

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

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**FACTORS AFFECTING CUSTOMERS' ADOPTION OF ELECTRONIC BANKING IN
GHANA: A CASE OF ECOBANK GHANA LIMITED**

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DECLARATION

I hereby declare that this submission is my own work toward the award of the Master of Science in Accounting and Finance and that to the best of my knowledge, it contains no material previously published by another person, nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

I dedicate this project to the Almighty God.

KNUST



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I wish to acknowledge my supervisor Mr. Peter BesahAvevor for his fatherly guidance. Am also grateful to my families, especially my wife for her support throughout my education. Finally I express my heart felt gratitude to Mr. Ennor Sylvanus Adonle and EfuwaEssel for their maximum effort.



ABSTRACT

Electronic banking is one of the modern approaches used by most financial institutions in doing transactional activities such as buying and selling, transferring capital or receiving capital, making inquiry or verifying information and others. The e-banking system allows banks to offer various services to the customers and some of these essential services may include lending, receiving financial advice, providing other products, deposit taking, account management, electronic payment of bill and others like sending e-mobile money. The main objective of the study was to determine the factors influencing the adoption of e-banking at Ecobank Ghana. Specifically, the study sought to; determine the effect of perceived usefulness of e-banking, the effect of security of e-banking on e-banking adoption, the effect of accessibility of e-banking on e-banking adoption and the effect of perceived ease of use of e-banking on e-banking adoption at Ecobank Ghana. This study employed quantitative research approach and structured questionnaire. Sample size of 200 customers were selected for the study. SPSS version 23 was used to analyzed the data. The study found that perceived ease of use, perceived usefulness and e-banking security had significant effects on e-banking adoption. The study however found that accessibility had insignificant effect on e-banking adoption. The study concludes that factors such as perceived ease of use, perceived usefulness and e-banking security influence the adoption of e-banking among customers at Ecobank Ghana. The study recommends that while e-banking is convenient and preferred by many customers, some customers are reluctant to use it due to the inability to read and follow electronically programmed commands, hence the need to redesign electronic devices to include command audio systems that use local language to increase accessibility for all customers. The use of local language would ensure that voice commands are used to guide people who cannot read and follow processes.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	4
1.3 Objectives of the Study	5
1.4 Research Questions	5
1.5 Significance of the Study	6
1.6 The Scope of Study	6
1.7 Research Methodology	6
1.8 Organization of the Study	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.0 Introduction	8
2.1 Conceptual Review	8
2.1.1 Electronic Banking	8
2.1.2 History of Electronic Banking in Ghana	11
2.1.3 E- Banking Adopting Challenges	13
2.2 Theoretical Review	18
2.2.1 Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)	18
2.2.2 Technology Acceptance Model (TAM)	19
2.3 Empirical Review	21
2.3.1 Perceived ease of use and E-banking Adoption	21
2.3.2 Perceived Usefulness and E-banking Adoption	22

2.3.3 Security and E-banking Adoption	23
2.3.4 Convenience and E-banking Adoption	25
2.4 Conceptual Framework	27
CHAPTER THREE	28
RESEARCH METHODOLOGY.....	28
3.0 Introduction	28
3.1 Research Design.....	28
3.2 Population of the Study	29
3.3 Sample Size and Sampling Technique	29
3.4 Data Collection Method	30
3.5 Data Collection Instruments.....	30
3.6 Data Analysis Method	31
3.7 Validity and Reliability	31
3.8 Ethical Considerations.....	31
3.9 Profile of the Study	32
CHAPTER FOUR.....	33
DATA ANALYSES AND DISCUSSIONS	33
4.0 Introduction	33
4.1 Demographic Characteristics	33
4.2 Factors influencing the adoption of E-banking	36
4.3 Reliability and Validity Test	44
4.4 Inferential Statistical Analyses (correlation & regression and hypotheses testing)	44
4.5 Discussion of Results	46
4.5.1 Perceived Ease of Use and E-banking Adoption	46
4.5.2 Perceived Usefulness and E-banking Adoption	47
4.5.3 Security and E-banking Adoption	48
4.5.4 Convenience and E-banking Adoption	50
CHAPTER FIVE	52
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	52
5.0 Introduction	52
5.1 Summary of Findings	52
5.1.1 Effect of Perceived ease of use on E-banking Adoption.....	52

5.1.2 Effect of Perceived Usefulness on E-banking Adoption.....	52
5.1.3 Effect of E-banking Security on E-banking Adoption.....	53
5.1.4 Effect of Accessibility on E-banking Adoption	53
5.2 Conclusions	53
5.3 Recommendations	53
5.3.1 Suggested Areas for Future Studies	55
REFERENCES	56
APPENDIX.....	62



LIST OF TABLES

Table 4.1: Gender Distribution.....	33
Table 4.2: Years of been Customer of the Bank.....	34
Table 4.3: Perceived ease of use.....	36
Table 4.4: Perceived Usefulness.....	37
Table 4.5: Security.....	39
Table 4.6: Accessibility	40
Table 4.7: Socio-cultural Issues.....	42
Table 4.8: Factors for enhancing the adoption of E-banking	43
Table 4.9: Internal Consistency of Construct	44
Table 4.10: Correlations	44
Table 4.11: Goodness of Fit	45
Table 4.12: Analysis of Variance (ANOVA)	45
Table 4.13: Factors influencing E-Banking Adoption and Hypotheses Testing	46



LIST OF FIGURES

Figure 2.1 Theoretical Framework Underpinning the study is Presented Diagrammatically	27
Figure 4.1 Age Distribution.....	34
Figure 4.2: Level of Education.....	35



LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
AVR	Automated Voice Response
E-banking	Electronic Banking
ECB	European Central Bank
GSE	Ghana Stock Exchange
IB	Internet Banking
ICT	Information Communication Technology
ISSER	Indian Institutes of Science Education and Research
ITU	International Telecommunication Union
PBC	Perceived Behavioural Control
PCs	Personal Computers
PDA	Personal Digital Assistant
PEU	Perceived ease of use
POS	Post of Sale
PU	Perceived Usefulness
QR	Quick Response
ROAA	Return on Average Assets
ROAE	Return on Average Equity
SADC	Southern African Development Community
SMS	Short Text Message
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
TV	Television
UNCITRAL	United Nations Commission on International Trade Law
www	World Wide Web

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

E-banking per the BCBS (2003) is the process of conducting financial activities through the electronic medium. Electronic banking is one of the modern approaches used by most financial institutions in doing transactional activities such as buying and selling, transferring capital or receiving capital, making inquiry or verifying information and others. The e-banking system allows banks to offer various services to the customers and some of these essential services may include lending, receiving financial advice, providing other products, deposit taking, account management, electronic payment of bill and others like sending e-mobile money (Committee on Banking Supervision, 2003). Although, researchers have given different ideas concerning the definition of e-banking yet there is no single definition for the concept (Abor, 2004; Boateng and Molla, 2006; Karma *et al.* 2014; Ahmed and Phin 2016).

The introduction of e-banking has made it possible for the banking sector to improve their financial services such as offering diverse services ranging ATM services, online services like purchasing and related services (Azouzi, 2009). The e-banking is an online service introduced recently by the telebanking in Ghana (Abor, 2004). Telebanking is the process of conducting financial activities using technological systems. E-banking enables customers to get access to financial products with the use of technological devices such as mobile phones and other telephone calls to transact business with financial institutions. E-banking also uses Automated Voice Response (AVR) that allows customers to make orders and request from a particular bank

through telebanking processes. Through electronic banking, customers are able to access diverse financial services in the banking sector (Boateng and Molla, 2006).

Although, e-banking has several benefits to both the financial institution and customers but due to some risks associated with the electronic system managers sometimes encounter operational challenges which affects the growth and development of the institution. Studies have identified that e-banking could be affected by three factors and these factors may include customers' attitude, perceived benefits and perceived usefulness. Regarding behavioural intention, Lee (2008) employed the theory of TAM and the TPB to explain customer behaviour in relation to e-banking adoption.

ATM is a new electronic banking technology introduced in the banking sector to offer financial services to potential customers. The ATM machine allows customers to withdraw money using registered card with security codes (Boateng and Molla, 2006). The ATM card allows customers to withdraw money any time the need arises. This technique was first adopted by Trust Bank in the year 1995 (Abor, 2004). This new online transaction has involved many Ghanaians due to its flexibility (Boateng and Molla, 2006).

Evidence has shown that there have been several searches regarding e-banking. For example, in Pakistan Mehmood *et al.* (2014) assessed the factors (Perceived Usefulness, Trust, Privacy and Security, Self-efficacy and Web Design) affecting e-banking in Pakistan and revealed that e-banking was influenced by factors such as perceived usefulness, self-efficacy and trust. Again, the result showed that privacy, web design and security had positive relation with e-banking.

Besides, in Kenya, Gikonyo (2014) discovered that men use the banking system more than women and that public awareness or education had no significant effect on the adoption of e-banking system. The study asserted that, factors such as security, government policies, internet, customer awareness and information promote the adoption of e-banking. However, cost of adoption was identified as a major challenge affecting the adoption of e-banking system.

In Tunisia, Nasri, (2011) determined the factors affecting e-banking in Tunisia and found that e-banking adoption in Tunisia had been influenced several factors and some of the factors included perceived risks, perceived convenience, perceived security and already existing internet knowledge. Other factors were security, risks and general knowledge. Al-Smadi (2012) discovered that perceive perceived ease of use and perceive usefulness were factors affecting e-banking adoption. Electronic banking today had improved many financial institutions in terms of performance and service delivery. The system has also become a competitive tool used by financial institutions in achieving competitive position in the financial market.

Maditinos *et al.* (2013) revealed that factors such as perceived ease of use, perceived risks, security, perceived usefulness and related factors influenced customer attitude towards the e-banking system. In this case, if the customer feels satisfied with the system the possibility of developing positive attitude towards the system would be high and otherwise. However, risks associated with e-banking system influence bank performance. In the city of Bahir Dar, Takele and Sira (2013) explored customers intention about e-banking and discovered that customer attitude, perceived behavioural control, perceived ease of use, subjective norm, perceived usefulness and risk were factors that influenced e-banking adoption.

1.2 Problem Statement

Several researchers have conducted studies concerning e-banking system (Boateng and Molla, 2006; Brar *et al.*, 2014; Sheikh *et al.*, 2014; Sharifi and Homayounfar, 2016). Sheikh *et al.* (2014) for example assessed the factors influencing e-banking adoption in the financial institution and discovered that factors such as security, information availability, perceived risks, prior internet knowledge and demographic factors had positive impact on electronic banking. Again, the researcher indicated that electronic banking was affected by five main factors and these factors were convenience, security, information availability, perceived risks, prior internet knowledge and among other. Brar *et al.* (2014) revealed that PU, PEU, subjective norm and behavior had significant impact on e-banking adoption. This study employed the TPB and TAM. E-banking though is a concept that is widely accepted in Ghana yet there are limited studies concerning the concept. Ghana had been noticed to have achieved greater improvement in its banking industry and some of these growths are as a result of the adoption of e-banking systems in the banking activities of the financial institutions (Dalberg, 2013).

Aside these areas, there is still the need for other researchers to explore some aspect of e-banking, for instance dimension being security, accessibility, perceived usefulness, perceived ease of use, the socio-cultural and security dimensions. This study thereby has employed security and socio-demographic factors into the technology acceptance model to determine e-banking adoption among customers of eco-bank Ghana.

1.3 Objectives of the Study

The general objective of the study is to determine the factors influencing the adoption of e-banking at Ecobank Ghana. The specific objectives include:

- a. To determine the effect of perceived usefulness of e-banking on e-banking adoption at Ecobank Ghana
- b. To examine the effect of security of e-banking on e-banking adoption at Ecobank Ghana
- c. To determine the effect of accessibility of e-banking on e-banking adoption at Ecobank Ghana
- d. To assess the effect of perceived ease of use of e-banking on e-banking adoption at Ecobank Ghana

1.4 Research Questions

To address the stated objectives, the following constitute the proposed research questions:

- a. What is the effect of perceived usefulness of e-banking on e-banking adoption at Ecobank Ghana?
- b. What is the effect of security of e-banking on e-banking adoption at Ecobank Ghana?
- c. What is the effect of accessibility of e-banking on e-banking adoption at Ecobank Ghana?
- d. What is the effect of perceived ease of use of e-banking on e-banking adoption at Ecobank Ghana?

1.5 Significance of the Study

The study would help stakeholders within the banking sector in formulating and establishing internal mechanisms to help promote the performance of the institution such as promoting economic growth and productivity. Also, the government would benefit from this study by applying the suggestions of this study to help enhance the activities of the banking industry to achieve economic growth and stability. Again, commercial banks and other financial institutions would benefit from this study by adopting e-banking systems to help improve service deliveries. This study would serve as future evidence to aid future researchers carry put their related studies.

1.6 The Scope of Study

This study would be structured into three as follows: Contextual, time horizon and geographical. Contextually, the study is to determine the factors influencing the adoption of e-banking in Ghana. specifically, the study will consider how factors such as perceived usefulness, security of e-banking, accessibility, perceived ease of use of e-banking on e-banking adoption at Ecobank. Geographically, the study will focus on Ecobank customers in the Takoradi metropolis. In terms of time perspective, the study will consider cross sectional data. That is the study will consider only present practices of e-banking adoption.

1.7 Research Methodology

This study will employ quantitative research to determine the factors influencing the adoption of e-banking in Ghana. The study would use both primary and secondary data. The primary data shall be gathered using a survey data collection method. Also, the study would deploy 200 respondents to answer the research questionnaires. The actual sample size would be determined

using Morgan and Krecie (1970) statistical formula at 95% confidence interval on an estimated 12000 customers of the Ecobank Ghana who engage in e-banking service. The sample size would be chosen using the convenience sampling method. Again, the data would be analyzed using the SPSS. Again, data would be presented using descriptive statistics analyses, correlation, Least Square Regression, Heteroscedasticity, Multicollinearity and Normality test (Reliability and Validity).

1.8 Organization of the Study

The study shall be grouped into five chapters. Chapter one would provide the general introduction of the study. Chapter two would provide the literature review of the various concepts including the theoretical review. Chapter three shall provide the methods used by the researcher in conducting the study. Chapter four would provide the data analysis and presentation and Chapter five would end by providing the summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter presents review of related studies in relation to factors influencing the adoption of e-banking with emphasis on Ecobank Ghana. Particularly, the overview of the construct, the theoretical orientation, the empirical review as well as the conceptual framework have been presented.

2.1 Conceptual Review

2.1.1 Electronic Banking

E-banking is some other form of banking in which money are shared via the change of digital indicators among economic institutions instead of via the change of cash, cheques or other negotiable contraptions (Al-Hawary and Hussien, 2017; Perera, 2018; Lin, Wang and Hung, 2020). Internet banking (IB) is termed as the availability of banking services through an open computer internet network straight to the comfort of a customer at a private account (Maltio et al., 2015; Lin, Wang and Hung, 2020). A large term used to outline the range of banking services and products offered through virtual, internet and mobile technology is known as internet banking (Kim et al., 2011). Internet banking technology is the range of services beginning from ATMs to Smartphone banking, domestic computers, television, the net and now mobile banking (Parker & Parker, 2008). Those technologies are getting an increasing number of popular inside the banking industry and are used to provide great offerings to customers requiring comfort and technological information and to reduce the bank's running charges (Nasri, 2011). Internet and cell banking have grown to be the maximum vital retail channels that banks are using to serve

their clients in step with their expectations and thus enhance their market proportion and effectiveness (Mwiya et al., 2017).

Timothy (2012) alludes advanced banking to the utilization of the Internet as a far off conveyance channel for regulatory purposes, for example, enrolling financial balances, moving assets among accounts and electronically recording and covering tabs. The framework can be given in two standard manners. A money related establishment with a physical office can set up a site and offer its administrations to its clients notwithstanding the standard conveyance channels. The subsequent route is to make a virtual bank where the PC worker is situated in the branch, which is the legitimate side of the bank. Banks offer their clients the possibility of depositing and withdrawing cash through ATMs or various remote transport channels, for which an administrative fee is charged. Electronic banking is now the channel for banking services (Mwiya et al., 2017).

Raza et al (2017) defined e-banking as web portal in which clients perform numerous banking activities which includes; bill payments as well as investments making. Similarly, to cash withdrawals, e-banking gives clients cheap right of entry to some of the transactions of the bank. Masoud and AbuTaqa (2017) term electronic banking as an isolated financial institution that do not best manages the flow of statistics among the purchaser's "domestic places" (e.g., houses, offices, etc.) and the bank's physical centers, but also orders, income, distribution and offerings, where the patron and the monetary group's agent are not within the identical physical location on the equal time. In line with Mols (1998), the robotic transmission of the modern day and conventional banking products and services immediately to clients by way of electronic approach

is known as electronic banking. This approach allows the customers to access their accounts, make transactions, perform evaluations as well as receive quality feedback from the banks.

Internet banking services provide customers with access to financial services remotely, including collections, bill payment, financial payments and transfers via the Internet, but not in branches of financial institutions; via the Internet using information devices, including desktop computers, laptops (PCs) and mobile devices (Liang and Wu, 2015). With online banking, there are no physical staff in the branches or units and customers have access to the transactions or services they want, anytime, anywhere (Liang et al., 2010; Chen et al., 2012). By offering e-banking services, operators of financial institutions can achieve many benefits and increase competition between companies, e.g. by reducing transaction time and the cost and staffing requirements for setting up branches, thereby improving the quality of services and customer satisfaction. Electronic banking can be described as a branch that includes online banking or (electronic banking), television, mobile telephone and computer banking (or offline banking), where customers can purchase these services using an intelligent electronic device such as a computer, PDA, ATM, POS, kiosk or touch phone (Masoud and AbuTaq, 2017). According to Masoud and Abu Taqa, there are unique forms of electronic banking, and here are some of the most important:

Automated Teller Machines(ATM)- are digital terminals that allow customers to obtain banking services at any time. To withdraw money from an account, make deposits or transfer money from one account to another, the consumer must have a bank card and a PIN. POS - this device allows the consumer to pay for retail purchases with a credit card or debit card. This card is in the sort or form of a credit card yet with a huge variation. The purchase money is without delay transferred from the account of the owner of the debit card to the account of the supplier (Malak

2007; Mwiya et al., 2017; Raza et al., 2017); internet/extranet banking -is a virtual domestic banking gadget that makes use of internet technologies which help the clients to transact money to the bank via computer system. The services which permits clients to make or conduct some banking services such as request for opening account and money transfers through short text messages is known as mobile banking.

2.1.2 History of Electronic Banking in Ghana

Office computerization frameworks were the most essential sort of web, electronic and correspondences advances utilized in Ghana. Phone, wire and fax were utilized to accelerate client care and improve its proficiency. The data and correspondence innovation chiefly utilized for banking exchanges was kept up throughout the years. Afterward, during the 1980s, as rivalry got fiercer and PCs got common, all banks in Ghana started to utilize them in the background and later they were utilized at ATMs to serve their clients. On account of advances in data innovation, banks had the option to consolidate their branches and shops, making the way of thinking of a solitary branch a reality. Barclays Bank Ghana Limited and Standard Chartered Bank Ghana Limited presented this significant electronic advancement that changed the nation's financial scene.

The ATM is probably the most advanced electronic tool in Ghana and in the world. In Ghana, banks have partnered with us to manage ATMs, which has improved their customer service. Ghana Trust Bank (now in partnership with ECOBANK) opened the first ATM in 1995. Since then, several major banks have put their ATM networks in a competitive position. Ghana Commercial Bank started ATM utility in 2001 in cooperation with Agricultural Development

Bank. Almost all banks in the country have now put the use of ATMs into operation. ATMs are the most efficient way to distribute banking services to retail customers in the province. Customers do not forget this, as it is important in terms of their preference for banks, and banks that have delayed the introduction of their ATM structures have suffered irreversibly. The ATMs have managed to create a philosophy of the only branch in the county being networked, so that people do not always have to go to their branch to do banking.

Although ATMs have proven to be extremely efficient through their amazing use, it has been found that it is possible to increase the competitiveness and efficiency of banks by providing even better customer service. Information and Communication Technology (ICT) had again become a driving force, making home banking services and branches a reality. In Ghana, some banks have started to offer automated banking services, especially for companies. Banks serve their clients with proprietary software to access their bank accounts, sometimes via the World Wide Web (www). However, these activities are more limited as they are entirely focused on business customers. Banks see the internet as a way to maximize their income and improve their competitiveness. At present, several banks in Ghana are still active on the Internet (I-Banking).

In the past, companies that wanted to achieve too high a level of customer satisfaction concentrated on finding the best and most popular servers in order to offer high quality products and services in their target markets. Lately, customers have not only demanded more quality, but also insisted on fast delivery of services and products. As a result, companies must face these changes if they want to remain competitive. As customers are under pressure for more time, the waiting time seems longer than ever before. If companies succeed in improving customer

perception of lost service wait times, customers will feel less frustrated and more satisfied with the service they receive. In addition, as services within the national financial system expand, the typical 40-hour week structure will collapse. During these days, weekends are working days and 24-hour customer service is provided via Internet banking.

Over the last decade, the GoG has made a determined effort to promote the "knowledge-based economy" mechanisms in order to make Ghana a country ready to develop ICT. Internet use in Ghana has also improved significantly since the liberalization of the telecommunications sector in the 1990s. In 2005 there were 18.1 internet users per 1,000 inhabitants, compared to one internet user in 1999 (ITU, 2007). Between 1999 and 2005 the number of computer owners per 1,000 inhabitants increased 52 times. A national policy for accepting IT was established in the year 2003 in the aim developing IT-base system of socio-economic development. The results of these projects can be found in the November 2005 issue of African Business magazine. In an article on the Ghanaian profile page with the headline "More cakes but less associations" it says: "Ghana has the most developed IT sector in West Africa. For a country that can indeed be defined as the poor end of the global digital divide, it's critical to know about the effect of ICT on Ghana's financial sector, which also tends to contribute significantly to the income of the service sector in Ghana (ISSER, 2005).

2.1.3 E- Banking Adopting Challenges

E-banking even with its several advantages, had challenges in its package's installation. Various challenges issued by preceding research works encompass Technological factors, security, infrastructure, regulatory and legal issues and Socio-Cultural challenges.

Technological factors: a hit e-banking adoption requires effective technology management. The restrained access to financial offerings is attributed to three primary demanding situations: limited scale (outreach), intensity and the high cost of imparting monetary offerings. Imperatively, the equipping of financial offerings to several individuals, mainly inside the depth of rural areas, the use of traditional department networks involves high charges (Lin, Wang and Hung, 2020). In an effort to conquer these demanding situations, financial service companies in an increasing variety of nations are locating innovative methods of delivering financial services. Using ICT is certainly presenting a way to growing scale and depth, even as lowering prices in the provision of financial services. Studies advise that technology plays a considerable function in enhancing financial access by means of taking financial utilities in a sustainable approach to under-served and un-served vicinities (Lin, Wang and Hung, 2020). Research additionally display that technologies including ATMs, mobile phones and points-of-sale (POS) systems are more and more being utilized to lessen costs and enhance access for low-income clients (Martina, 2015). These technologies are offering alternative conveyance channels for the delivery of financial utilities.

Security: Security is also a serious issue and a basic requirement for online banking. Security in online banking is about checking customer and bank data and protecting transmitted information from being intercepted. This authentication can be carried out with personal data and passwords of individuals. It is also necessary to implement a method to protect against the rejection of buyers and customers once the payment process has begun (Barnes and Hunt 2001). As indicated by Worku (2010), e-banking structures ought to likewise consider the requirement for multilateral security keys, for example the security needs of all gatherings associated with e-

banking frameworks. An unstable e-banking structure can nor be endorsed nor gain the trust of clients. Trust is one of the most significant components that make e-banking frameworks alluring to clients. Worku (2010) has likewise called attention to that e-banking programs are a security challenge since they depend on basic ICT frameworks that make weaknesses in banks and business organizations and can hurt clients. It was pivotal that banks recognize and address security issues so as to understand the capability of ICT in the arrangement of internet banking administrations. Programming disappointments can likewise be viewed as security issues, as they pulverize all portions of the system and lead to critical misfortunes.

In the perspective on Tadesse and Kidan (2015), there are significant security challenges. The following are a portion of those difficulties:

Divulgence of private data: In the field of electronic installments, there are a few manners by which interlopers can get to private data. For instance, programmers can catch arrange traffic to access private data. There is probability to get touchy data put away on a PC associated with the Internet. This data can be utilized for misrepresentation that can bring about loss of cash.

Duplicating: is the formation of new data or the proliferation of existing data that is actually solid however not legitimate. Instances of forging incorporate the cloning of electronic cash to copy use and the making of bogus records. A typical type of falsifying is the duplication of electronic information on an installment card (for example an ATM card), which makes it conceivable to copy cards and pull back cash from accounts (Mwiya et al., 2017).

Illegal alteration of payment data: Illegal modification of payment information can lead to loss of money and loss of customer confidence. Changes to transaction account numbers can result from incorrect payments, payment amounts or electronic balances on electronic media. Another problem with electronic payments is that an attacker may use a fraudulent website to obtain credit card numbers and other private and/or financial information. According to Raza et al (2017), the most common approach to securing electronic banking transactions is the use of encryption technologies, including encryption and digital signature. However, the use of these technologies reduces their effectiveness, and ultimately a balance must be struck between security and efficiency.

Infrastructure: Another test related with the presentation of e-banking is the arrangement of a proper foundation. A successful execution of e-banking requires a dependable and practical foundation that is available to the overall population. The most mainstream correspondence framework for Internet banking is a PC connect with the Internet. Numerous parts of the Internet bank utilize the system to speak with clients. Another correspondence foundation for Internet banking clients is the cell phone organize utilized for cell phones. The computerization of the financial segment is additionally an essential for e-banking. It is critical to have a shut budgetary system that joins banks and different money related establishments. This system is frequently utilized between various banks or budgetary parts for charging and installment affirmations.

As indicated by Kumaga (2010), low degree of web entrance and helpless media communications framework are hampering the turn of events and improvement of web based business in creating nations. In this unique situation, the Nigeria Microfinance Assessment

(2010) presumed that endeavors by the Nigerian government and other money related and ICT entertainers to change Nigeria's installment structure from a money stage to a globally acknowledged option electronic methods have been obstructed by the absence of an adequately evolved broadcast communications framework. Another significant test in this setting is the normal interference of intensity gracefully. This can prompt various issues in Internet banking, fundamentally identified with the force gracefully. This will drive banks to depend on generators, bringing about high working expenses. These issues are viewed as confinements for the advancement of Internet banking.

Administrative and Legal Issues: Laws, principles and different guidelines embraced at national, local or worldwide level are the primary requirements for the viable usage of e-banking administrations. A portion of the key components are hostile to illegal tax avoidance guidelines, oversight of business banks and money related establishments, management of installment frameworks by national banks, insurance of clients and data, co-activity and rivalry (European Central Bank, 2002). As per Mishra (2009), the virtual and universal nature of electronic installments has additionally been characterized in lawful terms, remembering locale and relevant law for instance of questions, legitimacy of electronic data, electronic agreements and computerized marks.

Some other critical difficulty that needs to be assessed is the legal and regulatory framework that will promote trust and assist in the technical effort to meet this objective. In this scenario, the backing from the law is required to guard the customer's interest and banks in many regions link with electronic banking and payment plans. The law should tackle some of the most vital

concerns, consisting of legal responsibility for losses in the event of fraud, distribution of losses within the occasion of insolvency, obstacle of manage, evidence and burden of evidence, information retention, fraud prevention, and many others (ECB, 2002). this could be accomplished by way of adopting model legal guidelines at worldwide degree, along with the UNCITRAL model law on digital trade (1996), the UNCITRAL model law on digital Electronic Signatures (2001) and at regional stage, including the SADC Model Law on electronic Transactions and Data protection (Mishra, 2009).

Socio-Cultural Challenges: Cultural and authentic contrasts in the treatment and utilization of various kinds of cash (for example the utilization of Visas in North America and the utilization of check cards in Europe) have eclipsed the making of a worldwide system for electronic installments. Contrasts in the degree of security and execution required between individuals of various societies and in the degree of progress compound the issue (Raza et al., 2017; Mwiya et al., 2017).

2.2 Theoretical Review

2.2.1 Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)

The TRA figures out the deliberate behaviour determinants and emerges from social psychology. TRA assesses the perception of behaviour used in the strategies used to shape the individual mindset toward that behaviour and also assumes that the individual is sound and constant. Behavioral goal, attitude and subjective norms are the three constructs the principle is based on. Attitude is the collection of perceptions associated with an exact character when that unique conduct is matched positively or negatively: "Do I lead nicely? Fishbein and Ajzen (1975). The

norms that have an effect on of people in certain social surroundings on their behavioural perceptions are known as subjective norms: "Will individuals who are essential to me take this behaviour? In broad terms, subjective norms are the beliefs of individual, measured via the cost connected to any view that impacts their behaviour.

Fishbein and Ajzen (1975) define behavioral intention as the characterization of both attitudes and subjective norms related to this behavior. It is this intention that has been discovered to define actual behavior. With regard to Internet banking, the TRA suggests that intention to participate or not in Internet banking can be determined on the basis of subjective standards and personal attitudes to internet banking. To facilitate the prediction of behavioral intentions, the TRA proposed to combine the principle of Perceived Behavioral Control (PBC) to the constructs of subjective attitudes and standards. Ajzen (1991) show perceived behavioral as an idea of how easy or difficult it is for a person to behave in the face of potential barriers: "If I wanted to, could I do it? Empirically, TRA and TPB are widely used to monitor the introduction and individual use of various technologies (Hanafizadeh et al., 2014), including online banking in the UK, Jordan, Taiwan and Hong Kong (Chen et al., 2006; Yousafzai et al., 2010). In the Zambian context there is no analysis in the literature of the use of electronic banking based on TRA and TPB, which limits the synthesis of the results of previous studies.

2.2.2 Technology Acceptance Model (TAM)

TAM was created by Fred Davis (Davies, 1989). This rule was adjusted based on the Theory of Reasonable Action (TRA). This model is most ordinarily used to quantify the level of acknowledgment of the innovation. As indicated by this model, the utilization of a data gadget

depends on the impression of comfort and perceived ease of use. Positive or negative perspectives towards the innovation are an element of saw perceived ease of use and usability. The main idea, perceive usefulness (PU) is "the abstract capacity of the client to utilize the picked perceived ease of use framework to improve its presentation" (Davis, 1989). It was at first clarified in the investigation of human work and afterward utilized for any typical work inside or outside the earth of the association.

The subsequent thought, PEU, is "the degree to which the client anticipates that the center framework should be without exertion" (Davies, 1989). PU is in like manner enlivened by PEU. Just like the case for the TRA and TPB, the intensity of such beliefs, mentalities and expectation in deciding real conduct in huge part depends upon the degree of estimation explicitness obtained (Ajzen and Fishbein, 1980). So as to receive these proposals to the innovation acknowledgment setting, it is fundamental to evaluate convictions with respect to utilizing innovation, rather than the innovation itself. Observationally, the TAM model has been utilized comprehensively to investigate individuals' acknowledgment and utilization of different innovations (Shaikh and Karjaluoto, 2015, for example, e-banking in United Kingdom, Malaysia, Iran and Jordan (Yousafzai et al., 2010; Alsmadi, 2012). Be that as it may, there is no any examination in the Zambian setting basically dependent on the TAM model; this cutoff points generalizability of ex study's decisions.

2.3 Empirical Review

2.3.1 Perceived ease of use and E-banking Adoption

The PEU is "the extent to which a person finds the device simple and easy to use". This means that you will not have any complications. In addition, much less time-consuming systems have been shown to increase human productivity (Mwiya et al., 2017). The perception of user-friendliness has had a huge impact on usage, with the intention of being the determining factor. The perceived ease of use can be a good indicator, perhaps even greater than the perceived ease of use, of the effectiveness of an information system when process issues are at the forefront (Venkatesh and Davis, 2010; Lin, Wang and Hung, 2020). The perceived ease of use has a direct or indirect influence on the perceived ease of use. User-friendly information technology entails fewer risks for the individual (Moon and Kim, 2011). The more customers understand that digital banking is easy to use, the more likely they are to use online banking services (Blachander, 2011).

PEU refers to the degree to which individuals claim that using the right technology requires little or no effort (Mwiya et al., 2017). The current perceived ease of use does not say whether a new information system is being used, but whether a user-friendly mindset is being created. Previous studies (Sikdar et al., 2015; Lee and Kim, 2017) show that the perceived ease of use is a reasonable context for a positive attitude towards online banking and consumer pleasure. Malhotra et al. (2014) examined the elements that affect the execution of online banking. The execution of online banking was affected by the following elements; the PU, PEU, perceived chance, image, outcomes demonstrability, perceived behavioral control and subjective norm. However, the perception on the execution of online banking was not affected by some of the elements such as the perceived usability, perceived reliability and private effectiveness. The

survey outcomes have to be very beneficial for bank dealers. An evaluation of the factors diagnosed in this survey will permit the managers of banks to concentrate their efforts and assets at the most effective and efficient ways to sell long-term banking offerings and could inspire clients to apply on-line banking.

Perera (2018) has recognized components that impact the appropriation of web-based banking by online brokers. The exploration demonstrated that its advantages positively affect client acknowledgment of web-based banking - 45.3%. The investigation again demonstrated that apparent convenience positively affects purchaser impression of web based financial administrations - 44.2%. Daniel and Jonathan (2013) analyzed the components that impacted client appropriation on net banking. The investigation additionally indicated that apparent usability effectively affects the execution of web based financial administrations by clients, at 41.1%. The outcomes demonstrated that the first TAM ventures - PU, PEOU and the development of government backing, trust and security were critical to the goals of web based financial clients. Ibrahim et al. (2018) results showed that the willingness of the organization to engage in e-banking, user trust and perception of risks in the system, and the prevailing mindset on e-banking had a positive influence on the adoption of e-banking by industrial banks in Mogadishu Somalia.

2.3.2 Perceived Usefulness and E-banking Adoption

PU significantly and largely understood in the electronic banking area. The use of a specific framework will promote the overall achievement of the objectives (Raza et al., 2017); this is a prerequisite for the introduction of mass technologies, which relies upon purchaser desires for

how the innovation can improve and disentangle their lives. The embraced instrument majorly affects the utilization of data innovation (Safeena, Date and Kammani, 2011). Web banking can be utilized for some exercises and performs numerous errands. The decision to use modern technologies depends on the extent to which someone claims that the production of goods or services is cost-effective compared to the previous technology (Safeena and Kammani, 2011; Lin, et al., 2020). According to Sikdar et al. (2015), the perceived usefulness of technology from the customer's perspective relates to the end result of the experience. If the outcome was positive or beneficial, consumers may be positive about the use of the technology. In addition, some researchers describe perceived utility as the level at which a person feels that the system improves their work performance (Sikdar et al., 2015). As far as internet banking technology is concerned, its benefits depend on whether customers find it cheaper, more convenient, flexible and efficient. It also assumes that customers who find a convenient self-service technology that allows them greater autonomy from the bank, information about financial advice and other financial assets are more likely to take a positive view of these technologies.

2.3.3 Security and E-banking Adoption

The term security means efforts to protect against possible dangers. It also means that security helps to protect the facts about consumers and their financial transactions. Security describes the fact that e-commerce parties can look secure and protect other information from potential threats. In the online environment, security refers to the ability of an agency website to protect consumer data and information about their financial transactions from theft at all times (Hua, 2009; Lin, Wang and Hung, 2020). Lin et al. (2020) study confirmed the variety of elements accepted by organizations and customers. Based on the results, companies can change their business practices

and increase customers' willingness to use online banking. Trust is the most valuable element for organizations and customers. Therefore, e-banking companies need to focus on areas such as liquidity monitoring, information security and financial compliance to reduce risk and gain customer trust. Maduku (2014) examined the beginning and use of internet banking by clients. The research outcomes indicated that these factors aided the execution and use of the net and especially mobile banking. In this evaluation, the confidence of the clients in on line banking was seen as the most essential predictive element for net and mobile banking, in contrast to past studies in diverse environmental contexts, in which the benefit and PEU of internet and mobile banking had been strongly affected (Al-Smadi, 2012). The research primary conclusions were that the prevention of doubt had a huge effective effect on usability and the notion of usability. The perceived risks have a huge effect on the mentality of the client, which in flip impacts the purchaser's purpose to apply digital banking services.

Ayal (2018) examined the elements that affect the introduction of web banking. The study identified the following affect the introduction of e-banking at commercial banks in Ethiopia: technological elements (perceived risk), organizational elements, human and financial resources, environmental factors, national ICT infrastructure, lack of regulatory framework, lack of government support and completion of foreign banks, demographic factors, gender, age and education, and lack of awareness and trust in the system. Xiao et al. has already tested (in 2017) results emphasize that perceived usability and reliability are important aspects that positively influence customers' willingness to use online banking, while usability and perceived costs are less important. The analysis of the reasons for objections to online banking has shown that the main factors are "complexity of use", "uselessness" and "security fear" and thus difficult situations for service providers. Al- Zu'bi et al. (2014) revealed that compatibility, perceived

usability, security, and perceived ease of use undoubtedly influence the implementation of Internet banking. In addition, this research adds a new topic that looks at the influence of all impartial factors together and reveals a significant link between these factors and the net acquisition of the bank. It is therefore necessary to ensure a synergistic link between these factors in order to maximize their impact on the bank's acceptance of Internet use. The study also shows that all the demographic classes studied affects the adoption of web banking, which suggests that they should be used to develop appropriate consumer segmentation, so that it would be possible to apply more appropriate marketing methods.

2.3.4 Convenience and E-banking Adoption

Anouze and Alamro (2019) statistical methods showed that several dominant factors as well as perceived ease of use, perceived convenience, security and a reasonable price were identified as obstacles to online banking. Al-Sharafi et al. (2017) results show that trust is created when customers find online banking useful, while perceived usability does not prejudice the intention of the Jordanian population to accept and use it. Perceived trust also plays a role in the partial mediation between the perceived benefit and the purpose of online banking.

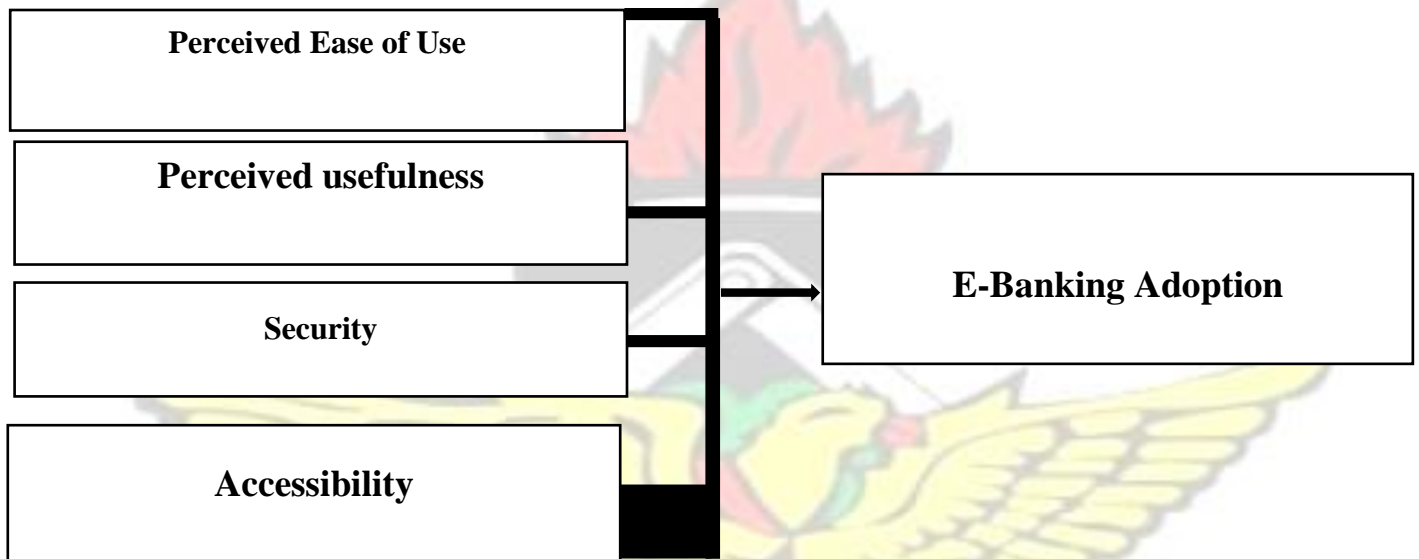
Masoud and AbuTaqa (2017) aimed and examine the elements that have an effect on customer recognition of e-banking services. The research revealed that the recognition of e-banking services has a significant influence (best of e-services, belief of usability, security, reliability). The best of e-services emerges as a crucial aspect in showing customer recognition of e-banking offers, whereas e-safety had less impact. The research indicated proof for the effect of the below elements of e-service quality: Al-Hawary and Hussien (2017) explored the influence of online banking services on customer loyalty. The research revealed that online banking offerings

(usability, perceived ease of use, website design, and privacy) have a statistically significant effect on client retention at Jordanian investment banks. In instances of accessibility, the research observed that it did not have much influence on customer retention.

Raza et al. (2017) investigated the components that decide the apparent advantages and helpfulness of executing portable banking. The outcomes show that versatility is huge and negative as far as perceived ease of use, while it is huge and positive as far as usefulness. Besides, hazard observation and similarity are emphatically and altogether identified with apparent convenience and value. Be that as it may, hazard recognition is certain and is to a great extent identified with apparent perceived ease of use, though the reliance on usefulness is low. Mwiya et al. (2017) who discovered that the changed TAM model is significant within the Zambian context. The attitudes in the direction of e-banking were also significantly positively affected by perceived usefulness, perceived ease of use and trust has a significant positive influence. The mind-set toward e-banking in flip has an impact on the aim and exact recognition of e-banking. According to scholars, executioners and policy makers, this survey has indicated that a progressed notion of trust (protection and reliability), usefulness and simplicity of use of on line banking structures ought to facilitate their implementation. Maltio et al. (2015) recognized the factors that have an impact on the use of online banking. The survey outcomes showed that, the usage of online banking was promoted by elements such as usefulness, risk perception, perception of security, past expertise on the internet and information about online banking. The survey concluded that online banking was also significantly affected by demographic elements.

2.4 Conceptual Framework

The research framework is based on TAM, as well as on security and accessibility. The purpose of the study is to test four entry points, namely: perceived ease of use, perceived usefulness, accessibility and security. It is expected that these hypotheses will have a significant impact on the reception of mobile phone signals, as shown in Figure 2.1.



Source: Author's

Figure 2.1 Theoretical Framework Underpinning the study is Presented Diagrammatically

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The research methodology of this research is outlined in this chapter. In the process, the following aspects have been considered in particular: research design, study population, data sources, target population, determination of sample size and sampling.

3.1 Research Design

Research designs are the basic principles and protocols used during the course of a study to decide whether a study is necessary. These comprise quantitative, qualitative and mixed research methods (Saunders et al., 2012). For this purpose, the study uses quantitative analysis. Quantitative analysis uses numbers and calculations to quantify the degree of prevalence. This includes collecting numerical data and demonstrating the relationship between theory and research in the form of conclusions. Quantitative research is also based on positivism and objectivity in the conception of social reality (Sikmund et al., 2012). In this study, the explorer used closed-ended questionnaires, correlation and regression analysis, which are characteristic of quantitative design.

Depending on the research purpose, the research designs are categorized into descriptive and explanatory research designs. For this study, the researcher used both descriptive and explanatory research designs. An explanatory research design is used when the aim of the study is to investigate cause-and-effect relationships. This design was used to investigate the reasons for the introduction of online banking among the customers of eco-bank. In contrast, the

descriptive design was used to better illuminate the factors influencing the introduction of online banking by providing a more concise and accurate description of the situation (Zikmund et al., 2012). The study therefore used a descriptive pattern to describe, explain and validate the variables.

3.2 Population of the Study

The population refers to the characteristics of persons or objects with a similar identity (Sakaran, 2003). Research must be aimed at a population group that has all the information relevant for research, including sampling elements, sampling units and research area. In the context of this study, the target group includes the branches of Ecobank Ghana in the Takoradi metropolis. It is estimated that by September 2015 the bank's client base in the Takoradi area will comprise more than 2,000 people.

3.3 Sample Size and Sampling Technique

Sampling is vital given the limited resources available. In this study 200 people were interviewed. This is because Saunders (2017) had predicted that a sample of 150 people would be optimal for a credible statistical analysis. The study adopted the convenient sampling method. A convenient sampling method was used to sample the clients. For the customers, a convenient sampling method was chosen because it is difficult to track them individually. They are therefore mainly approached and selected upon their arrival. The convenient sampling method was handy in selecting the respondents who were ready and available to be part of the survey.

3.4 Data Collection Method

The assortment of information is the demonstration of obtaining information unbiasedly from essential or potentially auxiliary sources utilizing satisfactory apparatuses. This examination utilizes information from both primary and secondary sources. The primary information were ordered by methods for a poll. At the end of the day, the primary sources include the reactions of the chose respondents. Questionnaires were planned and disseminated to the objective gathering. Secondary information was acquired from the yearly client overview reports and the investigation too included other competition banks for the study.

3.5 Data Collection Instruments

The questionnaires were deemed to be adequate for the collection of quantitative data, as it is understood that most of the target group would be able to read English and have some knowledge of English and would be able to respond adequately to questions without external help. In addition, the questionnaires offer a greater guarantee of anonymity and help to avoid prejudices or mistakes caused by the presence or attitude of the interviewer, for example during interviews (Zikmund 2012). All the measures used in this study are accepted and significantly modified compared with previous studies. A preliminary test of the survey tool is needed to ensure that respondents understand the questions asked and to determine the logical order of the questions asked. A pilot study was conducted with selected staff from Ecobank Ghana. Ten (10) people were selected to undergo the preliminary tests of the questionnaire. The aim of the pilot study was to ensure that the measuring instruments are reliable and safe. Cronbach alpha and factor analyses were considered to determine the reliability and validity, respectively.

3.6 Data Analysis Method

In line with Saunders et al (2012), analysis of data is a means of formulation, modification and manipulation of data using adequate techniques. Analysis of research data was performed using the Social Science Statistics Package (SPSS). Through careful research, the researcher ensured that data are appropriate, acceptable, sufficient and accurate. Correlations, regression, means and standard deviation were also used to perform substantive analyses.

3.7 Validity and Reliability

Cronbach alpha and factor analysis was applied for the measurement of reliability and validity of instruments. As Cooper and Schindler (2012) stated, the accuracy and precision of processes for effective investigation is called reliability, while validity is defined as the duration of the test measurement. The validity and actual reliability of a test measurement also adds to the credibility of the research results. The openness of the effectiveness of questionnaires is also ensured by preliminary tests and pilot studies and developed via literature research. Online banking experts were requested to advise on how to answer the questionnaires, based on the recommendations made. Hence, to check the reliability and validity of the survey, the Cronbach alpha and factor analyses were conducted.

3.8 Ethical Considerations

Ethical consideration will be taken into account in the implementation of the research. The investigators will then examine certain ethical issues before moving on to the usual order of priority. Kalof et al. (2008) considered that it would be of great benefit to researchers and participants if certain ethical standards are applied in research in order to maintain the rights of

respondents and minimize risk. The investigation is more active when it is linked to ethical issues. Simplified consent, anonymity, confidentiality and empathetic neutrality are a number of the ethical issues addressed in research. Again, the researcher investigated anonymity and confidentiality with respect to respondents, so no information regarding to respondents' names and telephone numbers were asked for. Respondents should not be required to ask questions; they should be given the opportunity to choose whether or not to participate in the administering of the questionnaire (Neuman, 2007), so that their attention is given first and foremost, especially when it comes to the administration and staff of agencies/companies.

3.9 Profile of the Study

EcoBank Ghana Limited ('EcoBank') was built up on 9 January 1989 as a constrained risk organization under the Banking Companies Act. The Bank of Ghana conceded its permit on 10 November 1989 and beginning taking a shot at 19 February 1990. It started procedure on 19 February 1990. Ecobank got an overall financial permit and was recorded on the GSE in July 2006. The bank experienced a vital progress from a discount bank to a widespread save money with 67 branches, various exchanging terminals, a few QR codes in the shops and in excess of 242 ATMs all through the nation. At the end of 2019, the bank achieved excellent financial results: Total assets £13,229 billion, equity - £1,784 billion, profit before tax - £642,496 billion, profit before tax - £444,946 million. As a result, return on average capital employed (ROAE) was 28.6%, while return on average capital employed (ROAA) was 3.8%. Ecobank is currently one of the leading banks in Ghana with a very influential corporate image.

CHAPTER FOUR

DATA ANALYSES AND DISCUSSIONS

4.0 Introduction

This part presents and talks about the consequences of the elements that impacted the presentation of e-banking in Ecobank, with an attention on customers in the metropolitan city of Takoradi, Ghana. For clearness and straightforwardness, the examinations are organized as follows: The initial background information about the respondents, the subsequent part contains the statistical descriptive (mean qualities, standard deviation, frequencies and percentages) of the fundamental factors utilized in the investigation, and the third part contains inferential measurable investigations (the correlation and the regression) and the hypothesis testing. It merits recalling that the legitimacy and unwavering quality of the plan was tried utilizing Cronbach's alpha tests.

4.1 Demographic Characteristics

This section consists of respondents' demographic information, which comprises of the following: respondent's gender distribution, age distribution, years of been a customer of the bank and level of education,

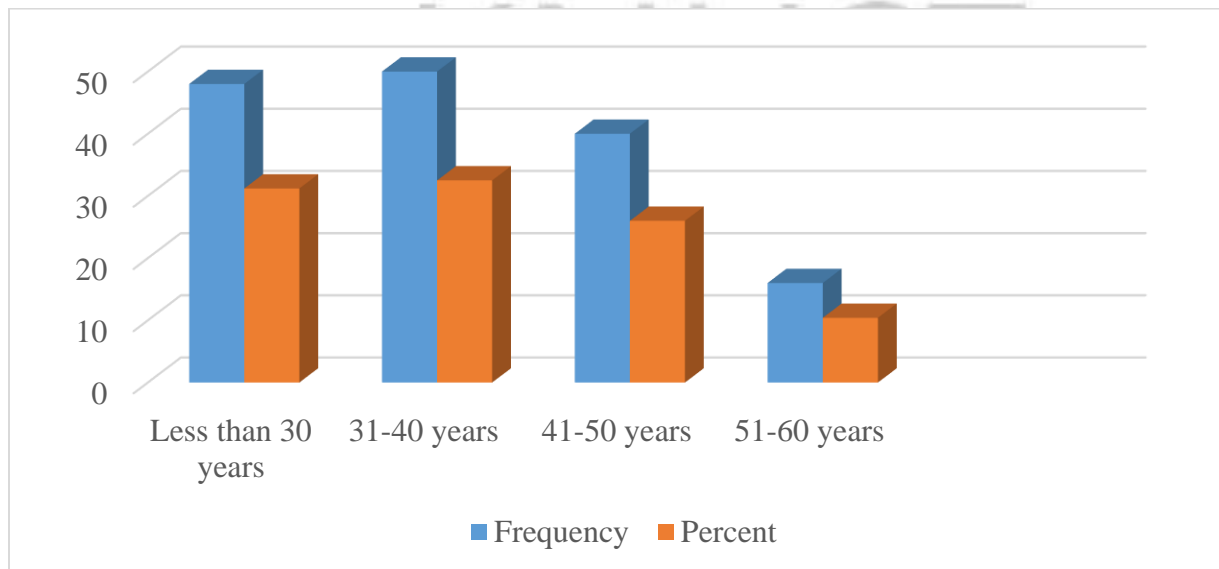
Table 4.1: Gender Distribution

Variables	Frequency	Percent
Male	106	68.8
Female	48	31.2
Total	154	100.0

Source: Field Survey, 2020

Table 4.1 shows of respondent's gender. The survey showed that out of 154 respondents more than half (68.8%) are men and the remaining 31.2% are women. This result indicates that in the

global city of Takoradi men dominate the electronic banking sector. This may be due to the fact that in the metropolis of Takoradi more men than women are trained in e-banking.



Source: Field Survey, 2020

Figure 4.1 Age Distribution

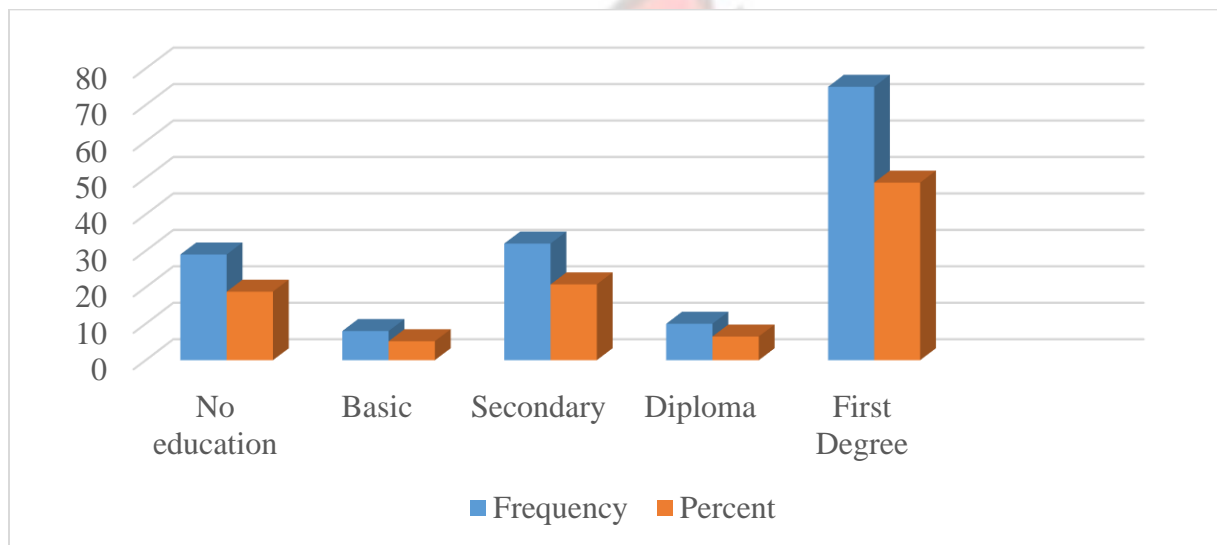
Regarding to the age distribution in the Figure 4.1, majority of the respondents (32.5%) were between the ages of 31-40, portion of the respondents (31.2%) were 30 years and below, 26% were aged between 41-50 years whist the remaining 10.4% were the respondents between the ages of 51-60 years. The results implies that the youth were dominant in transaction via e-banking as compared to the aged. This may be due to the fact that the aged are not compatible with the technological era.

Table 4.2: Years of been Customer of the Bank

Variables	Frequency	Percent
Less than 5 years	14	9.1
5-10 years	76	49.4
11-15 years	34	22.1
More than 15 years	30	19.5
Total	154	100.0

Source: Field Survey, 2020

Table 4.2 presents years respondents have been customer of the bank. Slightly below half of the respondents (49.4%) have been with the bank within 5-10 years whilst 22.1% of the respondents have been customers with the bank between 11-15 years, 19.5% were those who have been customers within 15 years and above. The remaining portion of the respondents (9.1%) were customers less than 5 years.



Source: Field Survey, 2020

Figure 4.2: Level of Education

Figure 4.2 displays the level of education of the respondents. The study found out that greater proportion of the respondents (48.7%) were first degree holders, 20.8% of the respondents were secondary school graduate whereas 18.8% were those with no formal education. However, few of the respondents (5.2%) were having just basic education background. This result suggests that the dominated people were those with first degree. Today, history has changed as more and more economics graduates start their new businesses with the support of the government and other youth development agencies.

4.2 Factors influencing the adoption of E-banking

The accompanying expressive measurements portray the factors utilized in the investigation according to factors affecting the presentation of electronic banking. The accompanying enlightening tables have been distinguished as components impacting the presentation and advancement of e-banking: perceived ease of use, usefulness, security, availability, socio-cultural. A 5-point Likert scale was used to effectively describe the variables, of which 5=strongly agree, 4=agree, 3=not sure, 2=disagree, 1=strongly disagree. The table with factors starts with Tables 4.3 to 4.8.

Table 4.3: Perceived ease of use

Statements	Mean±SD	SA	A	NS	D	SD
		Frequency/Percentage				
I am adequately educated about e-banking	4.66 ± 0.47	102/66.2	52/33.8	-	-	-
I understand the benefits of e-banking	4.66 ± 0.47	102/66.2	52/33.8	-	-	-
I find it easy using e-banking products	4.67 ± 0.46	104/67.5	50/32.5	-	-	-
I have become good at e-banking	4.62 ± 0.56	102/66.2	46/29.9	6/3.9	-	-
Generally, I like e-banking because it is easy to use	4.72 ± 0.44	112/72.7	42/27.3	-	-	-

Source: Field Survey, 2020. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

Table 4.3 presents the perceived ease of use of e-banking among the respondents. The survey showed that more than half of the respondents (66.2%) strongly agreed that they were adequately educated about e-banking; on the other hand the remaining 33.8% agreed to the statement with the mean=4.66 ± SD=0.47. Slightly above half of the respondents (66.2%) also strongly agreed that they understand the benefits of e-banking whereas the minority group (33.8%) agreed that they do understand the benefits of e-banking (mean=4.66 ± SD=0.47). With the mean of 4.67 and SD of 0.46 majority of the respondents (67.5%) strongly agreed that they found it easy in using e-banking products whilst 32.5% of the respondents agreed that they found it easy using e-banking products. Further, majority of the respondents (66.2%) strongly agreed that they are

good at e-banking, 29.9% also agreed on that whilst the remaining 3.9% of the respondents were indecisive; recording a mean of 4.62 and SD of 0.56. A greater percentage of the respondents (72.7%) strongly agreed that they generally like e-banking as it is easy to use, 27.3% as well agreed that due to the easiness in using e-banking they generally like it, the statement recorded a mean=4.46 and SD=0.61. The study provides empirical support for the previous conclusions, as Venkatesh and Davis (2000) indicated that the perceived ease of use has a huge impact on use and intention is an important factor. The perceived ease of use can be a good indicator, perhaps even more so than the perceived benefit, of the effectiveness of IT systems in case of process problems with customers. The usability perception does not indicate whether the new information system will be used, but creates an alternative approach to using the system. If the structure of the information is too easy to use, it will have a significant impact on the user and create a positive attitude towards using the latest technologies. Empirically, previous studies (Lee and Kim, 2007; Sikdar et al., 2015) suggest that the perceived ease of use is a reasonable precursor to a positive attitude towards online banking and customer satisfaction.

Table 4.4: Perceived Usefulness

Statements	Mean± SD	Frequency/Percentage					SD
		SA	A	NS	D		
I save time using e-banking products	4.70 ± 0.45	108/70.1	46/29.9	-	-	-	
I have benefited from using e-banking products	4.67 ± 0.49	106/68.8	46/29.9	2/1.3	-	-	
I save cost using e-banking products	4.48 ± 0.59	82/53.2	64/41.6	8/5.2	-	-	
I have greater control of my e-banking transactions	4.46 ± 0.61	82/53.2	62/40.3	10.6.5	-	-	

Source: *Field Survey, 2020. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree*

Table 4.4 presents the perceived usefulness of e-banking among the respondents. The study revealed that more than half of the respondents (70.1%) strongly agreed that using e-banking

products saves them time and however 29.9% of the respondents agreed to that, indicating a mean with 4.70 and standard deviation with 0.45. A greater percentage of the respondents (68.8%) indicated that they strongly agreed that they have benefited from using e-banking products, 29.9% of the respondents agreed, whilst the least of the respondents (1.3%) were not sure whether have benefited or not with the mean of 4.47 and SD of 0.49). Concerning the statement that using e-banking products save cost, slightly above half of the respondents strongly agreed that indeed they save cost using e-banking, 41.6% agreed that they save cost using e-banking products, whereas the remaining (5.2%) were neutral (mean=4.55 and SD=0.54). Regarding respondent controlling their e-banking transaction more than half of the respondent strongly agreed that they have greater control on their transactions via e-banking, 40.3% agreed that they do control their transactions and the remaining 6.5% were not sure whether they have greater control of their transaction or not, a mean of 4.48 and SD of 0.69 were recorded. These study supports the empirical findings of The decision to use modern technologies depends on the extent to which someone claims that the production of goods or services is cost-effective compared to the previous technology (Safeena and Kammani, 2011; Lin, et al., 2020). According to Sikdar et al. (2015), the perceived usefulness of technology from the customer's perspective relates to the end result of the experience. If the outcome was positive or beneficial, consumers may be positive about the use of the technology. In addition, some researchers describe perceived utility as the level at which a person feels that the system improves their work performance. Furthermore, if customers find a user-friendly self-service technology that gives them more autonomy in terms of banks, financial advice and other financial activities, they are much more likely to adopt a positive approach to this technology.

Table 4.5: Security

Statements	Mean \pm SD	Frequency/Percentage				
		SA	A	NS	D	SD
I am satisfied with the technology of e-banking products	4.68 \pm 0.46	106/68.8	48/31.2	-	-	-
The security of e-banking is satisfactory	4.41 \pm 0.74	84/54.5	54/35.1	12/7.8	4/2.6	-
Security is fully assured with e-banking	4.55 \pm 0.54	90/58.4	60/39.0	4/2.6	-	-
I have no worry at all about my data being stolen	4.48 \pm 0.69	90/58.4	50/32.5	12/7.8	2/1.3	-
Overall e-banking is safe	4.29 \pm 0.60	58/37.7	84/54.5	12/7.8	-	-

Source: *Field Survey, 2020*. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

Table 4.5 displays the security of e-banking as viewed by the respondents. The survey found out that more than half of the respondents (68.8%) strongly agreed that they are satisfied with the technology of e-banking products and remaining 31.2% of the respondents also indicated that they agreed that with their satisfaction with technology of e-banking products (mean=4.68 \pm SD =0.46). With regards to the satisfactory of e-banking security, majority of the respondents (54.5%) strongly agreed, 35.1% of the respondents agreed, 7.8% did not indicate whether they agree or disagree and the remaining 2.6% disagreed, a mean of 4.31 and SD of 0.51 were recorded. Slightly above half of the respondents (58.4%) suggested that security is fully assured with e-banking, 39.0% agreed that e-banking security is fully assured and the least 2.6% were not sure whether their e-banking was secured or not indicating a mean of 4.55 and SD of 0.54. Moving on with respondents worries about data being stolen, majority of the respondents (58.4%) indicated that they strongly agreed, 32.5% as well agreed, 7.8% were indecisive and the remaining 1.3% disagreed with mean=4.48 and SD=0.69. Concerning the overall safeness of e-banking, majority (54.5%) agreed, 37.7% strongly agreed and the least responses 12 indicating 7.8% were not sure (mean=4.29 \pm SD=0.60). These results empirically support the study of Hua (2009), the term security means efforts to protect against possible dangers. It also means that

security helps to protect the facts about consumers and their financial transactions. Security describes the fact that e-commerce parties can look secure and protect other information from potential threats. In the online environment, security refers to the ability of an agency website to protect consumer data and information about their financial transactions from theft at all times (Hua, 2009).

Table 4.6: Accessibility

Statements	Mean± SD	Frequency/Percentage				
		SA	A	NS	D	SD
I am not able to access my transactions all the time	4.31 ± 0.51	52/33.8	98/63.6	4/2.6	-	-
Infrastructure to support e-banking is adequate	4.42 ± 0.61	76/49.4	68/44.2	10/6.5	-	-
E-banking technology is reliable	4.38 ± 0.74	82/53.2	52/33.8	18/11.7	2/1.3	-
There is adequate maintenance of e-banking delivery systems	4.67 ± 0.46	104/67.5	50/32.5	-	-	-
Generally, I find e-banking highly accessible	4.66 ± 0.47	102/66.2	52/33.8	-	-	-

Source: *Field Survey, 2020*. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

Table 4.6 presents the accessibility of e-banking among the respondents. Majority of the respondents (63.6%) agreed with the statement that they are not able to access their transaction on time, 33.8% strongly agreed that they are not able to access their transaction on time and the remaining 2.6% were not sure whether their transaction were realised on time or not (mean=4.31 ± SD=0.51). Regarding the infrastructure to support e-banking being adequate, majority (49.4%) of the respondents strongly agreed, 44.2% agreed and the remaining 6.5% neither agreed nor disagreed thus indicating a mean of 4.42 with SD of 0.61. In relations to the reliability of e-banking technology, majority of the respondents (53.2%) strongly agreed, 33.8% agreed, 11.7% were not certain and the remaining 1.3% disagreed (mean=4.38 ± SD=0.74). Moreover, majority of the respondents (67.5%) strongly agreed to the statement adequate maintenance of e-banking delivery systems and the remaining 32.5% agreed that there was adequate maintenance of e-

banking delivery systems indicating (mean=4.67 \pm SD=0.46). Lastly, majority of the respondents (66.2%) indicated that e-banking is highly accessible and the remaining 33.8% agreed to the general accessibility of e-banking, this indicated a mean of 4.66 and SD of 0.47. Furthermore, a majority of respondents (67.5%) strongly agree that the maintenance of a bank's online delivery systems is appropriate, while the remaining 32.5% agree that the maintenance of a bank's online delivery systems is appropriate (mean = 4.67 \pm SD = 0.46). Finally, a majority of respondents (66.2 %) indicate that an online bank is very accessible and the remaining 33.8 % agree with the overall availability of an online bank, with an average of 4.66 and a standard deviation of 0.47. The study observationally upheld Villers (2012), which inferred that the accessibility and openness of computerized banking administrations incorporates the simplicity with which clients can get to budgetary instruments and their records, make installments from their records and access cash in their records through different advanced channels, for example, internet banking, ATMs, portable banking, to give some examples. Availability decides how these channels empower clients to increase important experience and give data about access. It decides if clients can discover items that address their issues when they need them and in a manner that encourages banking (Villers, 2012). Access to data and the simplicity with which shoppers can impart their insights with individuals they know and the "world" is emotional. Positive encounters can be effectively shared on the Internet, while negative encounters can be shared on the Internet. They can likewise manage without places of business and their gear.

Table 4.7: Socio-cultural Issues

Statements	Mean± SD	Frequency/Percentage				
		SA	A	NS	D	SD
I prefer e-banking to traditional commerce	4.31 ± 0.74	72/46.8	60/39.0	13.0	2/1.3	-
My culture does not support e-banking	4.07 ± 0.71	46/29.9	74/48.1	34/22.1	-	-
Level of fraud makes e-banking unattractive	4.50 ± 0.55	82/53.2	68/44.2	4/2.6	-	-
Weak law enforcement makes e-banking unattractive	4.62 ± 0.48	96/62.3	58/37.7	-	-	-

Source: *Field Survey, 2020*. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

Table 4.7 presents the socio-cultural issues of e-banking in the sight of the respondents. Majority of the respondents (46.8%) strongly agreed that they preferred e-banking to traditional commerce, 39.0% agreed they prefer e-banking to traditional banking, 13.0% were not sure about their choice of banking while the remaining 1.3% disagreed with their preference of e-banking to traditional banking (mean=4.31 ± SD=0.74). Furtherance with respondent culture and preference, majority of the respondents (48.1%) agreed that their culture does not support e-banking, 29.9% strongly agreed that their culture does not support e-banking and the remaining 22.1% were not sure whether their culture do support e-banking or not (mean=4.07 ± SD=0.71). With e-banking being unattractive due to level of fraud, majority of the respondents (53.2%) strongly agreed, 44.2% agreed and the least 2.6% neither agreed nor disagreed which represent a mean of 4.50 and SD of 0.55. Concerning e-banking unattractiveness due to weak law enforcement, majority (62.3%) strongly agreed and minority of the respondents agreed with the mean score of 4.62 and standard deviation score of 0.48. This conclusion is empirically confirmed by studies by Tadesse and Kidan (2005), who found that cultural and historical differences in attitudes and uses of different types of money obscure the need to develop a significant structure for electronic payments worldwide. Differences in the level of security and

performance required between people from different cultures and the degree of improvement exacerbate the problem (Tadesse and Kidan, 2005).

Table 4.8: Factors for enhancing the adoption of E-banking

Statements	Mean \pm SD	Frequency/Percentage				
		SA	A	NS	D	SD
Consistency with e-banking products	4.66 \pm 0.50	104/67.5	48/31.2	2/1.3	-	-
Lower cost of transaction	4.51 \pm 0.55	84/54.5	66/42.9	4/2.6	-	-
Increased education	4.33 \pm 0.55	58/37.7	90/58.4	6/3.9	-	-
Improved user-friendly technology	4.33 \pm 0.47	52/33.8	102/66.2	-	-	-

Source: Field Survey, 2020. SD=Standard Deviation; SA=Strongly Agree; A=Agree; NS=Not Sure; D=Disagree; SD=Strongly Disagree

Table 4.8 presents the factors enhancing the adoption of e-banking of respondents. The study revealed that majority (67.5 %) of respondents strongly agreed that consistency with e-banking products enhanced their adoption level, 31.2% agreed and the remaining (1.3%) were not sure whether consistency with e-banking products has enhance their adoption level or not with the mean of 4.66 and standard deviation of 0.50. With regards to lower transaction cost enhancing adoption level of e-banking, majority (54.5%) strongly agreed, 42.9% agreed and the remaining 2.6% were neutral (mean=4.51, SD=0.55). Concerning increasing respondent education on e-banking. Majority 58.5% agreed that increasing education will help enhance e-banking, 37.7% strongly agreed and the remaining 6 respondent indicating 3.9% were not sure (mean=4.33, SD=0.55). Lastly, majority of the respondents (66.2%) agreed that improving user-friendly technology enhance e-banking adoption and the remaining 33.8% strongly agreed, presenting a mean with 4.33 and a standard deviation with 0.47.

4.3 Reliability and Validity Test

As indicated in the Table 4.9 to ensure reliability of the measurement instruments Cronbach Alpha reliability test was conducted to determine the internal consistency. For instance, perceived ease of use was assessed using 5 items and scored acceptance rate of 0.75, the perceived usefulness was assessed using 4 items and obtained 0.81 acceptance rate, acceptability was assessed using 5 item and obtained a score of 0.78, the socio-cultural practices was assessed using 4 items and obtained 0.86 and finally intention to adopt was assessed using 4 and obtained a score of 0.71. These results imply that all the constructs were within the acceptance minimum limit. Thus, the research instruments were significant reliable to a larger extent.

Table 4.9: Internal Consistency of Construct

Construct	Number of items	Cronbach Alpha
Perceived ease of use	5	0.750
Perceived usefulness	4	0.811
Accessibility	5	0.782
Socio-cultural	4	0.861
Intention to adoption of e-banking	4	0.722

4.4 Inferential Statistical Analyses (correlation & regression and hypotheses testing)

The inferential statistical analyses which comprises of the correlation and regression and the hypotheses testing presented in the Tables 4.10 to 4.13.

Table 4.10: Correlations

	Perceived Ease Use	Perceived Usefulness	Security	Accessibility	Socio-Cultural	Intention to adopt
Perceived Ease Use	1					
Perceived Usefulness	0.466 (0.000)	1				
Security	0.181 (0.025)	0.163 (0.044)	1			

Accessibility	0.114 (0.159)	0.267 (0.001)	0.292 (0.000)	1		
Socio Cultural Issues	0.334 (0.000)	0.398 (0.000)	-0.138 (0.088)	0.169 (0.036)	1	
Factors enhancing adoption	0.015 (0.853)	-0.108 (0.182)	0.735 (0.000)	0.181 (0.025)	-0.392 (0.000)	1

As shown in Table 4.10, the study found an insignificant correlation between the perception of user-friendliness and factors promoting acceptance of Internet banking ($R=0.015$, $p\text{-value} > 0.05$). Again, an insignificant negative correlation ($R=-.108$, $p\text{-value} > .05$) between perceived usefulness and factors promoting acceptance of e-banking. However, there was a significant correlation ($R=.735$, $p < 0.05$) between security and factors promoting acceptance of Internet banking. The study also showed a significant correlation ($R=0.181$, $\text{value } p > .05$) between availability and factors promoting acceptance of Internet banking. The study also found a significant negative correlation ($R=-0.392$, $\text{value of } p < 0.05$) between availability and factors promoting acceptance of Internet banking.

Table 4.11: Goodness of Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.802 ^a	.643	.631	.80185

As shown in Table 4.11, 64.3 % of the total number of variables used in online banking are explained by the variables used in this study, namely: perceived ease of use, perceived usefulness, socio-cultural practices, security and accessibility.

Table 4.12: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	171.699	5	34.340	53.409	.000 ^b
	Residual	95.159	148	.643		
	Total	266.857	153			

a. Dependent Variable: Factors enhancing adoption of e-banking

As showed in the ANOVA Table 4.12 the score of the F-statistics was significant indicating a model fit. Thus, perceived ease of use, perceived usefulness, socio-cultural practices, security and accessibility are empirically fit to predict e-banking adoption.

Table 4.13: Factors influencing E-Banking Adoption and Hypotheses Testing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	8.593	1.618	5.310	.000
	Perceived Ease Use	.142	.012	.039	.001
	Perceived Usefulness	.135	.052	-.153	.011
	Security	.599	.046	.701	.000
	Accessibility	.148	.046	.056	.292
	Socio-Cultural Issues	.216	.048	.257	.000

a. Dependent Variable: Intention to adopt e-banking

As shown in Table 4.13, the study found that the perceived ease of use has a significant impact on the acceptance of Internet banking ($\beta=0.142$, $p\text{-value} < 0.05$). However, the perceived usefulness significant but negative acceptance of internet banking ($\beta=0.135$, $p\text{-value} < 0.05$). Again, security has a significant and positive impact on the acceptance of internet banking ($\beta=0.599$, $p\text{-value} < 0.05$). However, the conclusion of the study is that accessibility has no significant impact on the acceptance of Internet banking ($\beta=0.148$, value of $p < 0.05$).

4.5 Discussion of Results

4.5.1 Perceived Ease of Use and E-banking Adoption

The point of the examination was to decide the effect of perceived ease of use on the adoption of Internet banking. The examination found that the perceived ease of use significantly affects the

acknowledgment of Internet banking ($\beta = 0.142$, $p\text{-value} < 0.05$). This affirms the first hypothesis of the study. The impression of perceived ease of use is a significant factor impacting the adoption of e-banking. This result is empirically supported. The perceived ease of use has a direct or indirect influence on the perception of usability (Venkatesh and Davis, 2010; Lin, Wang and Hung, 2020). User-friendly information technology entails fewer risks for the individual (Moon and Kim, 2011). The more customers understand that digital banking is easy to use, the more likely they are to use online banking services (Blachander, 2011). PEU refers to the degree to which individuals claim that using the right technology requires little or no effort (Mwiya et al., 2017). The current perception of usability does not say whether a new information system is being used, but whether a user-friendly mindset is being created. Previous studies (Sikdar et al., 2015; Lee and Kim, 2017) show that the perceived ease of use is a reasonable context for a positive attitude towards online banking and consumer pleasure. Malhotra et al. (2014) examined the elements that affect the execution of online banking. The execution of online banking was affected by the following elements; the PU, PEU, perceived chance, image, outcomes demonstrability, perceived behavioral control and subjective norm. However, the perception on the execution of online banking was not affected by some of the elements such as the perceived usability, perceived reliability and private effectiveness.

4.5.2 Perceived Usefulness and E-banking Adoption

Moreover, the study assessed the effect of the usefulness on the adoption of web-based banking. The examination demonstrated that the usefulness fundamentally influences the adoption of web banking ($\beta = 0.135$, $p\text{-value} < 0.05$). This affirms the second hypothesis of the study. The usefulness perception is a significant factor in the adoption of Internet banking. PU significantly

and largely understood in the electronic banking area. The use of a specific framework will promote the overall achievement of the objectives (Raza et al., 2017); this is a prerequisite for the introduction of mass technologies, which relies upon purchaser desires for how the innovation can improve and disentangle their lives. The embraced instrument majorly affects the utilization of data innovation (Safeena, Date and Kammani, 2011). Web banking can be utilized for some exercises and performs numerous errands. The decision to use modern technologies depends on the extent to which someone claims that the production of goods or services is cost-effective compared to the previous technology (Safeena and Kammani, 2011; Lin, et al., 2020). In addition, some researchers describe perceived utility as the level at which a person feels that the system improves their work performance (Sikdar et al., 2015). As far as internet banking technology is concerned, its benefits depend on whether customers find it cheaper, more convenient, flexible and efficient. It also assumes that customers who find a convenient self-service technology that allows them greater autonomy from the bank, information about financial advice and other financial assets are more likely to take a positive view of these technologies.

4.5.3 Security and E-banking Adoption

Indeed, one of the objectives of the study was to find the effect of security on the adoption of web-based banking. The exploration indicated that the security of web banking significantly affects the adoption of web banking ($\beta = 0.599$, $p\text{-value} < 0.05$). This affirms the third hypothesis. Security is an unequivocal factor in the adoption of web banking. Lin et al. (2020) study confirmed the variety of elements accepted by organizations and customers. Based on the results, companies can change their business practices and increase customers' willingness to use online banking. Trust is the most valuable element for organizations and customers. Therefore, e-

banking companies need to focus on areas such as liquidity monitoring, information security and financial compliance to reduce risk and gain customer trust. Maduku (2014) examined the beginning and use of internet banking by clients. The research outcomes indicated that these factors aided the execution and use of the net and especially mobile banking. In this evaluation, the confidence of the clients in on line banking was seen as the most essential predictive element for net and mobile banking, in contrast to past studies in diverse environmental contexts, in which the benefit and PEU of internet and mobile banking had been strongly affected (Al-Smadi, 2012). The research primary conclusions were that the prevention of doubt had a huge effective effect on usability and the notion of usability. The perceived risks have a huge effect on the mentality of the client, which in flip impacts the purchaser's purpose to apply digital banking services.

Ayal (2018) examined the elements that affect the introduction of web banking. The study identified the following affect the introduction of e-banking at commercial banks in Ethiopia: technological elements (perceived risk), organizational elements, human and financial resources, environmental factors, national ICT infrastructure, lack of regulatory framework, lack of government support and completion of foreign banks, demographic factors, gender, age and education, and lack of awareness and trust in the system. Xiao et al. has already tested (in 2017) results emphasize that perceived usability and reliability are important aspects that positively influence customers' willingness to use online banking, while usability and perceived costs are less important. The analysis of the reasons for objections to online banking has shown that the main factors are "complexity of use", "uselessness" and "security fear" and thus difficult situations for service providers. Al- Zu'bi et al. (2014) revealed that compatibility, perceived usability, security, and perceived ease of use undoubtedly influence the implementation of

Internet banking. In addition, this research adds a new topic that looks at the influence of all impartial factors together and reveals a significant link between these factors and the net acquisition of the bank. It is therefore necessary to ensure a synergistic link between these factors in order to maximize their impact on the bank's acceptance of Internet use.

4.5.4 Convenience and E-banking Adoption

Furthermore, the examination ought to find the effect of accessibility on the adoption of web-based banking. The examination demonstrated that openness negligibly affects the acknowledgment of web banking ($\beta = 0.142$, $p\text{-value} > 0.05$). Hence, the fourth hypothesis is not supported. Accessibility is not a determinant of e-banking adoption. Anouze and Alamro (2019) statistical methods showed that several dominant factors as well as perceived ease of use, perceived convenience, security and a reasonable price were identified as obstacles to online banking. Al-Sharafi et al. (2017) results show that trust is created when customers find online banking useful, while perceived usability does not prejudge the intention of the Jordanian population to accept and use it. Perceived trust also plays a role in the partial mediation between the perceived benefit and the purpose of online banking.

Masoud and AbuTaqi (2017) aimed and examine the elements that have an effect on customer recognition of e-banking services. The research revealed that the recognition of e-banking services has a significant influence (best of e-services, belief of usability, security, reliability). The best of e-services emerges as a crucial aspect in showing customer recognition of e-banking offers, whereas e-safety had less impact. The research indicated proof for the effect of the below elements of e-service quality: Al-Hawary and Hussien (2017) explored the influence of online banking services on customer loyalty. The research revealed that online banking offerings

(usability, ease of use, website design, and privacy) have a statistically significant effect on client retention at Jordanian investment banks. In instances of accessibility, the research observed that it did not have much influence on customer retention.

Raza et al. (2017) investigated the components that decide the apparent advantages and helpfulness of executing portable banking. The outcomes show that versatility is huge and negative as far as ease of use, while it is huge and positive as far as usefulness. Besides, hazard observation and similarity are emphatically and altogether identified with apparent convenience and value. Be that as it may, hazard recognition is certain and is to a great extent identified with apparent ease of use, though the reliance on usefulness is low. Mwiya et al. (2017) who discovered that the changed TAM model is significant within the Zambian context. The attitudes in the direction of e-banking were also significantly positively affected by perceived usefulness, ease of use and trust has a significant positive influence. The mind-set toward e-banking in flip has an impact on the aim and exact recognition of e-banking. According to scholars, executioners and policy makers, this survey has indicated that a progressed notion of trust (protection and reliability), usefulness and simplicity of use of on-line banking structures ought to facilitate their implementation. Maltio et al. (2015) recognized the factors that have an impact on the use of online banking. The survey outcomes showed that, the usage of online banking was promoted by elements such as usefulness, risk perception, perception of security, past expertise on the internet and information about online banking. The survey concluded that online banking was also significantly affected by demographic elements.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarises the findings, conclusions and recommendations, as well as suggestions for future research.

5.1 Summary of Findings

5.1.1 Effect of Perceived ease of use on E-banking Adoption

The point of the examination was to decide the effect of perceived ease of use on the adoption of Internet banking. The examination found that the perceived ease of use significantly affects the acknowledgment of Internet banking ($\beta = 0.142$, $p\text{-value} < 0.05$). This affirms the first hypothesis of the study. The impression of perceived ease of use is a significant factor impacting the adoption of e-banking.

5.1.2 Effect of Perceived Usefulness on E-banking Adoption

Moreover, the investigation planned to decide the effect of the usefulness on the adoption of web-based banking. The examination demonstrated that the usefulness fundamentally influences the acknowledgment of web banking ($\beta = 0.135$, $p\text{-value} < 0.05$). This affirms the second hypothesis of the study. The usefulness perception is a significant factor in the adoption of Internet banking.

5.1.3 Effect of E-banking Security on E-banking Adoption

Indeed, one of the objectives of the study was to find the effect of security on the adoption of web-based banking. The exploration indicated that the security of web banking significantly affects the adoption of web banking ($\beta = 0.599$, $p\text{-value} < 0.05$). This affirms the third hypothesis. Security is an unequivocal factor in the adoption of web banking.

5.1.4 Effect of Accessibility on E-banking Adoption

Furthermore, the examination ought to find the effect of accessibility on the adoption of web-based banking. The examination demonstrated that openness negligibly affects the acknowledgment of web banking ($\beta = 0.142$, $p\text{-value} > 0.05$). Hence, the fourth hypothesis is not supported. Accessibility is not a determinant of e-banking adoption.

5.2 Conclusions

The research was conducted to determine the factors influencing the adoption and usage of online banking in Ecobank, focusing on clients in the metropolitan city of Takoradi in Ghana, using a quantitative approach to research and surveys. The study concludes that the perceived ease of use, usefulness and security of online banking have a significant impact on acceptance of the service. However, the study concludes that accessibility has not had a significant impact on the acceptance of online banking.

5.3 Recommendations

Based on the findings and conclusions of the study, the following recommendations are made to strengthen e-banking policies, practices and existing theories. The study has revealed that

perceived ease of use, perceived usefulness and security have effects of e-banking adoption. Management of the bank are therefore expected to educate customers of the bank about other benefits that comes along with e-banking example the COVID-19 pandemic has reminded as of the significance of using online banking platforms. The study recommends that while e-banking is convenient and preferred by many customers, some customers are reluctant to use it due to the inability to read and follow electronically programmed commands, hence the need to redesign electronic devices to include command audio systems that use local language to increase accessibility for all customers. The use of local language would ensure that voice commands are used to guide people who cannot read and follow processes.

The study further recommends that training is an important tool to fill the gap caused by a lack of knowledge or skills in the use of technology. Through education, people accept technology and are able to use it. As the theory of diffusion suggests, training will focus on key players who will then move on to the local level, and on training bankers and employees who will pass on this knowledge to customers.

The study also recommends that, before the technology is introduced, a full assessment of its suitability, perceived benefits, safeguards, accessibility and socio-cultural parameters of the environment in which it is being introduced should be made. This requires research into the technology to ensure that it meets all the above criteria, is culturally acceptable in the environment and is easy and simple to use.

5.3.1 Suggested Areas for Future Studies

The present study was conducted to ascertain factors that influence the adoption of e-banking at Ecobank Ghana by focusing on customers in the Takoradi metropolis of Ghana by adopting survey design and quantitative research approach. It is suggested that future researchers could replicate this study by using different methodology and location.



REFERENCES

- Abor, J. (2004). "Technological innovations and banking in Ghana: An evaluation of customers' perceptions". *African Journal Online*. Available at <http://www.ajol.info/index.php/ifep/cart/view/23668/20166> (
- Ahasanul, H., Ahmad Z. H., and Abu H. D. (2009). Issues of E –Banking transaction: An Empirical Investigation on Malaysian Customers perception. *Journal of Applied Sciences*, 9(10), 1870 -1879. No.3, pp. 240-250.
- Ahmed, E. M. & Phin, G. S. (2016). Factors Influencing the Adoption of Internet Banking in Malaysia. *Journal of Internet Banking and Commerce*, April, vol. 21, no. 1; 1-28
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall, Upper Saddle River.
- Alagheband P (2006). Adoption of electronic banking services by Iranian customers.
- Al-Hawary, S. I. S. and Hussien, A. J. A. (2017). The impact of electronic banking services on the customers loyalty of commercial banks in Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 7, No. 1, pp. 50-63
- Al-Sharafī, A. M. Arshah, A. R. Herzallah, F. A. T. and Alajmi, Q. (2017). The effect of perceived ease of use and usefulness on customers' intention to use online banking services: The mediating role of perceived trust. *International Journal of Innovative Computing*, 7(1), 9-14
- Al-Smadi, M. (2012). Factors affecting adoption of electronic banking: An analysis of the perspectives of banks' customers Dr. *Business*,
- Al-Smadi, O. M. (2012). Factors Affecting Adoption of Electronic Banking: An Analysis of the Perspectives of Banks' Customers. *International Journal of Business and Social Science*, Vol. 3 No. 17
- Al-Zu'bi, F. M. Z. Abu-Assi, A. H. and Dmour, H. (2014). Determinants of internet banking adoption in Jordan. *International Journal of Business and Management*, 9(12). 169-196
- Anouze, A. and Alamro, A. (2019). "Factors affecting intention to use e-banking in Jordan". *International Journal of Bank Marketing*, Vol. 38 No. 1, pp. 86-112. <https://doi.org/10.1108/IJBM-10-2018-0271>

- Ayal, A. (2018). Factors affecting adoption of e-banking in Ethiopian banking industry (In case of five selected banks). Master's Thesis, Addis Ababa University
- Azouzi, D. (2009). The adoption of electronic banking in Tunisia: An exploratory study. *Journal of Internet Banking and Commerce*, Vol. 14, No. 3
- Blachander, S. (2001). 'Internet Banking Patronage: An Empirical Investigation of Malaysia', Vol.5,
- Boateng R. and Molla A. (2006). Developing E-banking Capabilities in a Ghanaian Bank: Preliminary Lessons. *Journal; of Internet Banking and Commerce*, Vol. 11 no. 2.
- Brar, S. P. T. Sharma, D. &Khurmi, S. S. (2014). Factors Influencing E-Banking Adoption in India: An Amalgamation of TAM and TPB. *International Journal of Computer Science and Technology*, Vol. 5, SPL - 1, Jan –
- Chen R. F., Hsiao J. L., & Hwang H. G. (2012). Measuring customer satisfaction of internet banking in Taiwan: Scale development and validation. *Total Quality Management and Business Excellence*, 23(7–8), 749–767.
- Cheng, T.C.E., Lam, D.Y.C. and Yeung, A.C.L. (2006). Adoption of Internet Banking: An Empirical Study in Hong Kong. *Decision Support Systems*, 42, 1558-1572. <https://doi.org/10.1016/j.dss.2006.01.002>
- Claessen, S. (2006), Access to financial service, A review of the issue and public policy objectives. *The world bank research observer*,21,(2), 207-240.
- Dalberg. (2013). Impact of the Internet in Africa Establishing conditions for success and catalysing inclusive growth in Ghana, Kenya, Nigeria and Senegal. Geneva.
- Daniel, P. E-Z. and Jonathan, A. (2013). Factors affecting the adoption of online banking in Ghana: Implications for bank managers. *International Journal of Business and Social Research (IJBSR)*, Volume -3, No.-6,
- Davis, F. D. (1989). 'Perceived Usefulness, Perceived ease of use, and User Acceptance of Information Technology', Management Information Systems Research Center. *University of Minnesota*, Vol. 13, no. No. 3, September, pp.319-340.
- Fishbein, M. and Ajzen, I. (1975) Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research. Addison-Wesley, Boston.

- Gikonyo, J. K. (2014). Factors Influencing the Adoption of Internet Banking In Kenya. *IOSR Journal of Business and Management (IOSR-JBM)*, Volume 16, Issue 9.Ver. III (Sep.), PP 60-65
- Hanafizadeh, P., Keating, B. and Khedmatgozar, H.R. (2014). A Systematic Review of Internet Banking Adoption. *Telematics and Informatics*, 31, 492-510. <https://doi.org/10.1016/j.tele.2013.04.003>
- Helms, A. (2006). Access for all, Washington DC World Bank publication. *International Journal of Economic Development Research and Investment*, Vol.1 No.1.
- Hua, G. (2009). 'An experimental investigation of online banking adoption in china'. *Internet Banking and Commerce*, vol.14, April, Available: no.1.
- Ibrahim, A. A. Sudi, A. F. and Warsame, A. S. (2018). Factors affecting the adoption of internet banking in Mogadishu-Somalia commercial banks. Simad University
- International Telecommunication Union (2007). Telecommunication/ICT Market Trends in Africa. [Online] Available at <http://www.int/ICT/statistics/material>.
- ISSER, (2005). "Financial Challenges facing Urban SMEs". Available online at onlinelibrary.wiley.com/doi/10.1111/j.1540-627X.2005.00140.x/abstract
- Ivatury, G. (2006). Using technology to build inclusive financial system. Focus note 32, Will Behington, DC, and CGAP.
- Kamrul, H, 2009, "E-Banking in Bangladesh: The Future of Banking, School of Business Studies", MA thesis, State University of Bangladesh.
- Karma, G. N. Ibrahim, B. S. & Ali, H. A. (2014). Key Factors Affecting Mobile Banking Adoption among Banks' Customers in Sudan. *International Journal of Liberal Arts and Social Science*, Vol. 2 No. 6; 112-122
- Kim, T.H., Adeli, H., Fang, W.C., Villalba, J.G., Arnett, K.P. and Khan, M. K. (2011). Security technology in Kim, T.H., Villalba, J.G. & Arnett, K.P (eds.), International Conference, SecTech 2011 proceedings, Jeju Island, Korea, December 8-10, pp. 106-123.
- Lee, K., Lee, H. and Kim, S. (2007). Factors Influencing the Adoption Behavior of Mobile Banking: A South Korean Perspective. *Journal of Internet Banking & Commerce*, 12, 1-9.

- Lee, M-C (2008). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, xxx; xxx-xxx
- Liang C. C., & Wu P. C. (2015). Internet-banking customer analysis based on perceptions of service quality in Taiwan. *Total Quality Management and Business Excellence*, 26(5), 550-568.
- Liang C. C., Li C. F., & Wu P. C. (2010). Segmenting cyber-banking customers under stay-at-home economy with benefits: A pilot study. *Journal of Formosa University*, 29(2), 81-94.
- Lin, W-R. Wang, Y-H. and Hung, Y-M. (2020). Analysing the factors influencing adoption intention of internet banking: Applying DEMATEL-ANP-SEM approach. *PlosOne*
- Maditinos, D. Chatzoudes, D. & Sarigiannidis, L. (2013). An examination of the critical factors affecting consumer acceptance of online banking A focus on the dimensions of risk. *Journal of Systems and Information Technology*, Vol. 15 No. 1, pp. 97-116
- Maduku, K. D. (2014). Customers' adoption and use of e-banking services: the South African perspective. *Banks and Bank System*, Volume 9, Issue 2, 78-88
- Malhotra, P. Kassim, M. N. and Ramayah, T. (2014). Factors affecting adoption of internet banking: A case study from India. *Asia-Pacific Journal of Business*, Volume 5, Number 2, 13-24
- Maltio, G. M. Kazi, Z. H. Khaskheley, A. and Shaikh, M. F. (2015). Factors that influence the adoption of online banking services in Hyderabad. *International Journal of Economics & Management Sciences*, 4, 1
- Masoud, E. and AbuTaqa, H. (2017). Factors affecting customers' adoption of e-banking services in Jordan. *Information Resources Management Journal*, 30(2),
- Mehmood, M. Shah, F. Azhar, M. Rasheed, A. (2014). The Factors Effecting E-banking Usage in Pakistan. *Journal of Management Information System and E-commerce*, June, Vol. 1, No. 1, pp. 57-94
- Mols N. (1998). The Behavioural Consequences of PC Banking. *International Journal of Bank Marketing*, Vol 16, No. 5, pp 195-201.
- Moon, J. W. and Kim, Y. G. (2001). 'Extending the TAM for a World-Wide-Web context'. *Information & Management*, pp. 217-230

- Moutinho, L. and Curry, B. (1994). Consumer perception of ATMs: an application of neutral networks. *Journal of Marketing Management*, 10 (1/3), pp. 191-206. 33.
- Mwiya, B. Cikumbi, F. Shikaputo, C. Kabala, E. Kaulung'ombe, B. and Siachinji, B. (2017). Examining factors influencing e-banking adoption: Evidence from bank customers in Zambia. *American Journal of Industrial and Business Management*, 7, 741-759
- Nasri, W. (2011). Factors influencing the adoption of Internet banking in Tunisia. *International Journal of Business and Management*, 6, pp. 143-160.
- Ofori-Dwumfuo, G. O., & Dankwah, B. A. (2013). Adopting Internet Banking in Ghana. *Current Research Journal of Social Science*, 5(4), 143-151.
- Parker, T. and Parker, M. (2008). Electronic banking in Finland and the effect on money velocity. *Journal of Money, Investment and Banking*, 4, pp. 20-25.
- Perera, S. A. A. (2018). The factors influencing on the customer adoption of internet banking system special reference to the Sampath Bank in Colombo district. *International Journal of Scientific and Research Publications*, Volume 8, Issue 2, 83-107
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahnla, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, Vol. 14 No. 3, pp. 224-35
- Raza, A. S. Umer, A. and Shas, N. (2017). New determinants of perceived ease of use and perceived usefulness for mobile banking adoption. *International Journal of Electronic Customer Relationship Management*, 11(1), 44-65
- Safeena, R., Date, H. and Kammani, A. (2011). 'Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective'. *International Arab Journal of e-Technology*, Vol. 2, January, Available: No. 1.
- Shaikh, A. and Karjaluoto, H. (2015). Mobile Banking Adoption: A Literature Re-view. *Telematics and Informatics*, 32, 129-142. <https://doi.org/10.1016/j.tele.2014.05.003>
- Sharifi, A. & Homayounfar, M. (2016). An Analysis of Factors Affecting on Customers' Adoption of Internet-banking Services Using the Graph Theory. *Iranian Journal of Optimization*, Volume 8, Issue 1, 47-58
- Sheikh, F. M. Kazi, H. Z. & Khaskheley, A. (2014). Factors that Influence the Adoption of Online Banking Services in Hyderabad. *Romanian Statistical Review*,

- Sikdar, P., Kumar, A. and Makkad, M. (2015). Online Banking Adoption. *International Journal of Bank Marketing*, 33, 760-785. <https://doi.org/10.1108/ijbm-11-2014-0161>
- Stegman A, Rocha, M and Davis, W. (2005). The role of technology in serving the through retail partnerships, Correspondent banking in Brazil.
- Takele, Y. & Sira, Z. (2013). Analysis of Factors Influencing Customers' Intention to the Adoption of E-Banking Service Channels in Bahir Dar City: An Integration of TAM, TPB and PR. *European Scientific Journal*, May edition vol.9, No.13; 402-417
- Timothy, T. (2012). Electronic Banking Services and Customer Satisfaction in the Nigerian Banking Industry. *International Journal of Business and Management Tomorrow*, Vol.2, No. 3, 1-8
- Venkatesh, V. and Davis, F. D. (2000). 'A Theoretical Extension of the Technology, Acceptance Model: Four Longitudinal, Field Studies'. *Management Science*, pp. 186-204.
- Villates D. (1997). Demain, la banque à la distance, Banque 68-70
- Woldie, A. Leighton, P. and Adesua, A. (2008). Factors influencing small and medium enterprises (SMEs): an exploratory study of owner/manager and firm characteristics. *Banks and Bank Systems*, Volume 3, Issue 3;
- Xiao, Y. Sukumar, A. Tipi, L. and Edgar, D. (2017). Factors influencing people's intention to adopt e-banking: An empirical study of consumers in Shandong Province, China. *Asian Journal of Computer and Information Systems*, Volume 05, Issue 03, 26-43
- Yousafzai, S.Y., Foxall, G. R. and Pallister, J.G. (2010). Explaining Internet Banking Behavior: Theory of Reasoned Action, Theory of Planned Behavior, or Technology Acceptance Model? *Journal of Applied Social Psychology*, 40, 1172-1202.

APPENDIX

QUESTIONNAIRE (CUSTOMERS SURVEY)

Thesis Topic: Factors Influencing the Adoption of E-Banking at Ecobank Ghana

Introduction

I am a final year master's student from Kwame Nkrumah University of Science and Technology, Kumasi. This questionnaire is part of a research examining the factors influencing the adoption of e-banking at Ecobank Ghana by focusing on customers in the Takoradi metropolis of Ghana. Kindly select the right response from among alternative answers for each question by ticking in the appropriate box. You are assured of the confidentiality of this exercise because it will be solely used for academic purpose.

Thank you for your contribution

SECTION A: BACKGROUND OF RESPONDENT

Gender	Tick
Male	
Female	

Age	Tick
Less than 30 years	
31-40 years	
41-50 years	
51-60 years	

How long have you been a customer of the Bank?	Tick
Less than 5 years	
5-10 years	
11-15 years	
More than 15 years	

Level of education	Tick
No education	
Basic	
Secondary	
Diploma	
First Degree	

Second Degree	
Other (Specify)	

SECTION B: FACTORS INFLUENCING THE ADOPTION OF E-BANKING

On a scale of 1-5, to what extent do you agree with the following on e-banking? (Key: 1-strongly agree, 2- agree, 3-not sure, 4-disagree, 5-strongly disagree)

Perceived ease of use	1	2	3	4	5
I am adequately educated about e-banking					
I understand the benefits of e-banking					
I find it easy using e-banking products					
I have become good at e-banking					
Generally I like e-banking because it is easy to use					

Perceived Usefulness	1	2	3	4	5
I save time using e-banking products					
I have benefited from using e-banking products					
I save cost using e-banking products					
I have greater control of my banking transactions					

Security	1	2	3	4	5
I am satisfied with the technology of e-banking products					
The security of e-banking is satisfactory					
Security is fully assured with e-banking					
I have no worry at all about my data being stolen					
Overall e-banking is safe					

Accessibility	1	2	3	4	5
I am not able to access my account all the time					
Infrastructure to support e-banking is adequate					

e-banking technology is reliable					
There is adequate maintenance of e-banking delivery systems					
Generally I find e-banking highly accessible					
Socio-cultural issues	1	2	3	4	5
I prefer e-banking to traditional banking					
My culture does not support e-banking					
Level of fraud makes e-banking unattractive					
Weak law enforcement makes e-banking unattractive					

SECTION C: FACTORS FOR ENHANCING THE ADOPTION OF E-BANKING

On a scale of 1-5, to what extent do you agree with the following as constituting factors for enhancing the effective adoption of e-banking? (Key: 1-strongly agree, 2- agree, 3-not sure, 4-disagree, 5-strongly disagree)

Variables	1	2	3	4	5
Consistency with e-banking products					
Lower cost of transaction					
Increased education					
Improved user-friendly technology					

Any other comment

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Thank you for your cooperation.