managers and customers to identify and effectively apply critical success factors (CSFs) of effective implementation and address all factors with the potential to contribute to ineffective implementation (Sections 3.6 to 3.8), coupled with strong leadership in e-banking project management to ensure successful implementation and adoption of innovations. Equally, key learning outcomes should be a basis for improvement as in the case of FNBB who have not fared well in the implementation of e-banking products. .

6.2 PRIMARY RESEARCH FINDINGS

6.2.1 Extent of E-banking Usage at FNBB

The findings have confirmed that the usage of e-banking is very low. From **Respondent** the three forms of banking examined, only 28% of customer respondents and none of manager respondents (0%) assessed individual customers to be exclusive users of e-banking; compared to 20% of customer and 28% of manager respondents for manual banking and 57% of customer and 72% of manager respondents for both electronic and manual banking. Thus 80% of customer respondents were using combined electronic and manual banking (Table 5.8). These results render a question as to why a few or nil of customers are exclusive e-banking. Is it because there are products FNBB cannot provide electronically and how many of it. With a long history of e-banking, the bank can be said to be offering most of products electronically and a small proportion manually. This need to use both old and electronic banking has implications for negative perceptions thus act as a safeguard or hedge against risk. This also has implications for reliability of network, lack of adequate knowledge on using them, access to Internet and so on.

The findings also have confirmed that only 3 products out of 7 product lines i.e. ATMs, point of sale and mobile phone banking, were *often used*(43%); while 4 products - Internet, on-line,

card-less, and on-line payments (57%) were *least often used* (Table 5.10). These findings are depressing and they imply wastage of resources in e-banking as they are not yielding substantial return on investment. Considering that FNBB has introducing these products for close to 12 years, such findings should not be acceptable as they imply flaws in launching these products. This also raises questions on marketing strategies and their effectiveness. What is even more damaging is the revelation of findings in Table 5.10, that out of 121 customer respondents who assessed the extent of their usage of e-banking products, only 55 on average assessed this part, resulting in a low response rate of 45.3% (45%, 55 out of 121). This indicates that 55% of customer respondents who abstained either 'were not sure' or 'did not know' with the implication that they were not aware of any customers using it, a position closer to manager respondents' 0% assessment for exclusive usage of e-banking by customers (Table 5.8). The above discussion permits a conclusion that there is ineffective application of e-banking products by customers at FNBB, resulting in underutilisation and low ROI.

6.2.2 Effectiveness of e-banking implementation at FNBB

The findings have confirmed that implementation of e-banking at FNBB has been ineffective which has contributed to low adoption and sluggish performance of these products. The comments given by manager respondents as challengers and lessons learnt from the implementation process have overwhelmingly revealed the gaps and weaknesses in the management of the implementation process. These challenges affected and still affect three critical segments: *internal banking staff* who have not been ready for implementation; *external customers* who have not been involved in implementation (Table 5.16); and by implication lack of a *strategic change management programme* to prepare the needs of implementation. This resulted in operational and technical problems. In short, failure on the part of FNBB to follow the Change Model (Appendix 2) has contributed to ineffective implementation of e-banking and low adoption at FNBB. Thus low acceptance of change to e-banking has occurred. These findings are in harmony with Bratton and Gold (2007) and Burnes (2004) who attribute failure of many interventions such as e-banking on account of poor change management. These findings which resulted from the use of open-ended questions, sharply counteracted the subjective findings in Figures 5.1 to 5.3, and Tables 5.12 and 5.15 in which respondents over assessed the implementation of e-banking to have been effective and underrated the significance of factors in constraining this implementation. Thus the Likert scale assessed closed test items produced invalid and unreliable results when the

comments on challenges and lessons learnt as well as findings in Tables 5.8 and 5.10 are considered.

In view of this, the factors negatively influencing implementation of e-banking at FNBB with unfavourable consequences on bank performance are: lack of an effective change management programme for e-banking; security issues; lack of a comprehensive customer education campaign; the use of the traditional way of marketing e-banking; not being conversant with e-banking product features by bank staff to market it effectively; the lack of structures in retail banking halls for staff to meet and help customers; the lack of knowledge on e-banking products and services offered; trusting manual banking more than e-banking; and feeling more secure to use manual banking(Tables 5.14 to 5.16). It is thus concluded that e-banking implementation was ineffective.

6.2.3 Impact of E-Banking on Bank Performance

The findings have confirmed that e-banking has not significantly enhanced bank performance at FNBB especially in expected key performance outcomes of its implementation of customer migration to e-banking and increased revenues and quality of service delivery. Most customer respondents did not agree that e-banking had enabled FNBB to acquire, retain and protect its market share; that it had assisted and encouraged channel migration among its retail customers which had reduced queues in branches; and totally disagreed that use of e-banking had been contributing to low transaction costs and accelerating channel migration (Table 5.19). Although manager respondents were in harmony with customer respondents on test item 1.3, it is clear that they overrated the impact of e-banking in four test items which are not valid in view of previous findings. The implication arising from these results is that FNBB should be able to evaluate the relevance of e-banking products in achieving their aim of moving its customers from "bricks to clicks" in order to realise these benefits. Based on findings in Table 5.19, it is concluded that e-banking has had a minimal positive impact on bank performance at FNBB.

6.3 CONCLUSIONS

The following key conclusions are possible on the basis of this study:

- Ineffective implementation of e-banking is a significant and challenging management problem at FNBB and should be addressed. This has resulted in suboptimal performance of e-banking products thus preventing the bank from realising expected benefits of its implementation.
- The usage of e-banking among individual customers at FNBB is unacceptably very low, and is due to low adoption and ineffective application by both banking staff and customers.
- It is concluded that e-banking has had a minimal positive impact on bank performance at FNBB.
- Failure to effectively use best practice change management models and critical success factors in the implementation process for e-banking significantly contributed to ineffective implementation.
- Factors contributing to ineffective implementation of e-banking at FNBB are:
    - Lack of an effective change management programme for e-banking.
    - Security issues.
    - Lack of a comprehensive customer education campaign.
    - The use of the traditional way of marketing e-banking.
    - Not being conversant with e-banking product features by bank staff to market it effectively.
    - The lack of structures in retail banking halls for staff to meet and help customers.
    - The lack of knowledge on e-banking products and services offered.
    - Trusting manual banking more than e-banking.
    - Feeling more secure to use manual banking.
- FNBB does not have the strategic change management skills and competences to manage and implement e-banking without external expertise and support. This has led to underperformance of products and over assessment of most aspects of e-banking implementation by manager respondents.
- The application of strategic marketing suitable for e-banking is not appropriate.
- The challenges and key learning outcomes of implementation of e-banking are a confession and justification for failure of a project which needs to be redone to achieve desirable results and therefore have implications for future actions.

- Improving on implementation e-banking should help FNBB to realise its objectives for introducing it in its competitive market and give it reasonable urge.

In view of the above conclusions, it can be concluded that this study has achieved its research objectives.

6.4 RECOMMENDATIONS

In order to overcome constraints to effective e-banking implementation and increase its adoption by FNBB customers currently and in future so as to realise optimum benefits and realise goals and objectives at FNBB, the following measures are recommended to FNBB management:

- It is important to use external experts such as project management and change management consultants in the conceptualisation and implementation of e-banking products to avoid project failure and poor performance. The experts should be able to advice on critical aspects of project implementation. The findings indicate this to be important.
- There is a need to undertake a market survey with a view to segment the e-banking products for differentiated customers in branches to test their perceptions on current and new innovations and infuse their views on implementation. This should also help the bank to assess the level of awareness and readiness to use these products and help in developing a customer education campaign prior to implementation. This should enhance adoption. The results show that this is lacking in current implementation.
- There is need to strengthen operations management capacity in terms of improving technological capability and infrastructure which contributed to ineffective implementation of e-banking. The findings reveal that these are weaknesses.
- To comprehensively and holistically address all e-banking implementation and application issues, FNBB management should consider appointing a taskforce with an external consultant to review all factors, challenges and lessons learnt from the study and then recommend the model of implementation. This must focus on both banking employees and customers.
- There is a need to find out why only three e-banking products – ATMs, point of sale and mobile phone banking are often used while the remaining four - Internet, card-less (e-wallet), on-line payments and on-line banking are least used.

On the basis of this study, it is concluded that effective implementation of the recommended measures should ensure effective implementation of e-banking and result in high rates of adoption of e-banking products and services; increased vertical sales index; improved customer service; increased revenues; improved operational performance and competitiveness at FNBB.

6.5 SCOPE AND LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FURTHER RESEARCH

6.5.1 Scope of the study

The study was limited to First National Bank of Botswana and mostly Gaborone customers due to time and financial constraints, Furthermore it covered banks that have already implemented e-banking.

6.5.2 Limitations of the study and the recommendation for further research

Due to time and financial constraints the researcher did not have adequate opportunity to fully investigate other banks in Botswana with regard to e-banking impact on their performance.

Considerations for further research:

- A comparative study on all Botswana banks e-banking performance can be done to supplement the information provided in this study
- An increase in the number of participants in the study covering all Botswana bank customers can supplement the findings in this study.
- There are limited research studies in the field of e-banking in Botswana to provide more data.

6.6 CONCLUDING REMARKS

Botswana Banks are rapidly adopting e-solutions as a future key strategy and for competitive advantage. There have been recent introductions of innovative technologies and e-banking services. The Cellphone industry has gained a lot of momentum and adoption within Botswana. At the same time, e-banking acceptance depends probably on bank service quality, pricing, customer preferences and satisfaction.

The author argues that Botswana has not achieved significant success in the implementation of electronic banking; mainly due to the low intake of e-solutions and the continued long queues in the banking halls. This requires for a profound research to map the consumer base and the impact of e-banking on the development of bank-customer relationships in the value creation process.

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