AN EMPIRICAL STUDY OF E-BANKING IN CAMEROON

By

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DECLARATION

I declare that ***An Empirical Study Of E-banking In Cameroon*** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

……

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Last, but not least, I thank my family: my parents, Tatsi Talla Jean and Tatsi Nguetsop Juliette for giving me life in the first place, for educating, support and encouragement to pursue my interests. My Fiance Gaelle Esperance, my sisters and brothers, Bruno, Sidonie, Rodrigue, Sylvain, Rostow, Donald, Edith, Flora, Romain and Olivier. I will not forget my friends Elie Kogoup, Willy Chenkep, Crystelle Mboumen, Emilie Djoumessi, Oscar Balep, Etienne Le tchindjio, Cyrille Mbangzieu, Stephane Ouakam, Cyrille Ngnechie, Narcisse Zebaze, Ngandeu Jean-Yves, the whole Family Nguetsop and others who were always there for me.

DEDICATION

This dissertation is dedicated to my parents and to my fiancé

ABSTRACT

The objective of this study was to determine the factors which can affect the adoption of e-banking in Cameroon. To conduct that research, we tried to understand how demographic characteristics, attitudes and social influences impact on the customer's decision to adopt e-banking; to investigate barriers and challenges with regard to the adoption of e-banking; to identify the differences in perception regarding e-banking between e-banking users and non-users; and to determine whether or not e-banking offers more opportunities in comparison with the traditional banking system used in Cameroon.

Through an in-depth interview and questionnaires filled by bank's customer, the factors influencing the adoption of e-banking in Cameroon were identified. These were demographic factors such as age, income, educational level and occupation. Psychological factors such as perceptions of relative advantage, compatibility, complexity and perceived cost were also identified. Perceived risk was found to have a negative impact on e-banking adoption. A measure of the relationship between the factors and the adoption of e-banking was determined. Negative perceptions and attitudes influence the decision-making process, resulting in negative consumer behaviour outcomes. Social influences, including the opinions of friends, parents and colleagues, were found to have an influence on e-banking adoption. With regard to the research objectives that identified factors discouraging customers from using e-banking, the lack of trust, lack of information, lack of knowledge and perceived risk by non-users hindered the adoption of e-banking. Challenges and barriers with regard to e-banking adoption were also identified, namely resistance to change by bank employees, lack of knowledge, absence of e-laws and legislation for e-banking, absence of a proper telecommunications infrastructure and shortage of IT training. This research is especially valuable for the Cameroon banking industry, as the findings will provide insights for banks interested in implementing e-banking strategies.

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LIST OF ABBREVIATIONS AND ACRONYMS:

ABSA	Amalgamated Banks of South Africa
ATM's	Automated Teller Machines
BCEAC	Banque Centrale des Etats de l'Afrique Centrale
BEAC	Banque des Etats de l'Afrique Central
BIAO	Banque Internationale pour l'Afrique Occidentale
BICIC	Banque Internationale du Commerce et de l'Industrie du Cameroun
CBC	Commercial Bank of Cameroon
CEMAC	Communauté Économique et Monétaire de l'Afrique Centrale
CFA	Chartered Financial Analyst
CFCA	China Financial Certification Authority
COBAC	Central Ohio Bicycle Advocacy Coalition
EC	Electronic Commerce
EDI	Electronic Data Interchange
EFT	Electronic Fund Transfer
FNB	First National Bank
GDP	Gross Domestic Product
IB	Internet Banking
ICT	Information and Communications Technology
IDIs	In Depth Interviews
IDT	Innovative Diffusion Theory
IS	Information System
ISP	Internet Service Provider
IT	Information Technology
NFCB	National First Credit Bank
NIS	National Institute of Statistics
PCB	Personal Computer Banking
PIU	Performance and Innovation Unit
PLA	Participatory Learning Appraisal
PRA	Participatory Rural Appraisal
POS	Point of Sales
SCB	Société Camerounaise des Banques

SGBC	Société General des Banques du Cameroon
SME	Small Medium Enterprises
SMS	Short Message Service
SPNS	Share Payment Network System
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TAM	Theory of Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UAE	United Arab Emirates
UBA	United Bank of Africa
UBC	Union Bank of Cameroon
USB	Universal Serial Bus

CHAPTER. 1. INTRODUCTION

1.1 Introduction

Advances in electronic services technology have created many opportunities, as well as threats, for various business and service sectors. Organisations, either willingly or unwillingly, are increasingly embracing the Internet as a distribution channel, in order to remain competitive or gain a market share. With regard to electronic or e-services, the absence of accurate information on factors that have influenced users' behaviour could mislead an organisation into adopting unhelpful solutions as it strives to accelerate the implementation of e-services. A large amount of research has been conducted on the adoption of e-services by bank customers and the factors that influence the adoption of these services. There is now growing evidence that banks and customers benefit substantially from e-business and new technology, and in particular the Internet (Zorayda, 2003:33). Since banks are taking advantage of e-services, the main aim of this study was to determine the factors that influence customers' utilisation of e- services.

In this first chapter, the researcher outlines the importance of prioritising research on the factors that influence customers' decision to adopt e-services offered by banks. The first section of this chapter provides a background to the study, and the second section presents an overview of the evolution of the banking sector in Cameroon. The third section discusses the problem statement, and the objectives and hypotheses of this study are presented in the fourth section. The fifth section of the chapter describes the significance of the study, whereby an attempt is made to explain how this study differs from previous research conducted in the same country or on the same topic in another country. Section 1.7 discusses the limitations of the study, and the

final section of this chapter presents a layout of the remaining chapters of this study.

1.2 Background to the study

Taking advantage of information and communications technology (ICT) is an increasing challenge for developing countries. According to Nyangosi, Arora & Sumanjeet (2009:82), banking through electronic channels has gained popularity in recent years. This system, popularly known as "e-banking[1]", provides fast delivery of banking services to a wide range of customers. The Internet, one of the most successful innovations in the world, has created numerous opportunities as well as threats for organisations in various business and service sectors, compelling them to (either willingly or unwillingly) support their products or deliver their services 'online' using the Internet as the distribution channel (Chau & Lai, 2003).

Public and private organisations across the world are realigning their strategies to take advantage of this opportunity and to overcome the challenges in terms of the way in which they operate, deliver services and compete with each other using online services (Chan & Lu, 2004).

Boyer *et al.* (2002: 177) have defined online services as "the initial landing on the home page until the requested service has been completed or the final product has been delivered and is fit for use". For the banking sector, e-banking is now a global phenomenon. It is an invaluable and powerful tool driving development, supporting growth, promoting innovation, and enhancing competitiveness (Kamel, 2005 and Nath, Shrick & Parzinger, 2001). Technological innovations have been identified as contributing to the distribution channels of banks, and these electronic delivery channels are

[1] electronic banking

collectively referred to as electronic banking, hereinafter referred to as e-banking (Goi, 2005).

1.2.1 E-banking

E-banking is the term used for all types of electronic banking - it is also known as online banking or Internet banking. E-banking uses the Internet as the delivery channel to conduct banking activities, such as transferring funds, paying bills, viewing account balances, paying mortgages and purchasing financial instruments and certificates of deposits (Mohammed *et a*l, 2009:141). E-banking is also known as electronic funds transfer (EFT). It is basically the use of electronic methods or means to transfer money directly from one account to another, rather than carrying cash around or paying by cheque. With e-banking, people can withdraw money from Automatic Teller Machines (ATM) or pay accounts using a debit/credit card at any time of the day (Rahimuddin & Bukhari, 2009). Electronic delivery channels are collectively referred to as electronic banking. There are three main types of electronic banking, viz: automated teller machines, mobile banking, and online banking. Mobile and online banking offer security alerts so that clients know immediately what activity is occurring on their account. Alerts are sent directly to a client's cell phone or email address when credit or debit transactions are completed on the account. One can also receive daily alerts of the bank account balance.

Various authors and researchers have provided definitions of e-banking or Internet banking. Chalam and Rao (2007: 18-19) give perhaps the most comprehensive definition. After referring to e-banking as the use of technology in daily banking transactions by customers to access services electronically through the phone, personal computer and Internet, they identify the following e-banking products:

- Automatic Teller Machine (ATM)

- Electronic Funds Transfer (EFT)
- Personal Computer Banking (PCB)
- Share Payment Network System (SPNS)
- Point of Sale Terminal (POS)
- Electronic Data Interchange (EDI)
- Structured Message Transfer System Using SWIFT
- Corporate Banking Terminal
- Telebanking.

Consequently, the terms e-banking, online banking and Internet banking are used interchangeably to mean the same thing. In this study, these terms are also used interchangeably to refer to e-banking.

1.2.2 E-banking in developing countries

Nowadays, most developed countries are using electronic banking and a large number of studies have been conducted in this regard in these countries. These include the study by Pyun *et al*. (2002) in the U.S., Japan and Europe; Gurau (2002) in Romania; Sathye (1999) in Australia; Polatoglu and Ekin (2001) in Turkey; Balachandher *et al.* (2000) in Malaysia, and Jasimuddin (2004) in Saudi Arabia who all worked on the factors which can affect e-banking in different countries. Besides the developed countries, developing countries are also experiencing a strong growth in e-banking. Countries such as India and the Republic of Korea are experiencing a particularly strong growth in e-banking. In South East Asia, Internet banking is also developing rapidly, especially in Thailand, Malaysia, Singapore, and the Philippines (Mia *et al*., 2007). Similar trends were also observed by Thulani *et al.* (2009) in Zimbabwe; Guangying (2009) in China; Dhekra (2009)

in Tunisia; Adesina and Ayo (2010) and Maiyaki and Mokhtar (2010) in Nigeria; and Salehi and Alipour (2010) in Iran.

A strong banking industry is important in every country and can have a significant effect in terms of supporting economic development through efficient financial services (Salehi & Azary, 2008, Salehi *et al.*, 2008). However, there are several major challenges and issues facing the growth of e-banking and e-business in general. One major obstacle is the security concern (Feinman *et al.*, 1999; Financial Service, 2001). Another challenge for e-business (including e-banking) is the quality of the delivered service - including both delivery speed and delivery reliability (Furst *et al.*, 2000). As an Internet- based technology, e-banking is new and quite unfamiliar to some people in developing countries, due to the "digital divide" and the different levels of Internet experience and environments.

There is a range of theories related to the adoption of new technology. The main theories in this regard are the Theory of Reasoned Action (TRA) developed by Fishbein and Azjen (1975), the Innovative Diffusion Theory developed (IDT) by Rogers (1983), the Theory of Planned Behaviour (TPB) developed by Ajzen (1985), and the Technology Acceptance Model (TAM) developed by Davis (1989). As this study aims to increase our current understanding of the factors that influence the acceptance of e-banking, the Innovative Diffusion Theory (IDT) will be used as a guideline, but will not exclude a discussion of the other theories. Since the study is interested in demographic and social influences on the attitudes of the consumer, the IDT is the theory which focuses most on those characteristics, as it explores communication channels, individuals, organisational members and social systems, except for the technology itself (Rogers, 1995). Other theories focus more on security, risk, privacy, perceived usefulness and perceived ease of

use. More precisely, acceptance of online banking is studied from the information systems perspective, by examining whether or not factors such as demographics, attitudes and perceptions of customers, as well as social factors, have an influence on the adoption of new technologies such as Internet banking.

Studies on e-banking have received special attention during the last decade (Waite & Harrison, 2008:50). E-banking is adopted by a banking system for various reasons, which include increasing customer demands, the need to increase sales to existing customers, changes in the environment, and the need to achieve competitive advantage and increased efficiency.

In recent times, e-banking has spread rapidly throughout the world. All banks are rushing to adopt e-banking and make greater use of its facilities to provide a better service and achieve a competitive advantage. The spread of e-banking has benefited both the customer and the banking industry in developed and developing countries. Many of the ordinary tasks have now been fully automated, resulting in greater ease and comfort. Customers can have access to money 24 hours a day, 7 days a week simply by clicking a mouse or inserting a card into the ATM, and they can manage their transactions via an Internet connection anywhere in the world.

Kannabiran and Narayan (2005) have observed that banks and other businesses are turning to information technology (IT) to improve business efficiency and service quality, and to attract new customers. Technological innovation has been identified as contributing to the distribution channels of banks. According to Chang (2003) and Gallup Consulting (2008), the evolution of banking technology has been driven by changes in distribution channels.

1.3 Overview of the banking system in Cameroon

Cameroon is the largest country within the Economic Monetary Community of Central Africa (CEMAC).Its GDP in 2010 was estimated at US$ 44.327 billion and its per capita income at US$ 2,170, which represents half of the GDP of the CEMAC sub-region (Jeune Afrique Economie, 2011). Cameroon has experienced stable economic growth over much of the past decade and now has a relatively diversified economy, with services representing about 44 percent of the GDP and agriculture and manufacturing each accounting for about 19 percent of the GDP in 2009 (mfw4a, 2011).

Before the independence of the country in 1960, the banking system in Cameroon was dominated by foreign banks. After independence, foreign financial institutions were French banks, which were there to finance French investments in the country. The existing banks at that time were SCB (Societe Camerounaise des Banques), Credit Lyonnais Group, BICIC (Banque International pour le Commerce et l'industrie du Cameroun), SGBC (SociétéGénérale de Banques du Cameroun), Groupe Société Générale, and la Banque Internationale pour l'Afrique Occidentale au Cameroon (Groupe BIAO).

Various American banks then entered the market, namely Chase Manhattan Bank of Cameroon (Groupe Chase Bank), Boston Bank of Cameroon (Groupe Boston Bank), and the Bank of America (Groupe Bank of America).

Subsequently, the government started to involve itself in foreign banks and acquired partial ownership of BICIC, BIAO, SGBC and Credit Lyonnais. This continued until 1987, when a financial crisis occurred in the country. The crisis resulted in rising prices in Cameroon, trade deficits, and loss of government revenue. It changed the evolution and health of each bank, depending on whether it was a foreign or domestically owned institution.

Many financial institutions closed, while others changed ownership. Several other banks have been established in the country since then, however.

The bank of issue (the bank which has the right to issue currency and regulations on how banks must operate in Central African countries) is the Bank of the Central African States (Banque des Etats de l'Afrique Centrale-BEAC), which replaced the Central Bank of the State of Equatorial Africa and Cameroon in November 1972. Its headquarters are in Yaoundé. In 1993, member states of the BEAC created a supranational supervisory authority; the Commission Bancaire de l'Afrique Centrale (COBAC), in order to secure the region's banking system.

In the past decade, there has been a proliferation of financial institutions in Cameroon, ranging from banks to micro-finance institutions. In addition to the old banks viz.: BICEC, SGBC, SCB credit Lyonnais, SCB credit Agricole, Standard Chartered, and Afriland First Bank, new banks have emerged, such as Oceanic Bank, Citibank, Union Bank of Cameroon, United Bank for Africa, National First Finance, Amity Bank, Atlantic Bank, CBC and Ecobank (allafrica, 2011). Today, there are 15 banks whose spread of branches is very unequal. For example, Ecobank Cameroon, which is the most represented bank in terms of branches (26 branches in the country), has 20 branches in Douala and Yaoundé, while the rest are in the other main cities of the country, and there is no branch in rural areas.

With the emergence of new technology, all sectors are introducing a variety of innovative services - this is also the case with the banking sector, which is now offering customers a wide range of electronic services. As observed by Tizirai (2011), the evolution of e-banking facilities started in Europe in the 1970s. In Cameroon, until 1997, banks were only offering services through

the physical branch. Now, with the changes in the banking environment, they are also offering electronic banking services. It was only in the 1997 that the first e-banking products were introduced. The country now has electronic services such as Automated Teller Machines (ATMs), SMS banking, Internet banking, Point of Sales (POS) machines, and telephone banking.

Djoumessi (2009:74-75) noted that in 2009, there were only 46 ATMs throughout Cameroon. Till now, ATMs are in the main cities, where there are bank branches. In comparison to a country such as South Africa, which has approximately 18 000 ATMs, it is almost as if there are no ATMs in Cameroon (Douglas, 2009). As of 2010, 13 out of the 15 banks are offering online financial services (African Report, 2010). In Cameroon, research was conducted on electronic commerce issues (Nlemba, 2008), computer usage, Internet usage, telephone usage (NIS, 2010) and electronic banking (Mahmoudou, 2010). In his study, Mahmoudou (2010) focused on the e-banking tools in the country and showed how weak e-banking is in Cameroon.

Internet banking is still new and one of the central issues is the spread of Internet usage throughout the country, which is still very low at 2% in 2006 and 3.8% in 2009 (Internet worldstats, 2011). There are tools such as the Internet, mobile phones, personal computers and secure Internet servers which interact with e-banking. A country cannot fully develop e-banking if the indicators on the use of these tools are still weak. Table 1.1 shows the information and communications technology (ICT) indicators within certain countries around the world, including Cameroon.

Table 1.1: Trends toward Using and Owning a Technology

Country	Secure internet server per 1 million people		Mobile cellular subscribers per 100 inhabitants		Internet users per 100 inhabitants		Personal computer per 100 inhabitants	
	2002	2010	2002	2010	2002	2010	2002	2006
France	45.95	354.1	64.55	100.66	29.19	77.28	34.73	65.02
United Kingdom	268.03	905.1	82.96	130.76	56.49	84.73	40.41	80.19
Sweden	19.83	132	89.3	116.05	70.39	90.01	62.26	88.1
Cameroon	0.06	0.56	4.28	44.07	0.36	4	0.54	1.2
Nigeria	0.02	1.21	1.21	55.01	0.32	28.43	0.65	0.85
South Africa	14.05	62.59	29.78	100.48	6.78	12.33	7.29	8.46
Egypt	0.24	2.29	6.41	87.11	2.72	26.74	1.54	3.92
Zimbabwe	0.55	1.03	2.69	61.25	3.99	11.5	4.79	6.94

Source: Tradingeconomic.com, 2012

It is apparent from Table 1.1 that Internet, mobile and personal computer penetration is still very low in Cameroon. The ICT penetration rate is very high in developed countries, which is perhaps the reason why e-banking is also developed in those countries. In comparing the rate of ICT penetration with other developing countries, one can note that there is still a long way to go before e-banking is widely adopted.

According to afrilandfirstbank (2011), Cameroonian banks offer the following online banking services and products to their customers:

Inquiry: Account balance inquiry, account statement inquiry, fixed deposit inquiry, cheque statement inquiry.

Payment: Credit and debit card payments, transfer of funds, utility bill payments and direct payments.

Request: Demand draft requests, stop payment requests, cheque/cheque book requests, new fixed deposit requests.

Download: Statement download, customer profile download, other information and guidelines.

In Cameroon, banks prefer to serve large enterprises rather than SMEs. However, the main problem is the limited number of large enterprises, which only constitute 5% of all enterprises in the country (NIS, 2009). Banks are nevertheless trying to form closer ties with those who are working in the informal sector and living in rural areas through various projects. Access to financial services is limited, particularly for SMEs.

According to the financial inclusion indicators compiled by Dermirguc-Kunt and Klapper (2012: 18), Cameroon fares as follows:

- 15% of adults have an account at a formal financial institution;
- 4% of adults have at least one loan outstanding from a regulated financial institution;
- 92% of SMEs have an account at a formal financial institution;
- 26% of SMEs have an outstanding loan or line of credit;
- 1.43 commercial bank branches per 100,000 adults; and
- 1.4 ATMs per 100,000 adults

Internet security is still one of the major issues hindering the growth of Internet-related business transactions. Since the Internet is an open network, high security risks are involved with financial transactions. Internet fraud is common, and related stories get immediate media attention, making people hesitant to bank online. Various security measures (including hardware and software) are currently being tested and employed in Cameroon, but there is still some way to go in order to win the trust of a large majority of customers (Mols, 1999). Mobile devices are increasingly becoming a target for virus writers, hackers and short message service (SMS) spammers. According to Tower Group's research (2010), over 200 mobile phone viruses have been identified since phones have become capable of supporting PC-like applications such as email, instant messaging and Web browsing, and this number is doubling every six months (Blau, 2007). The resulting disruption of services and data theft can cause many problems for consumers, including lost revenues and customer dissatisfaction for mobile operators. As a result, banks suffer losses. This factor may cause many banks to be hesitant to provide mobile banking services. As observed by Defenceweb (2010), Cameroon is home to the world's riskiest Internet sites, according to cyber-security firm McAfee. Cameroon's place at the top of the Internet fraud list is partly a result of the alphabet. Criminals are taking advantage of Cameroon's Internet suffix ".cm" to trick careless Web surfers who mistype the popular ".com" suffix. By establishing false ".cm" sites that appear similar to the ".com" Web page that people think they are going to, criminals can acquire personal information for identity theft and the spreading of spyware and malicious downloads.

As reported by Hallelaw (2009), the banking industry in Cameroon is governed by laws and regulations whose sources are listed as international conventions, customs law, ordinances, presidential decrees, ministerial orders, circulars and court decisions. These regulatory instruments are

flexible in character, which means that they can be modified in accordance with socio-cultural, political and economic developments within Cameroon. Banking regulations vary between jurisdictions.

The reason for the lack of complete adoption of e-banking in developing countries such as Cameroon is an important research area and will be addressed by this study. Despite the growth of IT worldwide, bank customers in Cameroon continue to conduct most of their banking transactions using traditional methods. Understanding the factors that influence the adoption of e-banking in developing countries such as Cameroon is therefore an important area of research.

1.4 Problem statement

Cameroonian private banks such as Afriland First Bank and Commercial Bank of Cameroon are now expanding their business to other countries around the world. In many banks throughout the world, e-banking is now the focal area of bankers because it reduces the cost of doing transactions, attracts new customers, makes transactions faster than before, creates new markets, and enhances service quality. In Cameroon, e-banking is a new industry and consumer acceptance and use of e-banking is still limited. There is only a vague understanding of factors influencing consumers' adoption of e-banking. Very little research has been undertaken in Cameroon on factors influencing the consumer's adoption of e-banking (Dobdinga, 2012), hence the need for a study of this nature. The following question can therefore be asked: What are the factors that influence the adoption of e-banking in Cameroon? An understanding of how demographic characteristics, social influences, consumer perceptions and attitudes toward e-banking influence the adoption of e-banking will enable banks to develop solutions and plans to attract consumers and gain a bigger market share.

1.5 Objectives of the Study

The main objective of this study is to determine how demographic characteristics, attitudes and social influences impact on the bank customer's decision to adopt e-banking. To achieve the main objective, the following secondary objectives will be highlight:

- To identify the factors that influence the adoption of e-banking in Cameroon;
- To investigate the barriers and challenges with regard to the adoption of e-banking;
- To determine the differences between perceptions of e-Banking among users and non-users; and
- To investigate the relationship between demographic factors and the adoption of e-banking.

Hypotheses

In order to meet the objectives pursued in this study, the following hypotheses were tested:

- **H1: There is a relationship between demographic characteristics and the adoption of e-banking**.

  Studies have explored the potential relationship between demographic characteristics of customers and the adoption of e-banking. This relationship is found to be as significant as the psychological factors in determining its adoption (Gan *et al.*, 2006; Yuan *et al.*, 2010).

- **H2: There is a difference in perceptions of e-banking between users and non-users.**

Adopters have invariably been found to have different perceptions about an innovation in comparison with non-adopters (Ching and Ellis, 2004). Some products catch on immediately, while others take a long time to gain acceptance. In general, the perception of an innovation is positively related to its adoption (Rogers, 1983).

- **H3: Social influences have an impact on the adoption of e-banking.**

Social factors are a dominant force that not only encourages consumers to adopt Internet banking, but also to continue banking via the Internet. The opinion of a reference group is an important factor influencing the adoption of Internet banking (Cheung: 2001). Social pressures can emanate from any group, such as parents, colleagues or friends (Cheung *et al.*, 2000).

1.6 Significance of the study

Cameroon was chosen as the country to be studied for a variety of reasons, such as the availability of long-term data on its banks, as well as the fact that it is the country in the CEMAC region with the largest financial sector. In Cameroon, the economic environment is similar to that of other developing countries in Africa, which means that the results of the study can be used to facilitate the adoption of e-banking by customers or increase its usage in these countries. Moreover, from all the studies conducted in Africa with regard to the electronic banking system, most have focused on the south or east of Africa (Emma, 2009; Gardache, 2010; Rudi *et al*., 2001). In Central Africa, there has been very little research in this field, and the research conducted in the region, especially in Cameroon, has focused mainly on the regulation of the

banking sector or the conditions of banking loans (Djoumessi, 2009; Ngafi, 2006; Halle, 2011; Mahmoudou,2010).

1.7 Limitations of the study

The study is limited to two main cities, Douala and Yaoundé. According to Kuindja (2009:57), there are 161 bank branches in Cameroon - Douala and Yaoundé have 101 bank branches, which is two-thirds of the total. Therefore, it is expected that responses will be fairly representative of the total banking population in Cameroon. The other limitation relates to lack of data regarding the population of bank customers in the country. Due to confidentiality issues, banks are reluctant to provide information regarding their customers.

1.8 Chapter outline

The rest of the dissertation is structured as follows:

Chapter 2: Literature Review

The different theories developed with regard to the adoption of new technology and innovation is discussed, with a specific focus on the theory which helped to highlight the objectives of the study. In this chapter, the study will also highlight the findings of previous studies on the adoption of e-banking in developed and developing countries.

Chapter 3: Methodology

This chapter describes how data was gathered from bank customers and bank management in Cameroon. The chapter also describes the analytical techniques employed in this study. The problems encountered during the data-gathering process and the ethical issues that had to be addressed are also documented.

Chapter 4: Research Findings and Discussion

This chapter analyses data, tests hypotheses and presents findings in relation to this study. It also discusses the results with reference to other empirical studies.

Chapter 5: Conclusion and Recommendations

This last chapter concludes the study by summarising the results. Future scenarios regarding what can be expected from bank customers and how the industry could meet its needs are also discussed.

CHAPTER. 2. LITERATURE REVIEW

2.1 Introduction

The rapidly changing global information infrastructure (information technology and computer networks such as the Internet and telecommunications systems) has resulted in the development of electronic commerce at a global level. These developments have created a new type of economy, commonly referred to as the 'digital economy'. This new economy is characterised by rapidly changing technology, increasing knowledge intensity in all areas of business, and the creation of virtual supply chains and new forms of business and service delivery channels, which, among others, include e-banking. The transformation of an organisation from an old-fashioned company to a new, agile, electronic corporation is not easy and requires a lot of innovative thinking, planning and investment (Shah & Clarke, 2009). This chapter explores these dynamics and is divided into two main sections, with the first focusing on the various theories relating to the acceptance of e-banking by customers, and the second focusing on the different aspects of e-banking throughout the world.

2.2 Theories of e-banking

Although numerous studies on user adoption of technology were conducted in the past, very few focused on e-banking or Internet banking (IB) (American Banker, 2007). Some researchers investigated individuals' perceptions regarding the adoption of Internet banking for corporate purposes, and one of the theories in this regard is the technology acceptance model (TAM) developed by Davis (1989). In order to also understand why customers are not embracing e-banking, it will be useful to examine the theory of planned

behaviour, developed by Ajzen (1985) and the innovative diffusion theory, developed by Rogers (1983), which aim to identify the attitudinal, social and perceived behaviour control factors that influence the adoption of e-banking or Internet banking (IB).

Nasim (2009:1) states that in adopting e-banking or Internet banking, there are certain stages through which firms go, each with different roles. These different stages are reflected in the many levels that are present when firms undertake the adoption of new technology. These stages, whether for a mature firm or one that is relatively new, will also apply to a bank which is adapting to or using e-banking or IB. According to Spreadingscience (2009), firms go through five main stages, viz:

- Information awareness, where the individual is simply aware that the innovation exists;
- Interest, where the individual wants more information and begins to wonder whether or not the innovation will be to his/her advantage;
- Evaluation, where the individual mentally examines the innovation using the information gathered;
- Testing, where the individual actually tests the innovation to see if reality matches expectations; and
- Adoption, where the individual likes the innovation and adopts it wholeheartedly.

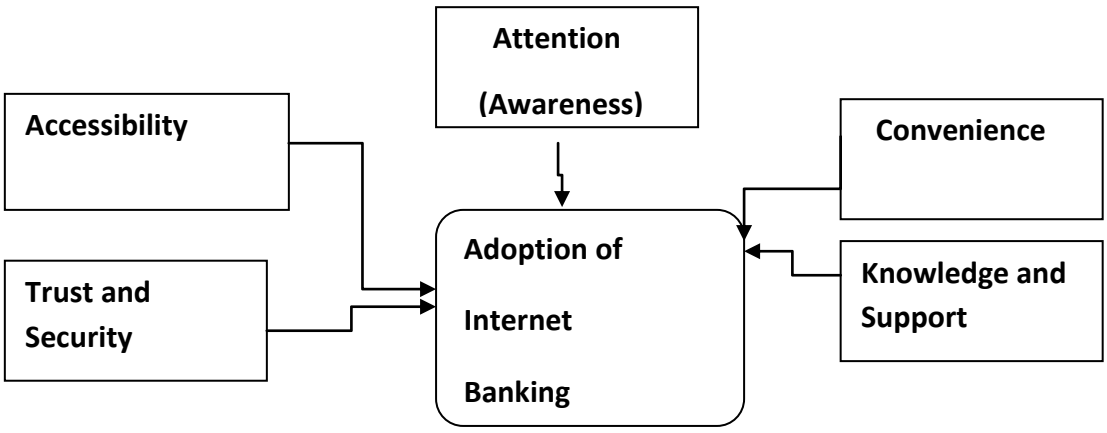
In the process of implementing e-banking, banks go through various levels of development, ranging from a marketing approach (involving changing the presentation and interactivity) to a strategic approach (redefining the business model). Whether a bank envisions a marketing-oriented approach or a business-oriented approach depend on the degree to which it is willing to

adapt e-banking, as well as the target market's understanding and acceptance of e-banking (Nasim, 2009: 6).

There are various factors related to the adoption of new technology. According to Nasim (2009:7), a bank must first attract the consumer's attention to Internet banking services before the consumer will consider e-banking. However, unless the consumer has a high level of Internet accessibility at home or at work, he/she is unlikely to consider adopting e-banking. The consumer also determines whether or not it is convenient to do banking this way (convenience), how usable the application appears to be (usability), and his/her perceived competence in terms of Internet and banking application use (self-efficacy).

The four factors of accessibility, self-efficacy, convenience, and usability are interrelated. The consumer also considers whether or not the perceived relative advantages of e-banking, compared with other banking forms, outweigh the perceived risks and costs. In addition, the availability of sufficient support and in-depth knowledge from the bank and its employees contribute significantly to the decision to adopt or reject the service. These factors are illustrated in figure 2.1 below.

Figure2.1 . Key factors in consumer adoption of e-banking or IB: a generic theoretical framework



Source: Nasim (2009:7)

This study focusses on 3 main theories: the technology acceptance model (TAM), the innovative diffusion theory and the theory of planned behaviour. These theories are explained below.

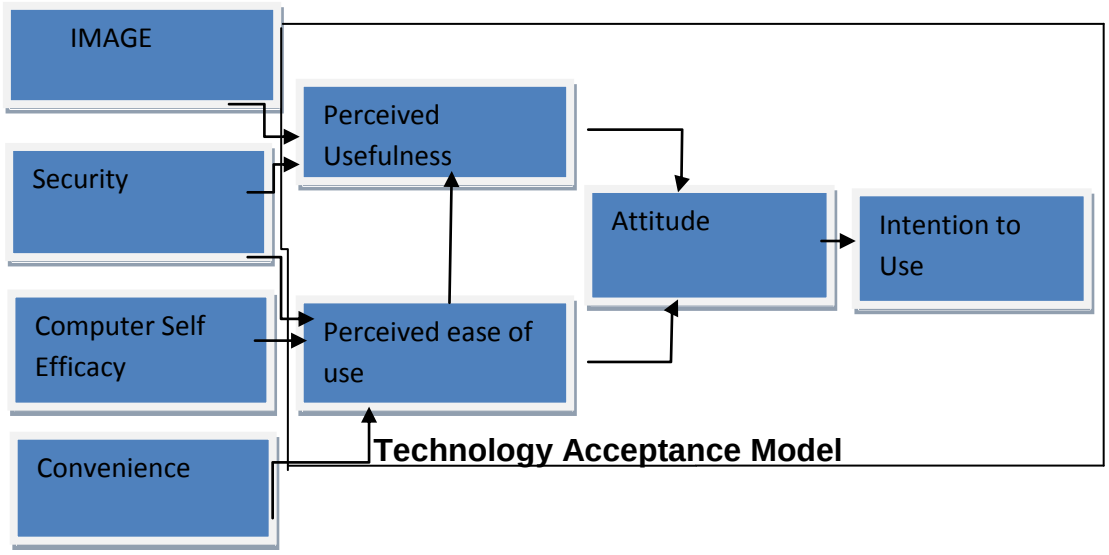
2.2.1 Technology acceptance model (TAM)

Davis (1989) developed the TAM, according to which users' adoption of a computer system depends on their behavioural intention to use, which in turn depends on their attitude and two beliefs, namely perceived ease of use and perceived usefulness. The TAM has become a widely used model for predicting the acceptance and use of information systems, and has recently also been applied in order to predict Internet adoption. It is an adaptation of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) in the field of information systems. In essence, the TAM posits that perceived usefulness and perceived ease of use determine an individual's intention to use a system. Perceived usefulness is also viewed as being directly influenced by perceived ease of use. Researchers simplified the TAM by removing the attitude construct found in the TRA from the current specification (Venkatesh *et al.*, 2006:431). Attempts to extend the TAM generally adopted one of three approaches: (1) introducing factors from related models, (2) introducing additional or alternative belief factors, and (3) examining antecedents and moderators of perceived usefulness and perceived ease of use (Wixom and Todd, 2005:87). Moon and Kim (2008) applied the TAM in their study in the WWW context. They introduced the construct of playfulness in order to predict attitude. Data was collected from 152 graduate management students in Korea. Their findings showed that although TAM-related hypotheses were all supported, the results deviated from the basic belief of the TAM that usefulness is the key determinant of user acceptance of IT. The results of Moon and Kim (2008) revealed that perceived ease of use has a more significant effect on attitude than perceived usefulness in the WWW context, and perceived playfulness (an intrinsic

motivational factor) has a more significant effect on attitude than perceived usefulness (an extrinsic motivational factor). A system that satisfies users' needs reinforces satisfaction with the system and is a perceptual or subjective measure of system success. Similarly, in some cases, usage of a system can be an indicator of information systems success and computer acceptance. Whether the system is regarded as good or bad depends on how the user feels about it. In particular, if users do not rely on the system and its information, their behaviour towards it could be negative.

According to the TAM, these two beliefs –perceived ease of use and perceived usefulness- are of primary significance for computer acceptance. Rusu and Shen (2011), who based their study of acceptance of e-banking in the United Arab Emirates (UAE) using the TAM, observed that among the elements, the intention to use a new technology is the main focus. Their conceptual framework is depicted in figure 2.2 below.

Figure2.2 . Conceptual Model Extending the Classical TAM with Image, Security, Computer Self-Efficacy and Convenience



Source: Rusu and Shen (2011:3)

The findings of their empirical study provide support for the TAM theoretical model, extended with convenience and computer self-efficacy. The results support the view that computer self-efficacy and convenience are important factors for determining the perceived ease of the use of e-banking or Internet banking for customers in the UAE.

King and He (2006) conducted a statistical meta-analysis of the TAM as applied in various fields using 88 published studies, and the results showed the TAM to be a powerful, highly reliable, valid and robust predictive model that may be used in a variety of contexts. Wang *et al*. (2003) confirm the validity of the TAM and support its use with different populations of users and different software choices.

In another study, Wang *et al*. (2003) studied the adoption of Internet banking in Taiwan using the TAM model and introduced the new construct 'perceived

credibility', which reflects the user's security and privacy concerns in the acceptance of Internet banking. They found that there was a significant impact of perceived ease of use, perceived usefulness and perceived credibility on the intention to use Internet banking.

Bagozzi (2007: 246) highlighted the poor relationship among the different constructs formulated in the TAM. He questioned the theoretical strength of the intention-actual use link, and observed that behaviour could not be viewed as a terminal goal. Instead, he argued that behaviour should be treated as a means to a more fundamental goal. Moreover, he explained that intention may not be representative enough of actual use, because the time period between intention and adoption could be full of uncertainties and other factors that might influence an individual's decision to adopt a technology. Burton-Jones and Hubona (2006) also applied the TAM in their research by administering a survey to 125 employees of a US government agency. Information about the participants' beliefs and usage behaviour with respect to two applications were gathered and analysed. The results suggested that perceived usefulness and perceived ease of use may not mediate all the influences of external environment factors on system usage. Instead, some external factors such as system influence, level of education and age may have a direct influence on system usage.

2.2.2 Theory of planned behaviour and innovation diffusion theory

Two other theories were developed in order to better understand the acceptance of new technologies by customers. These are the theory of planned behaviour (TPB) (Ajzen, 1985) and the innovative diffusion theory (Rogers, 1983). In particular, the decomposed TPB model, first introduced by Taylor and Todd (1973), was used in this study, since it was found to have better predictive power than the technology acceptance model (TAM) and traditional TPB models. Furthermore, Taylor and Todd (1973) stated that, in

comparing the two versions of the TPB, it is believed that value is added as a result of the decomposition in terms of increased explanatory power and a better, more precise understanding of the antecedents of behaviour. Thus, in the researcher's view, the decomposed TPB model is preferable to the pure form of the model. In comparing this model to the TAM, Taylor and Todd (1973) suggest that if the main goal is the prediction of usage, then the TAM might be preferable.

However, the decomposed TPB model provides a better understanding of usage behaviour and intention, and may provide more effective guidance for IT managers and researchers interested in the implementation of the system. The decomposed TPB model uses constructs from the innovation literature (e.g. relative advantage, compatibility). It also explores subjective norms (e.g. social influence) and perceived behavioural control more completely, by breaking them down into more specific dimensions. It provides a comprehensive overview of how an individual's attitudes, subjective norms and perceived behavioural control can influence his or her intention to use banking services via the Internet (Taylor and Todd,1973).

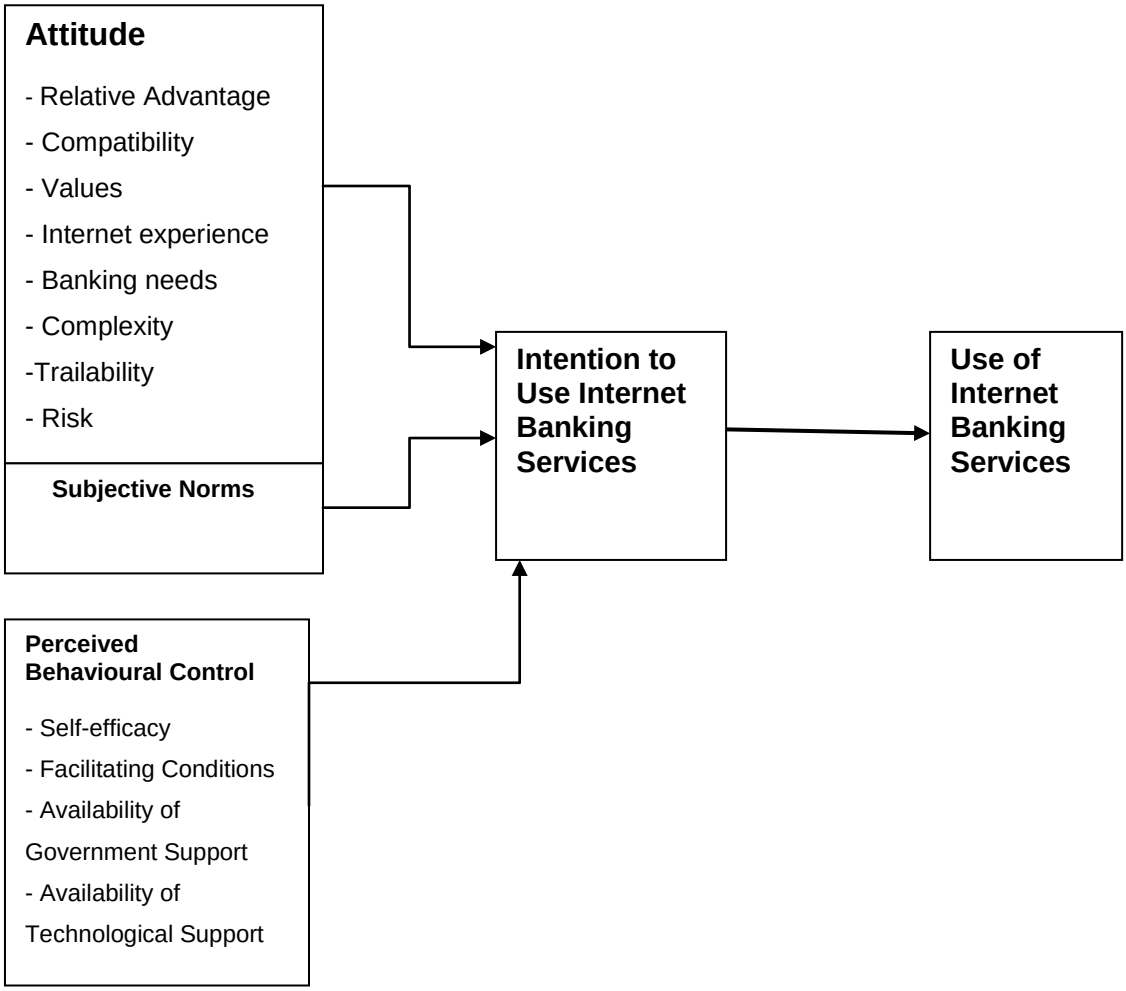
As highlighted by ISTheory (2005), the TPB posits that individual behaviour is driven by behavioural intentions, where behavioural intentions are a function of an individual's attitude towards the behaviour, the subjective norms surrounding the performance of the behaviour, and the individual's perception of the ease with which the behaviour can be performed (behavioural control). Attitude towards the behaviour is defined as the individual's positive or negative feelings about performing the behaviour. It is determined through an assessment of one's beliefs about the consequences arising from behaviour and an evaluation of the desirability of these consequences. Formally, overall attitude can be assessed as the sum of the individual consequence multiplied by desirability assessments for all expected consequences of the behaviour (Wu, 2009:52). Subjective norm is defined as an individual's perception of

whether or not people important to the individual think that the behaviour should be performed. The contribution of the opinion of any given referent is weighted by the motivation that an individual has to comply with the wishes of that referent. Hence, overall subjective norm can be expressed as the sum of the individual perception multiplied by the motivation assessments for all relevant referents.

Behavioural control is defined as one's perception of the difficulty of performing a specific behaviour. The TPB views the control that people have over their behaviour as lying on a continuum of behaviours that are easily performed, as opposed to those requiring considerable effort, resources etc. (Ajzen, 1991).

Tan and Teo (2009: 8) shared this view and postulated that a person's intention to adopt Internet banking is determined by three factors:(1) attitude, which describes a person's perceptions regarding Internet banking; (2) subjective norms, which refer to the social influence that may affect a person's intention to adopt Internet banking; and (3) perceived behavioural control, which refers to whether or not a person believes that he/she has the necessary resources and opportunities to adopt Internet banking. These factors are summarised in figure 2.3 below.

Figure2.3 . Research framework for the adoption of Internet banking services



Source : Tan and Teo (2009:8)

Sadeghi and Farokhian (2011:2) observed that an individual's intention to adopt an innovation is influenced by his/her attitude towards the behaviour and subjective norms. Therefore, a person's behaviour is determined by his/her intention to perform the behaviour. The attitude towards performing the behaviour is an individual's positive or negative belief about performing the specific behaviour. In fact, attitudes comprise the beliefs that a person accumulates over his/her lifetime.

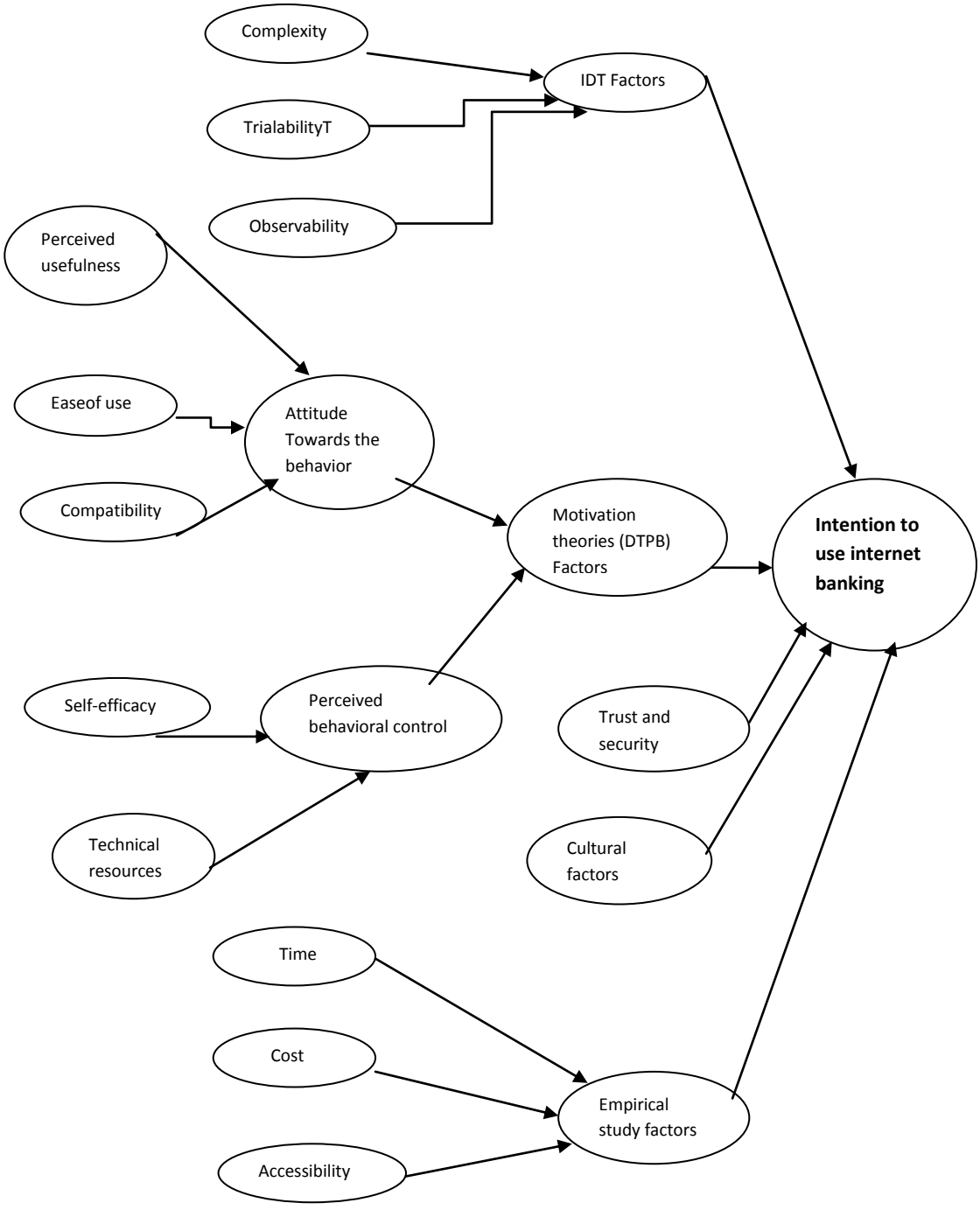
Rivis and Sheeran (2010) applied the TPB to assess the predictive validity of prototypes and descriptive norms in relation to young people's exercise behaviour. Their findings supported the utility of the TPB, descriptive norms, prototype similarity and past behaviour in predicting intentions and behaviour. Importantly, prototype similarity was directly associated with behaviour, both on its own and through its relationship with descriptive norms, even after controlling for the TPB and past behaviour. Côté *et al*. (2012) used the TPB to predict nurses' intention to integrate research evidence into clinical decision-making. The theory showed that nurses' intention to integrate research findings into clinical decision-making can be predicted by moral norms, normative beliefs, perceived behavioural control and past behaviour.

Moga (2009:1) observed that the critical factors determining the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trialability and observability. Researchers such as Tan and Teo (2009), Gerrard and Cunningham (2007) and Nor and Pearson (2007) tested the theory on the adoption of e-banking. The nominalised factors are complexity, trialability and observability. In terms of compatibility with the needs of potential adopters, e-banking can be seen as an expeditious tool that allows customers to better manage their multiple accounts. The more financial products and services there are, the more it is expected that individuals who have many financial accounts and subscribe to a variety of banking services will be inclined to adopt e-banking.

Abukhzam and Lee (2010:5) opined that bank managers' perceptions of two basic concepts provide a broader understanding of adoption of e-banking in the banking industry than that of previous theories and models, including the Theory of Reasoned Action, the Theory of Planned Behaviour, the Technology Acceptance Model and Innovative Diffusion Theory. These perceptions are the following: perceived technological features such as ease

of use and usefulness, compatibility, complexity and perceived risk and security; and perceived managerial and organisational issues such as organisational change, top management support and IT funds. Moga (2009:4) observed that there are several steps that must be taken by banks in order to increase accessibility. These steps are summarised in figure 2.4 below.

Figure2.4 . The steps taken by banks in their effort to increase Accessibility



Source: Moga (2009:4)

Based on her research findings, Moga (2009) identified factors that should be included in the main model to predict the adoption of IT, in particular e-banking. These factors are shown in figure 2.4 above. In reviewing this proposed model, it can be observe that four distinct components are represented: security and trust, empirical factors, national attributes, and classical theory focused on technology acceptance. The final proposed model should be developed by taking these factors into consideration.

Customer attitudes towards Internet banking are driven by trust, which plays an important role in increasing usability within the Internet banking environment. The issue of trust is more important in online as opposed to offline banking, because transactions of this nature contain sensitive information and parties involved in the financial transaction are concerned about access to critical files and information transferred via the Internet (Alsajjan & Dennis, 2006; Suh & Han, 2008).

As stated by Werner (2004:128), the TRA and TPB have some limitations in terms of predicting behaviour. The first limitation is that intention determinants are not limited to attitudes, subjective norms and perceived behavioural control, as there may be other factors that influence behaviour. The second limitation is that there may be a substantial gap in time between assessment of intention to perform a specific behaviour and the actual behaviour being assessed. In that time gap, the intention of an individual might change. The third limitation is that both the TRA and TPB are models that predict an individual's actions based on certain criteria. Individuals do not, however, always behave as predicted by those criteria.

Ogden (2007: 426) notes that the TRA and the TPB are pragmatic theories, but criticises their conceptual bases and discusses several limitations of these theories. Firstly, based on the literature review, she observes that some studies of the TPB did not report any role for subjective norms, while others

showed no predictive role for perceived behavioural control, and some showed no role for attitudes.

In the innovative diffusion theory developed by Rogers (1983:213), three main characteristics of innovations were identified: relative advantage, compatibility, and complexity. Adopters were invariably found to have different perceptions about these characteristics in comparison with non-adopters. Some products catch on immediately, while others take a long time to gain acceptance. If the innovation is perceived to be better than the existing system (a measure of its relative advantage), is consistent with the needs of the potential adopter (a measure of its compatibility), and is easy to understand and use (a measure of its complexity), it is more likely that a favourable attitude towards the innovation will be formed (Ching & Ellis, 2004:411).

2.2.2.1 Relative advantage

Lee *et al.* (2011:127) stated that relative advantage is defined as the degree to which an innovation is considered to be better than the idea it replaced. This construct is found to be one of the best predictors of the adoption of an innovation. Robinson (2009) opined that it is the degree to which an innovation is perceived by a particular group of users as being better than the idea it supersedes, measured in terms of economic advantage, social prestige, convenience, or satisfaction. The greater the perceived relative advantage of an innovation, the more rapid is the rate of adoption. There are no absolute rules for what constitutes “relative advantage”, as it depends on the particular perceptions and needs of the user group.

Gerrard and Cunningham (2007:8) identified perceived relative advantage as being a significant factor driving the adoption of e-banking. Hence, relative advantage is often the content of network messages with regard to an

innovation. Consumers may be motivated to use some electronic banking technologies because of their time-saving ability. Time-saving equates to a customer being able to access the services of a bank without physically visiting a branch. In one survey of computer banking users, 79% indicated that convenience was very important in their decision to use computer banking, and 71% said that saving time was very important (Fox, 2006:9). A survey conducted in South Africa and reported by Goldstuck (2001:2) states that another issue facing Internet banking customers is that they perceive the Internet channel to lack functionality. Thus far, financial service providers appear to have failed to communicate a clear value proposition to customers. Most consumers reported that they do not use Internet-based financial services nor expect to use them in the near future. Financial institutions thus face a challenge in demonstrating that using the Internet as a service channel will be worthwhile and that functionality will be delivered. The perceived relative advantage of e-banking is positively related to the level of adoption. Daghfous and Toufaily (2007:7) stated that the degree of adoption of e-banking is higher if the bank believes that this innovation might increase the performance of the bank. In their research in Malaysia on 100 Muslim consumers of banking services, Marhana *et al.* (2012) found that relative advantage is the most influential factor for the adoption of Internet banking, followed by compatibility and complexity. The respondents perceived Internet banking as having some relative advantages over conventional banking.

2.2.2.2 Compatibility

Lee *et al.* (2011:127) defined compatibility as the degree to which innovation is regarded as being consistent with the potential end-users' existing values, prior experiences and needs. The compatibility of an innovation, as perceived by members of a social system, is positively related to its rate of acceptance. Robinson (2009) also suggested that compatibility is the degree to which an innovation is perceived as being consistent with the values, past experiences

and needs of potential adopters. Therefore, an idea that is incompatible with their values, norms or practices will not be adopted as rapidly as an innovation that is compatible.

Wu (2009:56) stated that compatibility is defined as the degree to which an innovation is perceived as being consistent with the existing values, past experiences and needs of potential adopters. Bradley and Stewart (2003:1089) discovered that the perceived compatibility of Internet banking is a key driver in the adoption of Internet banking. Most of the previous studies in this field found significant positive relationships in this regard and concluded that compatibility significantly affected the adoption of Internet banking (Hernandez & Mazoon, 2007; Eriksson, *et al*., 2008). The convenience of online banking is helping people gain greater control of their finances and contributing to changing patterns of cash withdrawal and day-to-day money management (Beer, 2006). Marhana *et al.* (2012) opined that when an innovation is compatible with the individual's job responsibilities and value system, the innovation will be more likely to be adopted. With regard to banking, e-banking can be perceived as a banking channel that is compatible with the profile of the modern-day consumer, who is familiar with the Internet and is always busy.

2.2.2.3 Complexity

Lee *et al*. (2011:128) stated that complexity is the end-users' perceived level of difficulty in understanding innovations and their ease of use. Consumers will reject an innovation if it is very complex and not user-friendly. Research conducted in Estonia and reported by Kerem (2001:7) found that the most important factors in starting to use Internet banking are, first and foremost, better access to services (convenience), better prices, and a high level of privacy. Better service (i.e. preferring self-service over office-service) is also of above-average importance. Cooper (1997) reported that ease of use of

innovative products or services is one of the three most important factors determining adoption from the customer's perspective, which means that the adoption of Internet banking is likely to be increased when customers consider Internet banking processes to be easy to use. Marhana *et al*. (2012) mentioned that an innovation that is simpler to understand and easy to use will be adopted more rapidly than innovations that require adopters to acquire new skills and understanding. Hence, the more complex an innovation is, the slower its diffusion will be. However, modern-day consumers will find Internet banking easy to use because they tend to be educated and have sufficient understanding of computers and the Internet (Mohd-Suki, 2010). In a study done in Malaysia on 100 Muslim consumers of banking services, Marhana *etal.* (2012) found that the respondents who thought that Internet banking was easy to use were more likely to adopt this service. Mohd-Suki (2010) also found that complexity had a negative effect on the adoption of Internet banking in Malaysia.

The three factors discussed above, namely relative advantage, compatibility and complexity, are the main factors in the innovation diffusion theory. However, they cannot be studied without considering factors which are linked to them, such as perceived cost, perceived risk, demographic characteristics, and social influences.

2.2.2.4 Perceived cost

According to Ching and Ellis (2004:414), adoption of e-banking will be driven by the perceived costs and benefits inherent to the particular innovation. The cost of an innovation has many components: initial investment costs, operational costs, and utilisation costs. They also observed that there are two fundamental sets of factors affecting user needs, namely price factors and non-price factors. Hills (2004) found that with time, Internet costs are decreasing and will be very cheap in the future, which will encourage the

adoption of e-banking. If consumers are to use new technologies, the technologies must be reasonably priced in relation to alternatives. Otherwise, the acceptance of the new technology may not be viable from the standpoint of the consumer. As stated by Wu (2009:40), in South Africa, ABSA Bank launched a marketing campaign offering free Internet access as a means of promoting its Internet banking services in 2001. This campaign yielded the desired result, with 20 800 people signing up in the first three days. The service was introduced, the number of people banking online with ABSA increased from 150 000 to 300 000, and ABSA has moved from the number two position to become the top Internet banking provider in South Africa. In a study conducted in Pakistan, Asghar (2012:6) stated that 63% of the respondents did not find Internet banking to be an expensive service for them to use, while 57% also agreed that there were no hidden charges for online banking, as all the rates and charges were clearly and honestly communicated to users. The study therefore concluded that perceived cost has a positive effect on the adoption of Internet banking.

2.2.2.5 Perceived risk

Perceived risk has been identified by many studies as one of the most influential factors in the adoption of e-banking (Laforet & Li, 2005; Erikson *et al.*, 2008; Aldas-Manzano, 2009). Customers perceive e-banking services as being more risky than conventional banking (Zhao *et al.*, 2008). Zeithaml *et al.* (2008) found that there are several types of perceived risks, including economic, functional, social, and psychological risks, which influence customers' pre-purchase decision. According to Almogbil (2005), perceived functional performance of Internet banking determines whether or not it is adopted. Due to its technical nature and self-service features, the functional risk is higher among developing nations with high levels of illiteracy. In these nations, perceived operating difficulty and chances of incomplete transactions due to Internet slowness are thought to be high (Agarwal *et al.,* 2009;

Kuisma *et al*., 2007; Aslam & Sarwar, 2010). Asghar (2012:6) also found that perceived risk has an effect on the intention to adopt Internet banking. Lee (2009) conducted a study to investigate the effect of perceived risk and benefit on customers' behavioural intentions to use online banking, and to determine which factors have the most impact on the decision to use online banking. He examined five specific risk types – financial, security/privacy, performance, social and time risks - and found that "the intention to use online banking is adversely affected mainly by the security/privacy risk, as well as financial risk". These findings were supported by another recent study by Hua (2009:9), who investigated online banking acceptance in China. Hua (2009) showed that perceived ease of use is of less importance than privacy and security, and emphasised that "security is the most important factor influencing user's adoption".

2.2.2.6 Demographic characteristics

Previous studies also explored the potential relationship between demographic characteristics of customers and the adoption of e-banking. This relationship is as significant as psychological factors in determining its adoption (Gan *et al*., 2006; Yuan *et al.*, 2010). Wu (2009) stated that demography is the study of human population statistics, including size, age, sex, race, location, occupation, income, education and other characteristics. Each of these characteristics influences the nature of consumer needs and wants; ability to buy products; perceived importance of various attributes or choice criteria used to evaluate alternative brands; and attitudes towards and preference for different products. Hill (2004) conducted a study identifying the demographic characteristics of online banking users. She noted that it is commonly assumed that demographics influence the acceptance of electronic services such as online banking. The results of the study were that people who use such services are young, trendy and high-earning. They

actively seek out online banking tools, and they want to conduct all transactions using the same channel.

Age

It was observed that most of the Internet banking subscribers belong to the young generation, and the chance of its adoption among older people is low (Wang*et al*., 2003; Yuan *et al.*, 2010). According to Stoneman (2006:4), the greatest concentration of computer owners who have banked online in the USA are in the 18 to 34 year age group and represent 30% of the market. In contrast, only 15% of the population in the 55 to 64 year age group owns a computer and only 9% of this group banks online. Alagheband (2006) asserted that young individuals are more likely to adopt Internet banking. There is a strong relationship between age and the acceptance of innovations, and he found that older consumers had more negative attitudes towards new technologies.

Karjaluoto *et al.* (2002:271) indicated that age has an impact on the use of Internet banking. The results imply that the typical user is between the ages of 35 and 49. Hence, this study aims to determine whether or not age has an impact on consumer acceptance of Internet banking.

Educational Level

Many studies found that the level of education has a very significant impact on the adoption of Internet banking - as the educational level increases, the likelihood of adopting online services also increases (Laforet & Li, 2005; Yuan *et al.*, 2010). Low levels of education and literacy are viewed as a significant barrier to the diffusion of Internet banking services (Aslam *et al.*, 2011). There is a strong relationship between income and educational level. More educated consumers have more money available to spend, and this affects

their lifestyle. According to Polatoglu and Ekin (2001:164), affluent and highly educated groups generally accept changes more readily, making them the most likely group of consumers to adopt e-banking. This is based on sample information gleaned from their survey of Internet banking customers, which revealed that 82% of those interviewed were university graduates, and 73% reported being in the medium or high-income group.

Income

Income level has been found to be another significant demographic determinant of the adoption of Internet banking (Aslam *et al*., 2011). It was observed that the adoption of Internet banking is high among middle and upper income groups, as opposed to low income groups (Laforet & Li, 2005; Yuan *et al*. 2010). Similarly, the use of Internet banking is also found mainly among customers with larger deposits in their accounts (Yuan *et al*., 2010). Income is a popular demographic variable for segmenting markets because income levels influence consumer wants and determine their buying power (Lamb*et al*., 2000:217).

According to the World Bank, Cameroon is an upper-middle income country, as is South Africa, but it is also a country of stark contrasts. The extreme inequality in Cameroon means that destitution, hunger and overcrowding are seen alongside affluence. Therefore, this study also aims to determine whether or not income has an impact on consumer adoption of Internet banking in Cameroon. Worku (2010), in his study in Ethiopia on e-banking acceptance, found that the cost of Internet access relative to per capita income is a critical factor. Compared to developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunications, and high costs for licensing requirements. Choudrie and Dwivedi (2005) also

confirmed that the economic status of individuals influences their ability to own and use a technology.

Occupation

Education, occupation and income level tend to be closely linked in a cause-and-effect relationship. High-level occupations that are rewarded with high incomes usually require advanced educational training. Individuals with little education rarely qualify for high-level occupations (Yuan *et al.*, 2010). Karjaluoto (2002:359) relates this to Internet banking, where those currently using online services are well-educated and have better occupations than non-users. In conclusion, occupation has an impact on Internet banking and current users tend to be employed in better positions than non-users. The challenge facing banks in this regard is to find ways to make Internet banking equally attractive to the majority of their clients who are not employed in top occupations.

2.2.2.7 Social Influences

Groups having a direct influence on a person are called membership groups. These are groups to which the person belongs and with which he/she interacts. Some are primary groups, such as family, friends, neighbours and co-workers with whom the person interacts fairly continuously (Yuan *et al.*, 2010). Family members constitute the most influential primary reference group. The family of orientation consists of the person's parents. From one's parents, a person acquires an orientation towards religion, politics and economics, as well as a sense of personal ambition, self-worth and love. Even if the buyer no longer interacts very much with his or her parents, their influence on the buyer's behaviour can still be significant (Aslam *et al.,* 2011).

Cheung*et al*. (2000:55) stated that the Internet is such a widely discussed topic that social pressure plays an important role in explaining its usage. It follows, therefore, that social pressures may also affect Internet banking. Social pressures can emanate from any group, such as parents, colleagues or friends. While it would be difficult to predict how a particular group could influence an individual in terms of the adoption of Internet banking, it is nevertheless possible to assert that there is some influence by others on an individual's intention to adopt Internet banking. A survey conducted in Hong Kong and reported by Cheung (2001:116) showed that classmates and friends are likely to have an influence on potential adopters and users of Internet banking. Social factors are a dominant force that not only influences consumers' adoption of Internet banking, but also their continued use of e-banking. The opinion of a reference group is an important factor influencing the adoption of Internet banking. To bring Internet banking to the attention of reference groups, banks should more actively promote their online services. With greater awareness, people are more likely to start discussing the advantages and disadvantages of Internet banking. Once people realise that its positive aspects outweigh any negative aspects, they are more likely to accept Internet banking (Du, 2002:4).

According to the literature discussed above, many factors can influence the customer's decision to adopt or reject e-banking.

2.3 Evolution of e-banking

Asghar (2012:1) stated that science and technology are eager to provide more facilities through research and innovation in all fields of life. The Internet is one of the facilities that have become an integral part of life today. In particular, the Internet has been a key driving force behind the change in the banking industry. Marhana *et al*. (2012:1) mentioned that the advent of

Internet banking offers considerable opportunities and benefits for both banks and consumers. Banks can expand their client base and rationalise their business. Furthermore, Internet banking can also increase consumer convenience, since many banking transactions such as transferring funds and paying bills can be conducted online. Over the last few decades, information technology and its use has been increased, and this has affected the banking industry in such a way that banks can now differentiate their products and services from those of others (Saffu *et al.*, 2008).

2.3.1 History of e-banking

The precursors to modern home online banking services were the distance banking services using electronic media, which were introduced in the early 1980s when banks began to look at e-banking as a means to replace some of their traditional bank functions. This was because branches were very expensive to establish and maintain due to the large overheads associated with them, and e-banking products and services, such as ATMs and electronic funds transfer, were a source of differentiation for banks that utilised them. The term ‘online’ 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. ‘Home banking’ can also refer to the use of a numeric keypad to send tones down a phone line with instructions to the bank. Online services were introduced in New York in 1981, when four of the city’s major banks (Citibank, Chase Manhattan, Chemical, and Manufacturers Hanover) began to offer home banking services using the videotext system (Kaushik, 2012:3).

In the US, Stanford Federal Credit Union (California) was the first financial institution to offer online Internet banking services to all of its members as from October 1994 (Shang & Dutta, 2010:2). Today, many banks are offering Internet banking to their customers. In some cases, Internet-only banks have

emerged that do not maintain brick-and-mortar bank branches. Instead, they typically differentiate themselves by offering better interest rates and online banking features. As stated by IGI Global (2009:67), there are many reasons why banks adopt e-banking, which include customers' demands, selling more to existing customers, changes in the environment, achieving a competitive advantage, and increasing efficiency.

2.3.2 E-banking technology

According to Ravi (2011:3), banking technology refers to the use of sophisticated information and communication technologies, together with computer science, to enable banks to offer better services to their customers in a secure, reliable and affordable manner, as well as to sustain a competitive advantage over other banks. In terms of banking technology, Ravi (2011:3) states that 'banking' refers to the economic, financial, commercial and management aspects of banking, while 'technology' refers to the information and communications technologies, computer science and risk qualification and measurement aspects of banking.

During an earlier investigation of the implications of e-banking implementation, PIU (Performance and Innovation Unit) (1999) found that when a company has adopted a technology or application, the process of implementation is generally effected by three types of factors, namely technological, organisational and environmental. Technology-related factors are associated with the characteristics of the technology/application itself, including complexity, compatibility, and relative advantage. Organisational factors are primarily concerned with the people involved in the implementation within organisations, and impact on issues such as management support, user resistance and the level of expertise available. Environmental factors focus on the environmental context of the organisation and include factors such as supplier-customer relationships and competitive

pressure. E-banking relies heavily on information and communications technology (ICT) to achieve its promise of 24 hour availability (Bojan *et al.*, 2010:2).

According to the Economic Commission for Africa (2007), the growth of e-banking in most African countries has been slow for a variety of reasons, which include the following: low levels of Internet penetration and limited communication infrastructures. Many Africans are still unaware of the opportunities offered by e-banking. The major obstacles include the lack of a suitable legal framework and security measures, inadequate banking systems, poorly developed telecommunications infrastructures, especially beyond urban areas, and high rates of illiteracy. Zaroyda (2009) observed that one key reason for the slow development of e-banking in Africa is that there is no overall policy framework covering aspects such as technical, economic and political policy considerations, which help to create an enabling environment.

Despite banks in developing countries having recently acknowledged the benefits of e-banking technology in terms of improving productivity and efficiency, some countries (i.e. Nigeria) have struggled to adopt and integrate e-banking within their existing banking system (Khalfan & Akbar, 2006).

In some developing countries, the main problem with regard to the adoption of new technology in the banking system is the staff, as resistance to the adoption of technology is a common problem in the banking sector (Chan & Lu, 2004; Constantine & Chaniotakis, 2005). The perceptions and expectations with regard to banking technologies are a crucial element in the development of successful e-banking implementation projects (Lymperopoulos & Chaniotakis, 2004). If bank staff primarily consider e-banking to be a self-service and convenient channel that decreases costs, and if its adoption will not affect their positions, then they will more easily

adopt it (Nath *et al*., 2011). Banks should periodically reassess their sources of technology support to determine whether a given solution continues to fit their business plan and whether it is flexible enough to meet anticipated future needs (Shanmugam & Supramaniam, 2011).

2.3.3 E-banking security

Security can be seen as the fact that each technology has its own way to avoid fraud or anything which goes against the law. Shanmugam and Supramaniam (2011) observed that security in electronic banking services is greater than that in conventional banking services and requires more specific attention by bank management. The security of information may be one of the biggest concerns to Internet users. Economic and technological phenomena such as downsizing, outsourcing, distributed architecture, client/server and e-banking all have the goal of making organisations leaner and more efficient. However, information systems (IS) are widely exposed to security threats, as organisations push their technological resources to the limit in order to meet organisational goals (Dillon & Torkzadeh, 2006).

Security behaviour can be viewed as part of the organisational culture and may define how employees see the organisation (Koskosas, 2011). Similarly, organisational culture is a system of learned behaviour, reflected in the level of end-user awareness, and it can have an impact on the success or failure of the information security process. Albrechtsen (2007) found that users considered a user-involving approach to be much more effective for influencing user awareness and behaviour in information security. Leach (2003) studied influences that affect a user's security behaviour and suggested that by strengthening the security culture, organisations may achieve significant security gains. Debar and Viinikka (2006) investigated security information management as an outsourced service and suggested augmenting security procedures as a solution.

Electronic banking users, who most likely connect to the Internet via a dial-up modem, are faced with the smaller risk of someone breaking into their computers. Only organisations such as banks, however, with dedicated Internet connections, face the risk of someone gaining unauthorised access to their computer or network via the Internet. Nevertheless, users of electronic banking still face the security risk of unauthorised access to their banking accounts. Moreover, they are also concerned about non repudiability, which requires a reliable identification of both the sender and receiver of online transactions. Non-secure electronic transactions can be altered to change the apparent sender. Therefore, it is extremely important to incorporate non-repudiability, which means that the identity of both the sender and receiver can be confirmed by a trusted third party, who holds the identity certificates (Nasim, 2009).

Today, it is believed that people make the difference to information technology and security development, and that training in the ethical, legal and security aspects of information technology usage should be ongoing at all levels within organisations (Nolan, 2005).

2.3.4 e-banking advantages and disadvantages

Gao and Owolabi (2008) identified social (culture, tradition, education), economic (economic system, average income level) and technological (industrial infrastructure, technological background characteristics) aspects as key factors in the development and adoption of e-banking. It is very important for the banker to understand the expectations of customers, as observed by Chaffey (2009).

Electronic banking services have provided numerous benefits for both banks and customers. The first benefit for banks offering electronic banking services

is better branding and improved responsiveness to the market. Those banks that offer services such as Internet banking are perceived as leaders in technology implementation. Rabi (2011:4) observed that the main advantage of e-banking is a new distribution channel providing improved services to customers, as well as the use of electronic commerce strategies.

The benefits of e-banking depend on which side one is on - banks do not experience the same advantages as customers. The banking industry has reaped various benefits due to the development of the e-banking system. The main objective of every financial organisation is to boost profits for its shareholders, and online banking services offer ideal opportunities for increasing profits. The development of e-banking has greatly helped banks to minimise their overheads, charges and service costs. Many routine services and tasks have now been fully computerised and are quicker and more efficient. The growth of e-banking has made banks more economical, and has also led to the growth of the banking industry, with the introduction of new opportunities for banking processes. The Internet offers a potential competitive advantage for banks - this advantage lies in the areas of cost reduction and increased satisfaction of customer needs (Bradley & Stewart, 2003; Jaruwachirathanakul & Fink, 2005). The Internet is the cheapest distribution channel for standardised bank operations, such as account management and funds transfer (Polasik & Wisniewski, 2009). The commitment of senior management was also found to be a driving force in the adoption and exploitation of technology (Shiels, McIvor, & O'Reilly, 2003). According to Gettingmoneywise (2011), there are advantages to using Internet banking for anyone who is a customer of a bank. The ability to view statements online without having to spend money on overpriced telephone banking calls, for example, is an obvious benefit.

Wang *et a*l. (2003) observed that different distribution channels increase effective market coverage by enabling different products to be targeted in

different demographic segments. In general, customers have been affected in a positive manner by e-banking.

Despite the many benefits that Internet banking provides to both banks and their customers, acceptance of this technology has not been equal in all parts of the world (Gettingmoneywise, 2011). Security, of course, is *the* primary concern for those who are wary of taking their banking online, and there have been cases of successful breaches of some bank websites' security. According to Karjaluoto *et al*. (2002), there are also some disadvantages associated with e-banking services, as most people do not trust transactions which are conducted online. For beginners, e-banking can be difficult to learn, and websites sometimes take time to load. Some websites ask for identification, which can be very inconvenient for newcomers to e-banking. Hackers may intercept data and defraud customers, and phone bills can increase due to Internet usage. There is also a need for customers to have skills to deal with computers and the Internet. For the elderly and housewives, for example, this may make Internet banking difficult, and website changes may result in confusion among customers and delays in processing of transactions. As stated by buzzle.com (2011), one very common disadvantage of online banking is when a person has some problem or query. In a traditional bank, if one experiences a problem, one can go to an employee of the bank to solve it. However, in the case of Internet banking, one will find oneself making endless calls to the customer services department.

2.3.5 E-banking challenges and barriers

While many commentators hold the view that e-commerce has many advantages for developing countries, the African continent has a number of major challenges to overcome before it can more fully exploit the benefits of e-commerce (Akoh, 2001). Xiao (2010:3) opined that although the Internet

has created new possibilities for commercial banks, it has also opened the door to some challenges. Banks are becoming increasingly advanced and interconnected, offering a variety of self-service banking options online and subscribing to global payment systems and global structures.

Shah and Clarke (2009:10) indicated that the implementation of e-banking can have numerous barriers, such as access to the Internet, which is still difficult in some countries, despite the fact that the growth of the Internet is rapid. Lack of computer literacy, high cost of hardware and call charges, as well as various social and economic factors, are some of the reasons cited for this. With regard to Internet utilisation, Samuels (2002) stated that this is changing fast, as more and more people connect to the Internet, and these numbers are expected to grow even faster with the maturity of mobile communications. Some banks have been hesitant to adopt e-banking systems, fearing the high costs involved and that it will be difficult for them to match the prices of competing Internet-only banks. These fears have proven to be significant in most developed markets (Xiao, 2010:3).

Rabi (2011:5) summarised the challenges in e-banking as follows:

- Lack of legal rights and electronic justification;
- People don't like to reveal their finances;
- Lack of motivation and culture training;
- Lack of trust by users;
- Lack of security;
- Lack of culture and knowledge of banks about e-banking;
- Management hesitation to use experts in IT section;
- Traditional attitude toward data re-engineering;
- Lack of economic justification and risks involved in using e-banking systems; and
- Weakness of available facilities".

In some countries of the world, especially developing countries, lack of access to electricity is also one of the barriers to the widespread adoption of e-banking. According to Digital Opportunities for Women (2009), socio-economic conditions, such as poverty and illiteracy, as well as antiquated or restrictive telecommunications policies and limited information technology hardware and infrastructure, make it difficult for developing nations to participate in e-commerce. Xiao (2010:3) observed that Chinese people living in New York, especially in China Town, were not using the Internet because of certain draw backs such as computer illiteracy, security, fraud and theft, which deterred them from participating in e-banking.

Windrum and Berranger (2002) reported that many of the factors affecting the successful adoption of new technologies such as e-banking is generic in nature, and that the successful adoption of Internet technology depends to some extent on how this is used in conjunction with the other technology and management practices that form a 'technology cluster'. Common barriers include unsuitability for the type of business, enabling factors (availability of ICT skills, qualified personnel, network infrastructure), cost factors (ICT equipment and networks, software and re-organisation), security and trust factors, security and reliability of the e-commerce system, uncertainly of payment methods, legal frameworks, and intellectual property rights), and challenges in the areas of management skills, technological capabilities, productivity, and competitiveness (OECD, 2004). Chaffey (2009) observed that the opportunities have to be balanced against the risks and barriers associated with introducing or adopting e-business services, which vary from strategic to practical risks.

Amade and Jafarpour (2009) identified various types of barriers, such as cultural, social, legal or judicial, managerial, technical and technological barriers. Eyni (2008) ranked barriers in an ascending order of organisational

factors, technical factors, managerial factors and cost factors. Furthermore, Shukla *et al.* (2011), in their research on e-banking barriers, highlighted the risks of technological change.

2.3.6 E-banking around the world

Some experiences of emerging economies with regard to e-banking provide further insight into the foregoing discussion. E-banking has not evolved in the same way in all countries of the world, as illustrated below.

E-banking in India

According to Gupta (2006), concerns over security and misuse of e-banking in India have increased as more banks adopt electronic banking. The Indian Information Technology Act of 2000, which is basically a framework law, makes hacking a punishable offence under Section 66 of the Act. Breach of information security in the form of hacking is implicitly recognised as a penal offence. The 'appropriate government' (central/state) is empowered to declare any 'computer', 'computer system', or 'computer network' as a protected system. A ten-year prison term and a hefty fine await any person who secures access to the 'secured computer system' in contravention of the provisions of the law.

Despite the deterrence of the penal provisions of the IT Act of 2000, a lacuna in the law is that organisations and entities can take action against those who breach the data security procedure, but they are not obliged to implement data security measures to protect consumers and clients. The IT Act does not impose any such duty upon banks. In contrast, in the UK, failure to properly undertake the identification of new customers can create an array of risks for the bank. Under the Data Protection Act of 1998, a bank may face an action for damages if it fails to "maintain adequate security precautions in respect of

the data". Essentially, a legal duty is imposed upon the banks to use reasonable care and skill in disseminating information to people who access the bank's networks, either via the Internet or by using an ATM card. In India, a bank's liability will arise out of contract, as there is no statute in this regard. When liability is contractual, this means that, by virtue of the contract, the bank is under an obligation to keep customers' data confidential. If transactions are done on an open network such as the Internet then, in the case of a security breach, an Internet service provider (ISP) may be liable, in addition to the bank. However, ambiguity persists with regard to the liability of an Internet service provider, due to a dearth of decided case law in this regard. The viability of a sectorial legislation on data protection in e-banking should be investigated. India can take its cue from nations that have favoured the ad hoc enactment of sectorial laws over omnibus legislation (Gupta, 2006).

E-Banking in China

According to Tang (2004:3), China has decided to take advantage of the financial restructuring process and the Internet revolution in Asia. China's central bank has initiated and encouraged the development of Internet banking services since 31 May, 2000. This new Internet banking system provides 24 hour access to financial transaction services, personal financial consulting and utility fee payments. As a large and typical developing country with an ambition to become one of the world's economic superpowers, China understands the importance of EC (electronic commerce) and has made significant efforts to develop various EC initiatives, including e-banking, within the banking sector. Expanding from large cities such as Beijing, Shanghai and Guangzhou to large coastal and inland cities, the Chinese EC market has been growing rapidly and is predicted to reach $654.3 billion by 2010 (Tan *et al*., 2009:353).

In order to address the escalating competition brought about by the opening of the banking sector to foreign participants, China's domestic banks are currently being proactive in devising and implementing strategies to advance their e-banking products and services (Lu, 2005:432). The first generation of electronic banking was introduced by the China Merchant Bank in 1997 in the form of the Internet payment system. Other major banks followed and introduced a similar system between 1998 and 1999 (Laforet & Li, 2005:372). Online banking services with rudimentary functionalities such as electronic bill payment and fund management were then gradually made available to retail and corporate customers between 1999 and 2001. As the economy developed further and EC activities increased, the demand for more e-banking functionalities rose dramatically, promoting another round of e-banking service developments among Chinese domestic banks around 2001 (Lu, 2005; CFCA, 2008). The second generation in e-banking, which addresses the demand for increased sophistication in wealth management, provides additional functions that will facilitate investment activities, such as the purchase and sale of stocks, currencies and mutual funds. Meanwhile, basic asset management functionalities such as bill payment and fund transfer were also redeveloped to improve usability and convenience. Strengthened security measures, such as the use of a USB security token, known as "U Shield", was introduced in 2002 amid widespread concern about the reliability and security of e-banking services.

According to the latest research report on electronic banking conducted by the China Financial Certification Authority, around 20% of bank account holders in urban areas have adopted e-banking, while around 40% of corporate account holders conduct their transactions online (CFCA, 2008). Although e-banking in China has experienced a significant growth over the past few years, it is considered to be in its early stages of development compared to the adoption and utilisation rates for e-banking in the developed nations (Zhao, 2008:370; Rotchanakitumnia, 2003:317). Major problems

impeding the growth of e-banking include the lack of a standard legal system, the inability to develop a technology infrastructure at a pace compatible with China's e-banking development needs, and low acceptance of e-banking by the Chinese community in general (Laforet & Li, 2005; Zhao, 2008).

E- Banking in Nigeria

In Nigeria, electronic banking products are increasingly gaining ground, as many customers view them as a panacea for the problem of poor service delivery that has bedevilled many banks for a long time. However, experts posit that the rate at which Nigerians accept the products is far below expectations. According to Bello and Dogarawa (2007:7), this is due to a lack of awareness about the products, inadequate legal framework, and low technology. In order for the new delivery channels to succeed, both e-banks and the regulatory authority in Nigeria have to sensitise the public towards e-banking.

E- Banking in Ghana

According to Adams and Lamptey (2009:15), the banking industry in Ghana is undergoing rapid growth, with the liberalisation of the financial sector by the Bank of Ghana and a positive economic environment. The Bank not only introduced universal banking but also introduced the Ghana interbank payment and settlement system, there by establishing common electronic platforms for payment across financial institutions (Bank of Ghana, 2008). Many products and services are now a matter of competition necessity rather than a competitive advantage (William *et al.*, 2005). With many banks offering similar products and services, the focus of competition is now moving towards speed, customisation of products and services, and the opening up of more branches (branch banking) to add value to core banking products and services (Abor, 2004).

Ghana is nevertheless one of the African countries with the lowest Internet patronage, with only 1.8% of the country's population accessing the Internet (Internet World Statistics, 2008). The full impact of the Internet has not been felt in Ghana yet, especially in commerce and banking.

E- Banking in Libya

Abukhzam and Lee (2010:4) observed that the Libyan banking industry is under increasing pressure to improve its banking services. The increasing demand from the international banking community is placing significant pressure on Libyan banks to be electronically active (Libyan investment, 2007). Moreover, the large distances between Libyan banks has created the urgent need to connect the headquarters with their branches electronically, rather than handling cash and paper manually (CBL, 2007). Amongst the Arab nations, Libya has the reputation for having the finest bankers but the worst banking services (Libyan investment, 2007). E-banking technology has not yet found its way to Libya's banking sector (Libyan News and Views, 2007). Basic electronic banking facilities, such as automated teller machines (ATMs) and telephone banking, are limited in Libya and more interestingly, Libyan banks are still relying on manual banking methods to conduct their daily banking activities (Libyan News and Views, 2007). Therefore, the adoption of e-banking facilities is essential for Libya's economic reform.

Despite the rapid development of Libyan IT and telecommunications, the adoption of technology in the Libyan banking industry in general is limited (Libyan News and Views, 2007). The Libyan banking industry has been utilising information technology mainly at the branches for accounting practices or operating procedures, including interest calculations and balancing of books (CBL, 2007). Thus, ICTs are primarily used in Libyan banks for basic internal, operational and clerical purposes (e.g. typing, sorting customer files, and processing paperwork in the back office), as well as to

facilitate work processes and to manage documents that cannot be done manually.

E-Banking in South Africa

Wu (2009:47) mentioned that, according to the South Africa Yearbook for 2003/2004, at the end of December 2002, 42 banks (including 14 branches of foreign banks and two mutual banks) were registered with the Office of the Registrar of Banks. Furthermore, 52 foreign banks had authorised representative offices in South Africa. Currently, four major groups dominate the South African banking sector, namely Amalgamated Banks of South Africa (ABSA) Group Limited, Standard Bank Investment Corporation Limited, First Rand Holdings Limited (FNB) and Nedcor Limited (NedBank). These groups maintain extensive branch networks across all nine provinces, and together own 82% of the total assets (R 1 101 billion) of the banking sector. They all offer Internet banking services.

South Africa's banks started doing business via the Internet in 1996. They had a fairly slow start, but consumers responded because it is convenient, safe and cheap. ABSA Bank was the first to offer limited transactions online in late 1996, and this was followed by Nedbank, which began to offer a full banking service early in 1997. By July 1997, Standard Bank and FNB had added their working sites to the web and in August 1997, the newest player, Mercantile Bank, joined the online banking community.

According to Botha (2002:22), ABSA Bank predicted a South African Internet population of 3.2 million by the end of 2002, and planned to recruit 10 000 new users to the service each month. The bank offered its own free Internet access in order to encourage the use of the Internet and Internet banking. The offer included five e-mail addresses and 10 mega-bytes of free web space. At the time, ABSA hoped that the publicity surrounding the service

would generate sufficient interest in Internet banking to double their customer base. In a syndicated banking study, an update on a study conducted in May 2000 that tracked the potential to use the Internet for financial transactions, Karin (2002:1) reported that roughly 672 000 people were banking online in South Africa. Consumer acceptance and use of Internet banking is still far lower in South Africa when compared to other countries such as the UK. In 2005, there were 7.8 million Internet banking users in the UK. The number of people using Internet banking services more than doubled from 2000 to 2005,when there were 3.5 million users logging on to Internet banking services.

South Africa is now exposed to global market forces because of technology and the lifting of sanctions. Banks will need to focus their attention both at home and abroad and use technology to their best advantage (Green and Van Bellen, 2002:2).

E-Banking in the USA

Many factors may impact the development of the e-banking industry, including social (culture, tradition, education, etc.), economic (economic system, average income level) and technological (industrial infrastructure, technological background) factors. As such, there is a huge gap between the developed nations (such as USA and European countries) and developing nations (such as China and African countries) in terms of the development of the e-banking industry (Gao and Owolabi, 2008). In the USA, there were 220,141,969 Internet users as of June 2008, i.e. a 72.5% penetration (Yang & Cheng, 2009:5). Herington & Weaven (2007) indicated that online service quality has no direct impact on customer delight, e-trust or the development of stronger relationships with customers, but it does have an impact on e-loyalty. Their research also indirectly explained the shift within households to using online banking services. For example, in 2003, 91% of US households

held bank accounts, and 93% of those used at least one option of electronic transfer of funds with their account (Kolodinsky & Hogarth, 2004). Fest (2007) pointed out, however, that only 40% of US households took advantage of e-banking services, whereas over 50% of households had not been attracted yet to e-banking, because those customers might have had a bad experience with a self-service site (Swann, 2008). The winners in the e-banking industry are those banks that are able to successfully increase their offerings while simultaneously enhancing security measures and getting customers to believe in them (Rombel, 2006). In addition, for all e-banking customers, customer satisfaction is affected not only by banks' service quality, but also by their cultural features (Levesque and McDougall, 1996).

E-banking has far been developed more in developed countries than in developing countries. From the description seen above many factors have brought up the adoption level of e-banking in those countries who are already developed and the same factors which are not yet enhanced in developing countries is slowing down the evolution of that new technology in developing country.

2.4 Summary

In a world that is becoming increasingly globalised through the use of the Internet, Internet banking is gaining ground as a new opportunity for banking institutions. From a Cameroonian perspective, consumers are slow to adopt Internet banking, and only a small percentage of banking clients in this country have thus far opted to use Internet banking services. Very little research has been conducted in Cameroon to determine what factors influence consumer adoption of Internet banking. Clearly, there is a need for research on this topic. This chapter, which is a combination of research findings from around the world, is primarily a study of consumer behaviour and the factors which impact on this behaviour, particularly when the

consumer is faced with the uncertainty of adopting life-changing innovations such as e-banking or Internet banking. This chapter started by defining theories and findings obtained by other researchers on the adoption of e-banking and customer acceptance of innovation. This provided a foundation on which the remainder of the chapter was built, and which paved the way for a description of the three dominant factors that affect consumer behaviour.

The first of these factors (consumer perceptions of and attitudes towards Internet banking) was broken down into its various facets, namely relative advantage, compatibility, complexity, perceived cost, and perceived risk. Clearly, consumer perceptions and attitudes are interrelated, entirely subjective and can be changed. The second factor (consumer demographic characteristics) demonstrated that age, gender, educational level, income and occupation are the demographic categories which are most influential in shaping consumer behaviour. The third factor (social influences on the adoption of e-banking) examined the influence of reference groups on consumer adoption of innovative products such as e-banking. Many of the factors discussed have an impact on the adoption of Internet banking and need to be studied in the Cameroonian context. Conversely, banks should also consider whether or not they are fully exploiting those factors which positively influence the adoption of Internet banking.

After discussing the theories which are applicable to this study, the topic of e-banking or Internet banking was explored in this chapter. This was done by reviewing published studies that trace the rapid progression from the humble origins of the Internet to its development, e-banking technology, e-banking security, advantages and disadvantages of e-banking, e-banking challenges and barriers, and finally, e-banking around the world.

In terms of the main objective of this study, which is to identify the factors affecting the adoption of e-banking in Cameroon, this can largely be achieved

through the lens of the innovative diffusion theory, by exploring how attitudes and demographic characteristics influence the adoption of e-banking in Cameroon.

CHAPTER. 3. RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology used in this study. Naidoo (2006:64) stated that methodology is a description and analysis of methods chosen, as well as their limitations and resources, and outlines their assumptions and consequences. This chapter aimed to describe the research method used. It started with an explanation of the primary and secondary research, followed by an overview of the respondents who participated in the primary research. It also highlights the procedures used in designing the questionnaire such as questionnaire translation, negotiation for entry into a specific bank's sample, ethical considerations, and the pre-testing of the questionnaire. It also explores issues of population and sample size, as well as method used to collect and analyse data. Lastly, it highlights some challenges encountered while conducting this study.

3.2 Research design

A research design is a plan for selecting subjects, research sites, and data collection procedures to answer research question(s) (McMillan & Schumacher, 2006:117). McMillan and Schumacher maintained that the goal of a research design is to provide results that are judged to be credible. The main task of a research design is to specify and combine the key elements and methods in such a way as to maximise validity (Blanche, Durrheim and Painter 2006:133). The rationale for a research design is to help the researcher to plan and structure a research project in such a way that the eventual validity of the research findings is maximised through either minimising or, where possible, eliminating potential error (Mouton, 1996:108).

A research design focuses on the end product or the research logic and problem.

According to Brink and Wood (1983:252), the function of the overall framework which guides a research is to create conditions for the collection of data in a manner that intends to combine relevance of the research purpose with economy in methodology. Moreover, the aim of a research design is to provide valid and accurate answers to the research question (Dzivhani, 2000:11).

The qualitative research approach attempts to capture human experiences, which is what this study intends to do. Hollaway and Wheeles (in De Villiers, 2004) refer to qualitative research as a form of social inquiry that focuses on the way in which people interpret and make sense of their experiences and the world in which they live. The research design for this study was therefore qualitative, as the researcher was of the opinion that qualitative research was best suited to explore matters such as people's experiences with regard to e-banking. A combination of both exploratory and descriptive methods used, because the area under study was intended to explore people's subjective experiences and behaviour. Hence, the qualitative approach was used, since the aim of the study was to determine human behaviour and experience with regard to e-banking in Cameroon. This approach was chosen in order to provide in-depth information about banks and customers' perceptions and experiences in terms of e-banking.

According to the distinction made by Hoberg (1999:26), as well as by Glaser and Strauss (1965:261), a research design is more closely aligned with inductive building of theory, as opposed to deductive testing or extension of theory. Each aspect of the research design is outlined below with specific reference to the approach used in this study.

3.2.1 Qualitative research

Qualitative research emphasises the dynamic, holistic and individual aspects of the human experience and attempts to capture those aspects in their entirety, within the context of those who are experiencing them (Hungler and Polit, cited in Mathebula, 2000:24). It includes the identification, study and analysis of subjective and objective data in order to understand the internal and external worlds of people (Mathebula, 2000:24). The qualitative design facilitates flexibility and will enable people to describe their perceptions from their own frame of reference (Lewin, Stephens, and Vuliamy, 1990:11).

(Hoberg, 1999:51) emphasised that qualitative approaches are used when the researcher seeks to develop an understanding of human phenomena and to investigate the meaning given to events that people experience. This study involved interaction with the Internet banking user and the banks that adopt new technologies, in order to understand why banks in Cameroon are not embracing all these innovations and why some customers are still not adopting e-banking.

In light of the above, the qualitative design was deemed most appropriate for this study. It enables the researcher to enter the life worlds of the participants (De Vos *et al* 1998:80). In this study, the researcher employed a qualitative research design, because it does not give step-by-step instructions and a fixed recipe to follow. The design is flexible and may change during the research process. More than one method of data collection was used in this study, including in-depth interviews (IDIs), questionnaires and observations. This is known as the triangulation of data sources, and this helped improve the trustworthiness of the data.

Observation was chosen as a method because its emphasis is on discovering the meanings that people attach to their actions. In terms of this method, the

researcher attempted to participate fully in the lives and activities of the subjects being studied. This enabled him to share their experiences by not merely observing what was happening, but by also feeling it. Observations involve watching people and situations, recognising and noting what is going on, rather than merely asking for information.

IDIs were used because it helps the interviewer to better understand the mind of the interviewed and also the interviewer has the possibility to can go deeper in some questions. The questions resemble questionnaires in their purpose, but they allow for greater depth of responses such as emotions, experiences and feelings. This is the main reason why interviews were used in this study.

This study relied on the questionnaire as the key method of data collection, because it identifies and captures questions about a subject. For this particular study, a questionnaire was designed and consisted of both closed-ended and open-ended questions. The questionnaire method presented questions as a guide and enabled respondents to only give back to the researcher what will be helpful for the research. In terms of resources, the questionnaire was cheaper to administer than having to interview all the customers in the sample.

3.2.2 Exploratory research

Research is viewed as exploratory when it is situated in a relatively unknown research area or an area about which little is known (De Vos *et al.,* 1998:124). This is suited to this study, which attempted to gain insight into why banks in Cameroon are not embracing e-banking and what the level of adoption of e-banking is by bank customers. This was a relatively unexplored area of research, especially in the Cameroonian context. The exploratory nature of this study enabled the researcher to not only share in the

understanding and perceptions of customers and bank managers as participants in the study, but to also explore and acquire knowledge on how they structured and gave meaning to this aspect in their daily lives.

3.2.3 Descriptive research

A descriptive study provides a detailed description of the phenomenon under investigation in order to answer the research question (Brink & Wood, 1983:91). In this study, after the empirical investigation, the researcher described the lived experiences of customers and bank staff with regard to e-banking in terms of how they viewed the factors that influenced their rejection or acceptance of e-banking. The descriptions were predominantly textual and narrative. As Mathebula (2000:25) mentioned, the goal of qualitative research is to document and interpret, as fully as possible, the totality of whatever is being studied in particular contexts from the people's point of view.

3.3 Research methodology

Research methodology refers to the measuring instrument(s) by means of which accurate data about specific phenomena can be obtained (Mouton, 1996:125). It is a systematic, methodical and accurate execution of the design (Mouton, 2001:55).

A research design uses various tools and methods to perform different tasks. In this regard, a variety of methods are used for data collection, including surveys, interviews, group discussions, direct observation and Participatory Rural Appraisal (PRA) or Participatory Learning Appraisal (PLA) tools (Roche, 1999; Mouton, 1996 & Mouton, 2001). For the purposes of this study, a number of instruments which were used fall in the category of group discussions, according to Roche (1999:116), while according to Mouton

(2001:105), these instruments fall in the interview category. The methods that were used included key informant interviews and questionnaires.
The interviewer in this case has more opportunities to probe further in order to clarify issues and get more information from participants at the same time. However, this does not mean that the tools do not have their own shortcomings.

Two different sets of data, namely qualitative and quantitative data, were collected for this study. Qualitative data was generated mainly by using closed-ended questions. These types of questions do not provide much room for the respondent to express his/her views, as they provide prescribed options for selection. However, these questions require less time to administer and enable the interviewer to ensure that all questions are responded to. In the study, there was a deliberate attempt by the researcher to gather information about the adoption of e-banking.

3.4 Secondary data collection

Secondary data collection entails reviewing all available documentation on the subject under study. As argued by Mouton (2001:86), it is essential that every research project begins with a review of the existing body of knowledge. In this study, the secondary data collection involved reviewing all available literature on e-banking. The literature was used to gain an understanding of e-banking in general, the perceptions of customers in Cameroon regarding e-banking, and the reasons why not all banks in the country are embracing e-banking. The literature review was also used as a basis for the theoretical framework of this study. This literature was reviewed at two levels, namely published and unpublished literature. Once the data was collected, processed and published, it was made available for use by other people as secondary data. It is therefore important to know the

originator, as well as when and how the data was collected, in order to appreciate its reliability. All secondary data concerning e-banking in Cameroon and abroad was used to obtain information on how far the banking industry has progressed in terms of implementing e-banking services (Emma, 2009; Alawneh and Hattab, 2009; Wikipedia, 2011). Published articles about the adoption of e-banking (Nazim, 2009; Mols, 1999; Mattila *et al*., 2003), together with other analyses by experts in books, were also used to capture the general feeling and attitudes of bank customers with regard to e-banking in Cameroon.

3.5 Primary research

Skimmer and Ivancevich (1992) defined primary data as information collected for the first time and specific to the study. Primary data is collected through experiments, observations and surveys to address the specific research objectives. In this study, the researcher used interviews and questionnaires as data collection methods. He delivered and collected the client questionnaires at the bank branches and proceeded to interview two of the managers of each of the selected banks. The researcher opted to deliver all the questionnaires by himself, in order to ensure that the maximum number of questionnaires would be filled in. In addition, he conducted the interviews himself, in order to ensure the reliability of the responses.

3.6 Questionnaire design

Methodological triangulation was used to collect the required data during this study. As explained by Harricombe (1993:508), methodological triangulation entails studying something from various angles and perspectives. It is where information obtained from two or more techniques is cross-checked to enhance the quality of the data (Chambers, 1994: 256). Although this helps to

strengthen the study's design, one should not adopt a naïve, optimistic view that the aggregation of data from different sources will quickly add up to produce a more complete picture (Harricombe, 1993:508).

A structured questionnaire, adapted and modified, as used by Divya and Padhmanabhan (2009), was used as the main data-gathering instrument in this study (refer to Appendix A). The questionnaire was divided into two parts. Part 1 helped to capture information about the banks being investigated, such as the number of branches nationwide and the adoption and usage of e-banking services. This part was answered by the bank managers during an interview with the researcher. In the same part, the researcher tried to determine the perceived benefits of e-banking and the nature of the challenges faced in the adoption and usage of e-banking from the bank's perspective. Part 2 of the questionnaire aimed to determine the perceptions regarding e-banking from the customer's perspective, the nature of the challenges faced by bank customers in the use of e-banking, and the level of literacy in terms of information technology, telecommunications and Internet usage.

The questionnaire included both open-ended and closed-ended questions. However, there were more closed–ended questions than open–ended questions. This was in order to ensure that the respondents were given an opportunity to provide the information needed by the researcher. Open-ended questions were also used to enable the researcher to clearly identify the respondents' perceptions and observations.

3.6.1 Questionnaire translation

After some discussions on the questionnaire it was decided that questionnaires would be translated in French. This was because in

Cameroon the majority of the population speak French even if the country is officially a bilingual country with French and English as official languages. The respondents had the choice on the language suitable for them to understand. This was done with a lot of care to ensure that the meaning of the questions would remain the same. This was in consideration with the advice by World Vision International (2002:13) and others, who said that proper care must be taken in translating questions to ensure that the meaning of questions is not changed, as this may also change the data to be collected.

The translation of the questionnaires into French has also its own advantages. Firstly, it ensures that questions are asked consistently each time, resulting in getting consistent information from all respondents. Using the participant's own language is also a proper way of ensuring community participation in an unlimited way (World Vision International 2002:13). Furthermore, Fanning (2005:1) indicates that well-translated survey questions make it easier for respondents to read and respond, which, after all, is one of the key goals in using them (Bradburn, Sudman, & Wansink 2004). If respondents find the research questions easy to read and follow, then the response rate will greatly improve. In addition, well-translated questionnaires reduce the measurement error, as respondents will be more likely to follow through, and less likely to overlook some questions (Dillman, 2000). That is why Dillman (2000) asserts that people's motivation to respond to questionnaires is vested in their comfort ability in the language being used as this meets some of their social needs in a way.

However, one major limitation with translation is that if inaccurate work is done, then the meaning of the questions may be completely changed. This is why the researcher submitted the questionnaire to a sworn translator for translation. The second limitation is that it increases study time since additional time is allocated for questionnaire translation (Bradburn, Sudman,

& Wansink 2004); it is for this reason that the researcher referred to a sworn translator to avoid wasting time.

3.6.2 Negotiating for entry into the community

Before the pre-testing of the questionnaire was done, the researcher requested a discussion with one of the managers of the bank selected. Discussions were conducted on an agreed date where the researcher described the background of the study and how it was to be conducted. The researcher indicated to the manager that the study was meant only for learning purposes and not for any profit and therefore participants to the study would not receive any material or financial support for participating in the study. This was done to ensure that participants to the study are prepared well in advance so that they do not have high expectations for their participation.

After a discussion on the purpose of the study and its impact on the banking industry as well as in the country of Cameroon, the researcher was advised to send written documentation. A letter was then sent to the general manager (see appendix D) who authorised the researcher to conduct interviews with the people from the bank.

3.6.3 Ethical considerations

The methodology of this research incorporated issues related to research ethics and trustworthiness, sampling, data collection and processing, and literature consulted. Ethics refers to discussions around what is considered acceptable or justifiable behaviour in the practice of social research. It is concerned with what is considered to be fair ways for the researchers to proceed (Makhanya 2006:28). Mauther, Birch, Jessop,& Miller (2002:20) pointed out that ethics is the application of general rules and principles, and

the researcher's internalising of moral values. De Vos *et al.*(1998:24), define ethics as a set of moral principles, which offers behavioural expectations about the most correct conduct towards participants. The researcher was aware that at every stage of this research process, he would be confronted with ethical issues to resolve. Some of these ethical issues would be straightforward, while others would not. The researcher would therefore have to be continually ethically aware, and to always consider, inter alia, the interests of the participants (Angus 1998:111). The following ethical measures were considered throughout this research.

- The researcher asked for consent from the general manager of each bank to conduct research at the institution.

- Each participant in the study was informed of the purpose of the study and time required for participation.

- Participants were assured that their views and opinions as given freely in interviews and in their answers to the questionnaire would not be identified by anyone else. Subjects were not deceived about the goal of the study.

- Participants were assured that their views, responses, and opinions would be treated in the strictest confidence, which would not be violated. Although these views were coded in terms of general themes and patterns, certain opinions and views were stated verbatim, the name of the participant who provided the specific view or opinion was not mentioned, and on completion of the project, the researcher rectified any misunderstanding that arose in the minds of the respondents.

The researcher made sure that all the above ethical measures were taken into consideration throughout the study. This assurance naturally included a guarantee of the researcher's competency (De Vos, Strydom, Fouché & Delport 2005:63), which naturally included a correct and professional relationship with the participants, which in turn meant gaining their informed consent and briefing them if necessary (De Vos *et al.,*2005:63). The ethical clearance for the research was first done at the University of South Africa to ensure the condition on which the research will be done (Refer to Appendix E).

3.6.4 Questionnaire pre-testing

It has been strongly argued by some researchers (Dillman 2000; Bradburn *et al.* 2004) that pre-testing is important to the success of any survey. They indicate that questionnaires ought to be pre-tested to identify potential problems in intent, clarity and navigation. On the other hand, additional time and resources are required to carry out pre-tests of any survey. According to Dillman (2000), this calls for additional time to plan, carry out the pre-test and analyse the findings to identify any shortfalls. In the same manner, it calls for additional resources, which some researchers may possibly not be able to afford.

In order to ensure that quality data is gathered for the study, the questionnaire was pre-tested with three separate customers from the area of research (Cameroon). This helped to identify areas that may have been difficult for the interviewers and interviewees during the interaction. Various issues were noted after the pre-tests. Firstly, it was revealed that three questions required reviewing because they proved to be difficult for the respondents. In addition to the modification of these three questions, there was a need to increase the list of options for three of the closed-ended

questions in the original questionnaire. The review of the questionnaire was done soon after pre-testing. All these contributions were incorporated into the final questionnaire used for the actual data collection.

3.6.5 Population and population size

The targeted population was 15 banks in the country which are respectively EcoBank, Afriland FirstBank, SGBC(Société Générale des Banques du Cameroun), Standard Chartered Bank of Cameroon, UBA(United Bank of Africa), UBC (Union Bank of Cameroon), Atlantic Bank of Cameroon, BICEC (Banque Internationale pour l'Epargne et le Credit), CitiBank, SCB Cameroon, NFC Bank (National Financial Credit of Cameroon), Amity Bank of Cameroon, CBC (Commercial Bank of Cameroon), Attijarawa Bank, Oceanic Bank of Cameroon and Ecobank of Cameroon. All the customers and managers of these banks constituted the research population. In Cameroon, the banking industry is now controlled by five principal banks, according to "Jeune Afrique Economie" (2010), which are: BICEC, SGBC, Afriland First Bank, SCB Credit Lyonnais and Ecobank. The headquarters of these banks are in Douala and Yaoundé which are the economic and political capitals of the country respectively. The resume of the bank environment is in Table 3.1 below

Table 3.1 Bank environment in Cameroon

No	List of Banks in Cameroon	Headquarters
1	Afriland first Bank	Yaoundé
2	SGBC (Société Générale des Banques du Cameroun)	Douala
3	Standard Chartered Bank	Yaoundé
4	UBA (United Bank of Africa)	Douala
5	UBC(UnionBank of Cameroon)	Douala
6	Atlantic Bank	Douala
7	BICEC (Banque Internationale du Cameroun pour l'épargne et le Crédit)	Douala
8	NFCB (National Financial Credit Bank)	Yaoundé
9	Ecobank	Douala
10	Oceanic Bank	Douala
11	CBC (Commercial Bank Cameroon)	Yaoundé
12	SCB (Societe Camerounaise des Banques)	Yaoundé
13	Attijarawa Bank	Douala
14	Citibank	Douala
15	Amity Bank	Douala

Source: Jeune Afrique Economique (2010)

3.6.6 Sampling

As alluded by Mouton (2001:132) sampling is part of our daily life. It is the process of selecting a few things or objects from a bigger group (the sampling population) when we do not have knowledge of the larger collection of these objects. These become the basis for estimating or predicting a fact, situation or outcome regarding the bigger group. Blanche *et al.* (2006:133) explains that sampling is the process of selecting cases to observe. It is a known fact that time and resources may not allow us to do research that covers everyone, that is why sampling is chosen as a way of doing research. Though opponents of sampling argue that the process does not offer us an opportunity to find out the facts about the population, it saves time as well as financial and human resources. In this study, sampling was conducted to select the required cases to be included in the survey. The sample is representative of the population, which is achieved by selecting the sample randomly, or where it is not possible a convenient or purposeful large sample is one alternative.

3.6.7 Sample design

There are a number of sampling designs that researchers use depending on the purposes of the study. Some of these include random sampling, non-random sampling and mixed sampling designs. This study used random/probability sampling designs. This is a procedure in which every member of the population has an equal chance of being selected (Mouton 1996:138). Random/probability sampling is good because it helps to remove the possibility of investigator bias in the selection of cases. As recommended by Wright (1982) in Mouton (1996:139) “It is often our only route to eliminate bias. In addition, through the process of random selection independence is guaranteed and the principles of probability theory may be applied to estimate the accuracy of samples” (Mouton 1996: 139). The technique used

in the determination of our sample in this study is described below in the sampling design:

3.6.8 Sampling techniques

In carrying out this research, random sampling designs were used. Under this category, there are a number of techniques that can be used. Some of these methods include random walk, staged random sampling; cluster random sampling, simple random sampling, purposive random sampling, judgmental random sampling, and stratified or systematic random sampling (Blanche *et al*., 2006:134). In this study, two random sampling procedures were applied, which are purposive random sampling and judgmental random sampling procedures. This was done to ensure that every bank in the area has an equal chance of being selected. This was in line with recommendation made by Mouton (1996:138) who indicated that random sampling according to its very nature is unbiased in terms of selection. Blanche *et al*. (2006:133) add on to say that random sampling implies that each element in the sampling frame has an equal and independent chance of being selected for the sample. They argue, however, that random sampling can be a very laborious process and is seldom used in practice.

The researcher made use of purposive and judgmental random sampling procedures using a list of all the banks sourced from the secondary data and the ministry of finance in Cameroon. From the population illustrated in Table 3.1 the sample drawn up is shown in Table 3.2 below.

Table 3.2 Bank sample of the study

No	List of Banks	Headquarters
1	Afriland First Bank	Yaoundé
2	SGBC (Société Générale des Banques du Cameroun)	Douala
3	Standard Chartered Bank	Yaoundé
4	UBA (United Bank of Africa)	Douala
5	BICEC (Banque Internation du Cameroun pour l'épargne et le Crédit)	Douala
6	Ecobank	Douala
7	CBC (Commercial Bank Cameroon)	Yaoundé

Source: Jeune Afrique Economique (2010)

3.6.9 Sample size

Sample size refers to the number of electors from whom the required information can be obtained (Mouton 1996:139). Size of sample has a bearing on research results. It is generally true that, as the size of the sample increases, the degree of error or bias reduces, and the opposite is also true (Mouton 1996:139). In order to reduce the level of bias or error, the researcher used a sample size that is proportional to the size of elements under study.

In this study it was done in line with the advice by some researchers (Chadwick, Bahr & Albrecht 1984:68, Blanche *et al.* 2006:134), who indicated that researchers have developed a rule-of-thumb in as far as the sampling ratio is concerned. Blanche *et al*. (2006:134) argue that small populations of less than 1000 require a sampling ratio of at least 30%. This is required to ensure accuracy and validity of the data to be gathered. The banks that will constitute the sample of the research are BICEC, SGBC, Standard Bank, Atlantic Bank, Afriland First Bank, Ecobank, and United bank of Africa. BICEC and SGBC were chosen because they are state banks; Afriland First bank was selected because among the private banks in Cameroon it is the one which is really innovative in terms of e-banking products; Ecobank has been chosen because it is present in many countries in Africa (18 countries) and it is useful to understand the way he is operating in Cameroon. United Bank of Africa is also present in many countries in Africa, but was selected because it is the newest entrant in the financial market of Cameroon and has already proved its strength of security in e-banking in Nigeria. Standard Bank was selected because it belongs to a huge group which is present in many countries in Africa and even in Europe. SCB Credit Lyonnais has been also chosen because it belongs to a huge group of French-owned banks.

The survey sample consisted of two segments (managers of the banks and customer or clients of those banks) that differ in the usage and adoption of e-banking products due to their diverse backgrounds. To this end, the researcher set a goal to sample at least two managers of each bank and hundred customers per bank. The managers of banks were asked to fill-in the questionnaire during the interview, while some other questions not mentioned on the questionnaire were asked to them (see in the Table 3.3). The branch managers and relationship officers were asked to pass the questionnaire on to their clients so that all customers could have the same chance of participating in the survey. These managers were chosen due to their constant interaction with the bank's customers on a day-to-day basis. Bank

branches are scattered all over the main cities of the country, and it could have been expensive for the researcher to visit all those branches around the country. For that reason, the branches used were situated in two principal cities, namely Yaoundé and Douala, which are the political and economic capitals respectively of the country and where the headquarters of those banks are situated.

Table 3.3: Other questions asked to managers during the interview

Number	Questions
1	Do you even recruit if the person is qualified but doesn't have any knowledge in ICT?
2	Do you think the lack of acceptance of e-banking is due to a lack of communication?
3	Do you think accessibility to Internet is a problem in the adoption of e-banking?
4	Is e-banking legislation based on the reality of bank customer's life in the Cameroon?
5	Is there a minimum amount that customers should have before doing e-banking transactions?
6	Is it possible to make a deposit using the ATMs in Cameroon?
7	What is your general impression about e-banking in Cameroon?

3.6 Data analysis

According to Yin (1994), the ultimate goal of analysing data is to treat the evidence fairly, to produce compelling analytical conclusions, and to rule out alternative interpretations. In another sense, data analysis is seen to consist of three concurrent flows of activity (Huberman, 1994). These three are data reduction, data display, drawing of conclusions, and verification.

Data reduction refers to the process of selecting, focusing, abstracting, and transforming the raw data. Data display refers to an organized assembly of information that permits conclusions. Deductions and conclusion was drawn from the data to decide what things mean from the beginning of data collection.

Tables were constructed to organise and display the data; information was analysed and grouped to facilitate discussion on the key findings. A set of recommendations emerged after the data analysis was completed. This study being largely qualitative research, the type of data analysis that can be used is the deductive method. All the raw data collected during the research in Cameroon was transformed into usable information using the SPSS informatics programme (see in appendix C). The data was then analysed using graphics, diagrams, and statistics to interpret the questions one-banking in Cameroon and give recommendations according to the findings and interpretation of information collected.

3.7 The role of the researcher

The main instrument in qualitative studies is the researcher (Henning, 2004: 6). Kilbourn (2006: 9) suggests that it is important to be aware of one's subjective self and the role that this subjective self plays in research, since being aware is better than assuming we can get rid of the subjectivity.

Being aware of his subjective self in this study, the researcher was aware of the qualities that enhanced his research and those that could have skewed his interpretation of data if he were not aware of them. His personal history includes more than 3 years as service manager in a sales branch and being responsible for being in contact with customers in the field of work and collecting data in this field to analyse and elaborate the different strategies of sales. Kilbourn (2006: 9) elaborates that the way in which we see and respond to a situation, and how we interpret what we see will bear our own signature. This unique signature should not be a bias but a way of providing individuality to a situation. In this study, the researcher realised that the language and active listening skills he had previously developed in his leadership roles were very applicable to interview settings.

3.8 Validity and reliability

Reliability, according to a definition by Hussey & Hussey (1997:57), is concerned with the findings of the research, and is one aspect of the credibility of the findings. Reliability has to do with whether the evidence and the conclusions drawn stand up to the closest scrutiny. The accuracy of the measurement depends on the consistency of the measurement. In the case of this study, the same questionnaire was distributed to all respondents at the same time, to ensure reliability. Because the positivistic paradigm focuses on the precision of the measurement and the ability to be able to repeat the experiment reliably, there is always the danger that the validity would be very low as a result. In other words, if the reliability is high the validity can be low.

During the research process, this study followed the validity framework (Mouton, 1996:111) in order to ensure validity at different stages. The sample chosen for this reseach represent the population in the way that we have two banks which represent the public banks (BICEC and SGBC), five banks

which represent the private sector where one is a private national bank (Afriland First Bank) and the other four are private foreign-owned (UBA, Standard Bank, SCB Credit Lyonnais and Ecobank). Sometime during the research we had to explain questions to the respondents in order to let them better understand before they answered. However, the data gathered was used to confirm consistency. Inter-item correlation was used in order to determine the reliability of the items contained in the questionnaire. In order to ensure reliability of information gathered, the researcher conducted the interviews of bank managers by himself, and personally administered the majority of the customer questionnaires.

3.9 Limitations of the study

In the country of Cameroon, it is always easier to get information from enterprises than from the banking industry. Information regarding bank income, bank security measures and/or ATM design for example is confidential banking information. Should such information be made available for public access, it could pose a serious threat to the banking industry by effectively providing a “manual” for criminal minds. As a direct consequence of this, it became difficult for the researcher to ask in-depth information about the evolution of the income, the total deposit collected by the bank and also the supplier of the bank security. They were not able and somewhat unwilling to give out detailed information regarding the income related to the bank each year before and after adopting e-banking, e-banking security measures, or information regarding e-banking safety, which play a major role in the customer’s trust of the new service offered. Some respondents were not willing to provide information, fearing that it would to be used in-house to their disadvantage. However, an assurance was given to the respondents that the information would be kept confidential to protect them and that the research study would be made available to the respondents for their benefit. The

researcher dispatched did the questionnaire only in the bank branches in the two main towns of the country, namely as Yaoundé and Douala, and this was because of the time and financial limitation and also because these banks have most of their branches in these two towns (refer to appendix B).

3.10 Summary

Questionnaires and interviews were the two research instruments employed in this study. A desk and in-depth review of both unpublished and published data assisted in obtaining secondary data. These different choices of methodology were made because of the reliability, validity, time, and cost constraints. In this chapter the qualitative research approach, design, and methodology were presented. The main area of the study was the banks in Cameroon. The participants were purposively selected. Because the study focuses on the bank industry, the population of the study included staff and customers of those selected banks.

The literature showed that qualitative research was suitable for the present study, which is concerned with the experiences of the workers in the bank industry and the customers of that industry, which is a social phenomenon.
Clearly the choice for qualitative study is linked to the type of inquiry that a researcher conducts. Qualitative methods were found suitable to the present study, which also focused on organisational process, outcomes, and an understanding of individual and group experiences in adopting e-banking in Cameroon. One of the main concerns of this study was to describe the experiences of the people involved in the banking system in Cameroon, and to decide, on the basis of their experiences, how successful the implementation of e-banking has been.

CHAPTER. 4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the data analysis and a discussion of the findings of this study. The researcher conducted qualitative, descriptive research to investigate various aspects related to the adoption of e-banking by banks and bank customers in Cameroon.

4.2 Findings from the managers' interviews

Response rate

The researcher's expectation was to get responses from two managers of each of the seven banks which were surveyed (which is 14 managers). However, not all 14 managers were available to be interviewed, but 11 out of the 14 managers were interviewed, which represents 79% of the total. The responses collected from each bank are shown in Table 4.1 below.

Table 4.1: Responses collected from the banks

BANK	Responses
AFRILAND FIRST BANK	2
ECOBANK CAMEROON	2
SGBC	2
BICEC	2
CBC	1
STANDARD CHARTERED BANK OF CAMEROON	1
UBA	1
TOTAL	**11**

DESCRIPTIVE ANALYSIS OF FINDINGS

Demographic characteristics

Table 4.2: Demographic characteristics of respondents

Demographic characteristics	Interval	Frequencies	Percentages
Gender	Male	9	82%
	Female	2	18%
Age	25-40	1	09%
	41-50	4	36%
	51 and above	6	55%
Occupation	Director	4	36%
	Manager	7	64%
Educational level	Primary	0	0%
	Secondary	0	0%
	High school	0	0%
	Undergraduate	4	36%
	Postgraduate	7	64%

From the table above, it is clear that 82% of the interviewees were male, while only 18% were female. Most of them were above 51 years of age (55%), managers (64%) and had at least university-level education. Males are clearly dominant in the management field.

Most of them were old because it takes time to advance in a financial institution and they therefore reach the highest level when they are older than 45 years. They were also very well-educated. In an attempt to explore enablers and inhibitors of e-banking technology adoption, managers and directors were asked questions related to the factors that impact on their attitude and willingness towards the implementation of an e-banking strategy

in their bank. From their responses, it is evident that most of the financial activities take place in the main cities. Banks prefer to do business in Douala and Yaoundé, which is why most of their bank branches are located there. Furthermore, during the interview it was noted that all of them had already implemented e-banking. They stated many reasons for implementing this new technology, such as cost reduction, improved quality and efficiency, the ability to be more competitive, and attracting new customers. All of them mentioned that there had not been too many changes since the implementation and that they needed to know which factors influence customer s' adoption of e-banking.

On the one hand, the interviews showed that there are many negative influences within the Cameroonian banking system that act as obstacles to the adoption of e-banking, but on the other hand, the managers indicated that not all of these were considered to have the same degree of severity, and some were seen as more fundamental than others. The following represents the findings in relation to the interviewees' perceptions regarding the key factors enabling or hindering the adoption of e-banking.

4.2.1 Managerial and Organisational Factors

The factors discussed below were highlighted in the structured interviews with bank managers.

Resistance to change

A large number of respondents viewed the change from legacy banking to electronic banking as a threat. For instance, managers indicated that most bank employees expressed anxiety over the implementation of e-banking and emphasised their perceived inability to cope with the new technological

responsibilities. They also expressed fear of job loss, losing autonomy and control, as well as the fear of uncertainty. Manager interviewees believed that resistance to change by bank employees is the main barrier to the adoption of e-banking technology in Cameroon. During the interviews, one of the interviewees asserted that the majority of their bank tellers were relatively content with the way in which the business was being run. For that reason, they did not particularly want the introduction of any new technology that would change the way in which their daily activities were performed.

Lack of IT knowledge and awareness

This was reported by all interviewees to be a key problem. Participants pinpointed a lack of awareness of new technology, deficiencies in computer use, fear of computers, and the low level of technological education among the workforce and senior management. As one participant, director of the IT Department, mentioned, “Lack of awareness and understanding of our bank managers and employees about e-banking and its benefits is the main reason why our bank has been struggling to implement the system at the projected time”. This lack of understanding (especially in relation to IT jargon) was also a concern raised by the bank’s IT staff. Interviewees indicated that ignorance of software language is a key barrier to e-banking in many Cameroon banks, as noted by the IT director, who stated the following: *“IT language is a main barrier preventing our bank from adopting e-banking technology.”*

Clearly, the lack of know-how and general IT expertise comprises one of the biggest obstacles to the adoption and diffusion of e-banking technologies. The IT director, who had the necessary expertise, made a judgment about the bank’s readiness and was of the opinion that this was not simply a

problem with the lower level workforce, but extended to senior management as well.

Lack of a strategic plan

This was reported to be a hindrance by some of the interviewees, who felt that Cameroonian banks have the financial ability to really benefit from the adoption of e-banking technology, but because of the lack of a clear national strategy, there is a knock-on effect which has slowed down the technology adoption rate. In this respect, bank managers stated that they did not have a national strategic plan for the adoption of technology in general and e-banking in particular, due to the fact that senior officials of the government had not yet realised the value of e-banking technology, and it is therefore not yet seen as a priority by the government. This was somewhat in contradiction to a comment made in relation to another response, when one manager said:

"Our government is supporting the change and adopting the latest technology available on the market and providing the entire basic infrastructure needed for its adoption … our government provides the costs of importing hardware, software, and expertise to promote and encourage the use of e-banking technologies in many banks that cannot afford such costs".

Lack of E-laws and legislation

The unavailability of e-legislation was a main concern for all the interviewees. In this regard, one participant expressed his reservations by saying that he was very conservative when it came to using electronic systems, despite his knowledge of IT and Internet security. The problem was that the system in Cameroon did not protect him yet, so he had to take care of his own safety.

Accordingly, this study found that even within this small segment of society, the absence of e-legislation was seen as the main barrier to the improvement of e-banking in Cameroon. In this regard, the development of proper e-legislation was viewed as being crucial to the adoption of e-banking, since the absence of this would inevitably discourage people and businesses from going online.

4.2.2 Technological Issues

Unavailability of a proper telecommunications infrastructure

This was raised by many interviewees as a crucial barrier to the advancement of e-banking technologies. They revealed that despite the many plans to enhance the country's ICT infrastructure, many participants felt that it was still deficient and that integration between banks was poor. Thus, the technological infrastructure in Cameroon was not up to the standard required to support the use of modern banking technologies.

With regard to the lack of key resources, identified as the next obstacle to the adoption and diffusion of e-banking technology, comments were made related to Cameroon's stage of development, which revealed a lack of native expertise in e-banking technologies. The lack of skilled local professionals in advanced modern technology results in a reliance on expensive foreign expertise.

Shortage of IT training courses

Several bank managers complained that courses were too short, were not sufficiently advanced and covered only the basics of computer literacy, and that they were not always held at a convenient time which meant that it was not always possible for them to attend these courses.

4.3 Findings from the Customers' Questionnaires

Response rate

The researcher's expectation was to get responses from 100 customers of each of the seven banks surveyed. This would constitute a total of 700 customer responses. However, the total number of usable responses was 511, which represented 73% of the total. The responses collected from each bank are shown in Table 4.3 below.

Table 4.3: Responses from the banks

BANK	**Number of completed questionnaires**
AFRILAND FIRST BANK	89
ECOBANK CAMEROON	72
SGBC	51
BICEC	84
CBC	78
STANDARD CHARTERED BANK OF CAMEROON	69
UBA	68
TOTAL	**511**

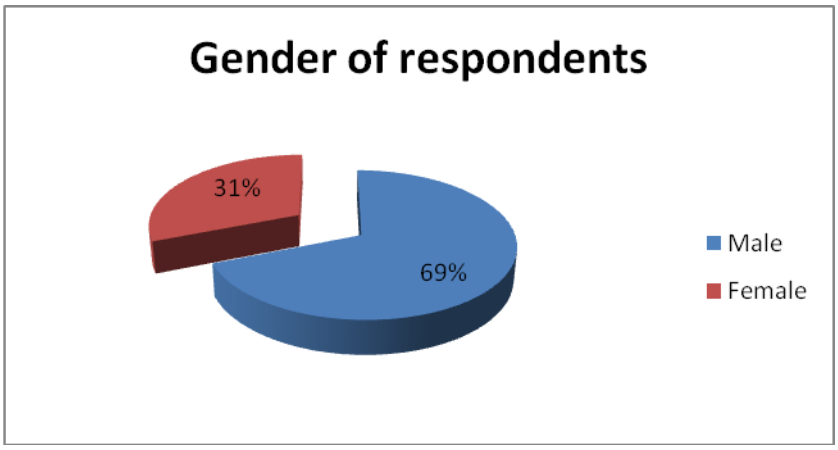
4.3.1 Descriptive analysis of demographic characteristics

This section of the sub-chapter presents the results in relation to gender, age, income, level of education and occupation.

GENDER

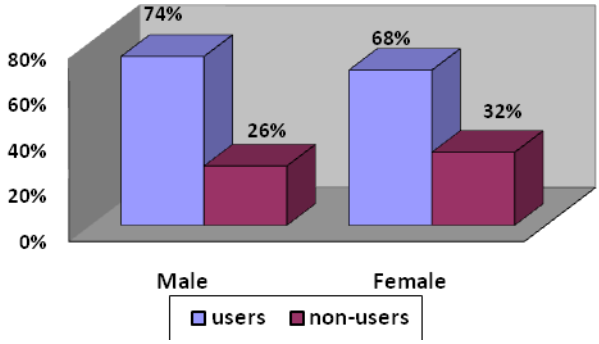
Figure 4.1 below presents the responses according to gender. 69% of the respondents were male and 31% were female, which is two-thirds and one-third of the sample respectively. This could be a rough indication that in Cameroon, males use banking services more than females.

Figure 4.1: Gender of respondents



figure,4.2 below shows the responses of users and non-users of e-banking according to gender.

Figure 4.2: Gender of e-banking users and non-users



Based on the above, it appears that there are slightly more male users of e-banking than female users. However, it is not easy to conclude that gender has a significant impact on e-banking adoption. Later in this chapter, the chi-square test was used to determine whether or not gender influences the adoption of e-banking.

Age

Figure 4.3 below shows the responses according to age. 45% of the respondents were 26-35 years old, while customers older than 50 years old represented only 9% of the respondents. On the basis of this figure, one can conclude that the majority of bank customers are young.

Figure 4.3: Age of respondents

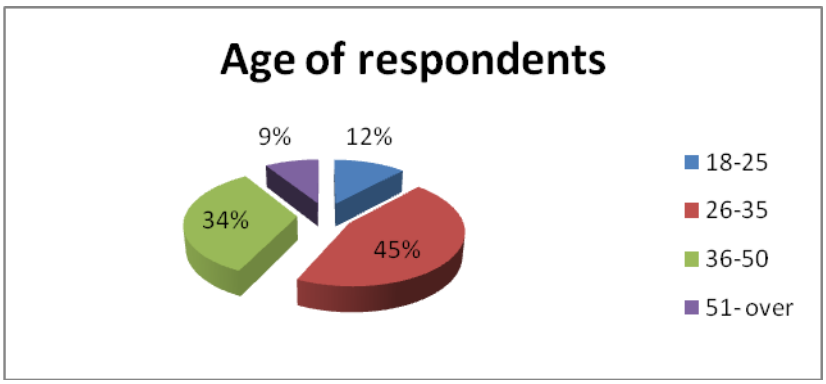


Figure 4.4 below shows the responses of users and non-users of e-banking according to age.

Figure 4.4: Age of e-banking users and non-users

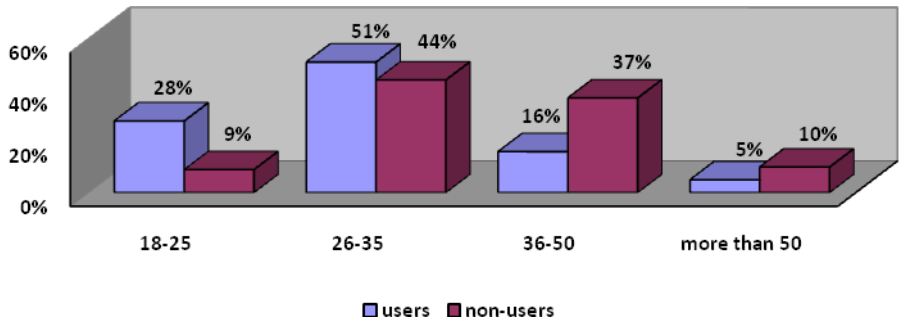


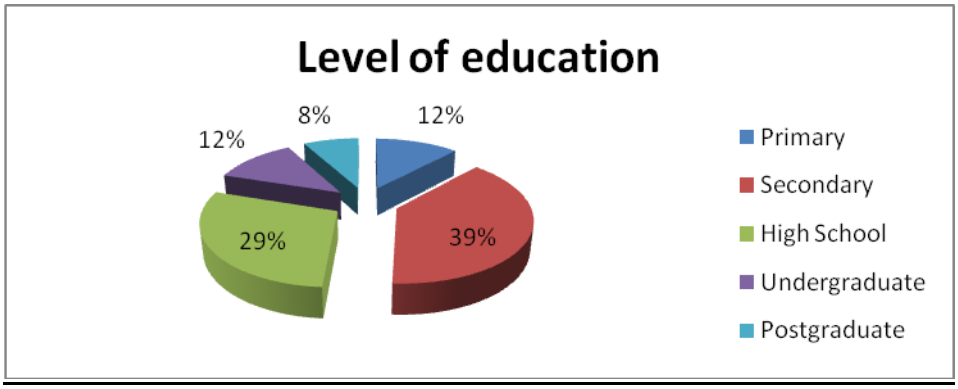
Figure 4.4 above shows that the majority of users (51%) are relatively young, which suggests that young people are more likely to adopt e-banking than older people. The frequency of users between the ages of 18 and 35 is higher than the frequency of non-users, while from 36 years and older, the frequency of users is lower than the frequency of non-users. Later in this chapter, the chi-square test was used to determine the significance of this finding. Nevertheless, this finding is consistent with the observation by Paddachi *et al*. (2005) that the younger the generation, the greater the likelihood that they will be used to new technological advancements, as compared to the older generation. Thus, young people are more likely to adopt e-banking than the older population.

Level of Education

Figure 4.5 below shows the responses according to level of education. One can see that 80% of the respondents have primary and secondary school education to a maximum of high school level, while only 20% have at least a university level (undergraduate and postgraduate) of education. From the

figure above, it is apparent that nearly 90% of bank customers have a secondary and higher level of education.

Figure 4.5: Level of education of respondents



The analysis of users and non-users of e-banking according to the level of education is presented in Figures 4.6 and 4.7 below.

Figure 4.6: Responses of users and non-users of e-banking according to level of education (below university level)

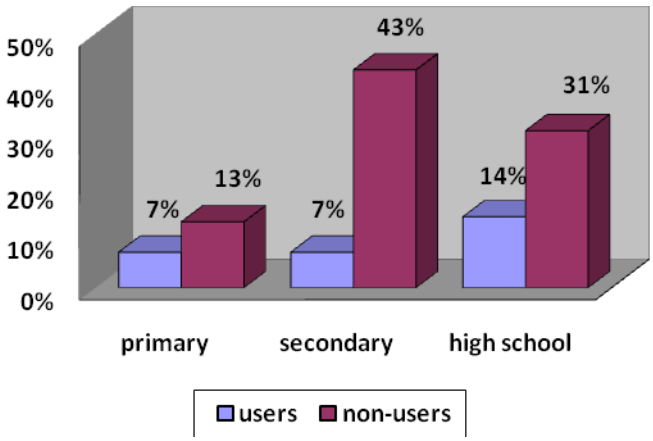
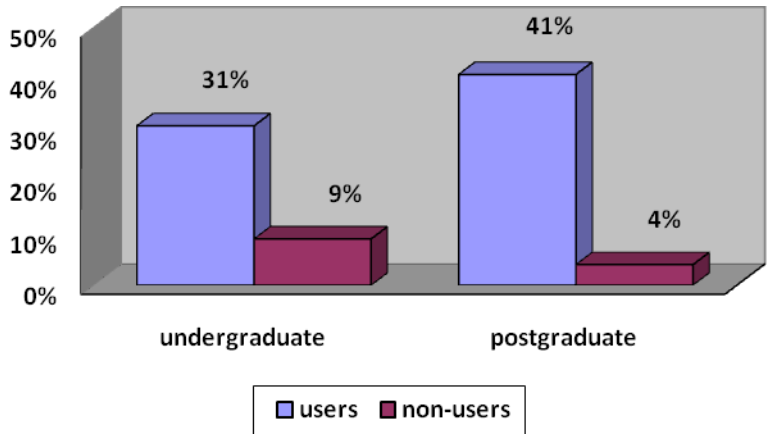


Figure 4.7: Responses of users and non-users of e-banking according to level of education (university level)



One can observe in both figures 4.6 and 4.7 that from primary to high school level (below the university level), non-users of e-banking are dominant. However, from undergraduate level upwards (university level), users of e-banking are far more dominant than non-users. This shows that there is a positive relationship between the level of education and the use of e-banking. The more educated one is, the more one is e-banking. This finding is consistent with the observation by Paddachi*et al*. (2005) that the higher the education level attained, the greater the probability of the customer adopting Internet banking. However, the significance of this relationship will be tested later in this chapter using the chi-square test.

Monthly income

Figure 4.8 below shows the monthly income of respondents. The greater number of respondents earn between 250 000 and 500 000 FCFA.

Figure 4.8: Distribution of respondents' incomes

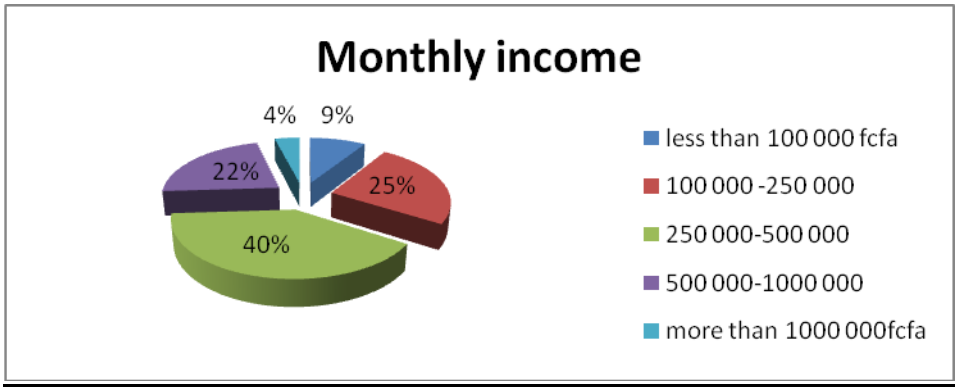


Figure 4.9 below shows the distribution of users and non-users of e-banking according to monthly income.

Figure 4.9: Distribution of users and non-users of e-banking by income

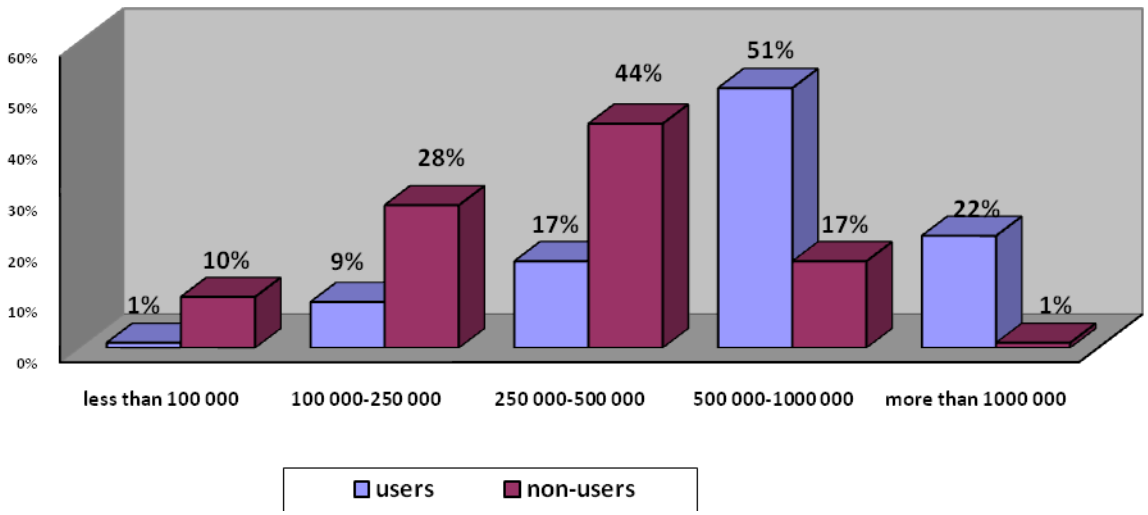


Figure 4.9 above illustrates the income disparity between users and non-users and indicates that monthly income seems to be a major factor affecting the use of e-banking. This follows an inverted U or Bell-curve (non-users on the right side) distribution i.e. concentration in the middle of graph. On the

non-users' side, the peak is at the interval CFAF 250 000 to 500 000 fcfa, while on the users' side, the peak is at the interval CFAF 500 000-1000 000, which means that users earn more than non-users. People earning higher salaries are therefore more likely to adopt e-banking than people earning less.

In Cameroon, lower income earners are mostly civil servants, while higher income earners are mostly those employed in the private sector. It is important for high income earners to use e-banking because of the size of transactions involved and the convenience afforded by e-banking. A survey conducted by Karjaluoto (2002) in Finland showed that income has a major effect on the adoption of e-banking, as users were found to have much higher incomes than non-users. Paddachi*et al*. (2005) similarly observed that the higher the income level, the more affluent the people and the more likely they are to possess a personal computer, and thus to use e-banking.

Occupation

Figure 4.10 below shows that the majority of sampled respondents were employed in the private sector.

Figure 4.10: Occupation of respondents

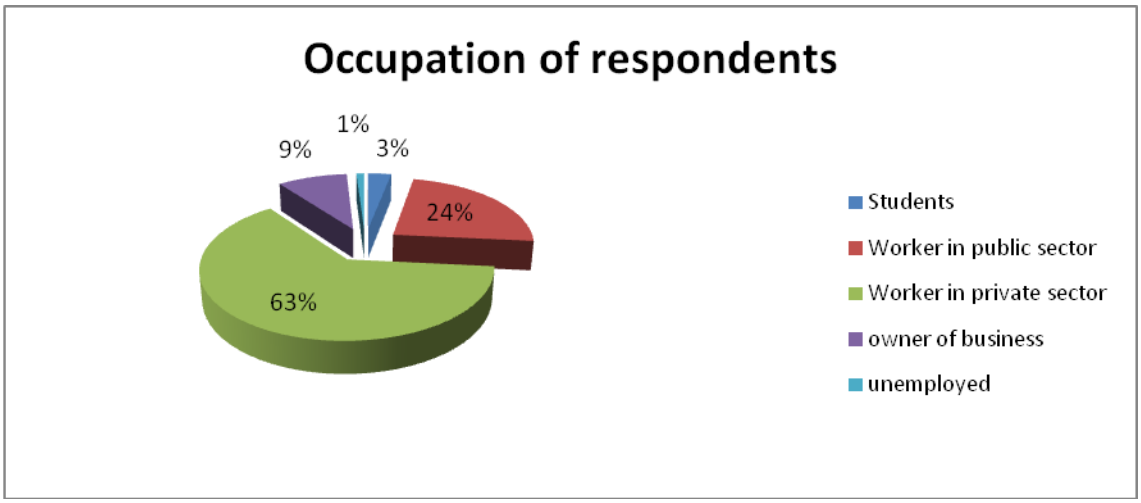


Figure 4.11 and Figure 4.12 below show that those working either in the private sector or in the public sector are more likely to use e-banking than others. Karjaluoto (2002) observed that those who use online services are well educated and have better occupations than non-users.

Figure 4.11: Distribution of users and non-users according to occupation

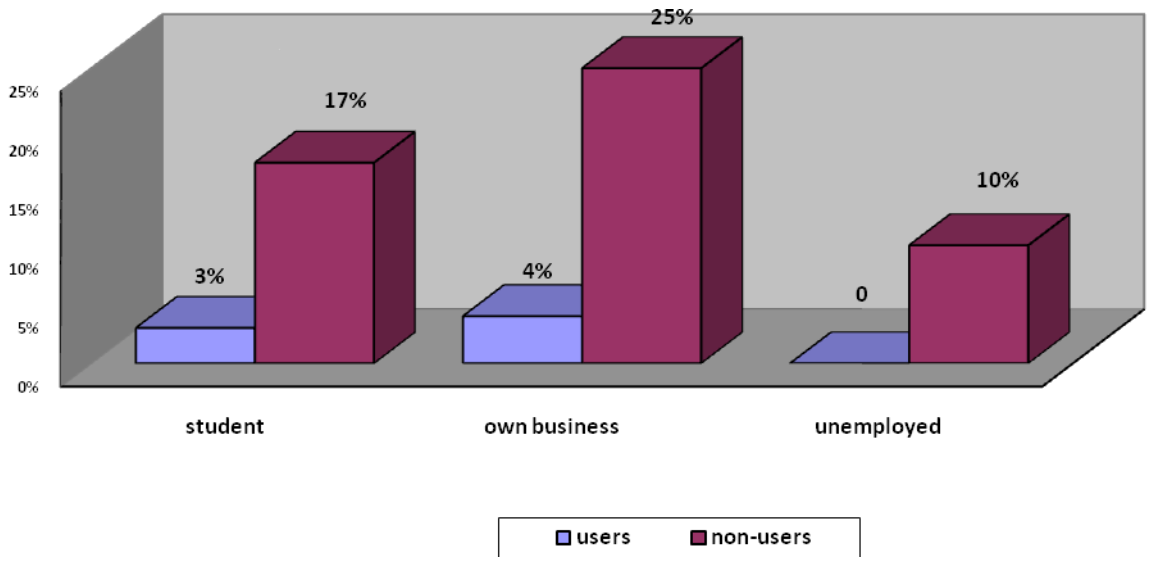
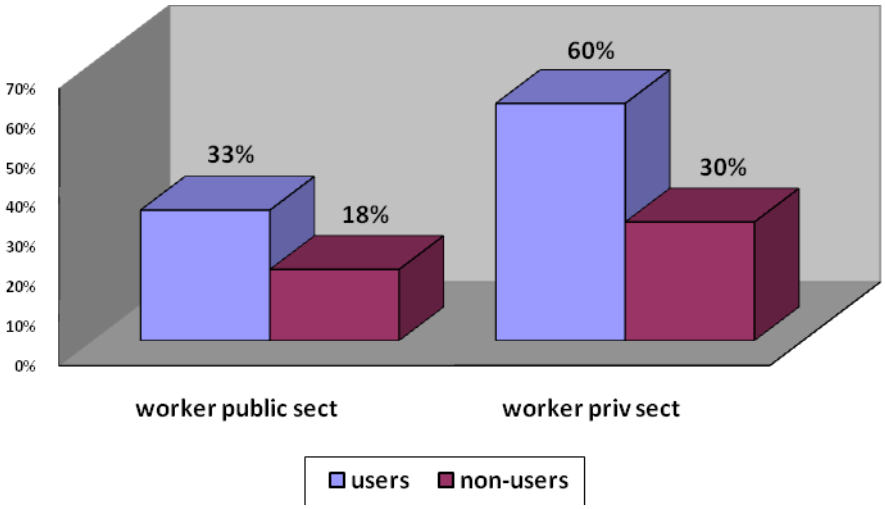


Figure 4.12: Distribution of users and non-users according to occupation (workers)

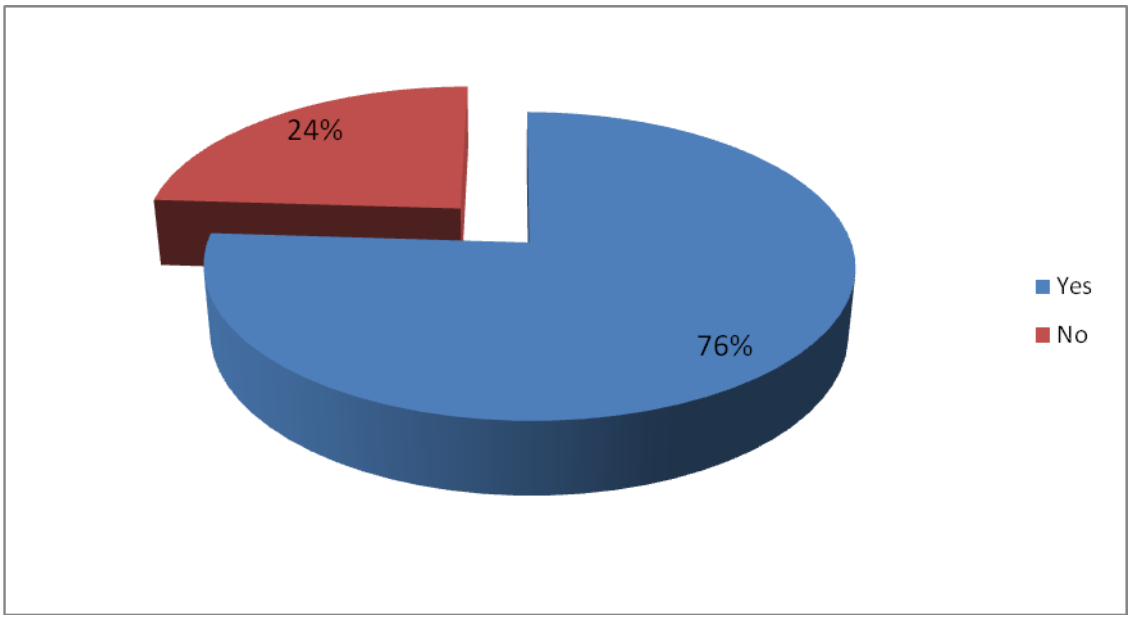


4.3.2 Analysis of Responses

Computer usage

Figure 4.13 below shows that over two-thirds of the respondents use a computer. This is an indication that the majority of the respondents are computer literate, perhaps not expert but at least able to understand the basics. Therefore, the environment is favourable for adopting e-banking.

Figure 4.13: Computer Usage



The place where they learnt to use a computer

From table 4.4 below, one can observe that respondents learn to use the computer at home (38%), in specialised centres (28.7%) where they have a teacher, at school (20.5%) and at work (12.8%). It would seem there are no barriers to becoming computer literate in Cameroon.

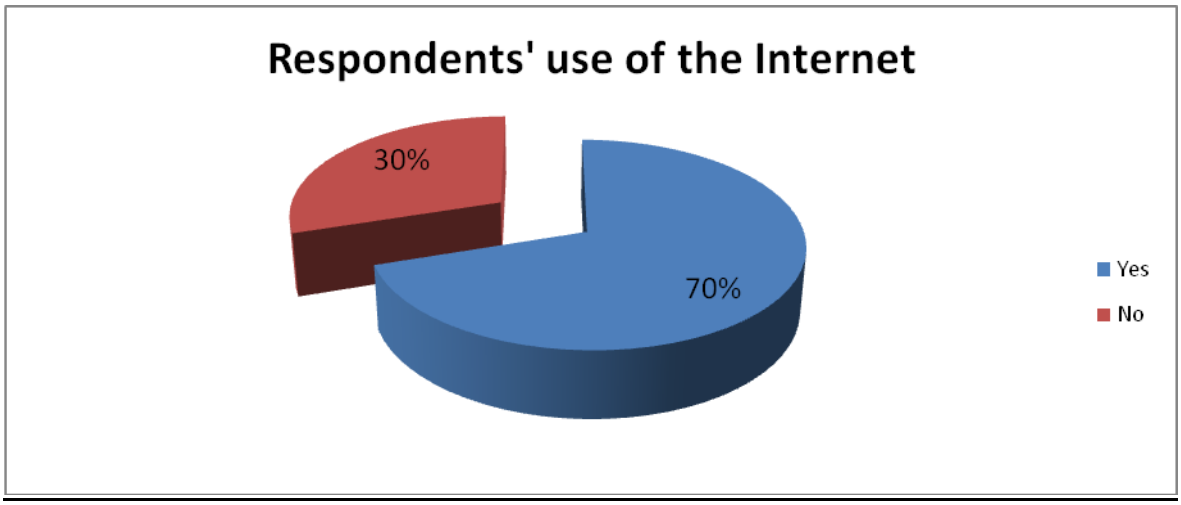
Table 4.4: Place where they learned how to use a computer

Place where they learned to use a computer	Percentage
School	20.5
Home	38.0
Specialised centre	28.7
Work	12.8

Respondents' use of the Internet

Figure 4.14 below shows that 70% (357) of respondents use the Internet, while 30% (154) do not. Thus, there is a high usage of the Internet among respondents, which is almost equal to the usage of computers (76%). Ordinarily, this should translate into a high usage of e-banking. However, consumer perceptions and attitudes can also play a role in the use of a product or service. According to Davis (1989), consumers' perceptions of technological innovations such as e-banking may not only be influenced by their socio-economic and demographic characteristics, but also by their perceptions of specific technologies and the characteristics of different products and services.

Figure 4.14: Respondents' use of the Internet



The place where they use the Internet

Table 4.5 below shows the different places where respondents use the Internet. Most of the respondents using the Internet are doing so in Internet cafés (44%), at work (32%), at home (21%), and in other places (3%).

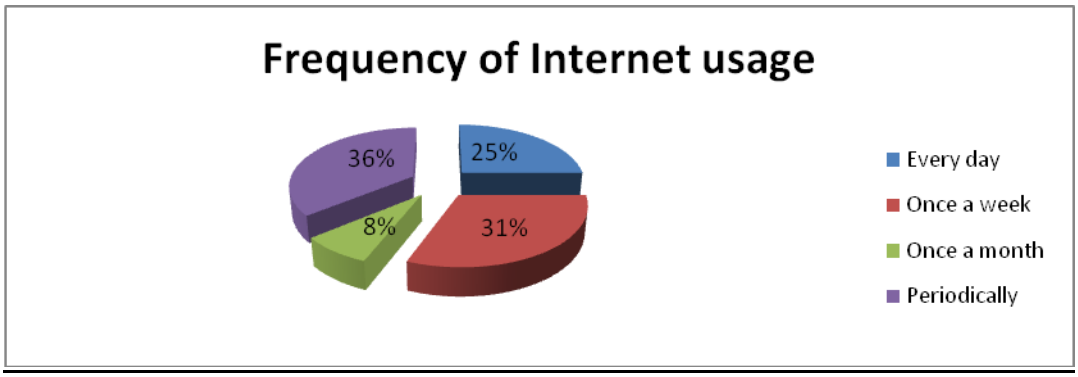
Table 4.5: Places where respondents use the Internet

Places where they use the Internet	Percentage
Home	21%
Workplace	32%
Internet café	44%
Other places	3%

Frequency of Internet usage

Figure 4.15 below shows how often respondents consult the Internet for anything, not necessarily e-banking. A quarter of the respondents (25%) use the Internet every day, while a third (31%) use it once every week, 8% once every month, and 36% at other times (periodically).

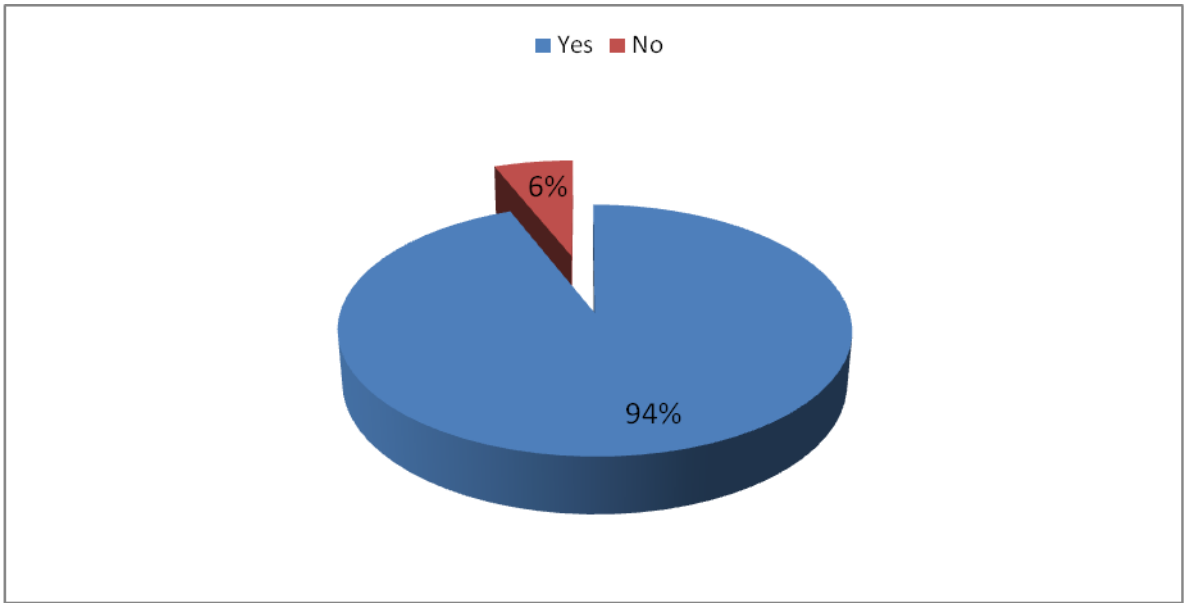
Figure 4.15: Internet usage frequency



Possession rate of mobile phones

Mobile phones are now a channel for electronic banking and therefore the usage alone is a reliable indicator of having a tool for e-banking. Figure 4.16 below shows the possession rate of mobile phones among the respondents. One can observe that almost all respondents possess a mobile phone (94%), while only a few of them (6%) do not. This means that it is quite easy to obtain a mobile phone in the country. The high usage of mobile phones is conducive to the adoption of mobile phone banking by banks. However, it remains to be seen whether banks and their customers will leverage mobile phones for e-banking. The next sub-section examines actual e-banking usage.

Figure 4.16: Possession rate of mobile phones



4.3.3 Electronic banking usage

This sub-section examines the actual knowledge of e-banking among respondents, the source of such knowledge, and the proportion of respondents who actually use e-banking. The researcher also examines factors which block and encourage the adoption and use of e-banking.

Knowledge of e-banking among respondents

Figure 4.17 below shows the level of knowledge with regard to e-banking. Most respondents know of the existence of e-banking in the country, as over 80% indicated their awareness of it.

Figure 4.17: Percentage of respondents with knowledge of e-banking

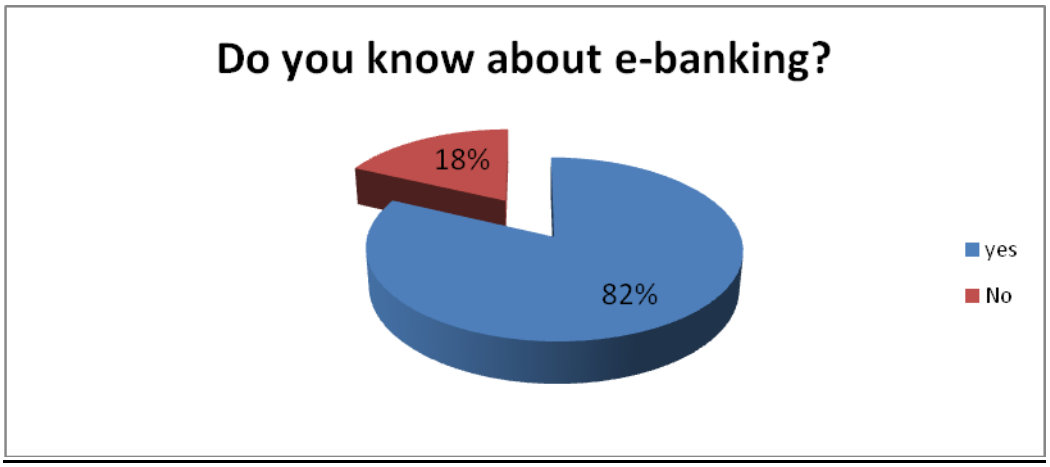


Table 4.6 below indicates where they heard about e-banking.

Table 4.6: Source of knowledge on e-banking

Place	Percentage
TV, radio and newspaper	12%
Internet	31%
Bank branch	42%
Friends	9%
Others	6%

It is evident that the bank branch (42%) is the most effective means of promoting e-banking, followed by the Internet (31%), television, radio, and newspapers (12%), friends (9%), and other media (6%). Figure 4.18 below shows the level of use of e-banking, which is only 14%. While many respondents know about e-banking, they do not use it, perhaps for reasons that is discusses later in this chapter.

Figure 4.18: Percentage of e-banking users

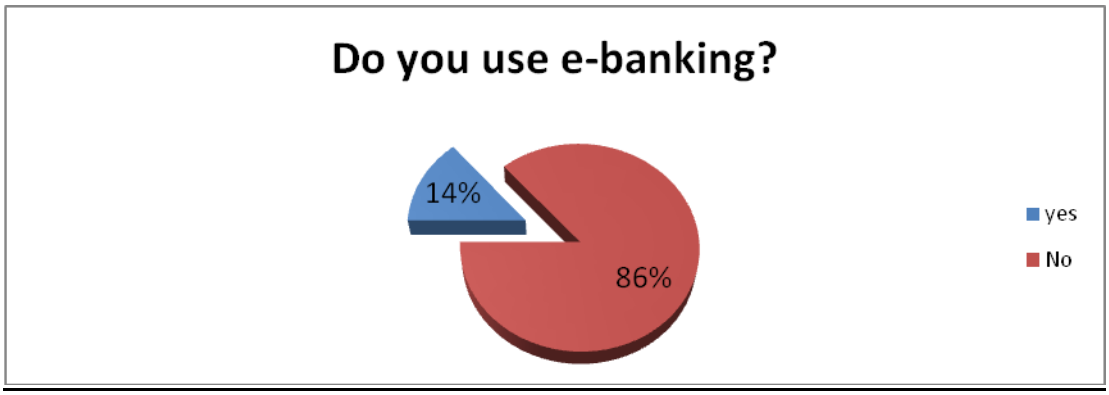


Table 4.7 below indicates the usage of the different e-banking services in the country.

Table 4.7: Usage of different e-banking services

E-banking services	Percentage
ATMs	38%
Phone Banking	13%
Internet Banking	27%
Electronic Fund Transfer	6%
SMSBanking	16%
Total	**100%**

Most respondents use ATMs (38%), followed by Internet banking (27%), SMS banking (16%), phone banking (13%) and finally electronic fund transfer (7%). Nasri (2011) found that in Tunisia, the services that are offered are ATMs, phone banking, Internet banking, and SMS banking. The findings are

consistent with the observations made by Foon and Fah (2010) in their study which was conducted in Malaysia.

Factors hindering the use of e-banking

The respondents who do not use Internet banking (441) gave the following reasons for not using this facility, as shown in table 4.8 below. A total of 134 (30%) respondents indicated that they do not trust e-banking services; 92 respondents have not heard about e-banking services; 38 (9%) respondents do not know how to use the services or the tools linked to that service, such as computers; 58 (12%) feel that there is no security in e-banking, 60 (14%) believe that e-banking is not easily accessible, 42 (10%) feel that the cost of the Internet is too high, and 17 (4%) are of the view that they do not need e-banking. This is more or less consistent with Nasri's (2011) observation that the principal reasons preventing customers from adopting e-banking in Tunisia are lack of knowledge, the weak level of security, ethical considerations, lack of trust, and accessibility.

Table 4.8: Factors hindering the use of e-banking

Factors	Yes	Percentage saying Yes (%)
Lack of trust	134	30%
Lack of knowledge	38	09%
Accessibility	60	14%
High cost of the Internet	42	10%
No need	17	04%
Not heard about it	92	21%
Security	58	12%
TOTAL	**441**	**100%**

Factors encouraging the use of e-banking

As shown in table 4.9 below, a total of 104 (17%) respondents indicated that they would like free access to the Internet, 134 (23%) indicated that they would like to be trained on how to use electronic services, 98 (17%) would like the cost to be reduced, 159 (27%) would like the security to be enhanced, and 92 (16%) would like the service quality to be improved. In general, most of the respondents had one or more things that, if changed, might encourage them to use e-banking services. Wu (2009), in his research in South Africa, found that factors which can encourage the use of e-banking are free skills training, enhanced security, and more communication about e-banking.

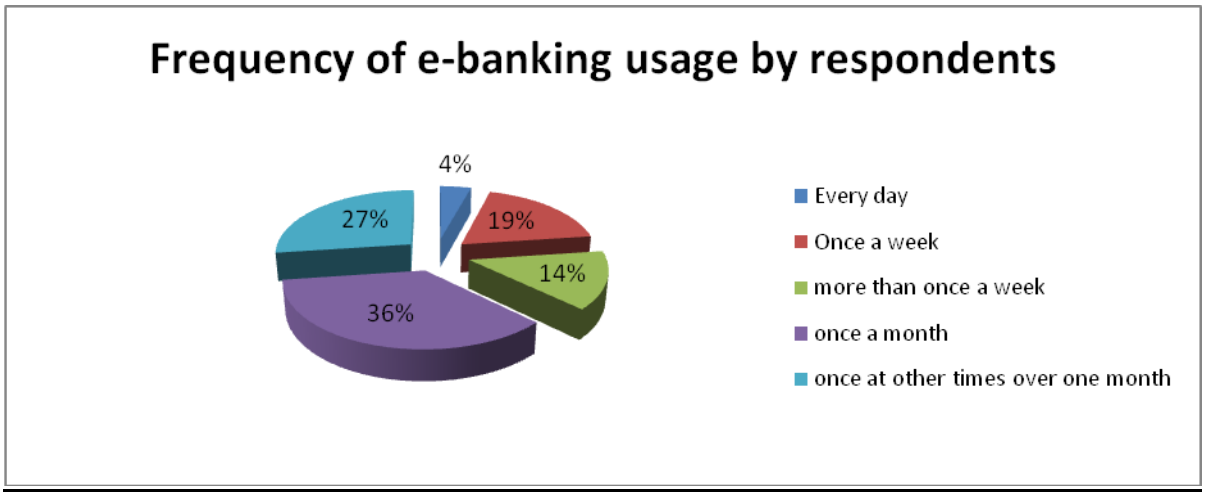
Table 4.9: Factors encouraging the use of e-banking

Factors	Yes	Percentage Saying Yes (%)
Free Internet access	104	17%
Free skills training	134	23%
Reduction of cost	98	17%
Enhanced security	159	27%
Improved service quality	92	16%
TOTAL	**587**	**100%**

Frequency of e-banking usage by respondents

Figure 4.19 below illustrates the frequency of e-banking usage by respondents. Most respondents (36%) use e-banking once a month; some (27%) use it infrequently (19); some (19%) use it about once a week; some (14%) more than once a week; and only a few respondents (4%) use it every day. Research conducted in South Africa by Wu (2009) found that 31% of respondents use e-banking services once a week, 45% use it more than two times a week, 10% once a month, 13% daily, and 1% use it infrequently. This indicates that in Cameroon, people do not use e-banking services very often.

Figure 4.19: E-banking usage frequency



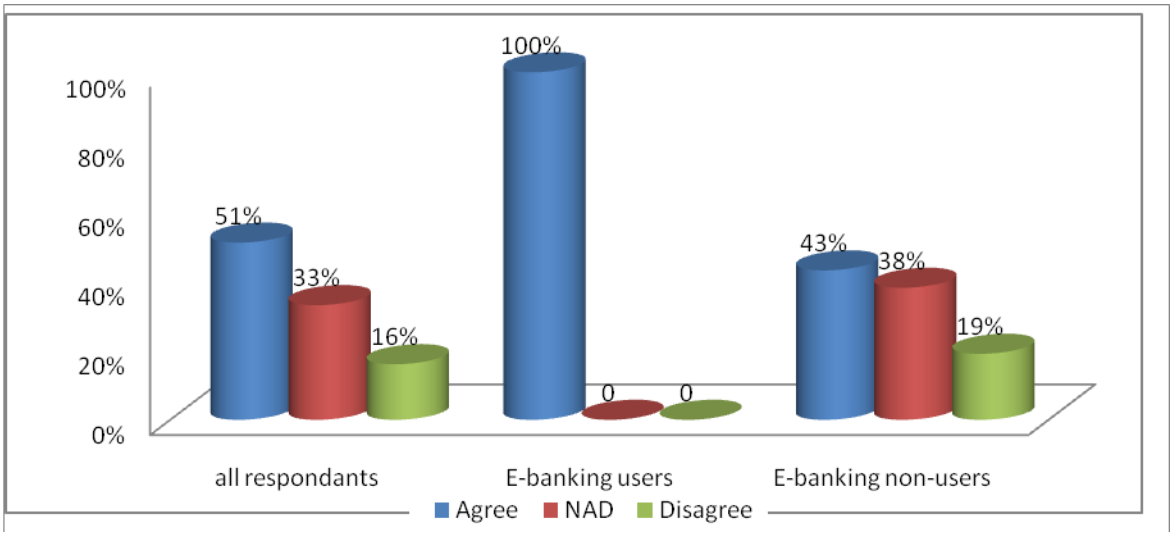
4.3.4: Perception of e-banking

The following sub-sections report on responses to questions concerning attitudes and perceptions towards Internet banking. These were collected through questions in the form of a Likert scale, where responses ranged from strongly agree to strongly disagree.

Does e-banking save time?

In order to achieve a better understanding of the responses, the researcher grouped the Likert scale questions into 3 groups (Agree, Neither Agree nor Disagree (NAD) and Disagree). Figure 4.20 below shows that 51% of the respondents agreed that e-banking is much better than traditional banking because of the time that it saves. Previous research by Fox (2006) supports this finding, suggesting that consumers may be motivated to use some e-banking facilities because they can save time by not having to visit a branch and wait in a long queue. This is a very important motivation for using Internet banking. Figure 4.20 also shows that 43% of non-users agreed that e-banking can be time-saving, while all the users agreed that e-banking is time-saving.

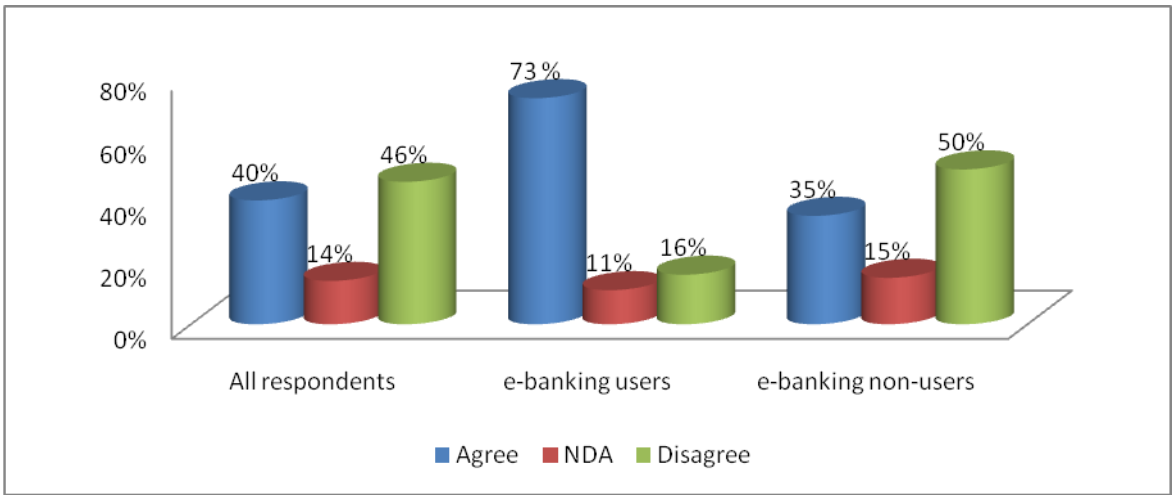
Figure 4.20: E-banking saves time



Is e-banking better than branch banking?

Figure 4.21 below shows that 40% of the respondents agreed that e-banking is much better than traditional banking. Figure 4.21 also shows that 73% of users agreed that e-banking is better than branch banking, while 35% of non-users agreed. This result is in accordance with previous research. Marhana (2012) observed that consumers may view e-banking as better than branch banking because it saves time, reduces transfer costs, and transactions can be carried out from home.

Figure 4.21: E-banking is better than branch banking

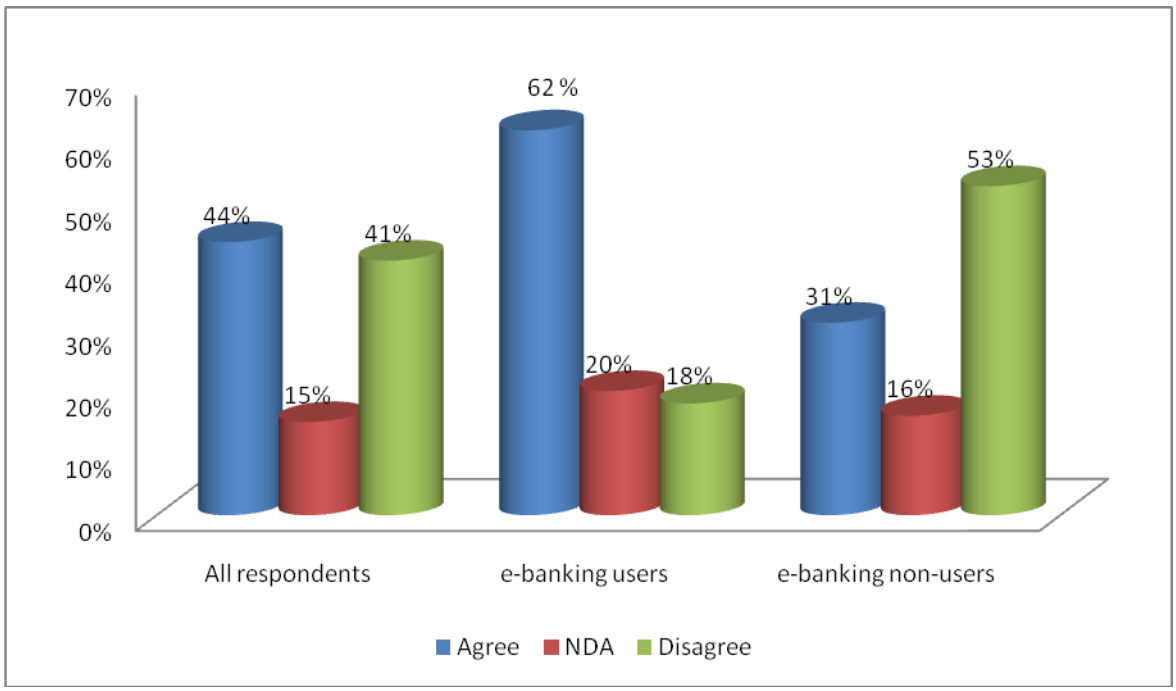


The compatibility of e-banking

Does e-banking suit your lifestyle?

This question probed customer perceptions regarding the impact that Internet banking has on lifestyles and the influence that this has on willingness to use Internet banking. Figure 4.22 below shows that 44% of the respondents agreed that Internet banking suits their lifestyle. It also shows that 62% of users agreed, whereas 31% of non-users agreed that Internet banking suits their lifestyle. On the non-users' side, there were 53% who disagreed, whereas on the users' side, only 18% disagreed.

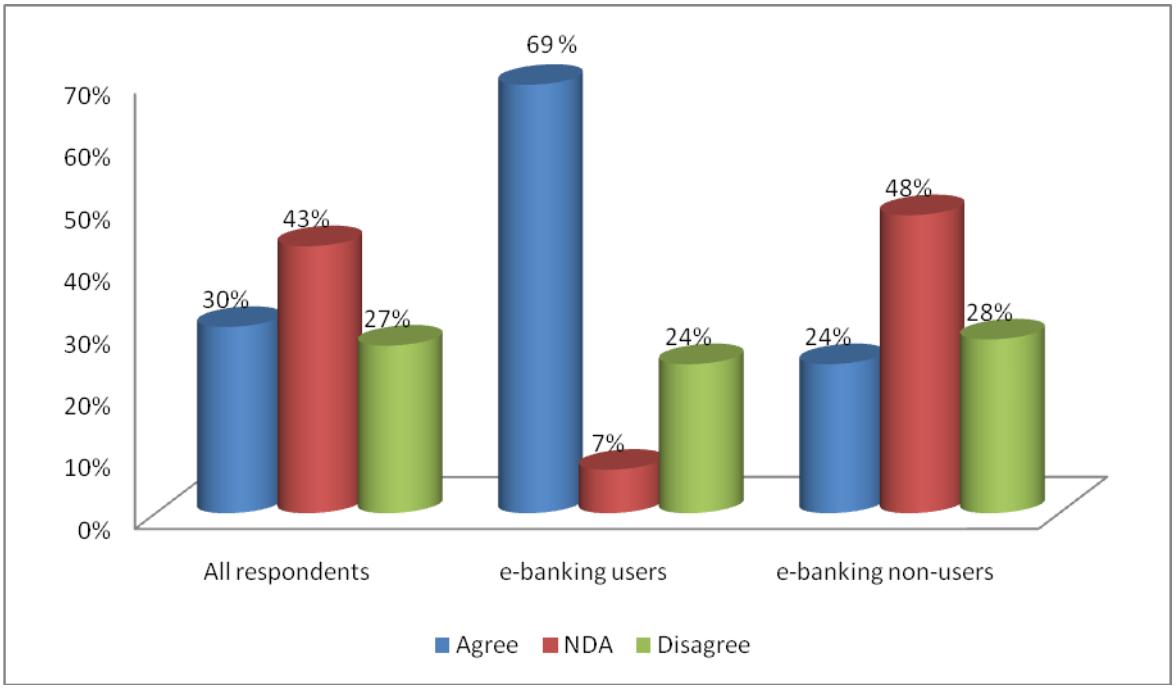
Figure 4.22: E-banking suits your lifestyle



Does e-banking make banking more convenient?

This question aimed to determine if Internet banking is perceived to be convenient by the respondents and whether or not this influences its usage. Figure 4.23 below shows that a total of 30% of respondents agreed that Internet banking makes banking more convenient. As can also be seen, 69% of users agreed, while 24% of non-users agreed that Internet banking makes banking more convenient. In addition, most of the non-users were neutral (neither agreed nor disagreed). Research conducted in Estonia by Kerem (2001) found that the most important factors in adoption of Internet banking are, first and foremost, better access to banking services (convenience).

Figure 4.23: E-banking makes banking more convenient



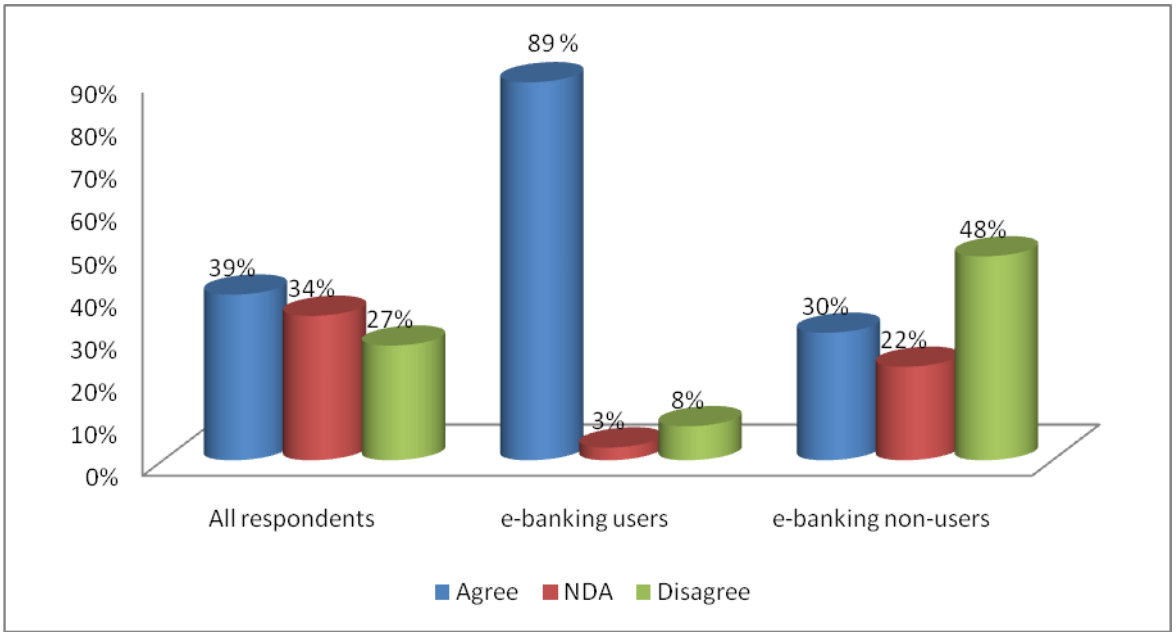
The complexity of e-banking

Are e-banking services easy to use?

Figure 4.24 below shows that 39% of all the respondents agreed that e-banking is easy to use, while only 27% disagreed. On the other hand, 89% of users agreed that e-banking is easy to use, while 30% of non-users thought that e-banking would be easy to use. Most of the non-users did not consider e-banking to be very easy to use.

The perceived cost of e-banking

Figure 4.24: E-banking is very easy to use

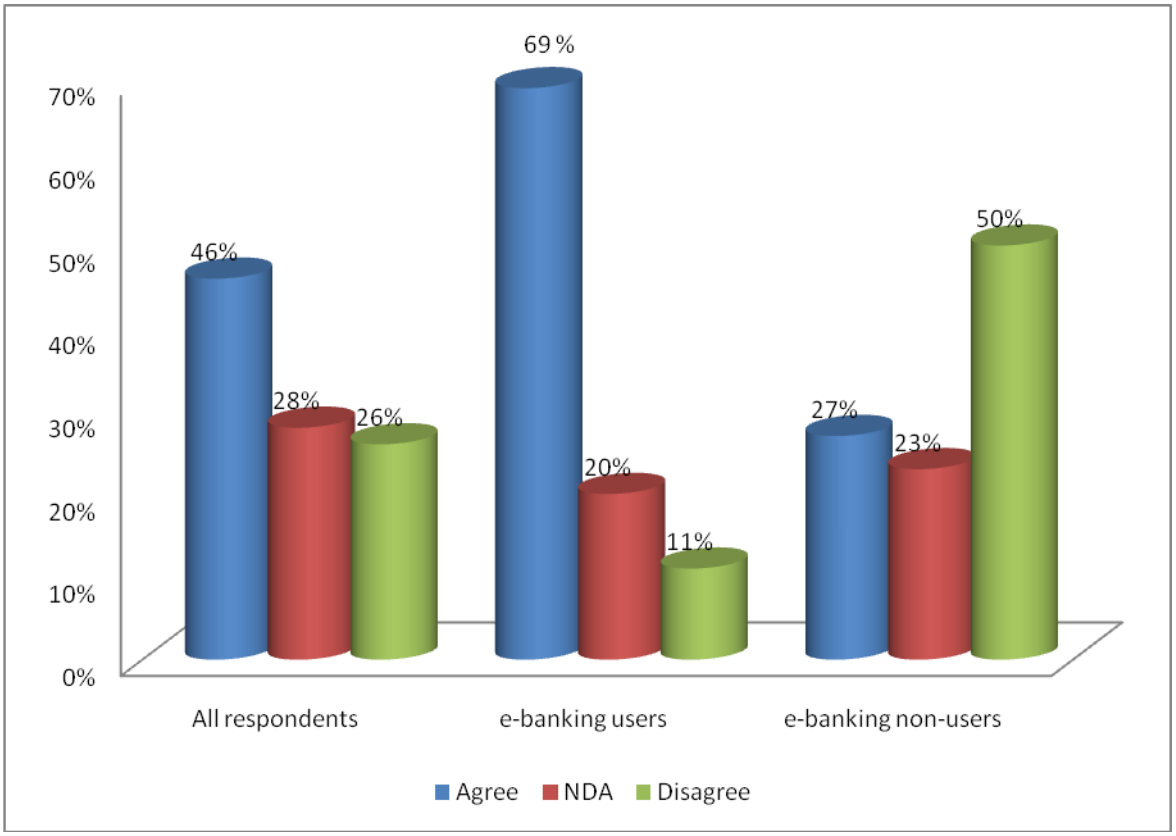


This is examined from two angles –the cost of using the Internet and the cost of utilising e-banking.

Is Internet use cheap?

Figure 4.25 below shows that a total of 46% of the respondents agreed that Internet use is very cheap, while 26% disagreed. A total of 89% of the users agreed that Internet use is very cheap, while only 27% of non-users had the same opinion. Half of the non-users and 11% of the users found the Internet not to be cheap to use.

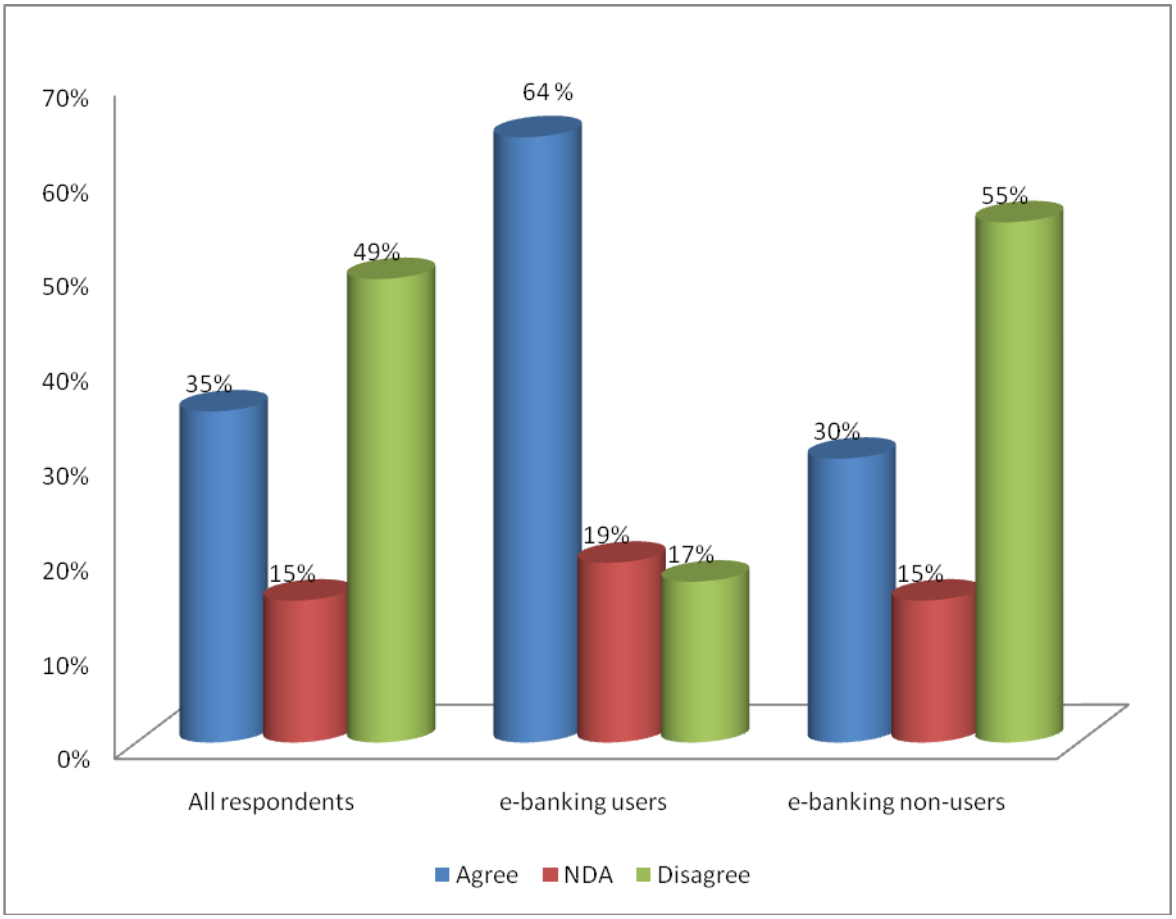
Figure 4.25: Internet usage is very cheap



Is e-banking cheap?

Research mentioned earlier shows that adoption will be driven by the perceived costs and benefits inherent to the particular innovation (Ching and Ellis, 2004:414). As shown in Figure 4.26 below, a total of 35% of the respondents agreed that e-banking is very cheap, while 49% did not. The figure also reveals that 64% of the users agreed that e-banking is very cheap, while 23% of the non-users agreed. Most non-users (55%) felt that the cost of e-banking is not cheap, while only a few users (17%) agreed with this.

Figure 4.26: E-banking usage is cheap

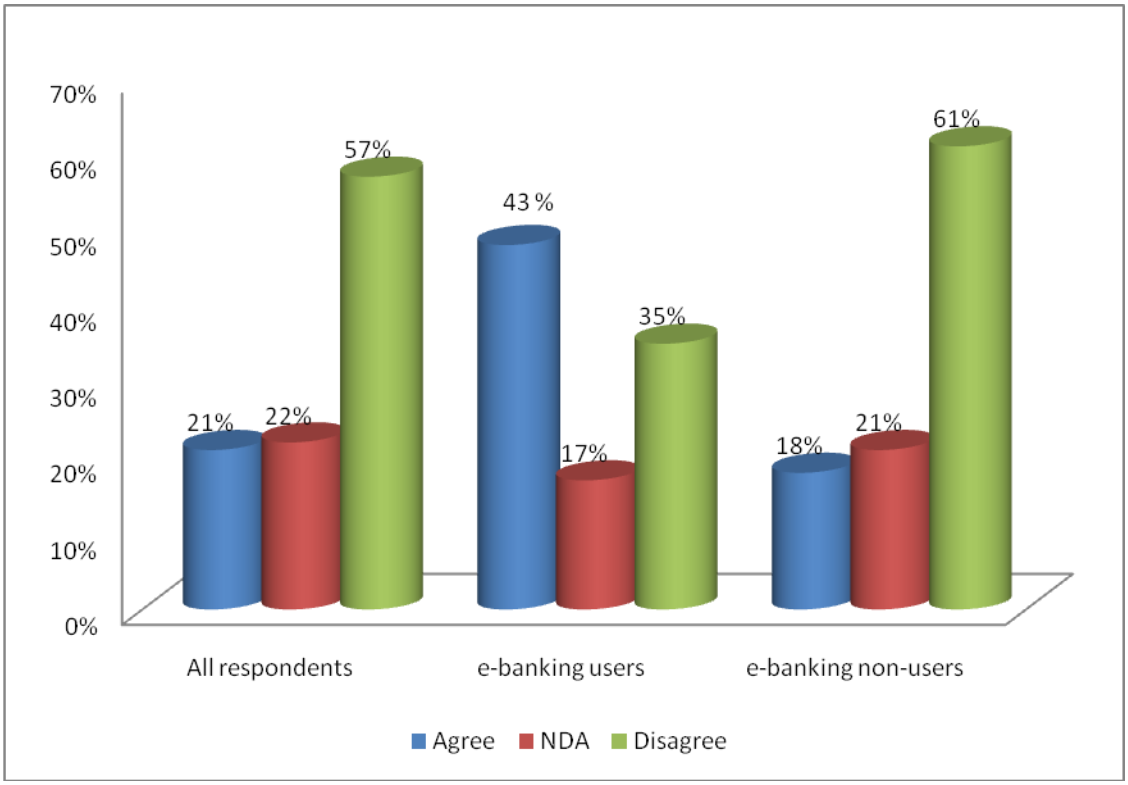


The perceived risks of e-banking

Is it safe to do transactions through e-banking services?

This question investigated consumer beliefs about the safety of e-banking. A total of 21% of the respondents believed that it is safe to bank online, while 57% did not. Figure 4.27 below shows that 48% of the users agreed that e-banking is very safe, but only 18 % of the non-users considered e-banking to be safe. The figure also reveals that 57% of the respondents do not think that banking online is safe. Surprisingly, 35% of users and 61% of non-users felt that e-banking is unsafe.

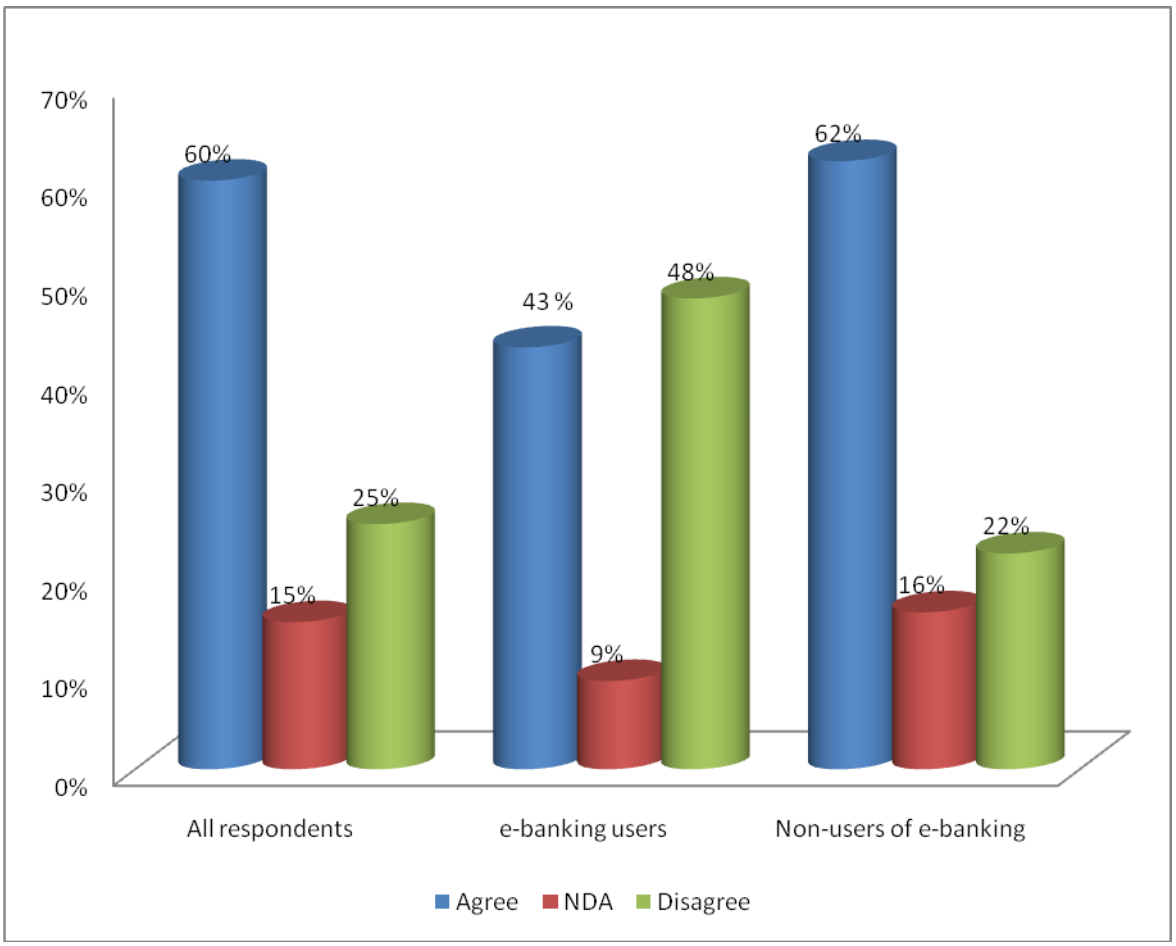
Figure 4.27: E-banking is very safe



Is banking at the branch safer than banking via the Internet?

A total of 60% of the respondents believed that banking at the branch is safer than Internet banking, while 25% of them did not. Figure 4.28 below shows that users (43%) agreed that banking at the branch is safer than Internet banking, while non-users (62 %) agreed that banking at the branch is safer than Internet banking. On the users' side, it was found that 48% of them did not agree that banking at the branch is safer than online banking, while 22% of non-users had the same opinion.

Figure 4.28: Banking at the branch is safer than via the Internet

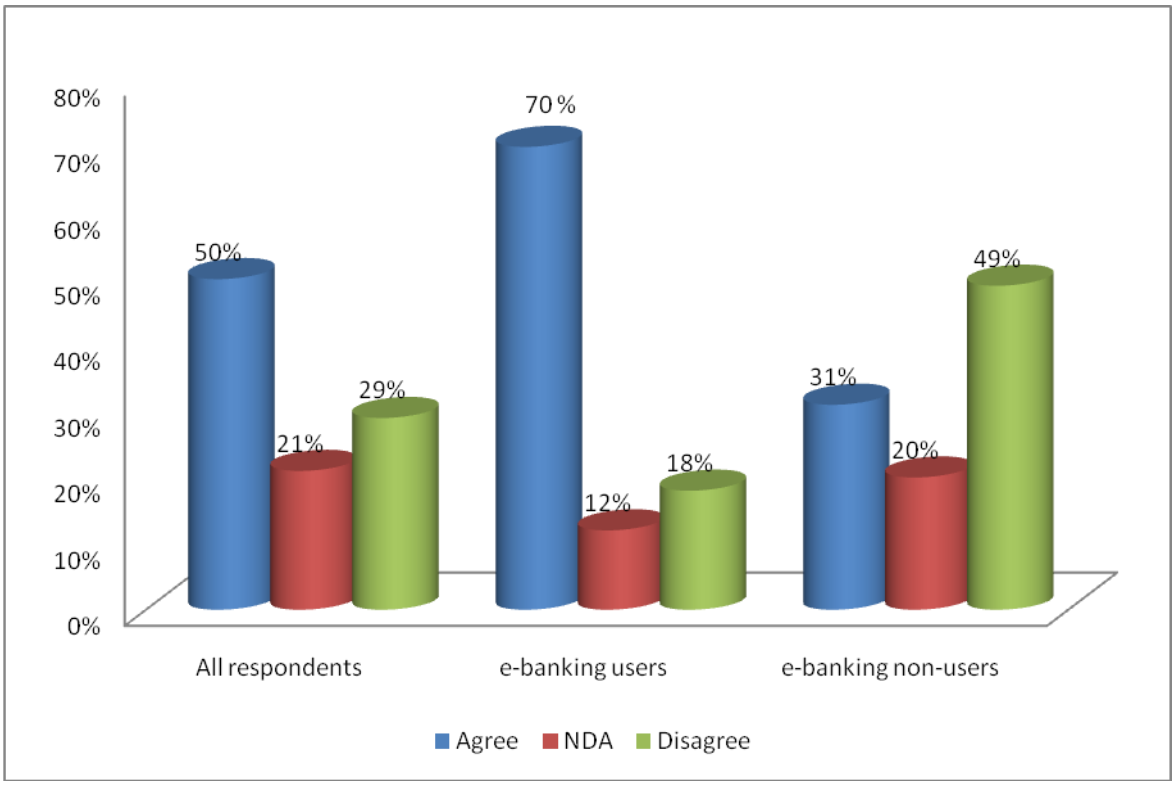


Social influences on the decision to adopt e-banking

Does the family influence the decision to adopt e-banking?

Figure 4.29 below shows that 50 % of all respondents agreed that their decision to adopt e-banking is influenced by their family, while 29% of them disagreed. A total of 70% of the users and 31% of the non-users agreed that their family influenced them with regard to their decision to adopt e-banking. On the other hand, 18% of users and 49% of non-users did not feel that the family had an influence on their decision to adopt e-banking.

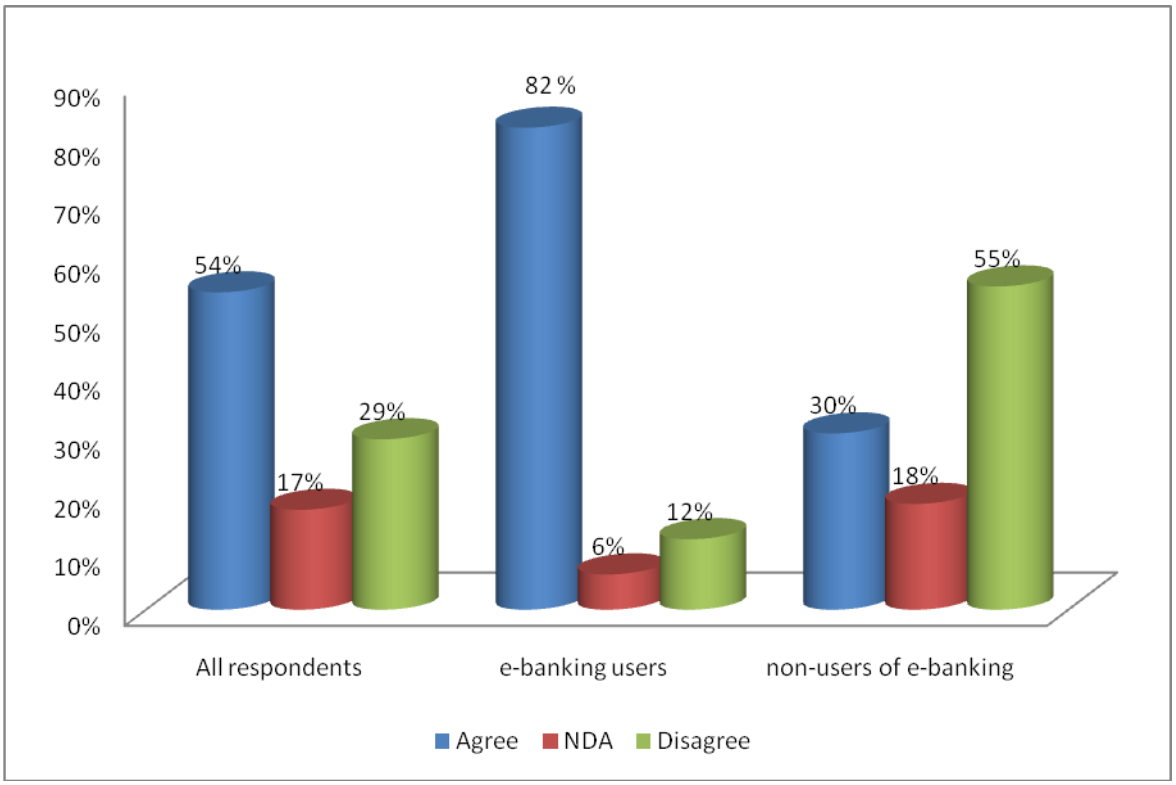
Figure 4.29: Family influence on the decision to adopt e-banking



Do friends and colleagues influence the use of e-banking?

Figure 4.30 below shows that 54 % of the respondents agreed that friends and colleagues influence their attitude towards the adoption of e-banking. Most of the users (82%) and 49 % of non-users agreed that friends and colleagues can influence their attitude towards adopting e-banking. This result is consistent with previous research (Yuan et al., 2010; Aslam *et al*., 2011) on the way in which friends and colleagues influence an individual's adoption of e-banking. Users are more likely to be influenced by friends and colleagues than non-users. This assertion will be tested later in this chapter.

Figure 4.30: Friends and colleagues' influence on the decision to adopt e-banking



4.4 Hypothesis testing using non-parametric tests

To determine the relationship between e-banking adoption and variables such as demographic characteristics, customer perceptions of e-banking and social influences on e-banking adoption, the researcher used two types of tests, namely the Mann-Whitney U test and the Chi-square test.

The Chi-square test was used to determine the significance of the relationship between e-banking adoption and demographic variables, completed by Phi for the 2*2 contingency table and Cramer's V test for the other contingency table, in order to show the strength of that relationship. On the other hand, the Mann-Whitney U test was used to compare the means of two groups of cases to test whether or not the means of one variable in the two groups of respondents is significantly different. In particular, the Mann-

Whitney U test was used to analyse perceptions regarding the use of e-banking between users and non-users.

TESTING HYPOTHESIS H1: THERE IS A RELATIONSHIP BETWEEN CUSTOMERS' DEMOGRAPHIC CHARACTERISTICS AND THE ADOPTION OF E-BANKING.

Gender

The cross-tabulation (Table 4.10) presented below shows the usage of e-banking according to gender. It can be noted that most of the users were male (74%). The p-value of the Chi square test is 0.032, which is less than 0.05 (Table 4.11). This implies that the Chi-square is significant and that there is a relationship between gender and the adoption of e-banking. The results therefore point to an acceptance of the hypothesis that gender influences the adoption of e-banking.The Chi-square test shows there is a relationship between gender and the adoption of e-banking, but in order to show the strength of that relationship, one has to interpret the value of Phi, which is 0.04, as seen in Table 4.11. The value of Phi=0.04, which is between -0.3 and 0.3, indicates that there is some association between gender and the adoption of e-banking. Gender therefore does have an impact on the use of e-banking. This conclusion is consistent with research by Hill (2004), who also found that gender influences the adoption of e-banking, and with the study by Khalil and Pearson (2007) in Tunisia, which found that fewer women engaged in Internet banking than men. Chen and Wellman (2004) focused on Internet banking usage in China, Germany, Korea, Italy, Japan, Mexico, UK, and USA, and found that men were more likely than women to use Internet banking.

Table 4.10: Cross-tabulation Chi-Square test – relationship between gender and the use of e-banking.

Gender	**e-banking usage Yes**	**e-banking usage No**	**Total**
Female			
Respondent Count	18	140	158
Expected Count	21.6	136.4	158
% Within Category	26%	34%	31%
Male			
Respondent Count	52	301	353
Expected Count	48.4	304.6	353
% Within Category	74%	66%	69%
Total:			
Respondent Count	70	441	511
% Within Category	13.7%	86.3%	100.0%

Table 4.11: Chi-Square Test – relationship between gender and the use of Internet banking

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-	1.029[a]	1	.032		
Continuity	.766	1	.038		
Likelihood Ratio	1.059	1	.003		
Fisher's Exact				.033	.019
Linear-by-Linear	1.027	1	.011		
N of Valid Cases	511				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.64.

b. Computed only for a 2x2 table

Age

The cross-tabulation in table 4.12 below shows the age distribution between the two different groups. The p-value of the Chi square test is 0.016, which is less than 0.05 (table 4.13), implies that it is significant and indicates that there is a relationship between age and the adoption of e-banking. The results therefore point to the acceptance of the hypothesis. In order to complete this result, it is necessary to interpret the Cramer's V value for this case, which is 0.2405 in the contingency table 4.13, and this value shows that there is a weak association between age and the use of e-banking. The data analysis suggests that age has an impact on the use of e-banking, and in the case of Cameroon, it has been noted that people in the age group from 26 to 35 years old are more likely to adopt e-banking, because this is the age group which makes most use of new technology. These findings are in line with previous studies, which found that most of the Internet banking subscribers belong to a younger generation and the chance of its adoption among older people is low (Wand *et al*., 2003; Yuan *et al*., 2010). The findings of Stoneman (2006:4) show that the greatest concentration of computer owners who have banked online in the USA are in the 18 to 34 year age group and represent 64% of the market.

Table 4.12: Age and the use of e-banking: cross-tabulation

Age	**E-banking usage** **Yes**	**E-banking usage** **No**	**Total**
18-25			
Respondent Count	20	41	61
Expected Count	8.4	52.6	61
% Within Category	29%	10%	12%
26-35			
Respondent Count	36	194	230
Expected Count	32	198	230
% Within Category	51%	41%	45%
36-50			
Respondent Count	11	163	174
Expected Count	24	150	174
% Within Category	16%	38%	34%
50- more			
Respondent Count	3	43	46
Expected Count	6	40	46
% Within Category	4%	10%	9%
Total:			
Respondent Count	70	441	511
% Within Category	100%	100%	100%

Table 4.13: Chi-Square Tests: relationship between age and the use of Internet banking

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.940[a]	3	.016
Likelihood Ratio	.996	3	.002
Linear-by-Linear Association	.068	1	.194
Nominal Cramer V	0.2405		
N of Valid Cases	511		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.30.

Income

The cross-tabulation in Table 4.14 below shows e-banking usage and non-usage according to income distribution. The p-value of the Chi square test is 0.026, which is less than 0.05 (Table 4.15), and this implies that the Chi-square is significant and that there is a relationship between income and the adoption of Internet banking. The hypothesis that there is a relationship between income and e-banking adoption is therefore accepted. In this case, the Cramer's V value is 0.4763, as shown in Table 4.15, which shows that there is a moderate association between income and the adoption of e-banking. Income does influence the adoption of e-banking, but the association is moderate, with most users (51%) earning an income of between 500 000fcfa and 1000 000fcfa. On the non-users' side, 44% of this group earned between 250 000fcfa and 500 000fcfa, and 28% between 100

000 and 250 000fcfa. These results imply that typical e-banking users have a high income. These findings are consistent with previous studies by Karjaluoto (2002) and Aslam*et al.* (2011), which showed that income had a significant effect on the adoption of Internet banking. Thus, Internet banking users earn a higher income than non-users. It has been observed that the adoption of Internet banking is high among middle and upper income groups, as compared to low income groups (Laforet& Li, 2005; Yuan *et al*. 2010). Choudrie and Dwivedi (2005) also confirmed that the economic status of individuals influences their ability to own a computer and use a technology such as Internet banking.

Table 4.14: Income and the use of e-banking: cross-tabulation

Income	**E-banking usage Yes**	**E-banking usage No**	**Total**
0 – 100 000fcfa			
Respondent Count	1	45	46
Expected Count	6.3	39.6	46
% Within Category	1%	10%	9%
100 000 – 250 000fcfa			
Respondent Count	6	122	128
Expected Count	17.5	110.5	128
% Within Category	9%	28%	25%
250 000 – 500 000fcfa			
Respondent Count	12	192	204
Expected Count	28	176	204
% Within Category	17%	44%	40%
500 000 – 1000 000fcfa			
Respondent Count	36	76	112
Expected Count	15.3	96.7	112
% Within Category	51%	17%	22%

1000 000fcfa - More			
Respondent Count	15	6	21
Expected Count	3	18	21
% Within Category	21%	1%	4%
Total:			
Respondent Count	70	441	511
% Within Category	100%	100%	100%

Table 4.15: Chi-Square Tests: relationship between income and the use of Internet banking

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.050[a]	4	.026
Likelihood Ratio	1.959	4	.043
Linear-by-Linear Association	1.093	1	.196
Nominal Cramer V	0.4763		
N of Valid Cases	511		

a.1 cells (10.0%) have expected count less than 5. The minimum expected count is 2.88.

Educational level

The cross-tabulation in table 4.16 below indicates the usage and non-usage of e-banking according to educational level. The p-value of the chi square test is 0.009, which is less than 0.05 (table 4.17). This implies that the chi-square is significant and that there is a relationship between educational level and the adoption of e- banking. The results therefore point to the acceptance of the hypothesis that there is a relationship between demographic

characteristics and the adoption of e-banking. Table 4.17 shows that the Cramer's V value is 0.5493, which indicates that there is a strong association between educational level and the adoption of e-banking. Users were generally more educated, with 31% having had education up to undergraduate level and 41% up to postgraduate level. Non-users were less educated, with 43% having had education up to the secondary level and 31% up to the high school level. In conclusion, the data analysis suggests that educational level has an impact on the adoption of e- banking, and that in Cameroon, people with a university level of education are more likely to adopt e-banking than those without . The influence of educational level is consistent with observations by Yuan *et al*. (2010), who found that the level of education has a very significant impact on the adoption of e-banking. As the educational level increases, the likelihood of adopting e-banking also increases. This result is also in line with a study by Polatoglu and Ekin (2001:164), who found that affluent and highly educated groups generally accepted changes more readily, making them the most likely group of consumers to adopt Internet banking. This was based on sample information gleaned from their survey of Internet banking customers, which revealed that 82% of users had at least an undergraduate level of education.

Table 4.16: Educational level and the use of e-banking: cross-tabulation

Educational level	**E-banking usage Yes**	**E-banking usage No**	**Total**
Primary school			
Respondent Count	5	56	61
Expected Count	8	53	61
% Within Category	7%	13%	12%
Secondary School			
Respondent Count	5	195	200
Expected Count	27	173	200
% Within Category	7%	43%	39%
High School			
Respondent Count	10	137	147
Expected Count	20	127	147
% Within Category	14%	31%	29%
Undergraduate			
Respondent Count	22	39	61
Expected Count	8	53	61
% Within Category	31%	9%	12%
Postgraduate			
Respondent Count	28	14	42
Expected Count	6	36	42
% Within Category	40%	4%	8%
Total:			
Respondent Count	70	441	511
% Within Category	100%	100%	100%

Table 4.17: Chi-Square Tests: relationship between educational level and adoption of e-banking

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.529[a]	4	.009
Likelihood Ratio	2.722	4	.005
Linear-by-Linear Association	.725	1	.125
Nominal Cramer's V	0.5493		
N of Valid Cases	511		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.75.

Occupation

The p-value of the Chi square test here is 0.000, which is less than 0.05 (table 4.19), which implies that the chi-square is significant and that there is a relationship between occupation and the adoption of e-banking. In this case, the Cramer's V value is 0.3102 (table 4.19), which means that there is a moderate association between e-banking adoption and occupation. The cross-tabulation (table 4.18) shows the occupation distribution between the two different groups, namely users and non-users. Users were working either in the public sector (33%) or in the private sector (60%). From these tables, it can be concluded that in Cameroon, working people are more likely to adopt e-banking than non-working people. Furthermore, the results imply that typical e-banking users are mostly in the private sector. This is consistent with other research findings (Karjaluoto, 2002:359), which reveal that occupation has an impact on the usage of e- banking, and that users are generally well-educated and have better occupations than non-users.

Table 4.18: Occupation and the use of e-banking: cross-tabulation

Occupation	**E-banking usage** **Yes**	**E-banking usage** **No**	**Total**
Student			
Respondent Count	2	75	77
Expected Count	2	76	77
% Within Category	3%	17%	15%
Worker Public Category			
Respondent Count	23	80	103
Expected Count	16	103	103
% Within Category	33%	22%	23%
Worker Private Category			
Respondent Count	42	132	174
Expected Count	36	136	174
% Within Category	60%	30%	34%
Own business			
Respondent Count	3	110	113
Expected Count	6	110	113
% Within Category	4%	25%	22%
Unemployed			
Respondent Count	0	44	44
Expected Count	1	46	44
% Within Category	0	10%	10%
Total:			
Respondent Count	70	441	511
% Within Category	100%	100%	100%

Table 4.19: Chi-Square test: relationship between occupation and adoption of e-banking

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.171[a]	5	.000
Likelihood Ratio	8.447	5	.000
Linear-by-Linear Association	1.547	1	.014
Nominal Cramer's V	0.3102		
N of Valid Cases	511		

a. 4 cells (28.6%) have expected count of less than 5. The minimum expected count is .68.

TESTING HYPOTHESIS H2: THERE IS A SIGNIFICANT DIFFERENCE BETWEEN USERS AND NON-USERS WITH REGARD TO HOW THEY PERCEIVE E-BANKING.

To test the perceptions of consumers regarding e-banking, the researcher used the Mann-Whitney U test to compare the differences between two independent groups when the dependent variable is either ordinal or interval, and not normally distributed.

H2a: There is a significant difference between users and non-users with regard to the perception that e-banking is time-saving and better than branch banking.

Firstly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to the perception that e-banking is time-saving. The observed z-value for this

statement is -7.363, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.012 is less than 0.05 (Table 4.20) and therefore, the test is considered to be significant at the 0.05 level. Non-users do not perceive Internet banking as time-saving, whereas users believe that Internet banking can be used at anytime and anyplace without having to queue at the bank, which equates to time-saving. The responses of users and non-users were totally different. The mean rank for users is 307.01 and for non-users it is 298.52, which shows that the mean for users is significantly more than that for non-users. Hence, the hypothesis that there is a significant difference between the perceptions of users and non-users regarding whether or not Internet banking saves time is accepted. This result is consistent with the findings of previous research by Fox (2006), who found that e-banking is time-saving.

Table 4.20: Comparison of mean values of users and non-users with regard to their perception that e-banking is time-saving

	Decision	N	Mean Rank	Sum of Ranks
E-banking is time-saving	Yes	70	307.01	21490.70
	No	441	298.52	127459.00
	Total	511		
Mann–Whitney U Value = 856.000 P value= 0.012 Wilcoxon W value = 21490.700 Z value = -7.363				

Secondly, the Mann-Whitney U test was also conducted to determine if there is a difference between users and non-users with regard to their perception that e-banking is better than branch banking. The observed z-value for this statement is -11.568, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.008 is less than 0.05 (table 4.21)

and the test is therefore considered to be significant at the 0.05 level. Non-users do not perceive Internet banking as being better than branch banking, unlike users. Thus, the responses of users and non-users were different. The mean rank for users is 304.11, while for non-users it is 298.52, which shows that the mean for users is higher than that for non-users, indicating that users perceive e-banking to be better than branch banking. Hence, the hypothesis that there is a significant difference between the perceptions of users and non-users regarding whether or not Internet banking is better than branch banking is accepted. This finding is similar to observations made by Marhana (2012), who found that consumers may be motivated to use some e-banking facilities because they are able to conduct transactions at home and therefore save on charges.

Table 4.21: Comparison of mean values of users and non-users with regard to their perception that e-banking is better than branch banking

	Decision	N	Mean Rank	Sum of Ranks
Online banking is better than branch banking	Yes	70	304.11	21287.7
	No	441	287.19	126650.00
	Total	511		
Mann–Whitney U Value = 1783.000 P value= 0.008 Wilcoxon W value = 21287.700 Z value = -11.568				

H2b: There is a significant difference between users and non-users with regard to their perceptions of the compatibility of e-banking.

Firstly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to their perceptions that e-banking suits their lifestyle.

The observed z-value for this statement is -12.554, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.000 is less than 0.05 (table 4.22) and the test is therefore considered to be significant at the 0.05 level. Non-users do not perceive Internet banking to suit their lifestyle, while users believe that Internet banking can do so. Thus, the responses of users and non-users were different, as the mean rank for users is 300.21 and for non-users is 292.00, which shows that the mean of users is significantly higher than that for non-users. Hence, the hypothesis that there is a significant difference between the perceptions of users and non-users regarding whether or not Internet banking suits their lifestyle is accepted. This result is consistent with the observations of Bradley and Stewart (2003:1089), who found that the perceived compatibility of Internet banking is a key driver in the adoption of Internet banking.

Table 4.22: Comparison of mean values of users and non-users with regard to their perceptions of whether or not e-banking suits their lifestyle

	Decision	N	Mean Rank	Sum of Ranks
E-banking suits my lifestyle	Yes	70	300.21	21014.70
	No	441	292.00	126694.00
	Total	511		
Mann–Whitney U Value = 1681.000 P value= 0.000 Wilcoxon W value = 21014.700 Z value = -12.554				

Secondly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to their perception that e-banking is convenient. The observed z-value for this statement is -10.041, with degrees of freedom (total sample size minus 2)

equal to 509. The two-tailed probability of 0.001 is less than 0.05 (table 4.23), and the test is therefore considered to be significant at the 0.05 level, which means that the hypothesis that there is a difference between users and non-users with regard to their perception that e-banking is convenient is accepted. Thus, the responses of users and non-users were totally different. The mean rank for users is 309.00 and for non-users is 302.52, which shows that the mean for users is significantly higher than that for non-users, and that users perceived e-banking to be convenient, while non-users did not.

These results are similar to previous research, which found that the convenience of online banking is helping people gain greater control of their finances and contributing to changing patterns in terms of cash withdrawal and day-to-day money management (Beer, 2006).

Table 4.23: Comparison of mean values of users and non-users with regard to their perception that e-banking is convenient

	Decision	N	Mean Rank	Sum of Ranks
E-banking is convenient	Yes	70	309.00	21630.00
	No	441	302.60	127950.50
	Total	511		
Mann –Whitney U Value = 1380.000 P value= 0.001 Wilcoxon W value = 21630.000 Z value = -10.041				

H2c: There is a significant difference between users and non-users with regard to their perceptions of the complexity of e-banking.

The Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to their perception that

e-banking is very easy to use. The observed z-value for this statement is -13.040, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.000 is less than 0.05 (table 4.24) and therefore, the test is considered to be significant at the 0.05 level. With P<0.05, the hypothesis that there is a difference between users and non-users with regard to the perception that e-banking is very easy to use is accepted. The responses of users and non-users were totally different - the mean rank for users is 322.53 and for non-users is 315.60, which shows that the mean for users is higher than that for non-users. More users than non-users perceived Internet banking to be very easy to use. This result is similar to research conducted by Cooper (1997), who found that ease of use of an innovative product or service is one of the three most important characteristics for adoption from the customer's perspective, and is also similar to research by Mohd-Suki (2010), who stated that modern-day consumers will find Internet banking easy to use because they tend to be more educated and to have sufficient understanding of computers and the Internet.

Table 4.24: Comparison of mean values of users and non-users with regard to their perception that e-banking is very easy to use

	Decision	N	Mean Rank	Sum of Ranks
E-banking is very easy to use	Yes	70	322.53	22577.10
	No	441	315.60	128950.50
	Total	511		
Mann–Whitney U Value = 2380.500 P value= 0.000 Wilcoxon W value = 22577.100 Z value = -13.040				

H2d: There is a significant difference between users and non-users with regard to the perceived cost of e-banking.

Firstly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to their perception that the use of the Internet is very cheap. The observed z-value for this statement is -12.363, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.000 is less than 0.05 (table 4.25), and therefore, the test is considered to be significant at the 0.05 level. With $P<0.05$, the hypothesis that there is a difference between users and non-users with regard to the perception that the use of the Internet is very cheap is accepted. The responses of users and non-users were totally different - the mean rank for users is 302.53 and for non-users is 285.77, which shows that the mean for users is higher than that for non-users. Thus, users perceived the use of Internet to be very cheap, while non-users did not. This result is similar to research conducted by Hills (2004), who observed that, over time, Internet costs were going down and would be very cheap in the future, thus encouraging the adoption of e-banking.

Table 4.25: Comparison of mean values of users and non-users with regard to the perception that the use of the Internet is very cheap

	Decision	N	Mean Rank	Sum of Ranks
Use of the Internet is very cheap	Yes	70	302.01	21140.7
	No	441	285.77	125454.00
	Total	511		
Mann–Whitney U Value = 1856.000 P value= 0.000 Wilcoxon W value = 21140.700 Z value = -12.363				

Secondly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regard to their perception that e-banking is very cheap. The observed z-value for this statement is -11.049, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.000 (table 4.26) is less than 0.05 and therefore, the test is considered to be significant at the 0.05 level. Users perceived that Internet banking service fees were very cheap while non-users did not, since the mean for users is 307.51 and is higher than that for non-users, which is 287.40. Hence, the hypothesis that there is a significant difference between users and non-users with regard to the perception of Internet banking services as being cheap. This result is similar to observations by Asghar (2012:6), who reported that 63% of respondents in a sample found Internet banking to be cheap. 57% agreed that there were no hidden charges for online banking and that all the rates and charges were clearly and honestly communicated to users.

Table 4.26: Comparison of mean values of users and non-users with regard to their perception that e-banking is very cheap

	Decision	N	Mean Rank	Sum of Ranks
E-banking is very cheap	Yes	70	307.51	21525.70
	No	441	287.40	126743.40
	Total	511		
Mann–Whitney U Value = 2180.000 P value= 0.000 Wilcoxon W value = 21525.70 Z value = -11.049				

H2e: There is a significant difference between users and non-users with regard to their perceptions of the risk of e-banking.

Firstly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users regarding their perceptions of the safety of branch and Internet banking. The observed z-value for this statement is -1.307, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of 0.002 (table 4.27) is less than 0.05, and therefore the test is considered to be significant at the 0.05 level. The hypothesis that there is a difference between users and non-users regarding the perception that branch banking is safer than Internet banking is therefore accepted. From the means value, one can also conclude that non-users perceived branch banking services to be safer than Internet banking services, since the mean for non-users is 92.15, which is higher than that for users, which is 24.31.

These findings are in line with previous research by Zhao *et al.* (2008), who found that customers perceived e-banking services to be more risky than conventional banking.

Table 4.27: Comparison of mean values of users and non-users with regard to their perceptions of the safety of branch and Internet banking.

	Decision	N	Mean Rank	Sum of Ranks
Branch banking is safer than online banking	Yes	70	24.31	1701.70
	No	441	92.15	40638.15.00
	Total	511		
Mann–Whitney U Value =128.000 P value= 0.002 Wilcoxon W value = 1701.700 Z value = -1.307				

Secondly, the Mann-Whitney U test was conducted to determine whether or not there are differences between users and non-users with regard to the perception that e-banking is very safe. The observed z-value for this statement is 1.317, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of P=0.102 (table 4.28) is less than 0.05, and therefore the test is considered to be significant at the 0.05 level. The hypothesis that there is a difference between users and non-users with regard to their perception that e-banking is very safe is rejected, since P>0.05. When the hypothesis is rejected, one does not have to look at the means value, because both users and non-users have the same perceptions regarding the safety of e-banking. Previous research conducted on the safety of e-banking found that due to its technical nature and self-service features, the functional risk is found to be higher among the developing nations, with high levels of illiteracy and where perceived operating difficulty and chances of incomplete transactions due to Internet speed failure are recognised to be higher. In this type of environment, customers still do not find it safe to bank online (Agarwal*et al.*, 2009; Kuisma*et al.*, 2007; Aslam&Sarwar, 2010).

Table 4.28: Comparison of mean values of users and non-users with regard to their perception that e-banking is very safe

	Decision	N	Mean Rank	Sum of Ranks
E-banking is very safe	Yes	70	12.14	849.80
	No	441	17.15	7563.15
	Total	511		
Mann –Whitney U Value = 78.000 P value= 0.102 Wilcoxon W value = 849.80 Z value = 1.317				

Testing Hypothesis H3: There is a significant difference between users and non-users with regard to social influences on their decision to adopt e-banking

Firstly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users regarding the perception that their decision to adopt e-banking is influenced by the family. The observed z-value for this statement is -10.254, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of P=0.000 (table 4.29) is less than 0.05, and therefore the test is considered to be significant at the 0.05 level. The hypothesis that there is a difference between users and non-users regarding their perception that family influences their decision to adopt Internet banking is accepted, since P<0.05. The mean for users is 328.55, which is higher than that for non-users, which is 276.23. This result is similar to the observation made by Aslam (2011), who also found that family influences the decision to adopt e-banking.

Table 4.29: Comparison of mean values of users and non-users with regard to their perception that the decision to adopt e-banking is influenced by the family

	Decision	N	Mean Rank	Sum of Ranks
Decision is influenced by family	Yes	70	328.55	22998.50
	No	441	276.23	121817.50
	Total	511		
Mann–Whitney U Value = 6513.500 P value= 0.000 Wilcoxon W value = 22998.500 Z value = -10.254				

Secondly, the Mann-Whitney U test was conducted to determine whether or not there is a difference between users and non-users with regardto their

perception that the decision to adopt e-banking is influenced by friends and colleagues. The observed z-value for this statement is -13.004, with degrees of freedom (total sample size minus 2) equal to 509. The two-tailed probability of p=0.000 (table 4.30) is less than 0.05, and therefore the test is considered to be significant at the 0.05 level. The hypothesis that there is a significant difference between users and non-users with regard to their perception that the decision to adopt e-banking is influenced by friends and colleagues is therefore accepted.

As the *p value*<0.001, one can say that this test is highly significant. The means of the two groups is 303.04 for users and 288.22 for non-users respectively, which shows that users reported being influenced by colleagues and friends in their decision to adopt e-banking, while non-users did not. This result is in accordance with research by Cheung (2001), who also asserted that friends have an influence on the intention to adopt e-banking.

Table 4.30: Comparison of mean values of users and non-users with regard to their perception that the decision to adopt e-banking is influenced by friends and colleagues

	Decision	N	Mean Rank	Sum of Ranks
Decision influenced by friends and colleagues	Yes	70	303.04	21212.8
	No	441	288.22	127103.00
	Total	511		
Mann–Whitney U Value = 1228.000 P value= 0.000 Wilcoxon W value = 21212.800 Z value = -13.008				

4.5 Summary

This chapter presented the results of the statistical analyses and established consumer attitudes towards e-banking. It also identified those factors which influence the use of e-banking and those factors which hamper its use. These factors relate to consumer demographic characteristics, consumer perceptions towards e-banking and social influences.

The chapter also presented the results of the data analysis, thereby profiling the banking habits and e-banking expectations of respondents. A chi-square test was used to test the relationship between consumer demographic characteristics and the adoption of Internet banking, and the phi and Cramer's V were also used to show the strength of that relationship. An independent sample Mann-Whitney U test was used to test differences between users and non-users in terms of their perceptions of e-banking. This study confirmed that demographics (age, income, educational level and occupation) have an impact on the use of e-banking, even if this is to varying degrees. Most users are middle-aged (between 26-35 years old), have monthly incomes between 500 000-1000 000fcfa, are well educated (university level) and are employed (either in the private or public sector). Most attitudinal factors, including relative advantage, compatibility, complexity, perceived risk and perceived cost were found to be significant and to influence the decision to adopt e-banking. However, the analysis of perceived risk showed that e-banking is seen as being unsafe by both users and non-users. Social influences were found to have a significant effect on the adoption of e-banking. On the basis of these findings, conclusions and recommendations will be made in the next and final chapter.

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the study draws conclusions regarding the research question and puts forward policy recommendations and suggestions for further research on e-banking in Cameroon. Theories and advantages of e-banking have stimulated research on identifying the factors that could influence the decision to adopt e-banking. There are many factors that can influence the decision to adopt e-banking, depending on each country and its realities. The adoption of e-banking is important for developing countries, as discussed in chapters one and two of this study.

This chapter synthesises the conclusions of the research, relates it to the underlying theories and gives some recommendations for future research.

5.2 Summary of findings

The objective of this study was to examine the factors that can affect the adoption of e-banking in Cameroon, with the sub-objectives which were to examine how demographic characteristics, attitudes and social influences impact on the customer's decision to adopt e-banking; to investigate barriers and challenges to the adoption of e-banking; to investigate the differences in perceptions regarding e-banking between users and non-users; and to determine whether or not e-banking offers more opportunities in comparison with the traditional banking system used in Cameroon.

Managers mentioned some difficulties encountered in the adoption of e-banking by banks. Cameroonian banking staff seemed to be very resistant to change. They wanted to stick to the traditional way of banking because they

did not want to learn new ways of doing things. Managers also mentioned the lack of knowledge and awareness among banking staff. Despite these shortcomings, banks and the government also have their own responsibility of ensuring the availability of a proper telecommunications infrastructure, as well as e-laws and legislation. Banking staff find e-banking to be incompatible with the previous way in which they were doing banking. They also find e-banking to be very complex to use, since they lack IT knowledge.

It was also found that Cameroonian banking staff can fully adopt and implement technological alternatives to traditional manual procedures if they find the new process to be easy to use and to help them accomplish their work tasks effectively.

With regard to the customer perspective, this study identified some factors that are more influential than others in terms of e-banking adoption in the Cameroonian banking market. The empirical results showed that relative advantage, compatibility, complexity, perceived cost, perceived ease of use and IT knowledge all have significant effects on the behavioural intention to use online banking. Bank users found e-banking to be time-saving, convenient, better than branch banking, cheaper than traditional banking, easy to use and to suit their lifestyles.

Perceived risk and security were found to have a negative impact on e-banking adoption. Among the demographic variables, level of education, occupation, age, gender and income level were found to have a significant influence in this regard. Users in Cameroon were found to be influenced in their decision to adopt e-banking by family members, friends and colleagues. Du (2002) also found that social influences impact on e-banking adoption.

An understanding of the factors identified in this study allows bank managers to direct efforts and resources in the most effective and efficient way, in order

to increase bank business in the long run and to encourage bank customers to adopt e-banking. In general, if the bank management has greater knowledge about the factors affecting their customers' adoption of e-banking, then they have a greater ability to develop appropriate strategies, thereby increasing the e-banking adoption rate. These findings were consistent with those of other researchers such as Yuan et al, 2010 and Asghar, 2012, who found that demographic characteristics (age, educational level, income, occupation and gender) have an impact on the decision to adopt e-banking. Others (Gerrard and Cunningham, 2007; Asghar, 2012; Marhana et al, 2012; Lee et al, 2011) found that relative advantage, compatibility, complexity, perceived cost and perceived risk have an impact on the adoption of e-banking. In Cameroon, this study found perceived risk to have a negative impact on the decision to adopt e-banking.

This research studied e-banking adoption based on theories such as the Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB) and the Innovative Diffusion Theory. E-banking adoption has become a major area of focus among researchers and bank managers due to its strong impact on business performance, lower costs, customer satisfaction, customer loyalty and profitability.

According to the Theory of Reasoned Action (Fishbein and Ajzen, 1975), an individual's intention to adopt an innovation is influenced by his intention to perform the behaviour. If a person intends to perform a behaviour then it is likely that he or she will do it. This study is based on the behaviour, intention to perform the behaviour, attitude and subjective norm. This theory is relevant to this study in that the attitudes of bank users towards e-banking was studied, and it was found that customer attitudes impact on the decision to adopt e-banking.

The Theory of Planned Behaviour developed by Ajzen (1985) is an attitude-intention-behaviour model, which posits that an individual's behaviour is determined by perceived behaviour control intention. Attitude, subjective norms and perceived behaviour control, in turn, determine intention. This second theory is relevant to this study because the intention to adopt the new technology is related to the perception that people have of that new technology.

The Technology Acceptance Model was developed by Davis (1989). This theory adapts the Theory of Reasoned Action model, in order to model users' acceptance of information technology. It aims to explain what determines computer acceptance so as to explain user behaviour across a wide range of end-users. This theory is based on perceived ease of use and perceived usefulness. It was found in this study that banking staff and customers can easily adopt e-banking if they perceive it to be easy to use and useful. From the customers' perspective, it was found that they could better adopt e-banking if they perceived it to be easy to use and useful, as with the customers who were already using it.

The fourth theory is that developed by Rogers (1983), namely the Innovative Diffusion Theory, which is based on three main factors: relative advantage, compatibility and complexity. However, as seen in Chapter 2 of this study, these factors cannot be studied without considering factors which are linked to them, such as perceived cost, perceived risk, demographic characteristics, and social influences.

This study found evidence of the innovative diffusion theory, which asserts that the main factors impacting on e-banking adoption are relative advantage, compatibility and complexity, which were all found to have an impact on the decision to adopt e-banking in Cameroon. Furthermore, factors such as perceived cost, social influence and demographic characteristics were also

found to have an impact on the decision to adopt e-banking in the country. Among all these factors, it was only perceived risk which was found to have a negative impact on e-banking adoption in the country.

In **summary**, all the objectives of this study were achieved. The factors influencing the adoption of e-banking in Cameroon were identified. These were demographic factors such as age, income, educational level and occupation. Psychological factors such as perceptions of relative advantage, compatibility, complexity and perceived cost were also identified. Perceived risk was found to have a negative impact on e-banking adoption. A measure of the relationship between these factors and the adoption of e-banking was determined. Negative perceptions and attitudes influence the decision-making process, resulting in negative consumer behaviour outcomes. Social influences, including the opinions of friends, parents and colleagues, were found to have an influence on e-banking adoption. With regard to the research objectives that identified the factors discouraging customers from using e-banking, lack of trust, lack of information, lack of knowledge and perceived risk by non-users were found to be barriers to the adoption of e-banking. Challenges and barriers with regard to e-banking adoption also included resistance to change by bank employees, lack of knowledge, absence of e-laws and legislation for e-banking, absence of a proper telecommunications infrastructure and shortage of IT training. This study is especially valuable for the Cameroonian banking industry, as the findings provide significant insights for banks interested in implementing e-banking strategies.

5.3 Recommendations

The government should provide some free basic computer training, in order to educate people about computers and the Internet. It should also improve public access to the Internet by expanding the available bandwidth. It should

also enhance the quality of telecommunications in the country and facilitate access to ICT tools. When people have more access to and knowledge about the Internet, they will use the services that the Internet can provide, such as online shopping and banking, more widely. These incentives should increase the probability that bank customers will adopt e-banking services. Banks should provide free computer courses on how to use e-banking. As the educational level increases, people who have attended these courses should gain more knowledge and skills in this area, and will eventually perceive e-banking to be more user-friendly. Bank officers need to inform consumers regarding how the security features have been enhanced to ensure that they will feel safe using e-banking. Word-of-mouth and communication directly from the marketer to potential adopters will aid the diffusion process. Banks also try to increase the number of ATM's not only in the bank branches and make sure they are working 24h/7days. Theory suggests that product attributes help this process, and e-banking should therefore provide banking services that are compatible with customers' banking norms and lifestyle. Thus, banks in Cameroon can use the findings of this study to improve the promotion of their banking services.

Although most banks offer e-banking services, not as many people as they would hope are actually using the system. Banks could therefore launch campaigns to raise awareness among people. These campaigns could be implemented in universities (since most young adults are university students), as well as in the form of road shows. They could be used mainly to educate people about the relative advantage of using the system, as well as to demonstrate how to cope with security and privacy issues. Campaigns could also be used to boost confidence among those with low self-efficacy through demonstrations at bank branches using a one-on-one consultancy system. Banks should also make ATM's available in rural areas and even in towns where there are no branches. They could also penetrate new markets through the use of company Internet sites, as people may be encouraged to

open bank accounts in order to utilise Internet banking facilities. Furthermore, they could visit companies and provide free training on the use of computers, the Internet and, more importantly, e-banking.

Finally, banks could also include extra features on their websites to make the experience more memorable and fun. A plain website may be appealing to an older audience, but not to young adults.

5.4 Limitation of the research and areas for future research

The study was limited to Cameroon especially in the two main cities of the country know as Yaoundé and Douala. It may be possible to conduct the same study in another country in the sub-region (CEMAC), in order to compare the results and identify common organisational, structural and strategic factors, as well as factors that contribute to differences in the adoption of e-banking from one country to another .

The study was also limited only to bank staff and individual customer but for future research it could also be extended to corporate customers. A comparison can then be made between individual and corporate customers in terms of the factors influencing their adoption decisions, criteria for selecting an e-banking service, and the types of products and services that are perceived to be useful.

Another area of future research could be to conduct a comparative study between e-banking adoption in Cameroon and a developed country.

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Appendix.A. Questionnaire for the interview of managers

QUESTIONNAIRE FOR INTERVEW OF MANAGERS (RESEARCH)

This questionnaire seeks to explain and understand the evolution of e-business in the banking system in Cameroon.

To answer the questions, please fill the blank space where the question is opened and just tick the yes column where the question is closed.

These answers will be anonymous if you prefer.

THANK YOU FOR YOUR CONTRIBUTION.

Number Of Questions	QUESTIONS FOR GENERAL INFORMATION	ANSWERS
1	Full name of the company	
2	Head quarter location	
3	Type of company	
4	Year of establishment	
5	Number of branches	
6	Number of employees	
7	Turnover in the last year	
8	Target customers	
9	Part of the financial market in Cameroon	
10	Most significant geographic market	

These questions will be answered during the interview with the different managers and directors in each bank (the manager of the branch, the informatics director, the marketing director).

1. Sex
   - Male [1] ☐
   - Female [2] ☐

2. Age
   - 25-40 [1] ☐
   - 41-50 [2] ☐
   - 51-more [3] ☐

3. Educational level
   - Primary [1] ☐
   - Secondary [2] ☐
   - High school [3] ☐
   - Undergraduate [4] ☐
   - Postgraduate [5] ☐

4. Position at work
   - Director [1] ☐
   - Manager [2] ☐
   - Non- Manager [3] ☐

5. Do you use e- banking?
   - Yes [1] ☐
   - No [2] ☐

6. How long have you been using e-banking?
   - One year [1] ☐
   - 2-5 years [2] ☐
   - 5-10 years [3] ☐
   - 10 or more [4] ☐

7. Why did you implement it?
   - Cost reduction [1] ☐
   - Time saving [2] ☐
   - Enhance the quality of service [3] ☐
   - More competitive [4] ☐
   - Follow trends [5] ☐

8. Which e-banking services do you offer?
   - ATM's [1] ☐
   - Phone banking [2] ☐
   - Internet banking [3] ☐
   - Electronic fund transfer [4] ☐
   - SMS banking [5] ☐

9. Which one is the most used?
   - ATM's [1] ☐
   - Phone banking [2] ☐
   - Internet banking [3] ☐
   - Electronic fund transfer [4] ☐
   - SMS banking [5] ☐

10. Which one is less expensive for the bank? ATM's [1] ☐

Phone banking [2] ☐

Internet banking [3] ☐

Electronic fund transfer [4] ☐

SMS banking [5] ☐

11. Which one is less expensive for customers? ATM's [1] ☐

Phone banking [2] ☐

Internet banking [3] ☐

Electronic fund transfer [4] ☐

SMS banking [5] ☐

12. How many ATM's do you have in the country? 1-5 [1] ☐

5-10 [2] ☐

10-15 [3] ☐

16 or more [4] ☐

13. Do they work 24/7 Yes [1] ☐

No [2] ☐

14. Better performance of banks since the implementation of e-banking

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

15. E-banking reduces costs

trongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

16. E-banking is more convenient

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

17. E-banking income is far higher than its costs

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

18. E-banking is very safe

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

19. E-banking attracts more customers

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

20. How long does it take to transfer money from one bank to another with e-banking?

1 day [1] ☐

2-3 days [2] ☐

4-5 days [3] ☐

More than 5 days [4] ☐

21. Which services do you offer online?

Balance enquiry [1] ☐

Money transfer [2] ☐

Inter account transfer [3] ☐

Bill payment [4] ☐

Other (specify)

_____

_____

22. Does e-banking have all the branch banking operations?

Yes [1] ☐

No [2] ☐

23. What are the barriers and challenges with regard to e-banking implementation?

Cost [1] ☐

Lack of IT knowledge and awareness [2] ☐

Security [3] ☐

Lack of effective leadership [4] ☐

Resistance to change [5] ☐

Lack of strategic plan [6] ☐

Lack of e-laws and legislation [7] ☐

24. Who is responsible for e-banking legislation?

Government [1] ☐

BEAC [2] ☐

CONAC [3] ☐

25. Is this legislation favourable for e-banking adoption?

Yes [1] ☐

No [2] ☐

26. How do you attract customers through e-banking?

Advertisements [1] ☐

Promotion [2] ☐

Reduction of costs [3] ☐

Introduction of new products [4] ☐

27. What is the ICT level of your employees?

High [1] ☐

Average [2] ☐

Weak [3] ☐

28. How do you manage to upgrade their ICT level?

Workshop [1] ☐

Finance manager formation [2] ☐

Others (specify) ☐

_____

_____

QUESTIONNAIRE FOR CUSTOMERS

My name is Jacques Herve Nguetsop Talla and I am conducting research for my M Com degree in Business Management at the University of South Africa. The title of my research project is An empirical study of e-banking in Cameroon. In order to collect representative data I would like you to fill this questionnaire which will contribute to the enhancement of the e-banking quality and services in Cameroon. I need only 15 minutes of your time to complete this questionnaire. The information provided will be treated confidentially and your co-operation will be highly appreciated. The aim of this research project is to improve the e-banking service to Cameroonian customers.

Full name: Jacques Herve Nguetsop Talla

Signed: _____ DATE

To answer the questions, please tick the answers which seem to be close to what you think is correct about the question or assertion.

These answers will be anonymous.

THANK YOU FOR YOUR CONTRIBUTION.

1. Age 18-25 [1] ☐ 25-35 [2] ☐ 35-50 [3] ☐ 50-more [4] ☐

2. Gender Male [1] ☐ Female [2] ☐

3. Income
   - 0 to 100 000 fcfa [1] ☐
   - 100 000 – 250 000 [2] ☐
   - 250 000- 500 000 [3] ☐
   - 500 000 – 1000 000 [4] ☐
   - 1000 000 – more [5] ☐

4. Educational level
   - Primary [1] ☐
   - Secondary [2] ☐
   - High school [3] ☐
   - Undergraduate [5] ☐
   - Master [6] ☐

5. Occupation
   - Student [1] ☐
   - Worker in public sector [2] ☐

Worker in private sector [3] ☐

Owner of business [4] ☐

Unemployed [5] ☐

Other (specify) [88] ☐

---

6. Do you have a bank account?

Yes [1] ☐

No [2] ☐

7. If yes, what type?

Savings account [1] ☐

Current account [2] ☐

Other (specify) [88] _____

8. Do you know how to use a computer?

Yes [1] ☐

No [2] ☐

9. Where did you learn this?

School [1] ☐

At home [2] ☐

In a workshop [3] ☐

10. Do you use the Internet?

Yes [1] ☐

No [2] ☐

11. Where do you use it?

At home [1] ☐

In the office [2] ☐

In the internet café [3] ☐

Other (specify) [4]_____

12. How often do you use the Internet?

Each day [1] ☐

Once a week [2] ☐

Once a month [3] ☐

Other (specify) [88] ☐

_____

13. What is the quality of the Internet connection in the country?

Good [1] ☐

Average [2] ☐

Bad [3] ☐

14. Do you have a mobile phone?

Yes [1] ☐

No [2] ☐

15. Is it easy to have a mobile phone in the country?

Yes [1] ☐

No [2] ☐

16. Have you ever used your phone for the Internet?

Yes [1] ☐

No [2] ☐

17. Do you know what e-banking is?

Yes [1] ☐

No [2] ☐

18. Where did you hear about it?

TV [1] ☐

Internet [2] ☐

Friend [3] ☐

In the bank branch [4] ☐

Other (specify) [88]_____

19. Which e-banking service do you know?

ATM's [1] ☐

Phone banking [2] ☐

Internet banking [3] ☐

Electronic Found Transfer [4] ☐

SMS banking [5] ☐

Other (specify) [88]_____

20. Do you use e-banking?

Yes [1] ☐

No [2] ☐

21. If yes, which services do you prefer?

ATM's [1] ☐

Phone banking [2] ☐

Internet banking [3] ☐

Electronic Found Transfer [4] ☐

SMS banking [5] ☐

Other (specify) [88] ☐

22. If no, why not?

Lack of trust [1] ☐

Lack of knowledge [2] ☐

Accessibility [3] ☐

Other (specify) [88]

23. Why do you use e-banking?

Rapidity [1] ☐

Low cost [2] ☐

Efficient [3] ☐

24. How often do you use it?

Every day [1] ☐

Once a week [2] ☐

Once month [3] ☐

More than once a week [4] ☐

Other [5] ☐

25. Why did you start using e-banking?

Time saving [1] ☐

Low cost [2] ☐

Security [3] ☐

Efficiency [4] ☐

Compatibility [5] ☐

26. How is the manual bank?

Very efficient [1] ☐

Efficient [2] ☐

Not efficient [3] ☐

27. How satisfied are you about banking services in Cameroon?

Satisfied [1] ☐

Not satisfied [2] ☐

Undecided [3] ☐

28. E-banking is better than branch banking

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

29. How do you receive notifications after each transaction?

Via SMS [1] ☐

In your mail box [2] ☐

At the physical branch [3] ☐

Other (specify) [88] ☐

30. Do the e-banking services meet your expectations?

Yes [1] ☐

No [2] ☐

31. E-banking allows you to better manage your finances

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

32. E-banking enhances the relationship with the bank

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

33. E-banking is time-saving

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

34. E-banking is better than branch banking

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

35. Use of the Internet for banking is very cheap

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

36. E-banking suits my lifestyle

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

37. E-banking makes banking more convenient

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

38. It is very easy to use e-banking

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

39. Internet banking is very easy to use

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

40. E-banking is very cheap

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

41. Having your own Internet is very expensive

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

42. Banking in the branch is safer than via the Internet

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

43. E-banking is very safe

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

46. Do you have a debit card?

Yes [1] ☐

No [2] ☐

49. Do you have a credit card?

Yes [1] ☐

No [2] ☐

50. Have you ever bought something online?

Yes [1] ☐

No [2] ☐

51. Do you use your card for shopping?

Yes [1] ☐

No [1] ☐

52. Do you think that e-banking has improved banking services in Cameroon?

Yes [1] ☐

No [2] ☐

53. Our decision to adopt e-banking is influenced by colleagues and friends

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

54. Our decision to adopt e-banking is influenced by family

Strongly agree [1] ☐

Agree [2] ☐

Neutral [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

55. Do you think that banks should look at the different complaints of their customers to enhance service quality?

Strongly agree [1] ☐

Agree [2] ☐

Neither [3] ☐

Disagree [4] ☐

Strongly disagree [5] ☐

Appendix.B. Bank branches in Cameroon

.

Estreme-nord	= Maroua
Nord	= Garoua
Adamaoua	= Ngaoundere
Est	= Bertoua
Sud	= Ebolowa
Centre	= Yaounde
Littoral	= Douala
Sud oust	= Bua
Ouest	= Bafousam
Nord oust	= bamenda

Appendix.C. Frequencies from the data collected

E-banking saves time

E-banking save time	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	60	197	172	77	5	511
Percentage	12%	39%	33%	15%	1%	100%
e-banking users frequency	56	14	0	0	0	70
e-banking users percentage	80%	20%	0	0	0	100%
e-banking non-users frequency	4	185	172	77	5	411
e-banking non-users frequency	1%	42%	38%	17%	2%	100%

E-banking is better than branch banking

E-banking is better than branch banking	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	48	156	72	77	158	511
Percentage	9%	31%	14%	15%	31%	100%
e-banking users frequency	19	32	8	10	1	70
e-banking users percentage	27%	46%	11%	14%	2%	100%
e-banking non-	29	124	64	67	157	441

users frequency						
e-banking non-users frequency	7%	28%	15%	14%	36%	100%

E-banking suit your lifestyle

E-banking suits your lifestyle	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
Frequency	60	167	79	107	98	511
Percentage	12%	32%	15%	21%	20%	100%
E-banking users frequency	12	31	14	8	5	70
E-banking users percentage	18%	44%	20%	11%	7%	100%
E-banking non-users frequency	48	136	65	99	93	441
E-banking non-users frequency	11%	30%	16%	22%	21%	100%

E-banking makes banking more convenient

E-banking makes life convenient	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	41	114	218	102	36	511
Percentage	8	22	43	20	7	100%
e-banking users frequency	11	37	5	8	9	70
e-banking users	16	53	7	11	13	100%

percentage						
e-banking non-users frequency	30	77	213	94	27	411
e-banking non-users frequency	7	17	48	21	7	100%

Is the e-banking service easy to use?

E-banking is easy to use	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	42	152	98	132	87	511
Percentage	6	31	36	22	5	100%
e-banking users frequency	37	26	2	3	2	70
e-banking users percentage	52	37	3	5	3	100%
e-banking non-users frequency	5	126	96	129	85	441
e-banking non-users frequency	1	29	22	29	19	100%

Is Internet use cheap?

Internet use is cheap	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	34	131	104	181	61	511
Percentage	7	39	28	14	12	100%
e-banking users frequency	18	30	4	18	0	70

e-banking users percentage	26	43	20	11	0	100%
e-banking non-users frequency	16	101	100	163	61	441
e-banking non-users frequency	4	23	23	36	14	100%

Is e-banking cheap?

e-banking is cheap	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	58	121	79	113	140	511
Percentage	11	24	15	22	27	100%
e-banking users frequency	12	33	13	8	4	70
e-banking users percentage	17	47	19	11	6	100%
e-banking non-users frequency	46	88	66	105	136	441
e-banking non-users frequency	10	20	15	24	31	100%

Friends and colleagues' influence on the decision to adopt e-banking

Friend and colleagues influence the use of internet	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
Frequency	72	154	89	127	69	511
Percentage	14	36	17	25	8	100%
e-banking users frequency	23	34	4	6	3	70
e-banking users percentage	33	49	6	7	5	100%
e-banking non-users frequency	49	120	85	121	66	441
e-banking non-users frequency	11	28	19	27	15	100%

Family influence on the decision to adopt e-banking

Family influence the use of internet	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
Frequency	24	164	101	134	88	511
Percentage	13	37	21	20	9	100%
e-banking users frequency	19	28	9	6	8	70
e-banking users percentage	28	42	12	7	11	100%
e-banking non-users frequency	5	136	92	128	80	441

e-banking non-users frequency	1	30	20	30	19	100%

Banking in the branch is safer than via the Internet

Banking in the branch is safer than on internet	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	121	184	78	81	47	511
Percentage	24	36	15	15	10	100%
e-banking users frequency	10	20	6	29	5	70
e-banking users percentage	14	29	09	41	7	100%
e-banking non-users frequency	111	164	72	52	42	441
e-banking non-users frequency	25	37	16	12	10	100%

E-banking is very safe

e-banking is very safe	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
frequency	28	84	104	201	94	511
Percentage	5	16	22	39	18	100%
e-banking users	10	24	12	18	6	70

frequency						
e-banking users percentage	14	34	17	26	9	100%
e-banking non-users frequency	18	60	92	183	88	411
e-banking non-users frequency	4	14	21	41	20	100%

Appendix.D. Request for entry into the area of research: French and Englishversion

NGUETSOP
TALLA
Jacques
Herve
Tel: 75899163
Email:hnguetsop@yahoo.fr

MERCREDI, 05 OCTOBRE 2011

AU MINISTRE DES FINANCES

OBJET: demande d'information

Monsieur

Je viens par la présente solliciter des informations concernant le système d'électronique bancaire et de la monétique dans les structures financières Camerounaise.

En effet étudiant Camerounais en Afrique du Sud plus précisément a l'université d'Afrique du Sud en Master de recherche, mon thème porte sur l'étude empirique de l'électronique bancaire au Cameroun. Après avoir poussé la recherche de données secondaires dans les documents et sur internet, je me suis rendu compte que ce domaine est encore peu documente dans notre pays, raison pour laquelle je viens auprès de vous solliciter l'accord pour que soit fait dans certaines banques du pays la collecte d'information via les questionnaires que rempliront les clients de ces dites banques.

En effet ce questionnaire a pour but comprendre les facteurs pouvant stimuler l'adoption de l'outil électronique par les consommateurs des services bancaires au Cameroun. La validation de cette requête me sera d'un grand apport dans la rédaction de mon mémoire de masters et les résultats pourront édifier les politiques bancaires au Cameroun visant à pousser la population à utiliser beaucoup plus les services bancaire et par la même voie les services électroniques bancaire.

Dans l'attente d'une suite favorable veuillez agréer monsieur le Ministre l'expression de mon respect profond.

Ci-joint:

- Template à remplir
- Preuve d'enregistrement dans mon université
- Copie du passeport (pour la preuve de nationalité)

Nguetsop Talla Jacques Hervé

NGUETSOP

TALLA

JACQUES H

TEL: 75899163

Email: hnguetsop@yahoo.fr

WEDNESDAY THE 05TH OF OCTOBER 2011

TO THE MINISTRY OF FINANCE CAMEROON

Object: REQUEST OF DATA COLLECTION

Dear Mr.

I hereby Mr. Nguetsop talla Jacques H Cameroonian citizen, would like to collect data from the banking environment in Cameroon.

I am a student in South Africa at the University of South Africa in Masters of Research Business Management; my subject of research is the Empirical study of e-banking in Cameroon. After the collection of secondary data in books and internet I found that this field is very few documented, for that reason to have a maximum of information I would like to collect data from the customer of banks in Cameroon so that it will help me to better understand from them the factors which can encourage them to adopt the electronic banking.

The aim of that questionnaire is to collect from those customer information which will help us to explain why they are not still embracing that electronic banking in the country and thereafter give recommendation which will help decision takers in banks to attract new customer and encourage old one to adopt e-banking services as it will benefit both banks and customer.

Dear minister of finance Cameroon, I am looking forward to have a positive answers from you.

See the documents attached:

- Questionnaire that the will fill
- Proof of registration in my University
- Copy of my passport (for the proof of Nationality)

Nguetsop Talla Jacques H.

Appendix.E. Ethical clearance for the research

UNISA university of south africa

2013-04-26

Ref. Nr:

2013/CEMS/FRM&B/CN001

To the researchers:
Mr. Jacques H N Talla (49126954) & Prof D Makina (1123696)
Finance, Risk Management and Banking
Unisa main campus,
AJH VD WALT 5-103
(012) 429 4832

This is to certify that Mr. Jacques Herve Nguetsop Talla submitted a research ethics compliance application to the Finance, Risk Management & Banking Ethics Review Committee for the MCom study:

An empirical study of e-banking in Cameroon

to declare that he has complied with the ethical requirements stipulated by the Unisa Policy on Research Ethics during the conduct and reporting of this study.

This compliance notification (2013/CEMS/FRM&B/CN001) was considered by the Research Ethics Review Committee of the Department of Finance, Risk Management and Banking, College of Economic and Management Sciences, Unisa on 22 April 2013 and found to be acceptable.

Mutezo

Ashley Mutezo
Chairperson: Research Ethics Review Committee
Department of Finance, Risk Management and Banking
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