PROSPECTS AND CHALLENGES OF CASHLESS ECONOMY IN GHANA

BY

FRANKLINA AWUKU
(10355100)

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JUNE, 2019
DECLARATION

I hereby, declare that this long essay is the result of my own original research towards the award of Master of Business Administration, Finance option. No part of this work has been presented for another degree in this university or elsewhere. All references used in this work have been fully acknowledge.

Signature:…………………………………..                         Date…………………………

Name: Franklina Awuku

(10355100)
CERTIFICATION

I hereby certify that this thesis was supervised in accordance with procedures laid down by this University.

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DR.LORDINA AMOAH

(SUPERVISOR)
DEDICATION

I dedicate this research work to my parents for choosing to give me the best education they could and my amazing and always caring siblings for their loving support, care and prayers throughout my two years at University of Ghana. I also dedicate this work to my loved ones for all their support.
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ABSTRACT
This study examined the prospects of Cashless Economy in Ghana. It also identified challenges Ghana faces it goes cashless. Finally, it assessed stakeholders’ readiness for cashless economy. The study employed purposive sampling technique to select Ministry of Finance (MoF), and Simple random technique to select 13 Universal Banks and 50 SMEs that constituted the sample size of the research. An interview guide assisted in extracting relevant information from MoF, whereas structured questionnaires were designed to facilitate the acquisition of relevant data from Universal Banks and SMEs. Descriptive statistics was employed to analyse and present data. The findings of the study revealed that cashless economy enhances GDP growth. This was reinforced by benefits of cashless system for various stakeholders which include; ease in transactions by government, increased security for all partners, greater efficiency in the public sector, reduction in corruption in public sector, 24/7 customer service, less congestion at offices, reduction in operational cost, increased bank efficiencies, fewer customers complaints, reduction in money Laundry, Convenience in business operation, enhancement of accountability, among others. The study also identified Cyber-attacks, high illiteracy rate, identity theft, unreliable networks, extra transaction charges as major challenges to cashless economy. Furthermore, the findings revealed that as Government was not fully ready to migrate Ghana to cashless, stakeholders appeared to be ready for cashless system. It is recommended that government should partner with stakeholder and invest in cyber security and also provide educational platforms for businesses and citizens to equip themselves with technological knowledge in order to safeguard against this threat. Again, government should engage banks and telecoms, in a ways of providing incentives for them, introduce policy that would eliminate charges associated with transacting digitally.
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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

A cashless economy is one in which all the transactions are done through electronic means such as debit/credit cards, online transfers, mobile money transfers, amongst others are used to transact business.

The recent development in the banking system has made it easier and safer to keep one’s money in a bank account. It is even easier to transact or transfer money from one account to the other globally using debit and credit cards in addition to innovations like banking apps. In the developed world for instance, debit and credit cards almost dominate financial activities. Moody’s Analytics (2013), studying the impact of card usage on gross domestic product (GDP) of 51 countries, found that electronic card usage added USD 1.1 trillion in real dollars to private consumption and GDP from 2003 to 2008. As Per the World Payments Report (2015), global non-cash transactions reached 358 billion in 2013, an increase of 7.6% over 2012. Further, European Central Bank (ECB) data on access and use of payment instruments and terminals show a steady graduation towards cashless payments. The total number of non-cash payments in the EU increased by 2.8% in 2014 over 2013 and by 6.0% in 2013 over 2012.

This development is not far-fetched in developing world as Sub Sahara Africa (SSA) recorded growth in the use of debit and credit cards, for instance in Ghana, Bank of Ghana, the regulator of the banking industry through Ghana Interbank, Payment and Settlement
Systems (GhiPPS) introduced e-zwich card, where Ghanaians will feel comfortable in using the card to transact business rather than using physical cash (Sarpong, 2013).

Another innovation on going in Ghana by the bank of Ghana is the introduction of electronic payment system for cocoa farmers, Known as the cocoa sika payment platform. This system is to help facilitate rapid and secure payment of monies to farmers for beans purchased.

The move toward Cashless has been enhanced by the introduction and dominance of Mobile Money (MoMo) operated by telecommunication giants like MTN and Vodafone in the region. The concept of MoMo is to attract both banked and unbanked sector of the economy as it provides another platform of transacting digitally. This has made Africa a global leader in mobile money-cashless electronic payment that use mobile phones as the main payment mechanism, rather than using a smartphone only as a channel to a user’s bank or credit card account. According to Frost & Sullivan (2014), the MoMo market in SSA generated $656 million in revenue which was as a direct result of increased patronage.

Ghana, which is seen as the gateway to Africa, has embarked on pragmatic steps in catching up with the trend. PWC (2016) highlighted significant growth in MoMo users and volume and value of transaction between 2012 and 2015. Banks like Ecobank, GT Bank, and other universal banks have improved digitisation experience for their customers by introducing mobile apps to help reduce movement of physical cash. Again, government initiatives like digital address system, MoMo interoperability, paperless port, national ID system, smart driver licences, e-business registration and certification, and digitisation of land record are geared towards Ghana going cashless. Educational institutions are not left out in the wake of cashless system in Ghana, the University of Ghana for example the university introduced a card for students enrolled on the master’s program, the card was both a student identification
and as an ATM card. This served as both identification purpose and wallet to save money on and reduced the issue of having carry physical cash on them to help ensure safety at all times. This research was therefore tailored to broadly address the issue of the prospects and challenges of the Cashless economy in Ghana. This study objectively traced and analysed the prospects and challenges of the cashless economy in Ghana.

1.1 Problem Statement
Ghana’s readiness for cashless economy has been a major discussion on various platforms like television programmes (good evening Ghana), websites, print media and radio talk shows etc. Whereas some stakeholders like the central bank, office of the president, Ecobank, Ghana commercial bank GT bank just to mention but a few believe the country is ready, others hold the opposite view such as pressure groups. However, the recent push by Bank of Ghana (BOG) towards the implementation of Payment and Service Bill, 2017 has been lauded by stakeholders as the positive move towards digitisation of payment system. The Bill seeks to promote the availability and acceptance of electronic money and other forms of payment services as retail payment medium. Secondly, major stakeholders (players) like retail shops, banks, utility providers (Ghana Water Company), and telecommunication networks of the economy have embarked on sudden swift towards technology by developing Apps, which are downloadable on Apple Store and Play Store to aid in payment of goods and services. Apps like Slydepay, Ecobank App, ExpressPay, ZeePay, Hubtel, myGHPay, GTpay, UMB SpeedApp, etc. can easily be downloaded by users to effect transactions. Again, the impact of MoMo transactions on the economy cannot be overlooked as it played critical role leading to the implementation of MoMo interoperability to enhance users’ digital experience.

These developments are meant to promote and/or provide easy and convenient ways of transacting across various sectors of the economy. However, the country faces massive
setbacks: The first is illiteracy rate. According to the Ghana Statistical Service, the literacy rate in Ghana stands at 67.3% in 2013 (GSS, 2013). Secondly, there is high infrastructure deficit for example in information technology, education amongst others which could impede efforts to go cashless. The Africa Infrastructure Diagnostic Report for 2015 states Ghana requires $1.5 billion each year for the next decade in order to meet its infrastructural deficit. Again, vices that are threat to cashless system like Scam, identity theft, corruption, hacks, among others are prevalence in the region.

Although Ghana seems to be getting ready to migrate to cashless system, there still remain major roadblocks that could impede its efforts to achieve this target. In the past, researchers have delved into Ghana mobile money growth and overview of Ghana’s readiness for cashless system, but not much research have been done on the detailed analysis on the economic benefits to GDP growth and challenges the country may encounter during the pre and post implementation era.

1.2  Objectives of the Study
To identify the economic prospects of cashless system in Ghana.

To determine the challenges of steering towards cashless.

To ascertain stakeholders readiness towards cashless system.

1.3  Research Questions
What are the economic benefits of cashless system in Ghana?

What are the challenges of cashless system?

How are stakeholders prepared to embrace a cashless system?
1.4 Significance of the Study
The study on prospects and challenges of cashless system is of great importance to any developing economy. This study will benefit stakeholders in different ways. First of all, regulators will have in depth knowledge about industries and individual views of cashless system to help enable them implement workable and sustainable policies that will contribute to economic growth and increasing prospects and stability of cashless system in the country, so as to know which ones prevalence so that immediate solution can be given. Secondly, findings of this study can be used to design useful policies for banks, financial and nonfinancial institutions as well as the regulators in the country, knowing that they all play important role in the development of the economy. In addition, students and researchers will gain deeper knowledge on the prospects and challenges of cashless system in Ghana.

1.5 Limitation and scope of the Study
This current study was conducted in Accra as key respondents’ headquarters are located in the capital city and major economical transaction take place in the city. The study posed certain limitations to the researcher during the process of undertaken the work; there were constraints in terms of time since the study was done within six to seven months, it didn’t give enough space to delve deeper into issues that could have added to the research. Funds was another major limitation and this was due to the nature of a post graduate research which is a national issue there is the need to reach and touch on certain key information that the researcher could not assesse because they are sensitive and need clearance to access it. Another factor was from the bank of Ghana, the representative could not help with needed information because appointment made kept been postponed and since there was not enough time for post graduate research work, the research was limited to these key stakeholders which includes universal banks, MoF and SME’s.
1.6 Chapter Summary

Having gone through chapter one which is the introduction above, which embraces the background of the study, statement of the problem, research problem, research objectives, research questions, significance of the research and research scope and limitations, the remaining research would be structured as follows: Chapter Two will focus on the literature review which is the theoretical review and empirical review. Chapter Three is the methodology which includes the research design, population, sampling procedures which includes the sample size, sampling technique and justification for sample, data source and data analysis. Chapter Four will embrace the findings, presentation of results and discussion. Chapter Five will be the conclusions and recommendations.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction
This chapter reviews literature regarding the current study which are relevant concerning the
general technological adaptation and the chapter seeks to bring to light what other researchers
have come out with on the prospects and challenges of cashless systems. Therefore it
explains the theoretical framework on the universal adaptation of technological practises.
Furthermore the chapter provides the review of relevant related studies to achieve the
objectives of the current study and exploring useful secondary data relevant to the study as
well. The chapter then concludes by summarizing the relevant reviews elaborated.

2.1 Overview of the banking system in Ghana
Ghana’s financial history is traced to 1953, the bank of Gold Coast was set up by Alfred and
the government which was later separated into Ghana commercial Bank (GCB) and Bank of
Ghana (BoG). BoG was to fill in as a bank of issue which will be changed over into central
bank while GCB fill in as record for public enterprises. Between 1957 to 1965 numerous
banks sprang up, some of these banks includes Agriculture Development Bank (ADB), Social
Security Bank (SSB), and Merchant Bank these banks including others took advantage in
increasing theirs savings at that time.

The financial law was passed in 1989, which paved way for banks such as Ecobank, Trust
Bank, Allied and Meridian (BIAO) to operate. Non–banking financial institutions were
authorized under the financial institutions (non- Banking) law 1993(P.N.D.C.L.328) to work
as discount organisations, finance houses, amongst others.
The banking sector over the years has experienced immense strength as such making it one of the key drivers of Ghana’s development financially and divided into the central bank thus the bank of Ghana and other different types of banks like the development bank, commercial banks and many rural banks. In the decade, some state owned banks have been denationalized under governments Divestiture implementation programme. As at 31st December 2016, Ghana had 33 banks operating in Ghana and 16 of these banks were owned by indigenous. Ghana’s 10 regions had 1342 bank offices with 139 been rural banks, 61 NBFI’s and 555 MFI’s. The bank of Ghana announced that the total assets of the financial service industry in much 2016 was gh76.27 billion. Fig 2.1 portrays Ghana’s financial service industry structure below.

**Figure 2.1: Structure of Financial services industry in Ghana**
2.2 Definition of key concepts

2.2.1 Cashless Economy
Adewale (2012,) defines cashless society as a steady movement of the complete payment system of an economy from the use of physical cash for all levels of personal, corporate, governmental including local and international commercial settlement activities to a systematic adoption of other non-physical cash manner of payment in settlements of all types of transaction both in the public and private sectors of an economy. Lamptey (2012) asserted that a payment system is a system which includes physical or electronic infrastructure and related processes and protocols used to settle financial transactions. According to Ejiofor &Rasaki, (2012) cashless system is on in which there is the ability to store money in an electronic purse or card which is then used to purchase product at vending machine, or at any point of sales terminal situated within the business grounds. According to Sarpong (2013) the bank of Ghana in performing its regulatory function through the interbank payment and settlement systems (GhiPPS) introduced e-zwich card, where Ghanaians will feel comfortable in using the card to transact business rather than using physical cash. Akhalumeh &Ohiokha (2012) the cashless economy is a system in which transactions are not done predominantly in exchange for actual cash .Jaiyeola, (2011) asserted that cashless economy brings with it transparency in business transactions and this of no doubt leads to an increase in tax revenue and by inference an increased infrastructural developments which is vital for economic development.

2.2.2 Electronic Payment System
According to Sarpong (2013) the bank of Ghana in performing its regulatory function through the interbank payment and settlement systems (GhiPPS) introduced e-zwich card, where Ghanaians will feel comfortable in using the card to transact business rather than using physical cash.
2.3 Theoretical Framework

The role of the theoretical framework is imperative in research because it is a backings and provides guidelines for the whole research. According to (Awa et al. 2015), a theory is defined as a system of ideas that are organised to explain a phenomenon. (Cherry, 2016) stated that a fundamental unit of theoretical frameworks is a theory or a model. According to (Akinola 20120), the paper examines the security and reliability part of cashless society. A Cashless society has numerous benefits, it leads to the reduction of crime, reduces corruption and enhances the rate at which services are provided but it has its one challenges like increasing the expenditure of governments to a large extent. In that sense governments may go a long way to implement cashless systems and practises but may not be fruitful if the end users are not in the position to fully comprehend and take advantage of the benefits associated with the service. More often than not security threat is of major concern to customers who for such a reason fear the loss of their money may not take advantage of it. According to (yang, Liu, Li &Yu, 2015) within the context of research, theories shape how ideas and concepts are organised together to achieve the overarching aim or purpose of a study. This means that the purpose of theories is to enable the prediction, explanation and better understanding of already established knowledge in order to broaden the bounders of knowledge (Yang et al, 2015). Therefore a theoretical framework performances the role as a structure that serves as an anchor for the entire research procedure (Awa et al, 2015). According to (Alilonu, 2012) cashless economy does not mean the total elimination of cash, as money will continue to be a means of exchange for goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical cash by providing alternative channels for making payments. (Humphrey 2012) asserts that many developing countries especially in Africa corruption has become general to the extent that it has penetrated and gained grips in most institutional framework, this is geared as a result of
cash being the major medium of payment transaction for that matter creating room for unhealthy and fraudulent dialogs that could unpleasantly affect the economy. According to (jaiyeola,2011) cashless economy conveys transparency in business transactions and this is of no doubt leads to an increase in tax revenue and by inference an increased infrastructural development which is necessary for economic development.

According to (Awal et al. 2015) research falls within the field of technological adoption on one hand and diffusion of technological innovation on the other hand. It is for such a reason that technological adoption and diffusion theories and models create suitable theoretical framework for explaining adoption of cashless payment systems within the context of the current study. Diverse theories and models have been suggested to clarify adoption and diffusion of technological innovation, these include, Theory of planned Behaviour (TPB), The Unified Theory of Acceptance and use of Technology (UTAUT) and Technology Acceptance Model (TAM). For this study the TPB and TAM are used as the theoretical framework for explaining the prospects and challenges of cashless system in Ghana.

2.3.1 Technology Acceptance Model

According to (Misango, Njeru & Kithae, 2016) there are some psychological and social factors that influence people’s decision to adopt a new technological innovation. These factors includes perceived risk, perceived ease of use, perceived usefulness, subjective norms and facilitating conditions. TAM asserts that both perceived ease of use and perceived usefulness are two main factors that influences the individual’s attitude towards using the technology (Misango et al. 2016).

 Numerous studies have applied the TAM to test individual’s use of different technological innovations including online shopping intentions (Misango et al, 2016), electronic collaboration (Rosaci, and Same, 2014), website use (Awa, Ojiabo, and Emecheta, 2015). The results from these studies generally corroborates that TAM sufficiently clarifies peoples
intents to use and their actual use of technological innovations. Therefore the use of TAM applied to the current study prospects and challenges of cashless system in Ghana is influenced by their perceived risk, perceived ease of use, perceived usefulness all build the kind of attitudes they hold about cashless system.

2.3.2 Theory of planned Behaviour
Because of the adaptation of new behaviour, the TPB is fit to be used as a framework. The fundamental assumption of the TPB is that for individual to engage in a new behaviour, they must first develop intentions to engage in the behaviour. The theory proposes further that intention in itself is influenced by several psychosocial factors (Ajzen, 1991). These factors include perceived behavioural control and subjective norms. Perceived behavioural control is the extent to which individuals trust that they can apply control over the new behaviour they intend to employ. Social norms is the pressure that individuals feel within their social environment to engage in the behaviour.

With regards to this study on prospects and challenges of cashless economy Ghana, the intent to use has to be followed by actual behaviour of using the technology. Most individuals are influenced by their attitudes and perceived social pressure to make evaluations to use cashless system in transactions.

2.3.3 Summary of Theoretical Framework
A look at both theories (technological acceptance model and theory of planned behaviour) indicated that the factors that influenced the intent of use of cashless payment included perceived risk, perceived ease of use, perceived usefulness and facilitating conditions of adopting cashless system.
2.4 Current Innovation in Ghana

Introduction of new thoughts, approaches or strategies have always been a symbol of the financial services industry. Financial innovations are most easily explained as induced by either market or regulatory factors (Sigma One Corporation, 2000). The evolution of IT particularly the internet and mobile device has resulted in the gradual disintegration of the banking sector (Egan, 2014). Bank of Ghana, the regulator of the banking industry through Ghana Interbank, Payment and Settlement Systems (GhiPPS) introduced e-zwich card, where Ghanaians will feel comfortable in using the card to transact business rather than using physical cash (Sarpong, 2013). Ghana, which is seen as the gateway to Africa, has embarked on pragmatic steps in catching up with the trend. PWC (2016) highlighted significant growth in MoMo users and volume and value of transaction between 2012 and 2015. Banks like Ecobank, GT Bank, and other universal banks have improved digitisation experience for their customers by introducing mobile apps to help reduce movement of physical cash. Again, government initiatives like digital address system, MoMo interoperability, paperless port, national ID system, smart driver licences, e-business registration and certification, and digitisation of land record are geared towards Ghana going cashless.

Another innovation on going in Ghana by the bank of Ghana is the introduction of electronic payment system for cocoa farmers, Known as the cocoa sika payment platform. This system is to help facilitate rapid and secure payment of monies to farmers for beans purchased.

2.5 Empirical review

The review of related empirical studies are provided in this section. It mainly includes studies that have gathered primary data in association to cashless society, there are a number of studies on cashless system therefore this studies review embraces those that have to do with prospects and challenges of cashless economy.
The concept of cashless economy has become known from the telecommunications industry, financial and non-financial institutions, stakeholders such as Bank of Ghana (BOG), Securities and Exchange Commission (SEC), Ministry of Finance (MOF) with remarkably little academic literature. In a recent literature review, Akinola (2012) the paper examines the security and reliability part of cashless society. It is a fact that cashless society has many advantages and it may lead to reduce corruption, crimes on the one hand and on the other hand it will be able to increase the government revenue to a great extent. Government may be forced to implement the cashless system by applying certain rules and regulations but it may fail if the service receivers are not in a position to understand the potential benefits. Most of the time customers perceive that there may be some amount of security threats which will lead to loss of money. This is to some extent true as this kind of unwanted event does happen. Cashless economy does not mean a total elimination of cash as money will continue to be a means of exchange of goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical Cash by providing alternative channels for making payments (Alilonu, 2012). However, Carbo-Valverde and Fransisco (2014) observed that ATM transactions and POS transactions are negatively related and have a large economic impact of one on another in Spain and currency demand is positively associated with ATM transactions whereas it is negatively related to POS transactions and the negative effect of POS transactions offsets the positive impact of ATM transactions. A cashless society defines a gradual movement of the entire payment system of an economy from the use of physical cash for all levels of personal, corporate, governmental including local and international commercial settlement activities to a systematic adoption of other non-physical cash mode payment in settlements of all types of transaction both in the public and private sectors of an economy (Adewale, 2012). Bank of Ghana, the regulator of the banking industry through Ghana Interbank, Payment and Settlement Systems (GhiPPS) introduced e-zwich card, where
Ghanaians will feel comfortable in using the card to transact business rather than using physical cash (Sarpong, 2013).

A related study by Lamptey (2012), a payment system is a system (including physical or electronic infrastructure and associated procedures and protocols) used to settle financial transactions. Electronic payment is a subsection of an ecommerce transaction to include electronic payment for purchasing and vending goods or services. Studies have been done on cashless economy in various jurisdictions for such a research this research will focus on the Ghanaian economy with the intention to fill a gap and add to existing knowledge on cashless system in Ghana.

2.5.1 Benefit of cashless economy perspective

According to Akhalumeh & Ohiokha, (2012) cashless system reduces transfer, processing fees, increase procedures and transaction time, it offers numerous payment option and gives immediate notification on all transactions on customers account. Echekoba &Ezu, (2012) carried out a study and found out that 68.2% of the respondent of their study were not pleased with long queues in banks, they complained of the attitude of tellers and while 2.89% were not pleased with the proximity of their homes to the banks, this study goes to elaborate on the benefits cashless system to citizenry and the nation at large

According to laoye, (2011) cashless economy has certain benefits which includes, quicker transaction meaning that right from the comfort of your home any transaction can be performed without having to join long queue to be served. Less congestion at halls cashless system makes it easy to have very fewer people at a given time at a banking hall which will speed up the service delivery and save time. Fewer customer complaints using cashless payment system reduces the number of complaints which is due to poor manual services and most often attitudes of stuff, therefore increasing customer satisfaction and revenue for institutions at large.
Reduction in money laundering, since cashless systems are a great tool for electronic payments, it is easier and faster to detect fraudulent activities through platforms designed to give indications of such acts and illegal sources of funds that are trying to use banking or payment systems as a channel to cleanse these funds and make them legal for their use.

Increase bank efficiency, using cashless systems makes the daily activities in the transaction procedures speed up and rabid services are delivered to customers and the institutions will be able to manage their resources by using fewer resources to generate a greater output in the course of performing their operations thereby increasing their profit and shareholders contribution.

Lower risk, this benefit is essential to the firms operating with cashless platforms because they are able to secure themselves internally from stuff who pillar funds of the institution, theft could be detected through these systems to reduce the robbery on the part of stuff and miscreants.

Collecting of cash. This benefits makes counting and sorting out of cash very simple. Doing this is a very expensive cost to the firm for this reason using a cashless system brings about another means of carrying out this activity via debit cards, point of sale devices, automated teller machines, credit cards and online transfers amongst others.

Lesser branches, this is a huge benefit to firms because it reduces operational cost of organisations to a large extent and makes them concentrate on their core mandate and delivery quality services above all.

2.5.2 Challenges of cashless system perspective

For any economy to fully enjoy a cashless system and have it operate effectively and efficiently, there is the need for illiteracy rate to be reduced to the lowest possibly, this is due to the fact that high illiteracy rate is a major impediment to the successful usage and conversion of cashless system.
Unreliable network, is another challenge facing the implementation of cashless system in the country. The unreliable power supply in the country impedes the progress of cashless system and to add to it the high cost of power which is mostly interrupted makes it difficult to transact cashless activities, customers can not perform their online business and activities whilsts institutions keep complaining of network failures in their operations. This means for a cashless system to fully operate these challenges need to be addressed quickly to yield the desired results. Alchalumeh & Ohiokha, (2012) agrees with is submission when they asserted that the issue of infrastructure must be concertedly addressed. Therefore, the inadequate infrastructure issue in Ghana cannot be overlooked anymore any further in the quake of cashless agenda of the country.

2.6 Summary of Literature Review

There have been interesting findings from the various studies reviewed above, at the same time a closer look at all the literatures it clearly shows that there is still the need for further study and explanation with empirical research.

The essence of the literatures reviewed is for institutions involved and responsibly in promoting cashless payment system are furnished with the relevant insight to enable them come out with the effective and relevant means to promote cashless system in the economy.

The current study contributes to the agenda to promoting cashless system in the economy.
CHAPTER THREE

METHODOLOGY

3.0 Introduction
This chapter discusses the processes and techniques used in carrying out the study to answer the research questions to achieve the objectives of the study. It provides the research design, a description of the respondents including information on the study population and sampling techniques. It also provides the instruments for data collection. The methods adopted in the administration of the research instrument, data collection procedure and data analysis are also looked at in this chapter.

3.1 Research Design
This study is a descriptive study. Descriptive research was employed to provide an accurate snapshot of some aspect of the observed persons, events, situations, and environments. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). This type of research could either be qualitative, or quantitative, or both. It could also include collecting quantitative data that can be arranged in numerical form. The researcher therefore employed both qualitative and quantitative data to analyze the benefits and challenges of cashless system in Ghana.

According to Boateng (2014), qualitative data is where primary forms of data are observations, interviews and documents. It embraces observations that yield detailed, thick description, inquiry in depth, interviews that capture direct quotations about people’s personal perspectives and experiences and careful document review. While quantitative data seeks to determine the extent of a problem or the existence of a relationship between aspects
of a phenomenon by quantifying the variation, it often seeks to test to support or disprove a proposed relationship between two or more aspects of a phenomenon.

The researcher used interview and structured questionnaire to gather data to answer the research questions and achieve the objectives of the study. Regarding the interview, an interview guide was developed to assist with the interview process, whereas the questionnaires had closed ended questions which made it simpler and easier for respondents to answer.

3.2 Sample Size and Procedure
Sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample. The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. In practice, the sample size used in a study is determined based on the expense of data collection, and the need to have sufficient statistical power.

In determining the sample size for this study, the researcher had a number of considerations, which included but not limited to the objectives to be achieved, research questions to answer, financial resources, and time. Time was quite critical because the researcher had less than 6 months to complete the work.

The study made used a research populations being a major regulator and stakeholder. The researcher observed that government uses Monetary Policies and Fiscal Policies to regulate the level of economic activities in the country. In effect, the regulator was which Ministry of Finance (MoF) which is in charge of Fiscal Policies. Purpose sampling technique was employed in selecting this population. This group was interviewed at its headquarter in Accra with the help of an interview guide.

The second population, stakeholder, were group into two. The first group was Universal Banks and the second group was Small and Medium scale Enterprises (SMEs). The
researcher chose these groups because Universal Banks play critical role in economic prosperity of Ghana. They enforce some of the policies implemented by BoG and also serve as a link between the surplus unit and deficit unit. As a result, the researcher used Simple Random technique to select 15 banks from the 23 banks. A structured questionnaire with closed ended questions was sent to their headquarters in Accra, with which the research sought to achieve the third objective of the study. During the process, the researcher would ask other questions in order to explore more information about Ghana’s readiness for cashless society.

The final group of the second population, which is SMEs, form about 90 percent of registered companies at the Registered General’s Department, accounting for about 80 percent of the private sector and 92 percent of businesses in Ghana (Abor & Beikpe, 2006). In order to have a fairer presentation of data, the researcher segmented Accra into four zones; that is North, South, East, and West. The researcher then used Simple Random technique to select 50 SMEs which became the respondents of the study. A structured questionnaire with closed ended questionnaire was sent to them with the aim of generation data to access SMEs readiness for cashless economy. The sample size for this group was small but the researcher was limited by time and resources to enlarge the scope.

3.3 Data Analysis
The qualitative data obtained at the end of the interview would be analyzed using the thematic approach. The interview guide in the Appendix 1 contains open ended questions and the purpose is to extract information as much as possible about Ghana’s readiness for cashless economy.

The second population’s sets of questions in Appendix 2 and Appendix 3 would be will be analyzed using tables and graphs with the help of Microsoft Excel. The researcher seeks to obtain enough information to depict stakeholders’ readiness for cashless economy.
CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction
This chapter deals with the analysis and interpretation of the responses from questionnaires and interviews administered for the study. The researcher designed three sets of questions; one for MoF, the second for Universal Banks, and the last for SMEs. The questions for MoF were in the form of interview guide that assisted the researcher during interview session at the ministry. The last two sets of questions were designed for 15 Universal Bank, and 50 SMEs. This chapter gives detailed information of the textual data collected and the results obtained from the study.

4.10 Ghana’s Readiness For Cashless Economy

4.11 Ministry of Finance (MoF)
MoF is in charge of the fiscal policy which is the use of government revenue collection and expenditure to monitor and influence the nation’s economy and helps government to archive its objectives. The researcher interviewed a senior staff of the ministry who provided relevant information needed to achieve the first and second objectives of the study. And since government is a stakeholder, the information also help in achieving the third objective. The analysis is explained below.

• Is Ghana ready for Cashless Economy?
MoF believes Ghana is on its way towards achieving a cashless economy but the country is not fully migrated yet. Government has policies geared towards digitisation, this when fully achieved would assist in migration to cashless system. For instance government has
introduced an electronic payment system at the ports and harbour to replace the old system, this is to aid migrate all major sectors of the economy unto the electronic system. Therefore Ghana is gradually preparing to become a cashless economy.

4.12 Benefits of Cashless Economy
A Cashless economy has numerous benefits according to the MoF, which will to a large extent help the country take advantage of these benefits includes given by the MoF includes.

- The ease of transaction
The MoF carries out a lot of responsibilities; it is responsible for paying all departments and agencies under its jurisdiction. This is a major transaction that needs to be carried out on time, so instead of the MoF writing numerous cheques that will need a numbers of three working days to clear into various accounts, an electronic platform which has the data of all department’s is just a click away saving time and ensuring efficiency that is making transactions much quicker and less time consuming.

- Increase security for all partners
This is by far one of the biggest benefits associated with a cashless economy. The MoF has customers and vendors with which it operates in partnership with in its activities. Its impact has been seen when it comes to transaction on a cashless platform or using a cashless means to carry out business. Security is of a major importance under any circumstances more so when carrying out financial activities, there is always more than one party involved in carrying out any form of transaction therefore, the need to consider security issue carefully and this is what cashless transaction provides to all stakeholders involved.

- There is greater efficiency
Cashless system brings about higher productivity. This is so because it enables individuals and institutions to use the same amount of resources they have to produces much more
outcome. Every year the MoF has to process over hundred thousand individuals qualified to undergo the mandatory national service (NSS) nationwide. So having to process this on a yearly bases manually is a major problem but the use of electronic platform will enable greater efficiency in managing scares resources and saving time while growing and developing A typical example of the electronic platform used by the MoF to handle this is EZWICH, rather than making payments through individual banks just one major platform could be used to avoid series of charges associated with transactions.

- **Reduction in corruption**
  This is a major benefit of cashless system, this is because it brings about transparency in executing all activities. The government through the ministry of finance made payments to the caterers of the national school feeding programme (NSFP) electronically to do away with inflation of figure by officials in charge by the use of the Ghana interbank payment and settlement system to (GhiPPS) example been the e-zwich card. In addition, beneficiaries of the livelihood empowerment against poverty(LEAP), nurses allowances, teacher trainee allowances are all done electronically to reduce if not eliminate corruption which will go a long way to reduce wastage of scares resources.

- **Impact on fiscal policy and economic activity**
  This a major benefit of cashless economy. The fiscal policy is the means through which government through the MoF uses the generated revenue from taxes steer the affairs of the economy to influence the money supply in the country and also to control interest rates this is to create a healthy economic growth and enable business cycle be in the expansion phase.so the government will achieve this by either cutting down on taxes or spending more.

- **Increased productivity due to advanced technology**
Cashless activity goes hand in hand with technology, which is the driving force and backbone behind the system, the use of advanced technologies makes development much easy and faster and makes the country an attractive place for investors. The electronic payment system at the ports and harbour gives raise to higher productivity and hence increased revenue generation to the government to carry out its duties.

- **Reduced tax evasion and leakages**

In Ghana tax evasion is the very first instinct of people and firms as well, using the manual means has not done the country any good so far. For instance, the newly introduced electronic system of payments at the harbour after the massive exposure of duty evasions amongst workers and individuals shows that using cashless systems to operate in institutions like these will go a long way to solve the issue of leakage in all government institutions in the country and expose business and individuals who evade tax and those taken advantage of the loop holes in the system to accumulate wealth that is supposed to be distributed across the length and breadth of the country to aid development and reduce poverty. This will also help deal with corruption at all level.

- **Enhances Government business with stakeholder**

The MoF believes that, the country going cashless will bring huge improvement to all stakeholders involved, both locally and internationally it could bring about fast and swift financial process in terms of payments. This could stretch from individual sectors, small and medium enterprises, large cooperation’s and government ministries and agencies transacting business with foreign counterpart in terms of importation on plants and machineries for various sectors of the economy.

- **Reduction of inflation**

Printing of physical cash cost a lost to the country therefore adopting and using cashless system will reduce the burden of excess supply of cash which will reduce inflation and...
maintain the general cost of goods and services at a minimal level. This will boost, producer confidents and encouraged increase in production and supply of goods and services in the country. A look at the budget allocated to the central bank for the printing of physical cash over the years shows an increase in printing cost. In 2015 it cost the government GHc122,010 to print currency, in 2016 it increased to GHc160,951. This amount kept increasing over the years.

4.13 Government Policies on Cashless System

- Digitisation

Government plan to go cashless is preceded by digitisation of various governmental institutions. It is believed that once this process is ready, migrating to cashless economy would be an easy process for government because facilities for electronic transactions would have been made available. Government started with digital address system where businesses and households are provided with digital address. This address would gradually replace old address system thereby making it easy to locate businesses, and government agencies online.

- Interoperability

This is a process by government to synchronise all payment platforms in Ghana. This is to help enhance the cashless agenda of the country. This means payments can be done across all networks without having to transfer cash onto the particular network before making any payment.

- The bank of Ghana Act

The bank of Ghana is the central bank of the country and the bank of the government. The bank of Ghana has establish rules and regulations to govern the process of carrying out financial activities throughout the financial system I the country. The banks and specialized deposit taken act 930, came into existence recently in the year 2016 to better regulate and safeguard the funds of individuals and instituitions.
4.14 Challenges of Cashless Economy

Cashless economy has certain challenges that impede the implementation of cashless economy. These challenges abstract the country and that matter the MoF from achieving the benefit of cashless system on the economic activity of the country over years. Below are some of the challenges faced in an effort to implement cashless system.

- **Security threat**

  This is a major challenge facing developing countries when it comes to electronic activities. Ghana has a large number of its population leaving in poverty due to low level of education and high level of unemployment rate in the country this phenomenon leads to higher dependency on a handful bread winners in a given family. Internet fraud is a major challenge when we talk about security treat in Ghana most individuals face the challenge of been defrauded by these scammers therefor making a lot of firms and individuals reluctant to engage in activities online for fear of been defrauded.

- **Cyber security attack**

  The process of protecting and recovering programs to government agencies and other institutions is a great danger. Criminals and hackers could use the access to seal or even damage sensitive data and extort money from consumers of electronic payment. The MoF is a major player in the payment process and activity of the economy for such a reason, adopting a fully electronic means of operating they could be exposed to such a challenge.

4.15 Measures to Address these Challenges

The researcher asked the respondent about the measures the MoF has in place in an effort to address the challenges associated with cashless system. Below are some of the challenges in place by MoF to address these challenges.
• **Strict financial and banking supervision**

The bank of Ghana, which is the central bank of Ghana in charge of the financial operations of the economy has been empowered to implement rules and regulations within which the governments, agency, ministry and financial institution must work within, to make it difficult for miscreants to capitalize on loop holes to operate.

• **Private public partnership**

Government is in partnership with several individual and private firms to enable growth. The private sector is the heart of growth for the country therefor the government through the MoF is in partnership telecommunication industries in Ghana to expand electronic payment system, the government provides the access the firm needs to implement payment system on a nationwide scale.

### 4.2.0 Other Stakeholders’ Readiness

In order to achieve the third objective and also obtain relevant data for the first and second objectives, the researcher designed questionnaires for Universal Banks and SMEs. The questions were closed ended questions which made it easy for respondents to spend fewer minutes in completion.

### 4.2.10 UNIVERSAL BANKS

#### 4.2.11 The Banks’ readiness for Cashless:

The first question focused on respondents’ readiness for cashless. This looked straightforward as the researcher wants to know each banks readiness for Ghana going cashless.

**Table 4.1: Universal Banks Readiness**

<table>
<thead>
<tr>
<th>Narration</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your Bank ready for Cashless Society?</td>
<td>12</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Percentage</td>
<td>80%</td>
<td>20%</td>
<td>100%</td>
</tr>
</tbody>
</table>
The result obtained from the data indicated that 12 banks, representing 80 percent of the population were ready for Ghana’s migration. Although the remaining 3 banks were not ready, they told the researcher that budgets and plans are in place to acquire necessary equipment for digitisation.

### 4.2.12 Digital Platforms

Question two was designed to generate information about various digital platforms the banks use to interact and/or transact with customers. Unlike the traditional system where customers troop to banking halls to withdraw monies before spending, digitisation enables them to transact at any point in time.

The researcher provided list of digital platforms from which respondents ticked which ones were applicable to their institution. The table below shows how respondents reacted to this question.

**Table 4.2: Digital Platforms**

<table>
<thead>
<tr>
<th>Digital Platform</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visa Card</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Master Card</td>
<td>13</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Online Banking</td>
<td>14</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Mobile App</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Mobile Wallet and Bank Account Linkage</td>
<td>12</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>QR Payment</td>
<td>1</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Digital Branch or Centre</td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

- **Visa Card:**

All the 15 banks ticked Yes for Visa Card. The researcher observed that the banks have Automatic Teller Machines (ATM) from which customers could withdraw cash. However, upon follow up questions, the researcher identified that customers use Visa Cards to transact
online which has reduced the number of cash withdrawals over time. A typical card has up to 5 years to expire and some banks do charge customers for using the Cards.

- **Master Card:**

13 banks provided Master Card for Customers. The remaining 2 had processes in place to roll on the Master Card platform. The researcher found out that majority of the banks’ customers do not use Master Card. And the reason some banks gave were that customers seem to be satisfied with the benefits of debit Visa Cards.

- **Online Banking:**

The Online Banking, according to one respondent, is like a virtual banking hall where customers can do almost everything that can be done at a banking hall. It provides avenue for customers to transfer and receive funds, pay bills, request for bank statements, and even interact with staff online when there is a challenge. 14 out of the 15 banks have this platform to enable customers bank 24/7.

- **Mobile App:**

Mobile App has some similarities with the online banking. The researcher found out that whereas customers need user names, password, and provide answers to some secret questions in order to log onto their Online Banking platform, Mobile Apps require just a code. Customers are requested to enter their secret codes in order to use the App. The only challenge some banks said was some customers’ inability to download the App from Apple Store and Play Store. Analysis of data gathered showed that all the 15 banks used for this study has Mobile App.

- **Mobile Money and Bank Account Linkage:**
Universal Banks has a platform where they link customers’ bank accounts to their mobile money wallet to enable customers to easily transfer money from their bank accounts to mobile money wallet and vice versa. This eliminates the burden of having to withdraw cash from their mobile money wallets and subsequently deposit into their bank accounts. With this innovation, customers can easily transfer money to their wallets in order to transact using mobile money without coming into contact with physical cash. The researcher found out that 12 out of 15 respondents have this platform in their move towards cashless.

- **QR Payment:**

QR Payment is quite a new way of making payments for goods and services. It is a new contactless payment solution that allows customers to make payments through QR Codes and mobile phones. Customers with smart phones having cameras can easily scan codes to effect payment. The researcher wanted to find out if banks have factored this new method of transacting in providing convenient ways for customers to have access to their money digitally. Analysis of the data shows that only 1 bank, out of the 15 respondents, has this method available for customers.

- **Digital Branch or Centre:**

One key consideration for this technological era is companies’ ability to adapt. As the world shifts more to digitalisation, there is the need for organisations to be innovative in order to be competitive. Digital Branch is a location set up by banks where customers could visit when they want to transact digitally in safe environment. Out of the 15 respondents, only 5 ticked YES. Conclusion reached by the researcher after further questions was that demand for digital branch was low because the banks already have secured platforms where customers can transact digitally.
4.2.13 Benefits of Cashless System for Banks

Question three was designed in order to generate information about benefits of cashless system for banks. The researcher provided 9 benefits and a likert scale of 1 to 5 for each benefit, with 5 being the ones with greatest benefit to the bank. Below is the table derived from the analysis of data collected.

Table 4.3: Benefits of Cashless System for Banks

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>24/7 Customer Service</strong></td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>7%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Less Congestion at Banking Halls</strong></td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
<td>13%</td>
<td>67%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Reduced Operations Cost</strong></td>
<td>0%</td>
<td>7%</td>
<td>27%</td>
<td>13%</td>
<td>53%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Fewer Customers Complaints</strong></td>
<td>0%</td>
<td>20%</td>
<td>33%</td>
<td>7%</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Increased Bank Efficiency</strong></td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>33%</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Lesser Branches and ATM</strong></td>
<td>7%</td>
<td>7%</td>
<td>33%</td>
<td>20%</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Reduction in Fraud</strong></td>
<td>7%</td>
<td>20%</td>
<td>20%</td>
<td>13%</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Reduction in Money Laundry</strong></td>
<td>7%</td>
<td>13%</td>
<td>13%</td>
<td>20%</td>
<td>47%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Lower risk (theft and robbery)</strong></td>
<td>0%</td>
<td>13%</td>
<td>13%</td>
<td>27%</td>
<td>47%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Figure 4.1: Benefits of Cashless System

- **24/7 Customer Service:**

Customers want to transact beyond the traditional working hours from 8am to 4pm, Monday to Friday. Therefore providing convenient platforms where customers can transact at any
time of the day is a competitive advantage, and this is what digitisation seeks to achieve. Out of the 15 respondents, 87% chose 5, indicating how important they perceive this benefit of cashless system. 7% of the respondents chose 4 and 3 respectively, whereas none chose 2 and 1.

- **Less congestion at Banking Halls:**

Customers are often stressed out when they have to cue for minutes or hours in order to deposit or withdraw money, or even obtain some relevant information from the bank, or even update their data with their bankers. Cashless system reduces the rate at which customers troop to banking halls to deposit or withdraw money. The researcher observed that digital platform like Linking mobile money wallet to bank account enables customers to transfer money to their mobile money wallets and subsequently transfer to other mobile money wallet. The process happens without the customer visiting banking hall. Data analysis revealed that 67% of respondent chose 5, whereas 20% chose 3. One reason for selecting 3 was that customers visit banking halls for various reasons, and not only cash transactions. The remaining 13% of respondent chose 4. They believed this benefit was important but could not be a major benefit for cashless system.

- **Reduced Operations Cost:**

The researcher observed from further questioning that operations cost is a major expense in the banking industry. Therefore ascertaining if cashless system would reduce this operation cost was important. The response was mixed although majority saw this benefit as very important. 53% of the respondent chose 5, with a main reason that cashless system would help reduce cumbersome nature of cash transactions processes. Therefore, lesser work means lesser hands to work. On the other hand, 27% chose 3 with the perception that although this is benefit of cashless, cashless system has its own inherent costs which could surpass cash
system. 13% chose 4, and the remaining 7% chose 2. Overall, majority believed this benefit is a major one to cashless system.

- **Fewer Customers’ Complaints:**

  Although this is seen to be an important benefit literally, the respondents’ reactions were varied. The researcher gathered that cashless system does reduce number of customers engaging in physical cash transactions, but technology has got its own challenges. Some banks cited system maintenance as one main challenge that confronts customers and sometimes incorrect deductions partly due to customers own negligence. One bank stated that some of the complaints it receives on customer care line has got to do with technological challenges. That is either App is not performing efficiently, or system failure. According to data gathered, 40% of respondents saw this as an important benefit, thereby choosing 5. 7% chose 4, and 33% and 20% chose 3 and 2 respectively.

- **Increased Bank Efficiency:**

  Banks wants to satisfy customers’ needs promptly in order to remain competitive. The researcher wanted to find out how cashless system would make banks more efficient. Data gathered shows that all the 15 banks chose 3 upwards. That is 60% of the banks chose 5, 33% chose 4, and remaining 7% chose 3. This means that cashless system makes banks more efficient and productive than cash system.

- **Lesser Branches and ATM:**

  In recent times, Universal Banks in Ghana wanted to get closer to customers thus they spread across the city. Some banks boast about proximity to customers as major competitive advantage. Realising that cashless system could lead to branchless banking, the researcher wanted to find out how beneficial cashless system would be in terms of reduction in number
of branches and ATM. Data analysed revealed that only 33% chose 5, with another 20% choosing 4. 33% chose 3, leaving 2 and 1 having 7% respectively. The researcher observed that respondents did not perceive this to be of greater benefits to banks in Ghana as majority of the citizens is unbanked.

- **Reduction in Fraud:**

Fraud is a major threat to the banking industry and the researcher sought to find out how cashless system could help limit this threat. It was observed that while 40% chose 5, 13% chose 4. 20% chose 3. This gives the indication that over 70% perceive cashless system is beneficial in curbing fraud. The remaining 27% saw it as less beneficial, with some suggesting that cashless system would disconnect customers from the branch which would pose another challenge for the bank in the event of identifying who did what.

- **Reduction in Money Laundry:**

Data collected indicate that respondent see cashless system as beneficial in reducing money laundry, although they reacted differently to the level of importance. Almost all agreed with the researcher when it came to tracking source and destination of money. From the analysis of data, 47% selected 5, 20% selected 4, 13% selected 2 and 3 respectively, and the remaining 7% percent selected 1.

- **Lower Risk (Theft and Robbery)**

Although theft and robbery in the banking industry has reduced drastically because of the level of security in the country, the threat it pose can be ignored. Cashless society has different challenge when it comes to security but the researcher focused on how it would reduce or lower theft and robbery at banks. 47% of respondents chose 5, signifying how
important they perceive cashless system to reduce this threat. 27% chose 4, whereas 13% chose 3 and 2 respectively.

4.2.14 Challenges of Cashless System to Universal Banks

In order to achieve the second objective, which is to determine the challenges of cashless system, the researcher deemed it necessary to know the challenges of cashless system with respect to the banking industry in Ghana. To that effect, the next question was asked to find out how the banking industry perceives the challenges of cashless system. The researcher therefore provided a list of challenges and provided a likert scale of 1 to 5, with 5 being pervasive and 1 being less prevalent.

Table 4.4: Challenges to Cashless System

<table>
<thead>
<tr>
<th>Challenge</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Illiteracy rate</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
<td>73%</td>
<td>100%</td>
</tr>
<tr>
<td>Identity Theft</td>
<td>13%</td>
<td>13%</td>
<td>27%</td>
<td>7%</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td>Inadequate Infrastructure</td>
<td>20%</td>
<td>13%</td>
<td>20%</td>
<td>20%</td>
<td>27%</td>
<td>100%</td>
</tr>
<tr>
<td>Unreliable Network</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
<td>73%</td>
<td>100%</td>
</tr>
<tr>
<td>Cyber Security Threat</td>
<td>0%</td>
<td>20%</td>
<td>0%</td>
<td>33%</td>
<td>47%</td>
<td>100%</td>
</tr>
<tr>
<td>Reduction in Staff</td>
<td>7%</td>
<td>7%</td>
<td>27%</td>
<td>33%</td>
<td>27%</td>
<td>100%</td>
</tr>
<tr>
<td>High Cost of Expertise</td>
<td>0%</td>
<td>13%</td>
<td>20%</td>
<td>47%</td>
<td>20%</td>
<td>100%</td>
</tr>
<tr>
<td>Privacy and Security concerns</td>
<td>7%</td>
<td>7%</td>
<td>13%</td>
<td>33%</td>
<td>40%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- **High Illiteracy rate:**

In determining how high illiteracy rate would impact the progress of going cashless or cashless system in the banking sector, data collected revealed overwhelming result as 73% of respondent chose 5, and 20% choosing 4. The remaining 7% chose 1. The researcher gathered that this challenge is pervasive because customers seem to have challenges when it comes to using technology. At one point, one respondent said that “sometimes downloading
our App at the play store is a challenge for some customers”. It is therefore no surprise that over 90% chose 4 and 5.

- **Identity Theft:**

One challenge of digitisation is identity theft. Therefore the researcher wanted to know how respondents would rank this challenge. Data collected showed that the result was mixed. 40% selected 5, and only 7% selected 4. 27% selected 3, whereas the remaining 26% was split between 1 and 2 at 13% each. Prior to issuing the questionnaire, the researcher thought this challenge would be pervasive but results turn to be the mild. Some respondents believe that with the level of security features in place, it would be difficult for perpetrators to succeed. One respondent said that “it won’t be long and they would be caught because we take these cases seriously”.

- **Inadequate Infrastructure:**

Inadequate technological infrastructure is a challenge in Africa so the researcher sought to find out how this challenge impact the banking industry as Ghana goes cashless. Analysis of data revealed that 27% chose 5. This was no surprise because the respondent has roadmap to have necessary infrastructure ready for cashless system, especially with the introduction of banking Apps, online banking, etc. The only concern was with internet as they do not have control over internet but the telecommunication industry. 20% chose 4, 3 and 1, and the remaining 13% chose 2. In effect, this is not seen as a major challenge for the industry.

- **Unreliable Network:**

Respondents saw this as a major challenge to the progress of cashless system in Ghana. Poor internet connectivity is a national issue and according to some respondents, customers often complain that when they get to some part of the city, they are unable to connect because their
network provider had poor reception at that area. Data analysis revealed that 73% of respondent chose 5, signifying the pervasiveness of this challenge. 20% also chose 4, with the remaining 7% choosing 1. Some banks recalled some times when they had system shutdown because of network or connectivity related issues.

- **Cyber Security Threat:**

Data collected revealed that 47% chose 5, 33% chose 4, and 20% chose 2. In the process of gathering data, the researcher asked followed up questions to ascertain the pervasiveness of this challenge. It was observed that this challenge, in a broader context, is macro in nature and it requires collaborative effort of government, BoG, security services, banking industry, and other industries to help curb its effect. One respondent said that “this affect the bank’s resources because when there is system breach, hackers steal from the bank and necessarily an individual customer”.

- **Reduction in Staff:**

The reaction from this was similar to the benefit of lesser branches and ATM. The researcher observed that cashless system has the tendency to automate some of the business processes thereby reducing the number of staff. One respondent said that “I see Tellers/Cashiers to be much affected but that would not even be so much because customers would still visit banking halls for cheque deposit and other transactions”. Data collected revealed that 27% chose 5, 33% chose 4, 27% chose 3, and 2 and 1 had 7% respectively.

- **High Cost of Expertise:**

Cashless system requires new technology which needs to be supervised by personnel with required skills and knowledge. Traditionally, banks close at 5pm but with cashless transactions, banks are required to work 24 hours. That is systems need to be monitored so
that any challenge could be resolved promptly. The researcher wanted to know how respondent would react to this challenge. After analysing data, it was observed that 20% chose 5, 47% chose 4, 20% chose 3, and 13% chose 2. This suggests that fewer banks see this challenge as pervasive as compared to those who selected 3 and 4.

- **Privacy and Security Concerns:**

Digitisation has major threat of hackers stealing data from organisation’s database for scams, among others purposes. In this regard, the researcher wanted to know how this threat or challenge would affect the banking industry as Ghana goes cashless. The response was as follow; 40% of respondent chose 5, 33% chose 4, 13% chose 3, 7% chose 1 and 2 respectively. It can be observed that scale 4 and 5 had over 70% which suggest that this is a major concern for the banking industry.

4.2.20 Small and Medium Scale Enterprises

4.2.21 Types of Company:

Table 4.5: Types of Company

<table>
<thead>
<tr>
<th>Type of Company</th>
<th>Total Respondent</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole Proprietor</td>
<td>36</td>
<td>72%</td>
</tr>
<tr>
<td>Limited Liability</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Partnership</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The objective for this question was to ascertain the distribution with respect to the types of company selected for this work. It was revealed after data analysis that 39 of the respondents, representing 72% were Sole Proprietorship. 11 companies, representing 22% were Limited Liability, and the remaining 3, representing 6% were partnership. It is evident from the data that majority of the respondents were Sole Proprietorship
4.2.22 SMEs Readiness for Cashless System

Questions 1 to 7 were designed to establish SMEs readiness for cashless system. The researcher provided Yes or No options for respondents so that appropriate response could be provided as pertain to the company. The table below shows how respondents answered the questions.

**Table 4.6: SMEs Readiness**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Yes (%)</th>
<th>No</th>
<th>No (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>41</td>
<td>82%</td>
<td>9</td>
<td>18%</td>
<td>50</td>
</tr>
<tr>
<td>Question 2</td>
<td>46</td>
<td>92%</td>
<td>4</td>
<td>8%</td>
<td>50</td>
</tr>
<tr>
<td>Question 3</td>
<td>19</td>
<td>38%</td>
<td>31</td>
<td>62%</td>
<td>50</td>
</tr>
<tr>
<td>Question 4</td>
<td>3</td>
<td>6%</td>
<td>47</td>
<td>94%</td>
<td>50</td>
</tr>
<tr>
<td>Question 5</td>
<td>33</td>
<td>66%</td>
<td>17</td>
<td>34%</td>
<td>50</td>
</tr>
<tr>
<td>Question 6</td>
<td>48</td>
<td>96%</td>
<td>2</td>
<td>4%</td>
<td>50</td>
</tr>
<tr>
<td>Question 7</td>
<td>45</td>
<td>90%</td>
<td>5</td>
<td>10%</td>
<td>50</td>
</tr>
</tbody>
</table>

**Figure 4.2: SMEs Readiness for Cashless**

*Figure 4.2* shows the readiness of SMEs for cashless systems. The response as depicted on the table above was that 41 companies, representing 82 percent, selected Yes. The
remaining 18 percent selected No. The researcher observed that those who selected No had made no preparation for cashless system and they were used to the traditional cash system.

**Question 2** asked if the respondents had bank accounts. Initially, the researcher thought it was not necessary because every business has bank account. However, it was observed that 8 percent of the population had no business bank account. They used their own personal bank accounts as business account. The remaining 92 percent, representing 46 companies, had business bank account which was used as part of their daily transactions.

**Question 3** concentrated on Point of Sale (POS) system. POS enables customers to pay with their debit or credit cards, which in effect reduces the amount of cash at the shops or offices. The analysis of data revealed that only 19 companies, out of the 50, had POS. Some of these companies expressed how easy it makes customers feel when paying for good and service. 31 companies, representing 62 percent, did not have POS.

**Question 4** asked if respondents have QR scan payment system. The response was that only 3 companies, out of the 50 companies, had QR scan payment system. The researcher observed the code displayed at the till where some customers used their smart phones to scan code in order to make payment. The remaining 47 companies did not have QR scan system. It was surprising that some respondents did not have knowledge about this mode of payment.

**Question 5** asked if respondents have registered for online banking. Online banking platform enables companies to pay suppliers and other creditors, as well as managing and monitoring their banking activities. In effect, it enhances business efficiency. The researcher observed that 33 companies, representing 66 percent, had subscribed for this platform. This means that out of the 46 companies that have business accounts as revealed in question 2, 33 of them had subscribed for online banking.
**Question 6 and 7** captured mobile money payment system. The researcher observed that 48 companies had registered for mobile money. This represented 96 percent of the population. However, 90 percent of the population accepted mobile money payments. The researcher found out that the 3 companies out of the 48 already registered for mobile money platform did not accept payments through that platform. These 3 companies explained that they had encountered challenges accepting money mobile in the past so although they were registered, they preferred to use it to make payment instead of receiving payment.

### 4.2.23 Electronic Payment (EP) Versus Cash Payment (CP) among SMEs

**Questions 8 and 9** were designed to see the how SMEs transact using EP, CP, or BOTH with their stakeholders. **Questions 10 to 14** also determine their perceptions about these two types of payment system. The table below shows how SMEs transact using EP, CP, or Both.

**Table 4.7: Electronic Payments Vs Cash Payment**

<table>
<thead>
<tr>
<th>Questions</th>
<th>CP (%)</th>
<th>EP (%)</th>
<th>Both (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 8</td>
<td>25</td>
<td>0</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Question 9</td>
<td>24</td>
<td>10</td>
<td>16</td>
<td>50</td>
</tr>
<tr>
<td>Question 10</td>
<td>17</td>
<td>27</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Question 11</td>
<td>12</td>
<td>34</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Question 12</td>
<td>10</td>
<td>39</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Question 13</td>
<td>10</td>
<td>39</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Question 14</td>
<td>12</td>
<td>37</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>

**Question 8** focused on how respondents transact with their customers. From the table above, it can be seen that 25 companies used only CP to transact with customers. On the other hand, none used only EP to transact with customers. However, the remaining 25 companies used Both EP and CP to transact with customers. That is they had options where customers could make payment with cash, card, or App.
**Question 9** focused on how respondents transact with their bankers, creditors, and other stakeholders apart from customers. Analysis of the data revealed that 28 companies, representing 48 percent used only CP to transact with stakeholders. On the other hand, 10 companies, representing 20 percent used only EP to transact with stakeholders. The remaining 16 companies, representing 32 percent, used both CP and EP to transact with stakeholders.

**Question 10** asked about how respondents assess the convenience of CP and EP. The data shows that 27 respondents, representing 54 percent believed EP is more convenient than CP. On other hand, 17 respondents believed CP is more convenient than EP. Some believed that cash transactions eliminated charges associated with EP. The remainder 12 percent were indifferent as they believed both were convenient to them.

**Question 11** was asked to identify which of these methods is expensive per respondent’s perception. It was observed that majority believed EP is expensive. This accounted for 68 percent of respondents. Major issues raised were mobile money charges for deposit and withdrawal, banks electronic charges including interbank transfers, etc. 24 percent believed CP is expensive because in the event that they want to pay suppliers or state authorities, there is transport cost which could be avoided if it were EP. Only 4 respondents, representing 8 percent were indifferent of the two.

**Question 12** brought to light how EP and CP could help reduce theft and corruption. It was revealed that 39 respondents, representing 78 percent believed EP help reduce theft and corruption. It was revealed upon further questions that EP provides enough evidence to identify any loophole in transactions. It also enables business owners and even auditors to trace perpetrators of corrupt activities. On the other hand, 10 respondents, representing 20 percent believed CP help reduce theft and corruption. It was difficult, however, for
respondents to explain how this can be achieved upon follow up question. Only 1 respondent believed both were useful in reducing theft and corruption.

**Question 13** focused on safety. That is respondents’ perception about the safety and security associated with each of the payment method, with respect to inherent risk in business activities. It was observed that 39 respondents, representing 78 percent believed EP is safe as compared to CP. Among other things, the researcher gathered that EP helps to secure company’s revenue mobilisation from theft, robbery, and other human errors that leads to loss of money. However, 10 respondents believed CP was safe because it eliminates cyber threats and other human errors that could lead to payments into wrong person’s account. The remainder 2 percent were indifferent of the two and believed both methods are safe.

In terms of accountability, which was the focus of **question 14**, the researcher observed that EP promotes accountability as 37 of the respondents believed EP leads to greater accountability. 12 respondents believed CP rather promotes accountability, whereas 1 respondent believed both payment methods promote accountability.

The result of the analysis is depicted in the graph below.

**Figure 4.3: Cash Payment vs Electronic Payment**
4.2.24 SMEs Awareness to Government initiatives toward Cashless Economy
The researcher used question 15 to gather information about SMEs awareness of current development by government toward Ghana going cashless. This question is relevant because SMEs awareness of Government initiatives would propel them to strategically plan in order to steer toward cashless. Upon analysis of data, it was revealed that 76 percent of respondent had knowledge about current developments by government. Some respondent mentioned the few they knew, especially those related to payment of Tax. The remaining 24 percent were unaware of current government initiatives. It was observed, upon follow up questions, that publicity about government policy is poor. The graph below shows how respondent reacted to question 15.

Figure 4.4: SMEs on Cashless Economy

Question 16 generated information, as shown in the graph above, about how SMEs perceives Cashless System in terms of improved profitability. Amazing 84 percent of respondents believed Cashless system would help businesses increase overall profit. The researcher gathered that respondents believe cashless system brings about efficiency and effectiveness in
business processes. However, the remaining 16 percent believes cashless system has no impact on profitability of their companies.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 Introduction
This study examined the prospects and challenges of the Cashless economy in Ghana. The study set out to achieve the following objectives: The first objective was to identify the economic prospects of cashless system in Ghana. The second objective was to determine the challenges of steering towards cashless. And the last objective was to ascertain stakeholders’ readiness towards cashless system. This chapter therefore presents summary of the findings, conclusions and recommendations based on the findings.

5.1 Summary of Findings
To achieve the objectives of the study, the following research questions were asked to guide the study: Firstly, What are the economic benefits of cashless system in Ghana? Secondly, what are the challenges of cashless system? Finally, how are stakeholders prepared to embrace a cashless system?

- Is Ghana Ready for Cashless?
After the interview at the MoF, it was discovered that Ghana is not fully equipped or ready for cashless society although government has embarked on some policies for cashless system. It was discovered that, among other reason, government long term goal of digitisation is to cashless economy to boost strong financial sector. On the other hand, data analysis revealed other stakeholders like Universal Banks and SMEs were ready for cashless society. It was revealed that 12 out of the 15 Universal Banks selected for the study were ready for cashless society. Although the remaining 3 banks were not ready, they had budget and plans in place to acquire necessary equipment for digitisation. Regarding SMEs, it was revealed that 41
respondents, representing 82 percent were ready for Cashless system, with the remaining 18 percent still stuck in the old system. In effect, although government has not fully migrated to cashless system, major stakeholders like Universal Banks and SMEs are well prepared in advance to welcome government move for cashless economy.

- **Benefits of Cashless Economy**

Information gathered from the MoF provided meaningful insight into the benefits of cashless system and how digitisation has helped the ministry transact with various partners or stakeholders digitally. Mof established that cashless system enables their transactions to be done with ease. This was of major importance because the ministry is in charge of scrutinizing budgets of Ministries, Departments and Agencies (MDAs) in the country and also allocating funds for them to meet their operational needs. Considering volume of tasks to be performed, cashless system enables them to save time and ensure that transactions are done much quicker. Secondly, cashless system increases the security for all partners. That is the level of cash and/or cheque movement is reduced as payments are done electronically. This reduces forged signatures and other incidence like theft and robbery. Thirdly, it was revealed that cashless system enhances greater efficiency. Among other things, electronic payments reduce the number of employees which would ordinarily be required in cash/cheque system. This leads to cost saving. It also enables greater outputs to be achieved using same or fewer resources. Again, Cashless system helps to reduce corruption within the public sector. As transactions are done electronically, cash movement is reduced and officers can easily be traced to their corrupt deals because their log-in details are captured by the system before and after performance of responsibilities. Cashless system also impact on fiscal and economic activities. That is revenue mobilisation effort by Ghana Revenue Authority is greatly enhanced by electronic payments and government is able to meet its obligations
promptly thereby fostering economic growth. In addition, electronic payments reduce tax evasion and leakages, and also help government to monitor inflation rate.

The researcher also found out that out of the benefits listed for Universal Banks with respect to Cashless system, 24/7 customer service, less congestion at banking hall, reduced operations cost, and increased bank efficiency were of greater importance to the banks as the percentage for 5, which represented highest level of benefit, exceeded 50 percent. This was shown in table 4.3. Overall, all the benefits had the total from likert 3 to 5 exceeding 70 percent. This means that Universal banks believes 24/7 customers service, less congestion at banking halls, reduced operations cost, fewer customers complaints, increased bank efficiency, lesser banches and ATM, reduction in fraud, reduction in Money Laundry, Lower risk (theft and robbery) are all benefits of cashless society although their level of relevance are not the same with respect to the individual banks.

Finally, cashless system has its benefits for SMEs which form greater portion of business registered in Ghana. As shown in table 4.6, questions 10 to 14 assessed SMEs perceptions about Cash payments and Electronic payments. It was revealed that in terms of convenience as asked in question 10, Electronic payments were more convenient than Cash payments as 54 percent of respondents selected Electronic payments as against 17 percent for Cash payments. With regards to reduction in theft and corruption in question 12, 39 respondents, representing 78 percent, believed Electronic payments help reduce theft and corruption. Again, on the issue of safety and security in question 13, 78 percent of respondents believed Electronic payments is safe and more secured as compared to cash payments. Furthermore, the data gathered for question 14 revealed that 74 percent of respondents believed that Electronic payments promote Accountability as compared to 12 percent which believed otherwise. This analysis revealed that Cashless economy provides convenience for SMEs in their business processes, and also helps to reduce corruption and theft which lead to loss of
profit and other resources. It also enhances the safety and security of resources, which finally leads to greater accountability.

Finally, the data gathered revealed that among SMEs, 84 percent believed Cashless Economy improves business profit, which is the result of business being efficient and effective in their processes.

- **Challenges to Cashless Economy**

Cashless Economy undoubtedly has many challenges which vary among different stakeholders, depending on the nature of their activities. The second objective for the study was to identify challenges Ghana would face going cashless.

The MoF, which is in charge of mobilising and disbursing government funds, presented two main challenges to cashless economy. The first is Security threat. According to the ministry, as the nation migrates to cashless economy, its partners and households within the Ghanaian community would resort to internet to transact. This, the ministry believes would make user vulnerable in terms of privacy, identity theft, scam, fraudulent behaviours, among others. The second challenge the ministry talked about was Cyber-attack. This was explained as being attack on government and organisations for greater benefit of the criminals or hackers. Cyber-attack, according to the ministry, is global challenge which has propelled governments especially in developed world to invest massively in cyber security.

The MoF indicated measures government has taken to address these challenges. The first is strict financial and banking supervision which would ensure that Ministries, Departments, and Agencies within government, and financial institutions adhere to strict security measures in order to protect data and resources of institutions. These measures are monitored and supervised by supervisory bodies periodically to ensure institutions comply. The second measure government resort to is Private Public Partnership. This development enables
government to join force with private sector to embark on projects for national development as well as investing in cyber security.

The researcher listed some challenges pertaining to financial institutions and provided likert scale to assist Universal Banks to rank these challenges according to how they perceive their prevalence. The result is shown in table 4.4. It was revealed that High Illiteracy rate and Unreliable Network were major challenge as 73 percent of respondents selected 5. 20 percent of respondents selected 4 for both challenges. This means that over 90 percent of respondent perceive these challenges to be pervasive. Challenges like Inadequate infrastructure, reduction in staff, and high cost of expertise had less than 30 percent of respondents selecting 5. This means that respondents did not perceive these to be major challenge within the industry and evidently supported by greater percentage falling between scale 2 and 4. In between these two extremes are Identity theft, cyber security threat and privacy and security concerns. These challenges had diverse responses as percentage of those who selected 5 fell between 40 percent and 50 percent.

SMEs are the third stakeholder used for this study and the researcher captured their perception about benefits and challenges. On the challenges, question 11 revealed that SMEs perceive Electronic payment method to be expensive as compared to Cash payment. This is as a result of charges associated with using this method for payment, unlike cash where there is no extra charge.

- **Stakeholders Readiness for Cashless Economy**

The third objective was to assess stakeholders’ readiness for cashless system. In this regard, the researcher structured the questions to capture information that would be relevant to achieve this objective.

Although MoF indicated that government was in the process of migrating fully to cashless system, further question was asked about government policy(ies) in recent times regarding
cashless. The ministry mentioned Digitisation, Interoperability and Banks and Specialised Deposit-Taking Institutions Act, 2016 as recent move by government to prepare the country for cashless. It also revealed that government has policy of paying institutional staff through Ezwich and other electronic means.

Secondly, the researcher assessed universal banks readiness by asking them to select which digital platforms they use to transact with customers. The results were that; all 15 respondents have Visa Card and Mobile Apps to enable customers transact digitally, 14 banks have Online Banking, 13 banks have Master Card, 12 banks have Mobile Wallet and Bank Account linkage platform, 5 banks out of 15 have digital branch, and 1 bank out of 15 had QR payment. This means that Universal banks generally are prepared for cashless. QR Payment and Digital Branch is a new trend and it could not be used to generalise universal banks readiness.

Finally, the researcher assessed SMEs readiness by assessing the means with which they handle their financial activities. Table 4.6 depicts results of data analysis. Question 1 asked about their readiness, which 41 respondent out of 50 selected Yes. Questions 2 to question 7 focused on their relationships with bankers and customers. Question 2 asked if they had Bank Accounts and 92 percent said Yes. Question 3 asked if they had POS system and 38 percent said Yes. Question 4 asked if they had QR system and only 6 percent said Yes. Question 5 asked about online banking and 66 percent said Yes. Question 6 asked if they had registered for Mobile Money Platform and 96 percent said Yes. Finally, Question 7 asked if they accept Mobile Money payment and 90 percent said Yes. It can be seen from above that SMEs have bank accounts, and 66 percent out of the 92 percent who have bank accounts have subscribed for online banking. And 90 percent out of the 96 percent who have registered for mobile money actually accept money payments from customers. They are however not used to POS
system and QP scan payment system as fewer respondents use this method to effect transaction.

5.2 Conclusion
The first objective was to identify economic prospect of cashless system in Ghana. From the analysis and presentation of data in chapter four, Cashless economy has many prospects and it differs among different stakeholders within Ghana.

Firstly, within the government or public sector, the MoF, presented ease of transaction, increase security for all partners, greater efficiency, reduction in corruption, positive impact on fiscal policy and economic activity, increased productivity due to advanced technology, reduced tax evasion and leakages, enhance government business with stakeholders, and reduction in inflation as the benefits of cashless system. These benefits enable government to execute his agenda promptly thereby increasing economic growth. For instance if the Mof is able to disburse MDAs budget on time, each MDA would be able to carry out its mandate for the period thereby promoting economic growth.

Secondly, within the Universal banks, it was revealed that the banks perceive 24/7 customers service, less congestion at banking halls, reduced operations cost, fewer customers complaints, increased bank efficiency, lesser branches and ATM, reduction in fraud, reduction in Money Laundry, Lower risk (theft and robbery) are all benefits of cashless society although their level of relevance are not the same the individual banks. These benefits reduce operational cost, thereby enhancing profitability in the financial sector.

Finally, SMEs which form greater part of business registered in Ghana also perceive that Cashless system is convenient, reduces theft and corruption, safe and secured, promotes accountability, and improve business profits.
Gross domestic product (GDP) is the total value of goods produced and services provided in a country during one year. The benefits identified in this study would increase goods produced and services provided in Ghana which in effect would increase Ghana’s GDP.

- **Challenges to Cashless Economy**

The second objective for this study was to determine the challenges of steering towards cashless. The challenges were segmented according to MoF, Universal banks, and SMEs.

Firstly, information from MoF revealed that cashless system security threat and cyber-attacks were the two main challenges. However, government has measures to address these two challenges: First, strict financial and banking supervision to ensure that institutions comply with security measures implemented by government. Second is PPP, which would bring private investors to collaborate with government to invest in cyber security and improve infrastructure.

Secondly, data analysis revealed that Universal banks perceive High Illiteracy rate, Unreliable Network, Inadequate infrastructure, reduction in staff, high cost of expertise, Identity theft, Cyber security threat, and Privacy and security concerns as challenges to cashless system. However, their pervasiveness varies among the banks. High illiteracy rate and unreliable network were perceived to be major challenges among the banks. The remaining challenges also affect the bank but their degrees of pervasiveness were either mild or low.

Finally, SMEs revealed that cashless system introduces additional cost, like transaction charges by banks and telecommunications companies, which makes it expensive as compared to normal cash transactions.

- **Stakeholders’ Readiness**

The third objective was to ascertain stakeholders’ readiness towards cashless system. The analysis of data revealed that Mof, which is in charge of government fiscal policies, believes
Ghana is not fully ready for cashless economy but government has commenced implementing policies that would enhance the country’s effort toward cashless. Key among those policies is the digitisation of business processes at various ministries, departments, and agencies within the country. Digitisation is also a medium to achieve Ghana Beyond Aid goal set by government. Other policies are the interoperability and the Banks and Specialised Deposit-Taking Institutions Act, 2016 which seek to boost the operations of the financial sector. Although Ghana is not fully ready for Cashless Economy, data obtain showed that Universal Banks and SMEs are already have policies and processes in place awaiting for the country to fully migrate.

Within the Banking industry, it was revealed that Universal Banks have digital platforms which assist customers and businesses to transact digitally thereby reducing physical cash movement within the country. Digital platforms like transacting online with Visa cards and Master Card, Online banking to transfer and receive money, Mobile Apps to make payments and transfer money, Mobile wallet and Bank account linkage, QR scan payment method, and Digital Branches. Among these digital platforms, Visa Cards and Mobile App were applicable to all Universal Banks, followed by Online Banking which 14 banks offered to customers. Master Cards were offered by 13 banks, whereas Mobile Wallet and Bank Account Linkage was offered by 12 banks. It was however observed that Digital Branch and QR Scan payment were not common among banks in Ghana. Among the reasons for this low patronage was that customers had familiarised themselves with the common ones and adaptation is somehow a challenge.

The research also revealed that SMEs have different means for accepting or transacting digitally, which in effect limit movement of physical cash. These medium are POS system, QR scan payment system, Mobile Money payment, and online banking. It was observed that among these method, Mobile money is the widely used as 90 percent out of the 96 percent of
respondent who have registered for mobile money accept money payments from customers. QR Scan payment system had the least patronage. POS is also used to transact but its usage is minimal among SMEs.

5.3 Recommendations
The research findings brought to light benefits and challenges of cashless system, as well as stakeholder readiness for cashless system. In view of these findings, the following recommendations have been made to help government effort in steering the economy towards cashless system.

Firstly, SMEs preferred cash payments to electronic payment because they perceive that transactional fees make it expensive. Businesses push any extra cost incurred to the final consumer which means that SMEs would either prefer traditional cash system or pass the cost on to the consumer that would not favour government policy. It is therefore recommended that government should engage Banks and telecommunications companies to find possible ways to eliminate these charges. For instance government could provide incentives in the form of tax reliefs.

Secondly, it was revealed that SMEs did not have much knowledge about recent government policies regarding cashless system. It is therefore recommended that government should intensify its effort in communicating these policies to citizens. Government should broaden its scope when it comes to disseminating information about relevant policies so that stakeholders would be well informed and prepare as such.

Thirdly, High illiteracy rate and Identity theft were challenges within the banking industry. Recently, Government introduced Free SHS which seeks to improve literacy rate in the country. While this effort is commendable, it is recommended that government should partner
with the Banks to invest more in technological education, using the media as platform where those who lack basic knowledge can learn how to use smartphones and other gadgets and also provide guidance on how to transact safely without losing personal information to scammers.

Fourthly, Cyber-attack was seen as a challenge by the MoF and Universal Banks. This is a macro economical challenge that could not be handled by since sector of the economy. It is therefore recommended that government should join force with stakeholders within the economy to invest heavily in cyber security. Secondly, government should introduce and enforce strict sanctions on institutions or individuals who try to launch cyber-attack on the country or any institution within the country.
REFERENCES


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APPENDIX 1

INTERVIEW GUIDE

This interview guide is prepared Ministry of Finance (MoF). It seeks to gather information on stakeholder readiness as we move towards cashless economy in Ghana. Your response and subsequent result of the analysis shall solely be used for academic purposes(s). Thank you for your time and cooperation.

1. Is Ghana ready for cashless system?
   Yes [ ] No [ ]

2. What are the benefits of cashless system, according to MoF, in Ghana?
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   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

3. How would Ghana going cashless impact fiscal policies and economic activities?
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   ……………………………………………………………………………………………
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4. Has government any budget in the last 5 with respect to effort(s) of Ghana going cashless?
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

5. What policy (ies) has government in place towards cashless society?
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   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
6. Would going cashless enhance government businesses with various economic stakeholders (including friends and partners both locally and internationally)?

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7. In dealing with corruption, would cashless system have any effect on government effort?

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8. Would going cashless have any effect on inflation?

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…………………………………………………………………………………………
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9. Would going cashless have any effect on economic growth?

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10. What does government consider as challenges to cashless system implementation in Ghana?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

11. How is government addressing these challenges?
12. In terms of infrastructure deficit in going cashless, what is the government’s strategy?

Thank You.
APPENDIX 2

QUESTIONNAIRE FOR UNIVERSAL BANKS

This questionnaire is prepared for Universal Banks in Ghana. It seeks to gather information on stakeholder readiness as Ghana moves toward a cashless economy. Your response and subsequent result of the analysis shall solely be used for academic purposes. Thank you for your time and cooperation.

1. Is your Bank ready for Cashless Society? Please tick as appropriate
   - Yes
   - No

2. Which of these digital platforms does your bank have? Pls tick as appropriate
   - Visa Card
   - Master Card
   - Online Banking
   - Mobile App
   - Mobile Wallet and Bank Account Linkage
   - QR Payment
   - Digital branch or Centre

3. The following are benefits of cashless system for banks, from 1 to 5, with 5 being the highest, how would you rate each of the benefits

<table>
<thead>
<tr>
<th>#</th>
<th>Benefit</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>1</td>
<td>24/7 customer services</td>
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<td>2</td>
<td>Less congestion at halls</td>
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<tr>
<td>3</td>
<td>Reduced operations cost</td>
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<tr>
<td>4</td>
<td>Fewer customers complaints</td>
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<td>5</td>
<td>Increased bank efficiency</td>
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<tr>
<td>6</td>
<td>Lesser branches and ATM</td>
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<tr>
<td>7</td>
<td>Reduction in fraud</td>
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<tr>
<td>8</td>
<td>Reduction in Money Laundry</td>
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<td>9</td>
<td>Lower risks (theft and robbery)</td>
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<td>10</td>
<td>Others...please list below</td>
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</tbody>
</table>
4. The following are Challenges of cashless system for banks, from 1 to 5, with 5 being the highest, how would you rate each of the challenges

<table>
<thead>
<tr>
<th>#</th>
<th>Challenges</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>High Illiteracy rate</td>
<td></td>
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<td>2</td>
<td>Identity theft</td>
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<tr>
<td>3</td>
<td>Inadequate infrastructure</td>
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<td>4</td>
<td>Unreliable network</td>
<td></td>
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<td>5</td>
<td>Cyber security threat</td>
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<tr>
<td>6</td>
<td>Reduction in staff (unemployment)</td>
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<tr>
<td>7</td>
<td>High cost of expertise</td>
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<td>8</td>
<td>Privacy and security concerns</td>
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<td>9</td>
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<td>10</td>
<td>Others...Please list below</td>
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</table>

Thank You.
APPENDIX 3

QUESTIONNAIRE FOR SMEs

This questionnaire is prepared for SMEs in Ghana. It seeks to gather information on stakeholder readiness as Ghana moves toward cashless economy. Your response and subsequent result of the analysis shall solely be used for academic purposes(s). Thank you for your time and cooperation.

Type of Company

Sole Proprietor ☐  Limited Liability ☐  Partnership ☐

Questions: Please tick as appropriate

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>1</td>
<td>Is your Company ready for cashless system?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Do you have bank account?</td>
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<tr>
<td>3</td>
<td>Do you have POS system?</td>
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<tr>
<td>4</td>
<td>Do you have QR scan payment system</td>
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<td>5</td>
<td>Are you registered for online banking with your banker?</td>
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<tr>
<td>6</td>
<td>Are you registered on Mobile Money platform?</td>
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<tr>
<td>7</td>
<td>Do you accept mobile money payments?</td>
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</tbody>
</table>

Please tick as applicable to your company, Cash Payment (CP) and Electronic Payment (EP)

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<thead>
<tr>
<th></th>
<th>CP</th>
<th>EP</th>
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<tbody>
<tr>
<td>8</td>
<td>How do you transact with your customers?</td>
<td></td>
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<tr>
<td>9</td>
<td>How do you transact with other partners like bankers, creditors, etc?</td>
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<tr>
<td>10</td>
<td>Which of these payment methods is convenient?</td>
<td></td>
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<tr>
<td>11</td>
<td>Which of these payment methods is expensive to use?</td>
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<tr>
<td>12</td>
<td>Which of these payment methods reduce theft and corruption?</td>
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<tr>
<td>13</td>
<td>Which of these payment methods is safe to use?</td>
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<tr>
<td>14</td>
<td>Which of these payment methods promote accountability?</td>
<td></td>
</tr>
</tbody>
</table>

15. Are you aware of current developments by government toward Ghana going cashless?

Yes ☐  No ☐

16. Would cashless system improve overall profit of your company?

Yes ☐  No ☐