

UNIVERSITY OF GHANA

**THE IMPACT OF E-BANKING ON BANK PERFORMANCE: A CASE STUDY OF
ECOBANK GHANA**

BY

EMELIA AYENSU OBENG-OSEI

(10637947)

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INTEGRI PROCEDAMUS

MAY 2019

DECLARATION

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

.....

EMELIA AYENSU OBENG-OSEI
(10637947)

.....

DATE

CERTIFICATION

I hereby declare that the preparation and presentation of this dissertation were supervised in accordance with guidelines on supervision of dissertation laid down by the University of Ghana.

.....
DR. ELIKPLIMI KOMLA AGBLOYOR
(SUPERVISOR)

.....
DATE

DEDICATION

To my husband Samuel, Children Nana, Elisha & Alvin; My Late Father John Ayensu, Siblings

Dorothy, Marian Lydia & Mothers Rose Quansah & Ernestina Nkansah

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LIST OF ACRONYMS

ATM	-	Automated Teller Machine
FICC	-	Fixed Income, and Currencies & Commodities
ICT	-	Information and Communication Technology
PEOU	-	Perceived Ease of Use
PU	-	Perceived Usefulness
ROAA	-	Return on Average Asset
ROAE	-	Return on Average Equity
ROE	-	Return on Equity
SPSS	-	Statistical Package for Social Science
TAM	-	Technology Acceptance Model

ABSTRACT

Technological Advancement has over the last decade drastically changed the way of doing things in many fields of human endeavour, of which the banking sector is no exception. Expectedly, a number of e-products have been developed and service delivery quality has witnessed improvements over the period. As a result, today's bank customer can access bank accounts on his/her own, transfer funds to other accounts, make payments for bills, buy items online, print or monitor statement of transactions, and transfer funds to and from mobile phones among others. In line with their commitment to satisfy the customer, through quality services, speed and convenience, banks continue to invest massively in ICT infrastructure, including e-banking terminals. However, the impact these innovations on a bank's performance largely remains untested. Given the current ICT penetration level and mobile telephony growth in the country, this research work sought to ascertain the impact that e-banking has on Ecobank Ghana's performance. The study adopted the mixed method approach and primary data was gathered through interviews of senior executives of the bank. This was augmented with secondary data from published historical financial statements. The study also gathered financial data on revenues attributable to the use of the bank's e-banking terminals from bank officials for analysis. Simple correlation analysis and trends were employed for the analysis of quantitative data and the thematic analysis method for the qualitative data. The study identified the Automated Teller Machine (ATM) and cards (debit, credit), Internet Banking, OMNI internet banking corporate clients, mobile banking, Ecobank Mobile App and BankCollect as the bank's main e-banking channels. The study also found that the implementation of e-banking in Ecobank has had tremendous impact on its performance by affecting its revenue positively, increasing its customer base, and enhancing its corporate image. The study found a positive and significant linear relationship between bank performance (ROE) and Fees & Commissions

from ATM and cards. In addition, the study found occasional system malfunctions such as breakdown of ATM machines, slow or no internet connectivity, and cost of maintenance as challenges for the implementation of e-banking in Ecobank Ghana. It was recommended that the bank undertakes massive awareness creation and advertisement for its e-products to attract more patronage from customers. It was also recommended that the bank installs real time monitoring systems to ensure that ATMs that run out of cash are quickly attended to minimize customer discomfort and user apathy.

KEYWORDS

E-Banking, Return on Equity, Information Communication Technology, Bank performance.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Technological advancement, over the years, has drastically changed the way of doing things in many fields of human endeavour, of which the business world is no exception. This has over the last two decades contributed to the significant improvement in the quality of life in most parts of our world (Corvoisier & Gropp, 2009). Specifically, electronic commerce is turning out to be the preferred mode for buying and selling of both products and services, at a cheaper cost and with greater convenience because it has been powered by development of information and communication technology (ICT). Generally, the banking sector and more particularly, retail banking have over the last two decades witnessed tremendous changes globally, to meet the growing sophistication created by the massive technological advancements and changes in customer demands. Accelerated by the advent of the internet and its rapid adoption and penetration, various innovative information technology delivery channels for the banking sector have been created (Chavan, 2013).

Consequently, competition has been redefined by the effective adoption of these electronic channels and payment systems, including Phone/Mobile banking, Automated Teller Machines (ATMs), Electronic Funds Transfer and Internet banking (Onay, Ozsoz & Helvacioğlu, 2008). Most banks in Sub-Saharan Africa have, therefore adopted multi-channel delivery of banking services, where the traditional banking has been through both “brick and mortar” branches and the internet (Callaway, 2011). Today, physical and geographical boundaries and limitations of banking services are non-existent due to the introduction of the e-banking platforms in the sector (PricewaterhouseCoopers, 2014).

Ecobank Ghana is known to be one of the early adopters of electronic banking as a channel of service delivery in Ghana. The bank introduced Automated Teller Machines (ATMs) in June 2003. However, the Trust Bank, now part of Ecobank, launched its first ATM in 1995. The bank has subsequently developed a number of e-banking products for its customers, and is also connected to the GH-Link platform, which provides an interconnection to all ATMs of banks in the country. In addition to its existing e-banking products, including Ecobank Xpress Account, Internet banking, Prepaid Card, ATMs and Points of Sale terminals, the bank recently introduced the Ecobank Mobile App & Ecobank Xpress point (Agency Banking) to the Ghanaian customer. These channels provide access to customer accounts as well as convenience of easy payments.

There are, however, cost and risk implications that the banks incur in the adoption of the e-banking as channels for the delivery of banking services. The cost stems, mainly from the banks' need to invest heavily in the ICT infrastructure necessary for the smooth operation for these channels. Considering the fact that banks invest massively in ICT infrastructure to enable the delivery of e-banking services, it is imperative to study the impact of the investment and its effects on the bank's performance. This study therefore seeks to ascertain the impact of e-banking on Ecobank Ghana's the performance.

1.2 Problem Statement

The banking industry in Ghana is highly competitive; and the combination of this with the growing sophistication of the customers have led to the adoption of technology by most commercial banks to deliver banking services (Asante-Gyabaah *et al.*, 2015). These banks have, in line with their commitment to satisfy the customer through quality services, speed and convenience, invested massively in ICT infrastructure, including e-banking platforms. Expectedly, a number of e-products have been developed and service delivery has witnessed improvements over the period. Today, as a result of these investments, a customer of any major

Commercial Bank in Ghana is able to check Bank account balances, transfer funds to other accounts, request for cheque books, print or monitor statement of transactions, make payments with a point of sales device, make payments for bills, buy items online, and transfer funds to and from mobile phones among others. Thus, the implementation of e-banking by the commercial banks offered customers of these banks an improved level of productivity and efficiency in the services they render, revenue generation and cost minimisation (Ackah & Agboyi, 2014).

Facilitated by the internet and mobile phone technology, banks continue to leverage their technological infrastructure to drive innovative products and services (PricewaterhouseCoopers, 2016). Although employing ICT in the delivery of banking services has resulted in improved service delivery and convenience to the customer, technological investments comes at a cost (PricewaterhouseCoopers, 2016). Banks' adoption of e-banking as channels of delivering their services comes with a cost. This raises the issue of managerial efficiency and overall profitability of the banks. According to European Central Bank (2010), although the banks have become more complex, earnings, risk-taking, efficiency and leverage continue to be the key drivers of their performance.

Notwithstanding the significance e-banking offers to the various banks, its influence on the bank performance largely remains inconclusive and subjective to the type of performance measure which is of interest to the researcher. To Mabrouk & Mamoghli (2010), generally, there is a lack of understanding of the drivers of innovation. Also, the impact of innovation such as e-banking on a bank's performance largely remains untested. Several studies have been conducted on the subject of e-banking in Ghana's banking sector, most of these studies have looked at the effect of e-banking on customer satisfaction, financial services or profitability (Amanfo, 2010; Akuffo-Twum, 2011; Asemanyiwaa, 2012; Sakoe, 2015). However, most of these studies were carried out at a time when information communication penetration level was

still low and a number of banks in Ghana had developed only a few e-banking products. Therefore, given the current ICT penetration level and mobile telephony growth in the country, this study aims to complement the body of knowledge on the subject of e-banking by looking at how it effects the performance of Ecobank Ghana limited.

1.3 Research Objectives

The key goal of this study, among others things, is to determine the impact that the implementation of e-banking has had on Ecobank Ghana's performance.

To accomplish the purpose of the study, some specific objectives are set as follows:

- i. To identify the e-banking services being provided by Ecobank Ghana Limited.
- ii. To investigate how the performance of Ecobank Ghana limited has been affected by e-banking
- iii. To identify the possible challenges of e-banking in Ecobank Ghana Limited.

1.4 Research Questions

- i. What are the e-banking services provided by Ecobank Ghana Limited?
- ii. How has e-banking affected the performance of Ecobank Ghana limited?
- iii. What are the challenges Ecobank Ghana Limited faces due e-banking operations in Ghana?

1.5 Significance of Study

The study is of relevance to practice, academia and policy making. Largely, this study is significant to practice because it seeks to furnish managers and shareholders of Ecobank Ghana with comprehensive information on how e-banking effects the bank's performance. This will offer some level of assistance in the determination of appropriate strategic and managerial actions that are needed in ensuring effective and valuable operation of e-banking in the bank. The study will also make recommendations, based on its findings, which will serve as a guide

in shaping policies that concern the adoption of e-banking Ghana's banking sector, and thus strengthening the local financial system to make it a stronger partner for national economic growth.

In addition to assisting stakeholders in the Ghanaian banking industry to pinpoint and articulate e-banking promotion strategies, the findings of the study will also serve as an addition to the stock of knowledge on the subject of e-banking. It will therefore, serve as a reference material for future studies that seek to continue the investigation e-banking in the banking sector in Ghana.

1.6 Scope and Limitations of the Study

The study seeks to ascertain the impact the adoption of e-banking has had on the performance of Ghanaian Banks. The focus however is on Ecobank Ghana Limited. The study's scope could have covered other universal banks in the country in order to strengthen the generalisability of the findings. However, the researcher's inability to expand the scope of the study is largely as a result of time and logistical constraints. Consequently, the findings of the study cannot be generalised to all Universal Banks in Ghana. The findings can, therefore, be interpreted within the confines of the case study. The researcher also acknowledges that unavailability and inaccessibility of data poses a challenge which may affect the findings of the study.

1.7 Organisation of the thesis

The whole study is organised into five chapters. Chapter one was a general introduction to the study. It covers the background of the study which includes the statement of problem, the objectives of study, research questions, significance of the study, scope and limitations of the study and concludes with the chapter disposition.

Chapter two covers the review of relevant existing literature on the subject. The chapter presents a discussion of related literature from books, journals, articles and periodicals, the

internet and other materials from the Bank. Chapter three focuses on the methodology used for the study. It provides details of the study design, study population, research instruments, methods of data collection and analysis. Chapter four covers the analysis of research data gathered and discusses the results of the analysis. Chapter five takes inferences from the analysed and interpreted data in chapter four, and draws conclusions for the study. It also makes recommendations that intends to help shape policy in the banking industry and future studies on e-banking in Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The current chapter covers the relevant extant literature on theories that concern the subject of study. The chapter discusses the theories underpinning for e-banking, defines e-banking and provides reasons for e-banking adoption. The chapter also covers bank performance measures, challenges of e-banking and empirical studies on e-banking.

2.1 Theoretical Framework of E-Banking

In the literature, there exist several theories that underpin the adoption of e-banking. However, due to its close relevance, the current study adopts the Technology Acceptance Model (TAM) as its theoretical support.

2.1.1 Technology Acceptance Model (TAM)

TAM is an adaptation from two previously developed theories, Ajzen & Fishbein's (1980) Theory of Reasoned Action and the Theory of Planned Behaviour (Ajzen, 1985). Developed by Davis (1989), the Technology Acceptance Model has been used to explain computer usage behaviour through a number of empirical studies (Lai, 2017). TAM helps understand the general determinants of computer acceptance that help in explaining users' behaviours. It attempts to offer an understanding into how ICT users behave relative to end-user computing technologies and user populations (Lai, 2017). TAM has two dimensions, perceived ease of use (PEOU) and perceived usefulness (PU). These two dimensions determine the attitude of users towards the use of a particular technology.

The first dimension, Perceived Ease of Use (PEU) refers to the extent to which the user expects the computerised system to be easy in terms of user friendliness, while the second, Perceived Usefulness (PU) explains the likelihood of a computerised system (example e-banking system)

to cause an improvement in the user's action/activity (Bugembe, 2010). It is suggested that the user's attitude in turn influences the behavioural intention to use a particular technology (Bugembe, 2010). The theory, therefore, helps to appreciate, predict and provide reasons for people's acceptance or otherwise of new information communication technology platforms such as e-banking. This theory helps in, for example, explaining the challenges of less patronage of e-channels. In effect, it provides the developers of e-banking products a hint of a product's acceptance and the ease of usage of the product by the customers.

2.2 What is E-Banking?

According to Hertzum *et al.* (2004) cited in Sarlak (2010), e-banking is a web-based banking. Liao, Shao, Wang & Chen (1999) also define e-banking as an electronic system which provides banking services through virtual means, rather than the traditional approach that relies on physical branches of banks. Thus e-banking involves the provision of retail or wholesale banking services to individual and corporate clients over the internet. To Management Association (2014, p 486), e-banking is "a high-order construct comprising several distribution channels". Although generally seen as banking through the internet, it is a concept which is larger than just the delivery of banking services via the internet (Management Association, 2014). UNCTAD (2002) postulates that e-services comprises of bank transfers, documentary collections and credits, lending, card businesses, payments and settlement among others.

E-banking, therefore, is a transactional online banking which comprises of systems that allow bank customers access their accounts online, undertake transactions, as the system allows, including buying of financial products/services and make other enquiries through public or private networks (Addai, Ameyaw, Ashalley & Quaye, 2015). E-banking services are provided to customers through various forms, including Automated Teller Machines ATMs, Telephone Banking, Computer Banking, Internet/Online Banking and Mobile Banking (Sarlak, 2010). This has offered customers of banks that operate e-banking the ability to access the e-banking

services with the aid of electronic devices, including personal computers (PC), personal digital assistant (PDA), automated teller machine (ATM) and telecommunication routes (Addai *et al.*, 2015).

2.3 Reasons for E-Banking Adoption among Banks

The adoption of e-banking among banks entails huge investments especially for the upfront cost of the e-banking infrastructure (Shah, 2009). Therefore, there must be compelling reasons for which banks implement e-banking. Addai *et al.* (2015) suggests that for the majority of banks, the core aims for the adoption of e-banking services, among others, includes customer service improvement and retention, growth through expansion of customer base, cost cutting and competitive advantage. The following are some other reasons cited in extant literature explaining the reasons for the implementation of e-banking among banks.

Customers' Demands - With the advent of the digital age and the seeming shift of balance of power to the customer, there are increasing demands for value, constant availability of service, and customisation of services to suit the needs of the customer quickly and at a reduced cost. It is imperative therefore for banks to develop creative ways of value creation to meet these customer demands. Thus, among others, e-banking is considered as a convenient and innovative means of creating value for bank customers (Shah, 2009).

Selling more to customers for growth – with most developed economies experiencing maturity in the financial services markets, the creation of new markets is limited. Therefore, financial institutions seeking growth are compelled to sell more products to existing customers. However, for developing economies whose financial services markets are not saturated, e-banking offers the opportunity to sell more products in new markets as well as to existing customers (Shah, 2009).

E-banking as a “Hygiene Factor” – According to Shah (2009), some banks are offering e-banking as “hygiene factors” to their customers because it is being offered by their traditional competitors, and if they don’t do same, they stand the risk of losing a chunk of their customers to these competitors, and even new entrants to the financial sector. Banks with such primary motive for implementing e-banking, however, tend to lag behind their competitors and fail to fully utilise the innovative potential of the e-banking platform to create more products to create value for their customers. Besides the hygiene factors that seek to provide satisfaction to the customers, Sheshunoff (2000) contends that, an imperative reason for e-banking adoption by banks is the necessity to build strong exit barriers for customers. Sheshunoff (2000) believes that with the customer becoming conversant with the application of full e-banking service of his/her bank, exiting to another financial institution becomes difficult.

Achieving competitive advantage - In the past, factors such as large branch network of a bank could be used for competitive advantage over other banks. However, in today’s banking world large branch network and even a mere adoption of e-banking without creating innovative products and first class customer service is not enough in differentiating a bank from its competitors. Bank services are homogeneous in nature and as such, traditional banking products and services are not enough to persuade the customers to stick to a particular bank; rather, using the e-banking platform to continuously churn out innovative products and services at a lower cost will attract potential customers and increase the loyalty of existing ones, thereby causing them to stick to the bank. Banks that seek to have competitive advantage tend to exploit the potential of the internet and other communication technologies such as the mobile phone to have smooth exchange of information with their customers (Shah, 2009).

Increases in revenue and cost reduction- Extant literature suggests that banks report increases in revenue as a result of the adoption and rolling out of e-banking products (Lehaney, Lovett & Shah – 2011; Shah, 2009; Ayadi & Pujals, 2004). Factors such as bank customer size,

increases, customer retention, and prospects for cross selling have also been cited as possible drivers of the revenue increment brought about by the e-banking channels. Other factors such as e-banking capabilities that allows banks to diversify their activities to cover services for other banks (including foreign banks), electronic bill payments, transactions to mobile phones and credit card lending among others, have also contributed to the expansion of the revenue stream of the banks. There is, however, an ongoing debate as to whether the increment in revenue are enough to provide a reasonable return on investment to the banks (Shah, 2009).

The reduction of overhead cost has been one of the key economic arguments for e-banking, as it reduces the need for more bank branches and its associated operational costs. Young (2007) however suggests that the introduction of e-banking provides very little savings, as the fixed cost involved in implementing e-banking is very high as compared to the variable costs. Costs such as systems integration, internet security and labour cost often tend to erode the efficiency savings made from the e-channels (Shah, 2009). Thus, a bank will require a larger customer base to make meaningful cost savings.

2.4 Bank Performance Measures

The shareholders and many other stakeholders of a bank often assess its performance based on the area of interest using certain key performance indicators. Generally, in assessing the financial performance of a bank, one will typically assess its policies and operations in monetary terms over a period of time. Results from such evaluation is then compared with the bank's peers and the industry at large (Adam, 2014). Several bank performance measures are found in the literature; however, there is no agreement on which of these measures should be considered most appropriate. Some common measures used as proxies for bank performance (profitability) includes Return on Average Equity (RoAE), Return on Average Asset (RoAA) and Net Interest Margin (Căpraru & Ihnatov, 2014).

However, the banking sector regulators and policy makers have in the recent past adopted the CAMELS (Capital Adequacy, Assets Quality, Management, Earning, Liquidity, Systems and Controls) rating system in the assessment and examination of the performance an overall financial health of banks (Aspal & Dhawan, 2016). First adopted by the Federal Financial Institution Examination Council in the United States, CAMELS stands for key ratios used to assess bank performance (Aspal & Dhawan, 2016). The Capital Adequacy of the bank, which gives an indication of the overall financial position and its ability to absorbed unexpected losses without going bankrupt, is assessed through Capital to Risk-weighted Assets Ratio, Debt-Equity Ratio and Government Securities to Total Investments Ratio. Assets Quality measures the bank's financial strength by ascertaining in particular the composition of non-performing assets (NPAs) which is expected to be very low otherwise the bank's profitability will be affected. Asset quality is measured through these ratios: "Net NPAs to Net Advances, Secured Advances to Total Advances and Priority Sector Advances to Total Advances" (Aspal & Dhawan, 2016).

Management Efficiency seeks to ensure adherence to regulations and norms, explain the bank's ability to adapt to changes in business environment and also measures the leadership and administrative competence of the bank. It is measured through Total Advances to Total Deposits, Business per Employee, and Return on Advances. Earning Quality provides an indication of the bank's operating performance and the quality of profitability in terms of its sustainability. Earning quality is measured through these ratios; Operating Profit to Total Assets. Net Interest Margin to Total Assets, and Interest Income to Total Income. The bank's capability in meeting its commitments as they become payable is the function of liquidity. Thus, the bank must have adequate liquid assets as a buffer. Liquidity is determined through these ratios; Liquid Assets to Total Assets, Liquid Assets to Demand Deposits, and Credit Deposit Ratio. Sensitivity Ratios looks at the risk of experiencing changes in market conditions

which have adverse effect on earnings and/or capital of the bank, for example interest rate changes. This is measured through Price Earnings Ratio, Total Securities to Total Assets Ratio, and GAP Analysis (Aspal & Dhawan, 2016).

2.5 Challenges of E-Banking

E-Banking presents both opportunities and challenges to various stakeholders. According to Miryala (2015), e-banking leads to poor relationship between the bank customer and bank officials, as most electronic banking services do not allow for face-to-face interaction with the customer. A number of these services however provides avenue for feedback from the customer through phone calls or text messaging. Miryala (2015) further suggests that some e-banking products involves complex transactions or processes that the customer must go through. The customer therefore tends to shy away from the patronage of products that seem complicated. A number of e-banking products/services involves the use of the internet which comes with both perceived and real security threats including attacks from hackers, phishing, malware and identity theft that could result in an unauthorised access to a customer's account.

According to Schaechter (2002), security remains a key challenge for banks implementing e-banking as the threats exists from within or outside the bank. To Nsouli & Schaechter (2002) the security challenges includes breaches leading to unauthorised access to the bank's system, attacks in the form of "brute force", "hijacking", "sniffing" or "spooffing" for access to customer information and accounts. The breaches also occur at the customer's end when security details such as account number and passwords are shared or kept loosely. Nsouli & Schaechter (2002) further asserts that Banks are also faced with risks associated with the implementation of e-banking including regulatory, legal and operational risk.

The management of technology is also a key challenge for banks implementing e-banking. For an efficient implementation of e-banking, it is essential to develop or acquire the appropriate

technology, deploy it optimally and then leverage it to the maximum level. Banks have the challenge of achieving and sustaining optimum service and adeptness of standards for e-products, while remaining cost effective and providing viable dividend to shareholders (Miryala, 2015). Arunkumar (2008) also asserts that banks are posed with the challenge of preventing the use of the e-banking channels for unlawful activities such as money laundering. Ensuring constant availability of e-banking services, including functional ATMs; preventing system breakdown, slow network, as well as providing user friendly website are some other challenges confronting banks that are implementing e-banking (Arunkumar, 2008).

2.6 Empirical Literature Review

The effect of e-banking on Jordanian banks performance was studied by Wabel (2011). The study measured the performance of banks in Jordan by ROE and two sets of control variables were used. The study employed pooled OLS regression technique for the analysis. The finding of the result showed a significant negative effect of e-banking on financial performance of banks. The main shortcomings of the study are that the researchers did not consider the ROE after a definite period of the e-banking's adoption. It has been recognised that the adoption of e-banking technology come along with some cost component that needs time to recover before the company may start reaping the benefits of its implementation. However, a study conducted in India (Malhotra & Singh, 2009) that sought to examine the effects of internet banking on performance and risk of Indian commercial banks revealed no significant correlation between the profitability and offering of internet banking.

Using a sample size of 72, Hernando & Nieto (2007) quantitatively studied Spanish commercial banks over the period 1994-2002. The study aimed at identifying and estimating the impact of the adoption of a transactional web site on financial performance. The findings of the analysis indicated that e-banking has a positive impact on banks' profitability (ROA and ROE) after one and a half years of implementation. This was as a result of staff level decreases,

IT and overhead expenses. The study concluded that e-banking is complementary to “brick-and-wall” banking and not a substitute. Hernando and Nieto (2005) also found improved performance for banks offering multichannel (e-banking and brick-and-wall bank) originating from increases in income from commissions, brokerage fees and savings from reduced staff levels.

Similar to the findings of Hernando & Nieto (2007), Oyewole, Abba, El-maude & Arikpo (2013) studied the performance of banks and e-banking within the context of Nigeria. The result of the study showed that e-banking began to contribute positively to bank performance (Return on Asset and Net Interest Income) after two years of its adoption. The findings from pooled OLS estimations indicated that e-banking has a negative impact on bank performance within the first year of its adoption. The study which covered 8 banks used Panel data drawn from the annual audited financial statements for the period 2000 to 2010.

Contrary to the above empirical findings, Delgado, Hernando and Nieto (2004) and Khrawish & Al-Sa’di et al. (2011) identified a negative impact of internet banking on performance of banks. It must be noted however that these studies, just like DeYoung (2001, 2002) focused mainly on internet only banks. These studies were also in the early years of the introduction of e-banking when most banks had just a few e-products. The findings of England et al. (1998) on the other hand found no significant impact on performance.

The findings of the study of Hussain, Das, Bhutto, Hammad-u-Salam, Talpur, and Rai (2017) indicated that the adoption of e-banking comes with challenges such as cyber threats, internet connectivity, transactions security, privacy of customers’ accounts, and banking system security. The study suggested further, that the problem of internet access makes customers reluctant to adopt electronic banking. Closely related to the findings of Hssain et al. (2017) is the result of the study conducted by Shamsdouha et al., (2005). In their study, Shamsdouha et

al., (2005) suggested that lack of privacy in executing transactions, safety and complexity of ATM machines were major concerns of both the customers of banks that have adopted e-banking.

The Findings of the study of Ashoka and Vinay (2016), indicated that illiteracy and fear of losing money through e-banking are key challenges for non-patronage of e-banking among bank customers in the Mysore District of India. The study, which employed a total sample size of 179, also indicated that every 9 out of 10 customers in urban areas who are below 40 years desires to patronise an e-banking product, at least ATM services. The study of Pikkarainen et al. (2004) also revealed that the main factors influencing the acceptance of online-banking consist of the perceived usefulness and the availability of information on online banking on the website of a bank that has adopted e-banking.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The chapter discusses, in detail, the methodology the researcher adopted in undertaking this research. It provides a description of methods and reasons for their adoption during the data gathering process of the study. The chapter, therefore, provides details on research design and approach, study population, sampling and sampling procedure, type and sources of data, data gathering and assembly, data analysis, reliability and validity of data, ethical considerations as well as the profile of the study organisation.

3.1 Research design

Bryman and Bell (2015) see a research design to be the framework or method through which a research is conducted as a way of providing answers to the formulated questions of the research and to accomplish the goal of the study. The study adopted the mixed approach, employing the combination of quantitative and qualitative approaches. According to Creswell, (2011), the mixed approach gives room for data triangulation, provides general comprehensiveness of the findings of study, helps in expanding the scope of the research topic and enhances methodological thoroughness.

3.2 Population of the study

Rubin and Babbie (2016) explain that the population is a collection of elements out of which samples are selected for a study. A population usually has a common characteristic among its elements; for example, employees working in a given organisation have at least one thing that is common to them (Ott & Longnecker, 2015). To Saunders et al. (2007), the sample is selected from the total population. The population of the current study comprises all the branches of

Ecobank Ghana Limited. This is made up of 67 branches and agencies as well as 1,521 staff, 40% of which are male while 60% are female (Ecobank, 2017).

3.3 Sampling and sampling procedure

The geographical spread and large numbers of an entire population of study often makes it impracticable to be used for a study. This, in addition to limitations of time and other resources, makes it convenient for a sample to be selected to represent the whole. For this study, a total of 10 senior executives are selected from 5 branches (2 from each branch) of Ecobank in Accra. The branches included the Head office, Ring Road, Adabraka, Silver Star Airport and Osu branches. The respondents are purposively selected from IT, Operations, and Finance departments. The sample comprised of people from both genders.

3.4 Type and sources of data

In conducting the study, the researcher gathered and analysed both primary and secondary data. The primary data were gathered by interviewing senior executives and staff of the selected branches. The researcher employed a draft interview guide in conducting the interviews for the selected senior executives of the bank. This provided relevant primary data necessary for evaluating the effect of the e-banking portals on the performance of the bank. This also assisted in gaining insights into the challenges of implementing e-banking in the selected bank.

The historical annual reports of the bank (2008 to 2017) were used to provide secondary data for the assessment of the impact of the e-banking channels on the bank's performance. The past financial statements are used to provide quantitative data for the assessment of the impact of the e-banking channels on the bank's performance. Data from the past financial statements (annual reports) assisted in computing the Return on Equity which is used as the proxy for the bank's performance. Other financial data on selected proxies for E-banking were also gathered from the bank. These were Fees and Commissions from ATMs and Cards (Debit and Credit

cards), Fees and Commissions from Mobile banking and Fees and Commissions from Internet Banking. Other secondary data relevant for the study were gathered from published documents and online articles.

3.5 Data gathering and assembly

For an effective data gathering process, the researcher first obtained permission to enable him to access bank officials and financial data. The researcher also booked appointments for a date to conduct interviews to obtain data from senior executives of the bank. Secondary data on the bank's published historical financial reports for the period 2008 -2017 was obtained from the Bank's website for analysis. This assisted in analysing the bank's performance for the period under consideration. Other financial data which are not published on the website were obtained from designated officials of the Bank. Data for the study were gathered within a period of two weeks.

3.6 Data analysis

In line with the suggestion by Braun & Clarke (2006), the study adopted thematic analysis for the qualitative data. Thematic analysis assists a researcher to identify, analyse and report patterns in a given data. The unrefined data gathered from the interviews are transcribed and relevant features across the entire data set are assigned codes. This served as a data organisation tool in grouping similar responses and identifying themes in line with the objectives of the research. Descriptive statistics were employed in analysing and providing summaries of the quantitative data gathered. The processing and analysing of the data quantitative data was done with the aid of Microsoft Excel 2013 and Statistical Package for Social Science (SPSS 23) data analysis tools.

3.7 Reliability and validity of data

According to Nardi (2015), reliability and validity refers to the extent to which the selected test instruments produces accurate and consistent results each time they are used in conducting a similar research, assuming there is no change in what is being measured. For this study, content and contextual validity is employed. Content validity is employed as a measure of the extent to which the data gathered through the selected instruments, represents a specific domain or content of a particular concept (De Bruin, Freeze, Kaulkarni & Rosemann, 2005). On the other hand, contextual validity refers to the degree of credibility of the evidence and conclusions drawn from the findings of the study (Bryman, 2012). This validity mechanism is attainable through data triangulation (Gray, 2013; Holloway and Wheeler, 2013). Thus, the study utilised data triangulation mechanisms where portions of data gathered were compared and validated with other sources where practicable.

3.8 Ethical considerations

Ethical considerations refer to certain ethical factors that would affect the conduct of the study if not adhered to (Bryman, 2012). Ethical considerations relate to both the respondents and the researcher and must be carefully adhered to. In line with this, the researcher ensured that all data collected from respondents are treated with utmost confidentiality. Also, all sampled respondents are made aware of the purpose of the study and their prior consent sought to ensure that responses are ethically solicited. The researcher also ensured that participation in the study was voluntary.

3.9 Profile of study Organisation

Ecobank Ghana Limited (EGH) started its operations as a merchant bank in February 1990. Being the first to be granted Universal Banking license by Bank of Ghana, the bank has witnessed consistent growth over the years. With 67 branches in eight of the 10 regions in the country, Ecobank is currently the largest universal in Ghana (Business Ghana, 2018). Ecobank

Ghana Limited (EGH) got listed on the Ghana stock Exchange in 2006. The bank is a subsidiary of the Ecobank Group (Ecobank Transnational Incorporated). The Ecobank Group currently has over 36 subsidiaries across Africa; operating in 20 currencies. Ecobank Ghana has a range of wholesale and retail banking products. The bank's Corporate & Investment Banking products have been broadly classified into four main categories; Loans & Liquidity, Cash management, Trade and Fixed Income, and Currencies & Commodities (FICC). The bank has other products such as Custody Business and a recently launched Ecobank Mobile App which allows customers the convenience of transacting banking business outside the branch set-up (Ecobank, 2017).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

The study sought to determine the impact of the adoption of e-banking on the performance of Ecobank Ghana Limited. This chapter presents the results and discussion of the research analysis based on the responses and facts gathered. In line with the objectives of the study, the chapter presents a summary of responses collected from interviews conducted as well as results of analysed data from secondary sources. The researcher collected secondary data from the bank's historical financial reports to arrive at figures for the bank's return on equity. Other financial data on revenues attributable to the use of the bank's e-banking terminals including ATMs, Debit and Credit cards, Internet banking and Mobile banking (revenue from mobile money transactions, mobile banking via USSD as well as Ecobank Mobile App) was also obtained from appropriate bank officials.

A total of ten (10) interviews were conducted to gather primary responses from senior executives on the impact of e-banking on the performance of the bank as well as challenges faced. The respondents (interviewees) comprise 6 males and 4 females. The interviews were conducted in the month of April 2019. Generally, each interview lasted between 45 minutes and 1 hour. The researcher generally followed the draft interview guide, except in few instances where the questions were rephrased for further clarifications. The researcher also posed follow-up questions to some responses for further insight. Table 1 presents a summary of the responses from the interviews which are grouped in line with the objectives of the study.

Table 4.1 Summary of responses from interviews

No.	Research objective	Thematic area	Distinctive colour	Most Frequently Used Words/terms
1	Identify the e-banking services being provided by Ecobank Ghana Limited	E-banking services	Pink	ATMs, Ecobank Mobile App, Omni, Internet Banking, Ecobank Xpress Account, Debit and Credit Cards, Ecobank Pay, Bank Collect
2	Examine the effect of e-banking on the performance of Ecobank Ghana Limited	E-banking and bank performance	Blue	Tremendous, High positive impact, Increase in Revenue, Reduction of cost, Gains through fees & commissions, Increased customer base, Enhanced status-pacesetter. Reduced staff.
3	Identify possible challenges of e-banking in Ecobank Ghana Limited	E-banking challenges	Brown	Stability of technology infrastructure, Risk and Security issues, Cost, Installation, Maintenance, Third parties, System breakdowns, Brick and mortar, User literacy

Source: Author's construct, 2018

4.1 E-Banking Services provided by Ecobank Ghana Limited

The responses gathered from the interviews revealed that Ecobank Ghana Ltd. officially introduced its maiden e-product, the Automated Teller Machine (ATM) and cards, in 2003. The Trust bank, which is now part of Ecobank, had however introduced its first ATM in 1995. According to a senior executive with the Ring Road branch, creating convenience, lowering transaction cost (banking), reducing queues at the bank, as well as increasing revenue were key considerations for the introduction of e-banking. He stated further that:

“You see, the issue of adopting and integrating technology [e-banking] in the banking sector is one of remaining relevant and competitive to your customers. We are in

business because the customer continues to do business with us, we therefore continue to leverage on the opportunities that ICT provides to deliver convenient services to our customers. We therefore began with the installation of our Automatic Teller Machines [ATMs] in all our branches as well as vantage points across the country. This allowed us to issue various debit cards which provides instant access to customer accounts through ATMs, cashless payment (POS) machines, mobile, and online. Banking services are also provided to a segment of our customers through credit cards such as the Ecobank Advantage Gold Credit Card, Premier Platinum Credit Card and Ecobank SAA Voyager MasterCard. The bank has also developed internet powered products such as internet banking among others. Partnering with the country's leading mobile telecoms companies the customer is also empowered to do banking [undertake financial transactions – transfer funds to and from bank account for payments] through mobile money services from the phone.”

As a follow up to the response from the senior executive, an online banking support manager with the bank's technical operations department at the head office stated that:

“In our quest to reduce both customer and operational costs, expand customer base and reach-out, and improve product delivery and communication, we have leveraged on ICT to provide a variety of e-products/service which offers convenience to our customers”.

He outlined the following as the key e-banking services provided by Ecobank Ghana Limited:

Automatic Teller Machines (ATM)– Services provided through the ATMs include secured cash deposits and withdrawal; Western Union funds redemption; eToken transaction redemption; and viewing and printing of mini-statements.

Internet Banking – E-banking services provided by the bank through this medium are delivered electronically via the Internet. Ecobank internet banking provides intra account, inter-

account, domestic & international transfer of funds; rapid transfer, Ecobank Africa transfers (within Africa), and Western Union send & receive money. The service also allows customers to view and print account statements; provides a forex calculator and allows the customer to undertake a term deposit. Ecobank internet banking also allows customers to setup student information system (SIS); define security question/answer and change mode of One Time Password (OTP) delivery (either by mail or SMS).

OMNI – The OMNI is an internet banking product uniquely designed to serve the bank's corporate clients. It provides corporate Internet Banking for bulk payments and salary distribution for corporate enterprises banking with Ecobank Ghana Ltd.

Ecobank Mobile App – The Ecobank Mobile App is a digital platform that provides secured transactional activities using smart phones and a one-time password aligned to a specific Mobile number on which the Mobile App has been on-boarded, and to which also exist an e-alert. The App provides the customer with Intra Account, Inter-Account and Domestic & International Transfers. It also provides Rapid Transfer, Ecobank Africa, access to account statements and a forex calculator. The App also helps customers generate e-token transaction to be redeemed at an ATM terminal. The Ecobank App also allows the customer to send funds to Mobile Money wallets. It is also used to pay bills, as well as generate and send statements to an email. The Ecobank Mobile App also allows customers to do mobile airtime top-up as well as mobile USSD.

BankCollect – BankCollect is an e-product designed to provide secured corporate revenue and tax collection terminals for the country's revenue authorities and corporate clients such as schools.

4.2 The effect of e-banking on the performance of Ecobank Ghana limited

The responses gathered from the interviews of senior executives of the bank revealed that implementation of e-banking has had tremendous impact on the performance of Ecobank Ghana. For example, an operations manager at the Adabraka branch stated that:

“When it comes to impact, I see it from both the numbers [revenue and customer base] and the intangible aspects. It is a competitive industry where there are a lot of similarities in the services we deliver to the customer... I mean just look at the number of banks operating in the country. We at Ecobank decided to leverage on ICT to deliver banking services in many forms that seeks to provide convenience to the customer for a token [fees and commissions] which eventually becomes significant revenue for the bank. The e-channels therefore serve as additional revenue channels for the bank... and that’s increase in revenues, though we also spend on the acquisition and maintenance of the technology that drives these e-products. On the intangibles the quality e-products introduced... example the Ecobank Mobile App have enhanced the status of the bank which is currently seen as the industry pacesetter in e-banking”.

According to a senior executive at the finance department of the head office branch, the impact cuts across functional and departmental levels. She stated that:

“E-banking channels are drivers of both the customer and his or her money... what I mean is, it helps retain old customers as well as bring in new ones... and you know what the customer brings to the bank... call it business or whatever, the bottom line is money to the bank. The more we render satisfactory service through the e-products, the more they recommend us to friends and businesses who also come to taste of the good service Ecobank provides. In the end, we get to receive fees and commissions from the customers who also get value for their money”. Beside the increases in revenue these

e-channels serves as huge assets that allows the bank to roll out wide ranging services and functions which in the past would have been very challenging. For instance, services such as BankCollect which is designed to provide secured corporate revenue and tax collection terminals for the revenue authorities and corporate clients have been possible as a result of our e-channels”.

In support of the assertion by the senior executive at the finance department of the head office, the IT manager at the Silver Star Airport branch indicated that e-banking has had positive impact on the growth of the customer base of the bank. He revealed that the youth and the IT savvy individuals in particular are those attracted more by the bank’s Mobile App. He also revealed that the bank has attracted more customers from the informal sector as a result of its e-banking product that allows them to transfer funds from their mobile money wallets to their bank accounts. These are business owners who do not have time to do daily deposits into their accounts, thus, such services provide them convenience in undertaking such transactions. Other respondents disclosed that e-banking has changed the way banking transactions are undertaken in the bank. For instance, a manager in charge of operations at the Ring Road branch stated that:

“E-banking has really changed and if I may add, demystified certain things in the banking sector in general... specifically for Ecobank take for instance T-bills, now in the comfort of your home and in your privacy, you can purchase T-bills on your phone. Funds on your phone which you would’ve hitherto thought was too small to be carried to the banking hall to buy T-bills can easily be invested with no hassle or shyness... and the good thing is it is brought to you by Ecobank Ghana. Besides you are saved from the cost of transportation and time to the banking hall. I must add that e-banking has also reduced the overheads of the bank... I mean in terms of the number of staff needed

to man a bank branch or perform certain functions... well others may see it negatively but from the angle of profitability it is cost savings”.

4.2.1 Fees and Commission from E-products

All the responses from the interviews conducted point to the fact that e-banking has had positive impact on the performance of the bank. The researcher also gathered data on the performance of the various e-products in terms of revenues generated from the services provided. The e-products of the bank were grouped into three (3): Fees & Commissions from ATM and cards, Fees & Commission from Mobile Banking and Fees & Commission from Internet banking. As shown in Table 2, for the period from 2008 to 2012, the bank’s key e-products were ATMs and Cards (Debit/Credit) thus, no data on mobile banking and internet banking. Responses gathered from the interviews indicated that the bank introduced Internet banking in 2011 and Mobile banking (Mobile money and Mobile App) in 2013.

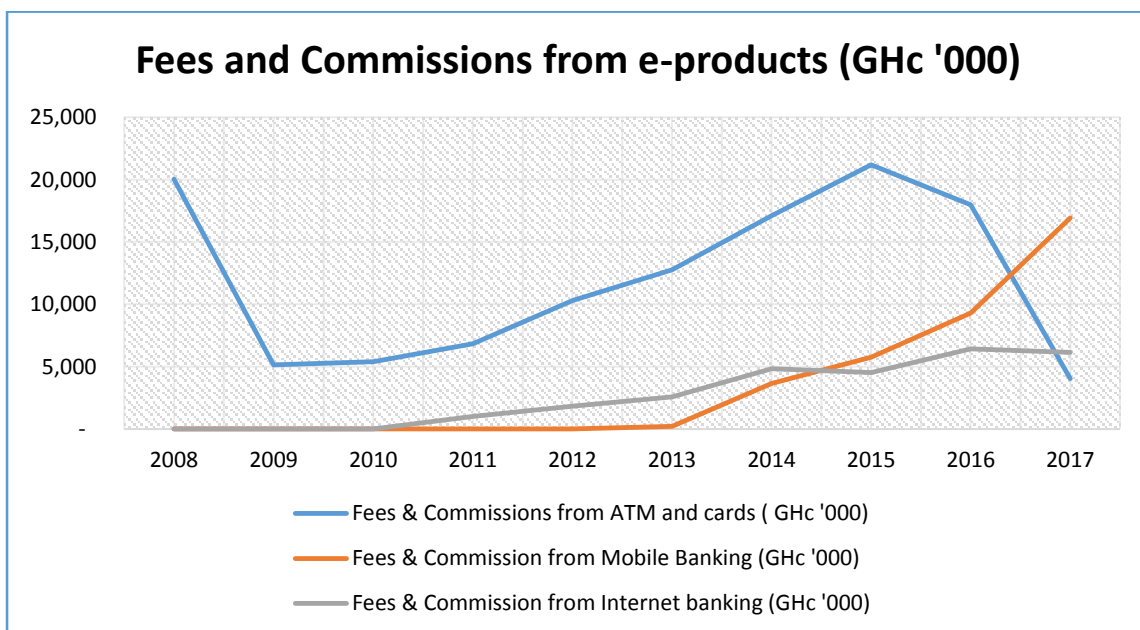
Table 4.2 Fees and Commissions from Ecobank’s E-products

Year	Fees & Commissions from ATM and cards (GHc '000)	Fees & Commission from Mobile Banking (GHc '000)	Fees & Commission from Internet banking (GHc '000)	Total Fees and Commissions from e-products (GHc '000)
2008	20,038	-	-	20,038
2009	5,151	-	-	5,151
2010	5,398	-	-	5,398
2011	6,839	-	1,016	7,855
2012	10,304	-	1,824	12,128
2013	12,769	226	2,590	15,585
2014	17,096	3,643	4,829	25,568
2015	21,196	5,768	4,532	31,496
2016	17,976	9,307	6,428	33,711
2017	4,032	16,921	6,156	27,109

Source: Field data, 2019

As shown in Figure 4.1, for the period from 2008 to 2015, the main e-products (ATMs and Cards) realised continuous increases in revenue. This can be attributed to high patronage from customers of the bank. Revenue from this group of products has since 2015 been declining while Mobile banking revenues are increasing. This could be as a result of a switch in patronage from the major existing e-channel - ATMs to the more convenient Mobile banking channel which comes handy and offers services without necessarily leaving the comfort of one's room or office. When asked which of its e-products is widely patronised, majority of the respondents mentioned Ecobank Mobile App. This, therefore, explains why with its introduction, the existing e-channel (ATMs/Cards) began to have reduced revenue figures. Figure 1 also shows a rather slow increase in revenue from Internet banking. A response on the challenges of e-banking explains why internet banking has been slow in realising steady increases in revenue. The respondent intimated that more customers entertain fear in using internet banking as a result of the incidence of internet fraud which poses the risk of a customer losing his/her funds just by a click of a button.

Figure 4.1: Fees and Commissions from e-products of Ecobank Ghana



Source: Author's construct, 2019.

4.2.2 Return on Equity (ROE) – Ecobank Ghana

To ascertain the impact of e-banking on the performance of Ecobank Ghana, it was necessary to analyse its past performance for the period selected for the study. To ascertain the bank’s performance, the profitability ratio of Return on Equity (ROE) was computed. Return on Equity (ROE) helps in ascertaining the return on shareholders’ investment after all commitments such as fixed interests are deducted. The ROE provides information on how well the retained earnings of a company has been used to generate extra earnings. Thus, given the resources provided by the shareholders of the bank, ROE is used to determine how much profit the bank has been able to generate. Although a clearer picture is shown when compared with peers, higher ROE generally provides an indication that a company has been efficient while a low ROE indicates poor performance. The ROE is computed as follows:

$$\frac{\text{Net profit or profit after tax}}{\text{Shareholders' fund or equity}} \times 100$$

The bank’s return on equity for the period from 2008 to 2017 is shown in Table 4.3.

Table 4.3 Return on equity for Ecobank Ghana Limited

YEAR	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ROE	0.42	0.26	0.27	0.28	0.31	0.33	0.40	0.38	0.34	0.25

Source: Field data, 2019

4.2.3 E-banking and Bank Performance

The simple bivariate correlation (also known as zero-order correlation) was employed to determine the relationships that exist between bank performance (ROE) and the three (3) groups of e-products namely, Fees & Commissions from ATM and cards, Fees & Commission from Mobile Banking and Fees & Commission from Internet banking, and it was subject to a

two-tailed test of statistical significance. As shown in Table 4, the results of the Pearson correlation indicated that there was a positive and significant linear relationship between bank performance (ROE) and Fees & Commissions from ATM and cards ($r = 0.944$, $n = 10$, sig value < 0.01). This is also shown in Figure 4.2.

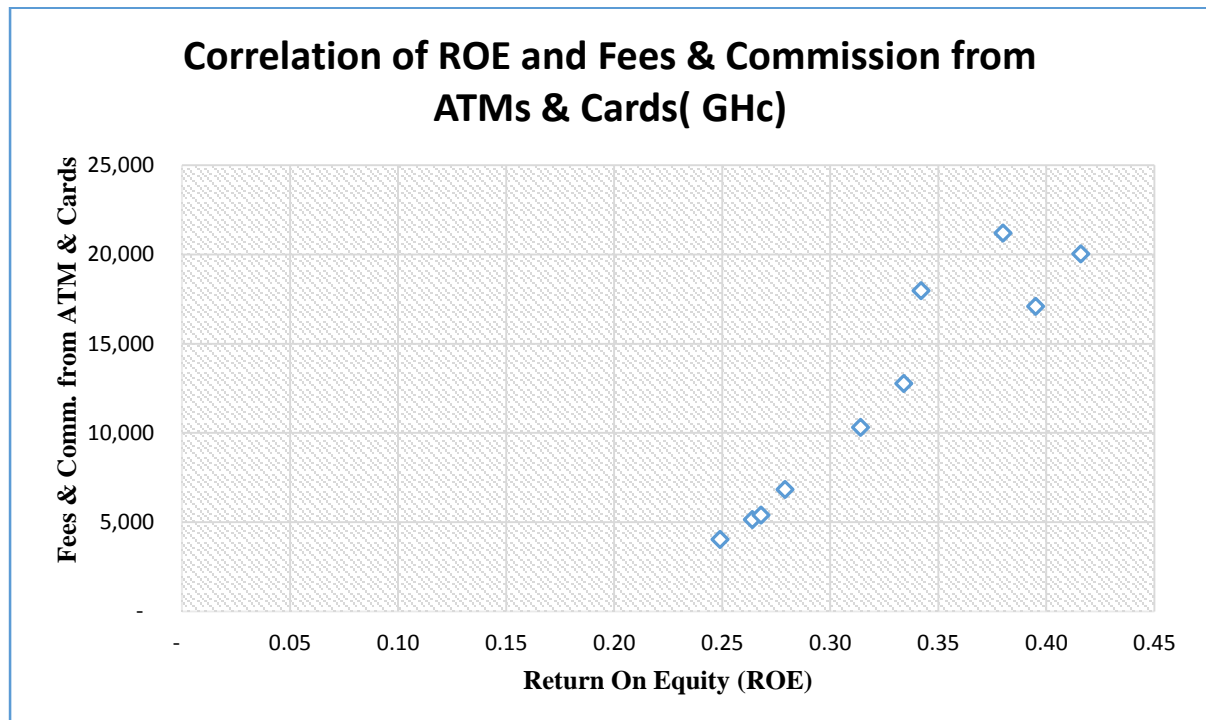
Table 4.4 Correlations of ROE and Fees & Commission from ATMs & Cards

		Correlations	
		ROE	Fees & Comm. from ATMs and Cards
ROE	Pearson Correlation	1	.944**
	Sig. (2-tailed)		.000
	N	10	10
Fees & Comm. from ATMs and Cards	Pearson Correlation	.944**	1
	Sig. (2-tailed)	.000	
	N	10	10

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2019.

Figure 4.2: Correlation of ROE and Fees & Commission from ATMs & Cards



Source: Field data, 2019

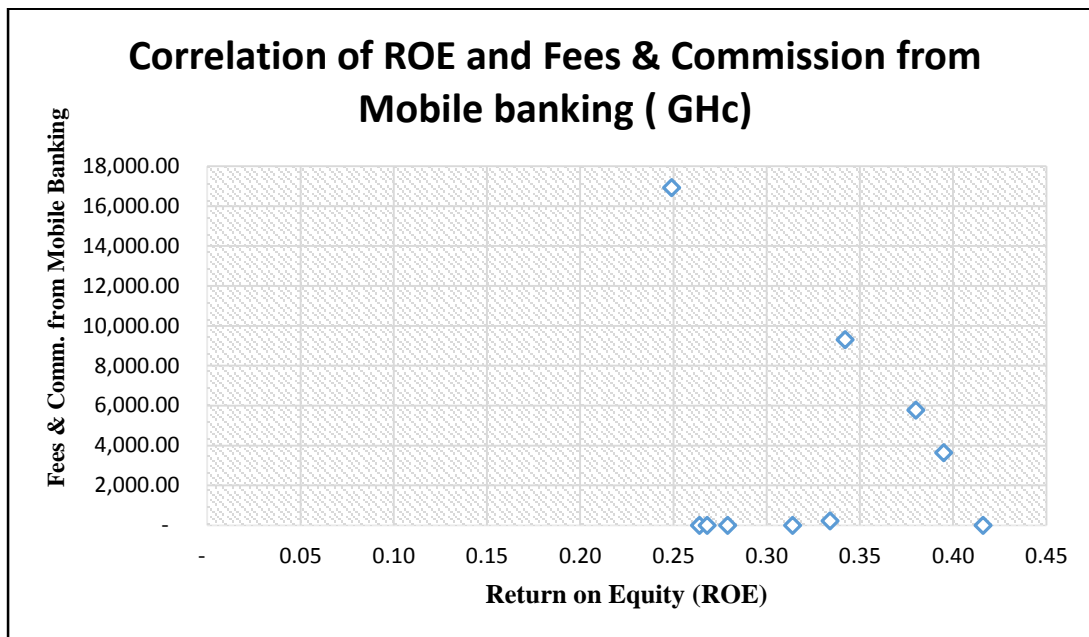
As shown in Table 4.5 below, the results of the Pearson correlation indicated that there was a strong negative linear relationship between bank performance (ROE) and Fees & Commissions from Mobile Banking ($r = -0.730$, $n = 5$, $p = 0.162$). Thus, a negative linear relationship exists between revenue from mobile money transactions, mobile banking via USSD as well as Ecobank Mobile App. That is, as revenue for mobile banking increases, return on equity decreases and vice versa (depicted in Figure 3). This could be due to the fact that these products were introduced barely 5 years ago and the large investments made are expected to take some time before contributing positively to the returns on equity of the bank. A lower number of users relative to older e-channels could also be a factor accounting for this relationship.

Table 4.5 Correlation of ROE and Fees & Commission from Mobile banking

		Correlations	
		ROE	Fees & Comm. From Mobile Banking
ROE	Pearson Correlation	1	-.730
	Sig. (2-tailed)		.162
	N	10	5
Fees & Comm. From Mobile Banking	Pearson Correlation	-.730	1
	Sig. (2-tailed)	.162	
	N	5	5

Source: Field data, 2019.

Figure 4.3: Correlation of ROE and Fees & Commission from Mobile banking



Source: Author’s construct, 2019.

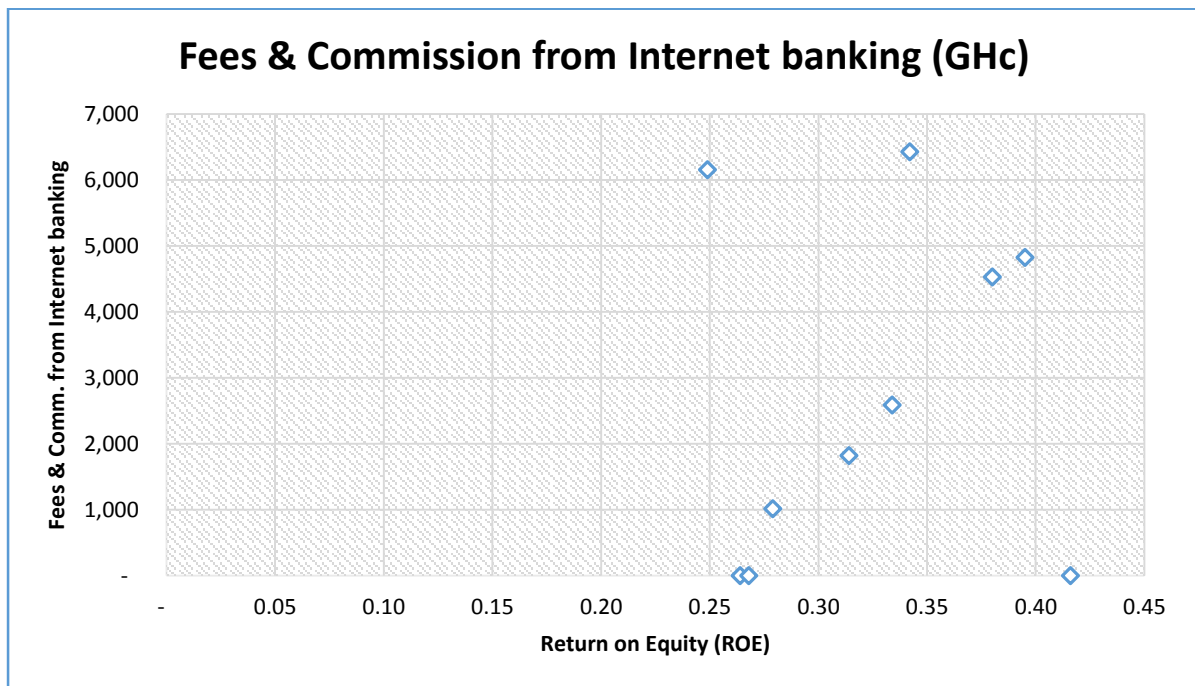
The Pearson correlation results in Table 4.6 indicate that there was a very weak positive linear relationship between bank performance (ROE) and Fees & Commissions from Internet Banking ($r = 0.189$, $n = 7$, $p = 0.685$). Thus, a weak positive linear relationship exists between revenue from Ecobank Internet Banking and the returns on equity. This is also depicted in Figure 4.4.

Table 4.6 Correlation of ROE and Fees & Commission from Internet banking

		Correlations	
		ROE	Fees & Comm. from Internet Banking
ROE	Pearson Correlation	1	.189
	Sig. (2-tailed)		.685
	N	10	7
Fees & Comm. from Internet Banking	Pearson Correlation	.189	1
	Sig. (2-tailed)	.685	
	N	7	7

Source: Field data, 2019.

Figure 4.4. Fees & Commission from Internet banking



Source: Author’s construct, 2019.

4.3 Challenges of E-banking in Ecobank Ghana Limited.

Although majority of the respondents stated that e-banking has had a positive impact on the performance of the bank, they also stated that there are some challenges confronting the bank’s smooth e-banking implementation. For example, the online banking support manager at the head office stated in response to the question posed to him on challenges that:

“Yes, there are challenges... they come in two forms, customer related and bank related. Well let me start from the bank related ones, they include the stability of the technology infrastructure that powers these services. Sometimes we experience system malfunctions such as breakdown of say ATM machines or slow connectivity. For the customer who is used to the convenience these breakdowns create great discomfort. It is also quite costly installing and maintaining the infrastructure... the bank constantly has to ensure that the system is secured and backup regimes (both in and off-site) established. We also depend on third parties who provide significant services... the

actions or inactions of these third parties need constant monitoring to avoid failures to the system. Also, technology keeps advancing and existing technologies soon become obsolete thus requiring upgrade or total replacements. These developments therefore pose challenges to the bank. On customer related challenges user literacy remains key to the success and high patronage of the e-products. Often people sign on to a product and immediately they leave the banking hall they forget how to use the service. So, they don't patronise and we also don't get to receive our revenue from the fees. We still have customers who have been issued ATM cards but are not confident enough to use the ATMs... these people end up coming to the banking hall to make withdrawals defeating the objective for installing these ATMs".

To an operations manager at the Osu branch, a number of customers are not using the services being provided due to experiences they have had with connectivity or user fees. She disclosed that some customers shy away from services such as Internet banking for fear of having a bad internet connection hence, inability to complete transactions nor safely log out. A senior Finance executive at the Adabraka branch also revealed that a number of customers seem unaware of some of the e-products that the bank has introduced. He also indicated that some customers are neither smart-phone nor internet savvy thus, do not show any interest in patronising the e-products such as Internet and Mobile banking which will help the bank generate more revenue. To a senior executive with the IT department at the head office, some customers still prefer the brick and mortar banking, where they go to the branches to undertake all their transactions thus, depriving the bank of making some gains from the patronage of its e-products. He also revealed that pressure from other banks' customers on the bank's ATMs sometimes makes them run out of cash earlier than anticipated, and this tends to bring discomfort to its customers.

4.4 Discussion of results

The results indicated that revenues from the e-channels of the bank have been rising. The increasing trend can be attributed to an increased acceptance of the various e-channels. Particularly for the ATM and cards, there was a sharp reduction in revenue in the early years of their introduction. This could be due to perceived high cost of charges for e-channel usage. This channel however realised consistent increases in revenue after some years when the number of users may have increased and charges for ATM withdrawals have reduced. Although introduced earlier, the increase in revenue from the internet banking channel has not been as impressive as compared to that of mobile banking (mobile money, mobile banking via USSD and Ecobank Mobile App).

From Figure 4.1, the mobile banking channels recorded drastic increases in volume of revenues in 2016 just at the time that the ATM and cards channels were recording drastic falls. This development could be attributed to a switch from the level of patronage from the ATM and card channels to the more convenient and newly introduced mobile banking channels. The mobile banking channels also provide a wider reach for financial transactions as services go beyond Ecobank customers to even the unbanked who have mobile phones. Also, the low levels of revenue from internet banking could be attributable to the perceived ease of use, internet access, lower fees and awareness among the bank's customers.

The results of the study revealed that the Return on Equity (ROE) dropped from a high percentage of 42% to 26% in 2009 and recorded consistent increases until the year 2015 when it began to record decreases to as low as 25% in 2017. The returns for the period under consideration has however been positive throughout; an indication that the company has generally been efficient with the use of its resources and posting strong profits. The Pearson correlation result, as presented in Table 4, revealed that there was a positive and significant

linear relationship between bank performance and revenues from ATM and card channels ($r = 0.944$, $n = 10$, sig value < 0.01). This implies that a positive relationship exists between the bank's Returns on Equity (ROE) and the revenue from the ATM and card channels. Thus, increases in revenue from these terminals will lead to increases in ROE and vice versa. Therefore, as the bank improves on these channels and attracts more customer usage, its performance (ROE) will also improve. The findings however indicated that the other e-channels considered in the study have a weak and a negative correlation with bank performance.

The weak positive linear relationship found between the ROE and Fees & Commissions from Internet Banking (depicted in Figure 3) indicates that there is an insignificant effect of that channel's contribution on the performance of the bank. This could be attributed to lower fees and or patronage of that channel. It also gives an indication that internet banking among bank customers is still in its budding stages. The strong negative linear relationship recorded between bank performance and revenue from Mobile Banking ($r = -0.730$, $n = 5$, $p = 0.162$) also implies that the huge investment cost for mobile banking channels are yet to be recouped, thus variables other than mobile banking channels may be the contributory factors for increases in returns on equity. Some of the challenges identified in the study, such as low awareness and phobia for technology among some customers, could also explain why some of the e-channels have either an insignificant or negative relationship with the proxy (ROE) for the bank's performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The study sought to determine the impact of the adoption of e-banking on the performance of Ecobank Ghana Limited. This chapter provides the summaries of the findings, conclusions, and recommendations of the study as per the stated objectives. The chapter commences with a summary of the research process and continues with the summary of findings as well as the conclusion deduced from the study. The chapter concludes with recommendations which can be implemented by stakeholders to help experience greater impact of e-banking on the performance of the bank.

5.1 Summary of Research Process

This study in general sought to ascertain the impact of e-banking on the performance of the bank. It also sought to identify the bank's e-banking services as well as the challenges faced in the implementation of e-banking. The study adopted the mixed method approach, and data was gathered through interviews with senior executives. The researcher collected secondary data from the published historical financial statements of the bank to ascertain its performance through the ROE. Other financial data on revenues attributable to the use of the bank's e-banking terminals including ATMs, Debit and Credit cards, Internet banking and Mobile banking was also obtained from bank officials for analysis. The study adopted thematic analysis for the qualitative data in line with Braun & Clarke's (2006) suggestion. Simple correlation analysis and trends were employed for the analysis of quantitative data.

5.2 Summary of Findings

The study identified a number of issues as summarised below:

- The study found that convenience, low transaction cost, remaining competitive, reduction of queues at the bank, as well as having additional channels for increasing revenue were the key considerations for the introduction of e-banking in Ecobank Ghana.
- The study identified a number of e-banking products which have been designed and rolled out to serve various customer needs (both corporate and individuals). These products include the Automated Teller Machine (ATM) and cards (debit, credit) introduced since 2003, Internet Banking, OMNI internet banking for the bank's corporate clients, mobile banking, Ecobank Mobile App and BankCollect, among others.
- The study revealed that the implementation of e-banking in Ecobank has had tremendous impact on its performance by affecting its revenue positively, increasing its customer base, providing a large platform that allows the bank to expand its scope to provide wide ranging services, enhancing the bank's image and reducing the number of staff needed at the branches.
- The study revealed that there is a positive and significant linear relationship between bank performance (ROE) and Fees & Commissions from ATM and cards.
- Challenges identified in the bank's efforts to implement e-banking include occasional system malfunctions, such as breakdown of ATM machines, slow or no internet connectivity, and cost of constant monitoring to secure against cyber-attacks.

5.3 Conclusion

The study succeeded in achieving its stated objectives which sought to determine the impact of the adoption of e-banking on the performance of Ecobank Ghana Limited. The objectives were to identify the e-banking services being provided by Ecobank Ghana Limited, examine the effect of e-banking on the performance of the bank, as well as identify possible challenges

of e-banking in the bank. The study found that the bank has implemented a variety of e-banking products, and the impact of some of the products on its performance has been positive. Some of the products are yet to have a positive impact on the bank's performance, because they are quite new to customers.

The study therefore concludes that although e-banking implementation comes with a few challenges, its contribution to the bank's performance and competitiveness in the industry is very significant.

5.4 Recommendations

1. It is recommended that management of the Ecobank Ghana Limited should undertake massive awareness creation and advertisement for their e-products so as to attract more patronage from customers. The bank should also create in-branch awareness of its e-products for customers who go to the branches to undertake transactions. This should be done through both short one-on-one engagements and distribution of fliers to customers.
2. It is also recommended that the bank should install real time monitoring systems to ensure that ATMs that run out of cash are quickly attended to in order to minimise customer discomfort and apathy towards patronising the ATM terminals. To this end, the bank must make provision for a task force who would specifically attend to ATMs on weekends and holidays, when most ATMs run out of cash. The bank should also introduce fixed monthly payment or capped charges for ATM usage to encourage high patronage of the ATM terminals.
3. In order to ensure that third parties rendering supportive services towards the quality delivery of e-banking delivery do not defraud customers, the bank should enter into legally binding and enforceable service quality agreements with the supportive service providers to guarantee reliable service delivery.

4. The implementation of e-banking entails collection of personal data on customers. It is therefore recommended that the management of Ecobank Ghana Ltd. should adhere to the data protection rules, as stipulated by the data protection Act 2012 (Act 843), to provide for the privacy of customers' personal data.

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APPENDIX I

**INTERVIEW GUIDE FOR SENIOR /BRANCH EXECUTIVES OF ECOBANK
GHANA LIMITED (EGH)**

Date..... Title/Dept/Branch..... Gender.....

Introduction:

This is an MBA thesis interview guide for the collection of data on the topic “THE IMPACT OF E-BANKING ON BANK PERFORMANCE: A CASE STUDY OF ECOBANK GHANA”. This study, among other reasons is intended to determine the impact of the adoption of e-banking on the performance of Ecobank Ghana Limited. This information you are being asked to provide is only for academic purpose and the obtained responses will be treated with utmost confidentiality.

Questions:

1. Can you kindly share with me what informed the decision for e-banking adoption in EGH?
2. When did EGH roll out its first e-banking channel/products? What were the initial products?
3. What are the e-banking products/services provided by EGH currently?
4. How does each e-banking product/service mentioned function and what value proposition does it promise the customer of EGH?
5. How will you describe the patronage of your e-banking products/services?
6. Which of the e-banking products/services is patronised the most?
7. Do the customers entertain fears in patronising some of the e-banking products/services?
8. What has been the impact of the e-channels on the performance of EGH?
9. How does the bank make gains from the implementation of e-banking?
10. Does the provision of e-banking products/services affect your Bank’s profitability?
11. What are the challenges you face in the implementation of e-banking in EGH?
12. What does the electronic platform hold for the future of EGH and its customers?

Thank you for your time and support.

APPENDIX 11: DATA COLLECTION FORM (FOR ECOBANK GHANA, HEAD OFFICE)

Introduction:

This is an MBA thesis data collection form for quantitative data on e-banking fees & Commissions (Annual figures). Data gathered will assist in completing the thesis on “THE IMPACT OF E-BANKING ON BANK PERFORMANCE: A CASE STUDY OF ECOBANK GHANA”. The study, among other seeks to determine the impact of the implementation of e-banking on the performance of Ecobank Ghana Limited. Information provided is for academic purposes and the obtained responses will be treated with utmost confidentiality.

Data on e-banking fees & Commissions (Annual figures)

YEAR	Fees & Commission from Debit/Credit cards(GHc)	Fees & Commission from Mobile Banking (GHc)	Fees & Commission from Internet Banking (GHc)
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			

Thank you for your time and support.