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CONSUMER ATTITUDE TOWARDS ELECTRONIC PAYMENT SYSTEMS IN THE BANKING INDUSTRY IN GHANA

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For the award of the degree of

MASTER IN BUSINESS ADMINISTRATION

BY

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Business Administration and that, to the best of my knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other degree of the University, except where due acknowledgment has been made in the text.

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DEDICATION

This piece of work is proudly dedicated to the Almighty God, my wife, Iris Awuni (ESQ) and my two lovely kids (Tyra & Joe-Ronny Lambongang).

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ABSTRACT

Despite the availability of alternate payment systems such as cheque payments, mobile payments, online payments, and card payments, most Ghanaians still use the former methods of payment. The study assessed Ghanaian consumers' perception about electronic payments. These included identifying the main determinants of consumer acceptance and use of electronic payment services in Ghanaian banks, assessing customer satisfaction with e-payment in the Ghanaian banking industry, and deterring fraud. The study used purposive sampling to choose participants from the employees and systematic sampling to select customers. As part of the findings, consumers' attitudes towards electronic payment systems are influenced by usability, security, privacy, after-sales service quality, marketing mix, and reputation. The study found that consumers are pleased with the value provided for their banking needs and the ability to test e-payments in the banking industry. The study also indicated that low internet and fewer users, expensive and difficult e-commerce technology, and lag in other supporting sectors are obstacles, while customers' major concerns are trust and security. It found confidence and security as important reasons for not using electronic payment systems. The technology can also boost the economy by allowing customers and banks to access a bigger market and join the global payment system. Stakeholders should provide enough assurance of security for using electronic payment system on their privacy to lure the unbanked into the system without necessarily keeping accounts with them.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Businesses in the twenty-first century operate in a complex and competitive market marked by changing conditions and an exceedingly volatile economic climate; banking is no exception (Jimenez, et al., 2007). Many banks have had to rethink their strategy to stay competitive since the introduction of electronic payments in the banking sector; this is especially true in an era when clients are sophisticated and want much more from financial services. Consumers are looking for new levels of convenience and flexibility, as well as powerful and simple-to-use financial tools, products, and services that traditional retail banking cannot give. It's worth emphasising that information and communication technologies (ICTs) have changed the way most businesses operate and respond to changing consumer expectations. In the banking industry, the promise of ICTs has been measured in terms of their ability to expand the customer base, reduce transaction costs, improve response quality and timeliness, expand advertising and branding opportunities, facilitate self-service and service customization, and improve customer communication and relationship management (Garau, 2002). Most established banks, as well as some in developing countries, now provide varied levels of e-banking complexity. Most African banks, on the other hand, appear to be fine with just having a Web presence, with only a few making headway toward fully complete e-banking programmes (Boateng, 2006).

Electronic payment systems (EPS) have a slew of economic advantages in addition to their ease and security. EPS's main economic benefits include mobilising savings and ensuring that most of Ghana's currency is held in banks. Borrowers will have access to finances because of this (businesses and individuals). Furthermore, an electronic payment system might track individual expenditure, making it easier for banks to build goods. When the government makes economic decisions, this data is also useful. EPS can also help you reduce cash handling and cost of printing (Cobb, 2004).

Unlike in other parts of Africa and wealthy countries, most of Ghana's population uses the cash payment system, which involves the usage of physical cash for transactions. Different payment systems, such as cheque payments, mobile payments, online payments, and card payments, are used by other countries around the world. Apart from cheque payments, these payment methods have yet to attain widespread recognition in Ghana. Prior to the introduction of electronic payment into the Ghanaian banking system, all customers had to walk into a physical bank to conduct any type of transaction; join lengthy and twisting lines; and wait hours for a brief conversation with a teller to complete their transactions (Abor, 2004). As a result, the study aims to establish customers' attitudes toward accepting or rejecting electronic payments using internet banking by Ghanaian consumers using mobile phones, iPods, and other devices as the "wallet" of the future.

1.2 Problem Statement

Since 2004, the banking scene has been evolving, and this trend is expected to continue with increased competition and greater customer service. This is due to increased competition in the Ghanaian banking industry because of a decade of liberalisation; banks are now faced with the problem of differentiating their goods to attract new consumers (Yartey, 2008).

Although, some consumers perceive the usefulness and easiness of use as part of the numerous benefits electronic payment systems offer, they have not transferred this attitude toward the application of e-payment in the banking operations. Many bank customers are reluctant to use online banking; some do not like the technology at all; while others fear their computers may garble their accounts. Also, consumers are afraid to use the e-payments because they think the slightest error could lead to loss of money.

The major reason for undertaking this study is to provide a chance for significant stakeholders to provide feedback on consumer attitudes toward electronic payments. The study equally identifies the drivers of poor patronage of electronic payment systems in Ghana's banking industry. The study is aimed to enlighten stakeholders on the economic impact of electronic payment systems. This study is intended to have an impact on the decision-making processes of marketing and technology experts/professionals, banking industry management, regulators, academics, and the public. The goal of this research is to add to the body of knowledge and literature on the issue under consideration. Researchers, scholars, students, policymakers, banking professionals, and other stakeholders interested in customer attitudes regarding e-payment systems in Ghana's banking industry would find it interesting.

1.3 Objectives of the study

The general objective of the research is to investigate consumer attitude towards the use of electronic payment systems in the Ghanaian banking industry.

The specific objectives are:

1. To identify the main determining factors for the consumers to accept and adopt electronic payment services in Ghanaian banks.
2. To evaluate the degree or level of usage of e-payments by customers in Ghanaian banks.
3. To ascertain the level of satisfaction of customers with e-payment in the Ghanaian banking industry.
4. To determine the challenges faced by customers as they adopt e-payments in the banking sector of Ghana.

1.4 Research Questions

To attain the above stated objectives, the study sought to answer the following questions:

1. What are the main determining factors for the consumer to accept and adopt electronic payment services in Ghanaian banks?
2. What is the degree or level of usage of e-payments by customers in Ghanaian banks?
3. What is the level of satisfaction of customers with e-payment in the Ghanaian banking industry?
4. What are the challenges faced by customers as they adopt e-payments in the banking sector of Ghana?

1.5 Significance of the Research

The research provides first-hand materials on consumer attitude on the electronic payment system in the banking industry with particular attention to the growth and development of businesses in Ghana. The study is expected to inform the stakeholders of how electronic payments systems have made any economic impact. This research is expected to influence decision making processes of marketing and technology experts/professionals, management of the banking industry, regulators, academia, and the public.

The result of this research seeks to contribute to knowledge and literature on the subject under investigation. It is useful as a source of reference to researchers, academics, students, policy makers, banking professionals and other stakeholders interested in consumer attitude towards e-payment systems in the banking industry in Ghana.

This research would be helpful to management and staff working within the banking industry to identify the consumer attitude towards the e-payment so as to encourage them of the usage of the EPS; thereby meeting their needs and expectations. The findings and results also provides a more reliable scientific measure and perspective for describing and evaluating the level of efficiency of the new system and its effect on corporate performance and consumer satisfaction.

It also provides the empirical support for management strategic decisions in several critical areas of their operations, and above all, provides a justifiably valid and reliable guide to designing workable service delivery improvement strategies for creating and delivering consumer value, achieving consumer satisfaction and loyalty, building long-term mutually beneficial relationship with profitable consumers and achieve sustainable business growth in Ghana.

To policy makers like government agencies such as the Ministry of Finance and Economic Planning and the Bank of Ghana, the findings of this study provide insights and a more reliable guide to monitoring the impact of the consumer attitude on EPS in the banking sector. It also serves as a benchmark for measuring partly their respective policy goals and objectives. This research is also expected to increase awareness of the challenges of electronic payments and serve as a guide for future implementation of such systems by developing countries with low level of technological infrastructure. This will inform policy makers of the banking industry to establish appropriate interventions that will lead to consumers' adoption and acceptance of the electronic payment system.

This research is to bring to bear modern trends of banking for more cost effectiveness in the industry; ensuring that consumer awareness, interest and satisfaction are attained. It would be of help to professionals to adopt and implement the necessary strategies to whip up consumer interest in the e-payment systems.

To stakeholders like investors, shareholders, employees, pressure groups, consumer associations, etc., the study provides information that suggests to the improvement in of the electronic payment system. There has been a very large information gap for investors and analysts on electronic payment system's impact on business activities; hence, the study seeks to reduce the information gap by adding to the already existing knowledge.

1.6 Scope of the study

The focus of the study will be on consumer attitude towards electronic payment systems in the banking industry in Ghana. Again, the study is going to give some benefits to the financial industry. The study is carried out at selected banks, within the Ashanti region. It is a case study

approach and will not cover other players to reflect the entire banking industry's consumer attitude to electronic payment system.

1.7 Overview of Research Methods

In pursuance to achieve the objectives of the study the researcher employed a methodology based on primary data with regards to consumer attitude towards electronic payment system in the banking sector of Ghana. The sample for the study was taken from the staff and customers of three selected banks (namely, Ecobank, Standard Chartered and Barclays Banks, all located along the Harper Road, Adum) in the Kumasi Metropolis. The sample unit of the study constituted all senior staff from the various departments of the banks and the ordinary customers of the selected banks. The researcher limited the sample size to one hundred (100) respondents, comprising seventy (70) customers and thirty (30) staff (ten from each bank). The simple random and purposive sampling techniques were adopted in the selection of the sample units or respondents from the departments and quota sampling method applied for the customers.

The primary data was collected using two distinct questionnaires prepared and administered to staff and consumers. The researcher analysed both open-ended and closed-ended questions to ensure that the responses provided are as concise as possible. The structured questionnaires attempted to provide the necessary input in determining the authenticity of various techniques that have a deep awareness of customers' attitudes toward electronic payments at banks.

Data (through questionnaires) were compiled, processed, and analysed using statistical processes such as distribution tables and bar and pie charts made with Microsoft Excel software. In addition, data such as particular remarks and issues expressed by respondents were analysed and

summarised in tables. Secondary sources included textbooks, newspapers, reports/articles, journals, bulletins, and documents and presentations.

1.8 Limitation of the Study

Among the challenges encountered during data collection included the following:

Time constraints made it impossible for the researcher to contact all banks nationwide instead, selected a branch each of three major banks (namely, Ecobank, Standard Chartered Bank and Barclays Bank), within the Kumasi Metropolis. Management's reluctance to divulge information on certain key areas necessary for a preliminary conclusion posed yet another challenge. Due to the data secrecy and overprotection culture in the Ghanaian business, managements are not willing to release information which will enrich the study and establish a strong validity and reliability. Even though few institutions were selected, a comparative study with other players in the economy would have been more appropriate but for constraints of financial resources and unavailability of data as well as materials will not make it possible to undertake such a study.

Moreover, costs in terms of printing, photocopying, binding as well as opportunity cost would be incurred. Consequently, the researcher to combine academic work with this study as well as his regular profession. The researcher had difficulty in retrieving all the questionnaires distributed to the various respondents and had to re-issue new questionnaires after these respondents complained they did not know where they kept them.

1.9 Structure of the Study

The study has been organised into five major chapters: Chapter One introduces the thesis, background, the problem statement, aims, and research questions, and the central importance of the project. The research in chapter two analyses both theoretical and empirical work. In chapter three, the research methods are examined. Thus, how data were solicited and from which sources. The tools for gathering these data are mentioned besides the software that was used for to analyse data. The analysis and discussion of the data is covered in Chapter four. In the fifth chapter, the findings, conclusions, recommendations, and research gaps are covered in depth.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter much attention was directed at the theoretical and empirical review of literature in respect of consumer attitude and how it has impacted on electronic payment system. Literature review provides an account and analysis of what renowned scholars and researchers have published on particular topics or fields of studies (Taylor, 2008). According to Saunders et al (2007) it is a detailed and justified analysis and commentary of the merits and faults of literature in a chosen area which demonstrates familiarity with what is already known about a research topic.

2.2 The Concept of Consumer Attitude

Attitude is the result of what we say, feel, and know (Mooij, 2005), and is a significant factor influencing consumers' purchasing behaviour, which has attracted considerable attention from researchers interested in the behaviour of bank customers and their relationship with these institutions over the years (Mwesigwa, 2010).

According to Venkatesh and Davis (2003), an individual's attitude toward electronic payment via online banking is described as his or her total affective reaction to using the internet for banking purposes. Mwesigwa (2010) stated, using Fishbein and Ajzen (1975), that attitude toward behaviour is composed of beliefs about engaging in the behaviour and the appraisal of those beliefs. They defined attitude as an individual's favourable and negative feelings (evaluative affect) toward a certain behaviour. According to the attitude theory, the more favourable an individual's attitude toward a product or service is, the more likely that individual will use the product or service. Attitudes, it is believed, develop over time through a process of learning influenced by reference group influences, experience, and personality.

Besides, Byers and Leader (2004) stated that the adoption of internet banking is determined by changing consumer behaviour and attitudes rather than the cost structure of banks. According to research on consumer attitudes and adoption of electronic payment in the banking sector, a person's demographic, motivation and behaviour toward different banking technologies, and individual acceptance of new technology are all factors that influence a person's attitude toward electronic payment via banking (Howcroft, 2006).

Mwesigwa (2010) quoted Taylor and Todd (1995), who proposed that the five perceived features of an invention (relative advantage, compatibility, complexity, and trial ability) might be used to gauge the distinct aspects of attitudinal belief about the innovation. The value of the internet for consumers' banking needs is determined by the benefits that accrue to those who use the technology. In general, an innovation's perceived relative benefit is connected to its rate of adoption. The rate of acceptance of an innovation is inversely proportional to its relative advantage. Similarly, because online banking services enable clients to access their accounts from any location and at any time of day, they benefit from being able to manage their finances more effectively and conveniently.

Another essential aspect of the dissemination of innovation theory is compatibility. In a meta-analysis of innovation conducted by Tornatzky and Klein (1982), as quoted by Mwesigwa (2010), it was discovered that an innovation was more likely to be adopted when it was compatible with the individual's work responsibilities and value system. Internet banking is seen as a delivery channel that fits the profile of today's banking consumer, who is likely to be computer proficient and comfortable with the internet. Cheung (2004) defined complexity as the degree to which an innovation is perceived as being relatively difficult to comprehend and utilise and discovered that it has a negative impact on Internet adoption. The precise opposite of ease of

use is complexity, which has been shown to have a direct impact on internet adoption (Byers & Lederer, 2004).

In his view on trial-ability, Rogers (2005) suggested that potential users of new technology who are given the opportunity to try it out will feel more familiar with it and so be more inclined to accept it. According to Tan and Teo (2000), if customers are given the opportunity to try the innovation, it will reduce certain unknown worries, particularly if they discover that mistakes can be corrected, resulting in a predictable condition.

2.3 Factors Affecting Consumers' Attitude towards Electronic Payment

A couple of previous research have outlined numerous major elements that could influence consumers' attitudes toward electronic payment, according to Guo & Noor (2011), such as usability, security, privacy, after-sales support, marketing mix, and reputation.

2.3.1 Usability

The degree to which a website allows visitors to use its functionalities readily and appropriately is referred to as usability (Calisir et al., 2009). Making the design simple enough for customers, who are naturally goal-oriented, to complete their task as fast and painlessly as possible, is what online usability is all about (www.webcredible.com). The website is the basic foundation for online transactions, and electronic payment is based on the Internet. As a result, website usability has a big influence on online shoppers' perceptions and e-commerce success. Several prior studies have summarised a number of variables as a benchmark for measuring website usability, including ease of use, reaction speed, navigation, interaction, design, convenience, learnability, efficiency, site fundability, and accessibility.

2.3.2 Safety

Salisbury et al. (2001) defined Web security as "the degree to which one believes that the World Wide Web is secure for transmitting sensitive information." The study discovered that the security of e-transactions influenced online banking transactions, and that perceived security was positively connected with online purchase intention. Similarly, Elliot and Fowell (2000) found that one of the most important elements in electronic payments in banking was the consumers' impression of security-related difficulties. As a result, security has become one of the most prominent factors causing consumers to hesitate or dread utilising e-payments, and it has had a significant impact on their perception of that financial service.

2.3.3 Privacy

Personal information is always a major concern when it comes to the idea of privacy. "data not otherwise available via public sources" is a broad definition of personal information (Beatty, 2006). The collecting and transmission of personally identifiable information about an individual consumer who has visited a website is a common source of online privacy concerns (Hatch, 2000). Guo& Noor (2011) defined four aspects of online privacy, citing Smith et al. (1996): unlawful secondary use of personal information, improper access to digitally stored personal information, personal information acquisition, and inaccuracies in gathered personal information.

Online privacy problems, according to Metzger and Docter (2003), include anonymity, intrusion, surveillance, and autonomy. To summarise, there are numerous aspects that are difficult to regulate when it comes to protecting consumers' privacy in the virtual world. As a result, internet privacy is more difficult to secure than traditional offline privacy. That is why many consumers continue to refuse to use electronic payment methods.

2.3.4 After-Sales Service Quality

'After-sales Service' refers to the delivery service for supplying products/services to customers after payment, as well as technical support after sales, and so on (Cao & Gruca, 2004). There are two types of post-purchase services: anticipated and unexpected. Installation, training, written instructions, maintenance, and upgrade are examples of anticipated services that the customer has planned for. Unanticipated service is defined as the maintenance of sold-out products, such as repairs, refunds, and replacements (Sparks & Legault, 2003).

2.3.5 Marketing Mix

Marketing activities are divided into four types of marketing-mix instruments, which are referred to as the 4Ps of marketing: product, pricing, promotion, and location (McCarthy, 2002). While the 4Ps are widely regarded as tools that can affect consumers' behaviour and the eventual outcome of the buyer-seller interaction, the worth and present position of the combination as a marketing toolkit is regularly debated (Kotler & Armstrong, 2001; Kotler, 2003).

2.3.6 Reputation

Applied Economics (Shapiro, 1983) and Strategic Management (Fombrun & Shanley, 2009) are two viewpoints on the concept of reputation. From a marketing perspective, brand equity or the credibility of a seller is always linked to the concept of reputation (Hyde & Gosschalk, 2005). In the virtual world, reputation is more significant than in the real world. Consumers cannot inspect things before purchasing them in a virtual world. They can only get product information through the bank's website, and they must believe the bank's product/service description. As a result, consumers' attitudes regarding online banking are influenced by the reputation of electronic payments. Melnik and Aim (2002) found that an employee's overall reputation has a favourable and statistically significant impact on the readiness of customers to accept electronic payments.

2.4 The Concept of Electronic Payment (E-Payment) System

A payment system is a set of institutions, tools, and procedures that allow financial agents to transmit and settle monetary obligations (Bassey, 2009). As a result, an efficient payment system is one in which the financial architecture ensures that monetary obligations are transferred and settled with the least amount of time, expense, and inconvenience. Clearing and settlement, two important components of the payment system, are at the heart of this efficiency. The first is the exchange of bonds and cash between buyers and sellers, while the second is the conclusion of a financial transaction including the delivery of securities or monies from one party to another. The Bank of Ghana Annual Report, (2010), revealed that a payment system is the entire matrix of institutional infrastructure arrangements and processes in a country for initiating and transferring monetary claims in the form of commercial and central bank liabilities, covering:

- 1) Payment instruments used to initiate and direct funds transfer,
- 2) Network arrangements for transacting and clearing payment instruments,
- 3) Institutional players in the system,
- 4) Market conventions and regulations and
- 5) Legal and regulatory framework.

However, due to the nature of electronic payment systems, several definitions have been put out. But the researcher has attempted to bring some few notable ones ranging from now-familiar automated teller machines (ATMs) to Internet bill payments.

E-payment (Australia Government Information Management Office (AGIMO), 2004) is defined as "payment by direct credit, electronic transfer of credit card details, or some other electronic means, as opposed to payment by cheque and cash."

Electronic payment is the use of computer networks such as the Internet and digital stored value systems to perform currency and related transactions using electronic means. The technology allows customers to pay bills directly from their bank accounts, without having to visit the bank or write and mail checks (Humphrey et al, 2006).

According to European Central Bank (2003) electronic payment is a payer's transfer of a monetary claim on a party acceptable to the beneficiary. Kalakota and Whinston (1997, p. 153), intimated that "electronic payment is a financial exchange that takes place online between the buyer and the seller. The content of this exchange is usually the form of digital financial instrument (such as encrypted credit card numbers, electronic checks, or digital cash) that is backed by a bank or an intermediary, or by a legal tender." Electronic payment, according to Vassiliou (2004), is a type of financial transaction aided by electronic communication between the buyer and the supplier.

Based on the definitions above, the researcher can clearly define E-payment or Electronic payment as any digital financial payment transaction including money transfer between two or more parties. In simple terms, an e-payment transaction is one in which money is exchanged electronically or digitally between two parties (banks, businesses, and individual customers) in exchange for goods and services. Any payment that isn't made with paper-based instruments is clearly an e-payment transaction.

The convenience, reliability, and security of the payment method, service quality, which includes features such as the speed with which payments are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances that have

improved the speed, convenience, and flexibility of retail payment systems are all factors that must be considered to achieve effective and efficient retail payment systems (Pariwat&Hataiseere, 2004).

2.5 Types of Electronic Payment

Electronic payment systems are primarily intended for consumers that use credit, debit, or prepaid cards to make purchases. There is always a payer and a payee in commerce who trade money for goods or services, as well as at least one financial institution that connects "bits" to "money" (Asokan, et. al., 2000). The latter job is separated into two pieces in most present payment systems: an issuer (used by the payer) and an acquirer (used by the payee). A movement of actual money from the payer to the payee, via the issuer and acquirer, is used to perform electronic payment from a payer to a payee. In today's banking business, there are numerous sorts of electronic payments that are most used.

2.5.1 Credit Cards

The credit card system, as it is fondly known, is a pay-later (credit) payment method, in which the amount of the sale is credited to the payee's bank account before the payer's account is debited (Asokan, et. al., 2000). Credit cards, in simple words, allow clients to make purchases up to a pre-determined limit. The credit is either paid in full at the end of a defined term, usually a month, or it can be paid in part and the remaining balance extended as credit (Asokan, et. al., 2000). Customers recognise credit cards across the world, and retailers accept them. They are also simple to use over the internet, as only the beneficiary's credit card information is required to complete a transaction (Vassiliou, 2004)

2.5.2 Debit Instruments

The payer's account is deducted at the time of payment in pay-now payment systems. This category includes ATM card-based systems. Debit instruments, according to Vassiliou (2004), allow the payer to have purchases immediately charged (debited) to funds on his or her deposit-taking institution account, such as a bank. Direct debits, debit cards, and checks are all examples of debit instruments.

2.5.3 Prepaid Payment Services

Before purchases are made, a certain amount of money is removed from the payer by debiting that amount from the payer's bank account in prepaid payment systems (Asokan, et. al., 2000). This sum of money can then be utilised for future payments. Before engaging in any financial transaction, this payment system needs users to provide funds. This includes smartcard-based electronic purses, electronic currency, and (certified/guaranteed) bank checks (Asokan, et. al., 2000). Ghana's E-zwich payment system comes into this category as well. Pay-now and pay-later are both direct payment systems in the sense that they demand interaction between the payer and the payee. There are also indirect payment systems, in which either the payer or the payee initiates payment without the involvement of the other party (payee or payer) (Asokan, et. al., 2000).

2.5.4 Payment Portal Services

Payment portals are payment service providers that provide merchant accounts to online shops in general and offer a wide range of payment methods. For merchants, payment portals handle the payment aspect of e-commerce operations. When customers make online payments, merchants can direct them to the payment portal's site, where they can choose from a variety of payment

options. The gateway alerts the e-merchant that the order can be dispatched after the payment is completed successfully (Vassiliou, 2004).

2.5.5 Mobile Payment System (MPS)

Mobile payment systems consist of initiating a transaction, such as a purchase request, and finalising that transaction by authorising payments for the exchange of goods and services, using mobile devices such as a mobile phone, PDA, Wireless Tablet, and other devices connected to a Mobile Telecommunication Network. Mobile payment systems are thus a type of electronic payment, with the exception that transactions are conducted via a mobile phone. A person can use his or her mobile phone to make payments instead of cash, checks, or credit/debit cards. In Singapore in 2001 and Japan in 2004, cell phones with mobile payment technologies were first released, with over 5 million pocket phones sold in the first year on the market (MobilePayment.com, 2009).

The goal of mobile payment systems is to turn the phone into a "future wallet" that stores credit card, debit account, and mobile "cash" information for transactions (Dean, 2005). SMS, Direct Mobile Billing, Mobile Web Payment (WAP), and Contactless Near Field Communication are the five methods of mobile payment system functioning (NFC).

To make a payment by SMS, a consumer must send their request in the form of text to a short code or a specific number (this number being the merchant's or the other receiver's number), the recipient will then be notified of the payment's completion, and the transaction will be completed. Customers use their mobile phones like a bank account or a debit card with Kenya's M-Pesa, which was developed by Vodafone and Safaricom and originally launched in 2005.

Customers credit their account at a local air-time dealer, and then send money to a recipient using SMS (Maybank, 2007).

In Asia, MPS uses Direct Billing, which eliminates the need for a credit/debit card or bank account to be linked to the MPS account. It's as simple as employing direct billing, in which the Mobile Network Operator also serves as an MPS service provider. As part of the service charge, a person on the Direct Billing option is billed on a regular basis for MPS transactions initiated. To make transactions, this option employs two-factor authentication. A PIN and a one-time password are the two-factor authentication methods utilised here (Maybank, 2007).

MPS transactions are begun using an interface application with a walk-through menu from which the appropriate transaction type is selected. MPS transactions are produced in computer languages such as Java 2nd Micro Edition (J2ME), Python, or Wireless Application Protocol (WAP). This necessitates the development of a virtual currency account that is linked to the consumer's sources of finance, such as a bank account, credit card, and virtual money through the upload of vouchers. The menu also includes a list of transaction types from which a user must choose one before authorising a transaction.

In an NFC application, a user makes a payment by waving his or her phone near a reader module, such as a credit card scanner, which is equipped with a smartcard, or a microchip installed in the phone. Most transactions do not require authentication, but some do. Some transactions require PIN authentication before they can be completed.

Figure 2.1: NFC – Nokia and Visa Cooperation for MPS in Malaysia



Source: Kofigah (2010)

Because mobile phones contain an inbuilt chip that may be used to store money or offer secure authorisation and identification, and do not require the use of a card reader, some analysts anticipate that smart cards will be phased out as a payment method. This is what makes MPS such a powerful alternative payment system, as it has the capacity to move an economy away from cash. It's also worth mentioning that MPS can be less expensive. MPS implementation in countries such as Kenya, the Philippines, South Africa, Japan, and others has demonstrated that one does not need to own a mobile phone to profit from MPS services such as Mobile Money Transfer (MMT), as money may be sent through an approved MPS service provider dealer (Dean, 2005).

2.5.6 Internet

When a customer makes an online payment, he or she is transferring money or making a purchase over the internet. Consumers and organisations can send money to other parties from their bank or other accounts, and they can shop online using credit, debit, or prepaid cards.

According to current statistics, over 80% of online purchases are performed with a credit card or debit card. Currently, most internet transactions are paid for with a credit card. While other modes of payment are becoming more popular, such as direct debits from accounts or pre-paid accounts and cards, they still represent a less developed transaction process (Kofigah, 2010).

2.5.7 Biometric Payments

Biometric-based electronic payments are still in their infancy. Trials are being conducted in the United States, Australia, and a few other countries. Most biometric payments use fingerprints for identity and access, while Visa International is testing speech recognition technology, and retina scans are also being considered. In essence, a biometric identification such as a fingerprint or voice might substitute the plastic card, ensuring that the individual doing the transaction is properly identified. The biometric identification replaces the card, cheque, or other transaction mechanism, and the electronic payment is still charged to a credit card or other account (Kumaga, 2012).

2.6 Benefits of Electronic Payments to Consumers

With the introduction of the internet, electronic payments and transactions have reached new heights. Consumers have recently preferred to make purchases over the internet by passing unencrypted credit card details across the network, which provided little protection and privacy. However, as customers got more concerned of their privacy and security, a slew of new secure network payment solutions arose (Fiallos & Wu, 2005). Financial institutions, banks, and retailers all gain from digital money (Fiallos & Wu, 2005). Digital Money is an electronic payment technique that can allow anonymous, flexible electronic payment in the same way that paper money does, but with the added security standards required for internet transactions. According to Lee et al. (2003), a secure electronic cash system can ensure anonymity for legitimate users

while simultaneously providing tracking for illegally issued cash or money that has been laundered. If criminal conduct is discovered, the anonymity of digital cash may be revoked in order to safeguard the bank. Since digital money can track double spending, and double spending safeguards content by revealing the double spender's identity, Lee, et al, (2004) noted that digital cash is a foolproof technique of guarding against illicit transfer of intellectual property and materials. By incorporating tracing content characteristics into the digital cash payment mechanism, users are prevented from engaging in individual duplication activity, Digital Money can be used to deter illicit material copying and distribution (Lee et. al., 2004).

Legal, anonymous purchasers can use this capability to distribute content to other paying anonymous users while adhering to copyright regulations. In businesses such as digital entertainment, using digital money might raise demand for items by making distribution easier and safer. Digital Money can track down who is unlawfully replicating and distributing copyrighted intellectual property, enhancing author security while also reducing revenue and sales losses for digital media entertainment organisations (Lee et. al., 2004). This technology, as well as its safety features, can be implemented by digital media entertainment, as well as intellectual property suppliers and distributors, to ensure higher copyright compliance among customers. Software and intellectual property piracy can be prevented and eventually abolished by adopting such a payment and distribution strategy. Financial institutions can benefit from decentralised structures, faster transaction and decision-making processes, and more cost-effective ways of conducting business using digital money (Fiallos & Wu, 2005).

Electronic payments, according to Cobb (2005), have a slew of economic advantages in addition to their convenience and security. When these advantages are fully realised, they can make a significant contribution to a country's economic progress. Electronic payments that are

automated help to deepen bank deposits, boosting funds available for commercial loans, which are a major driver of total economic activity. Cobb (2005) claims that efficient, safe, and convenient electronic payments provide a wide range of macroeconomic benefits. Introducing electronic payments has the same effect as shifting gears on a bicycle. When you add an efficient electronic payments system to an economy, it shifts into overdrive. When you add in better-managed consumer and business credit, economic velocity skyrockets. While the enormous volume of cash transactions benefits the electronic payment industry, it comes at a cost to local economies. Cash must be minted, securely transported, tallied and reconciled, and kept secure and maintained for re-use. The cost of a single payment is expensive and will always be high, whereas the cost of an electronic system is fixed. Once the infrastructure is in place, transaction costs are quite low” (Cobb, 2005).

Cardholders help to keep money in the banking system by using their cards at the point of sale. EPS can assist in displacing shadow economies, bringing concealed transactions into the banking system, and increasing financial system openness, confidence, and participation (Cobb, 2005). There is a link between increased point-of-sale volumes and increased demand deposits, according to Al Shaikh, (2005). Automated electronic payments serve as a bridge into the banking sector as well as a potent development engine. Such payments remove cash from circulation and deposit it in bank accounts, resulting in low-cost money that can be used to promote bank lending for investment, which is a key driver of total economic activity. Greater transparency and accountability are achieved as a result of the process, which leads to increased efficiency and improved economic performance. Electronic payment, according to Hord (2005), is particularly handy for the consumer. You should only have to enter your account information once, such as your payment card number and shipping address, in most circumstances. After that,

the data is saved in a database on the retailer's Web server. You simply log in with your username and password when you return to the website. It's as easy as clicking your mouse to complete a transaction: all you have to do is confirm your purchase and you're done (Hord, 2005). Hord (2005) goes on to say that electronic payment reduces costs for enterprises. The more electronic payments are completed, the less money is spent on paper and shipping. Electronic payment options might also help firms retain customers. A customer is more likely to return to the same e-commerce site if he or she has already entered and stored their information.

Electronic payments, according to Cobb (2005), “can lower transaction costs, stimulate higher consumption and GDP, increase government efficiency, boost financial intermediation, and improve financial transparency.” “Governments play a critical role in creating an environment in which these benefits can be realised in a way that is consistent with their own economic development plans,” she continued. According to Humphrey et al. (2006), the introduction and use of electronic payment instruments holds the promise of broad benefit to both businesses and consumers in the form of lower costs, greater convenience, and more secure, reliable means of payment and settlement for a potentially vast range of goods and services offered around the world. Electronic payments, for example, allow bank customers to conduct everyday financial activities without having to visit their local branch. Merchants could save time and money by using electronic payment items instead of cash (Appiah&Agyemang, 2006).

The resource cost of a country's payment system can account for 3% of its GDP, according to Humphrey et al (2006). Because most electronic payments are only a third to half the price of paper-based non-cash payments, it is clear that the societal cost of a payment system might be significantly lowered if it is automated (Appiah&Agyemang, 2004). Electronic payments conducted through self-serve channels like as ATMs, branch office terminals, and point-of-sale

(POS) systems can be automated and streamlined to eliminate paper-based errors and expenses. All countries must be able to receive and process electronic payments in a timely and secure manner. Businesses can gain a major competitive edge by offering a fast electronic payment solution, which allows customers to pay with their preferred credit or debit card.

In the broad drive to enhance microeconomic activity by minimising the importance of physical cash in daily transactions and fostering the formation of a cashless society, Ghana has trailed well behind the rest of the globe (including many of its African contemporaries). However, financial experts have warned that unless something radically innovative, functional, and savvy is introduced, which considers attitudes as well as the country's large unbanked population, the country's dream of becoming a functionally cashless society in the shortest possible time may be elusive (Ackorlie, 2009).

2.7 The Prospects of E-Payment

In terms of the number of goods and services transacted on the internet, e-commerce is rapidly expanding. New sectors of e-commerce, such as business-to-business (B2B) and associated business-to-government (B2G) e-commerce, are emerging, as is the potential for vast numbers of individuals to engage in m-commerce via cellular devices. Even the most optimistic estimates of e-commerce place the goods value at less than 1% of the overall value of goods and services traded in the traditional economy, indicating that there is lots of room for growth as more people go online. Payment must be fully incorporated into the on-line discussion in order to complete an online transaction. Large business clients will require that banks facilitate high-value bank-mediated fund transfers quickly and conveniently. Similar demand will be seen in Europe and Asia, as well as the developing globe to a lesser extent. It's possible that innovations like the Worldwide Automated Clearing House (WATCH) will lead to a situation where individuals and

businesses trading on the Internet will be able to effortlessly transport monies to and from any country on the planet. It's possible that these new payment system providers will be more responsive to client needs and will eventually supplant banks for certain types of transactions. This is especially useful in countries with less developed banking infrastructure than advanced countries (Raja &Velmurgan, 2008).

A large number of companies have developed universal payment portals that purport to provide consumers with a wide range of ostensibly free information and services; however, using real micropayments is clearly more flexible and allows for a much clearer link between the content delivered and the amount paid. M-commerce is without a doubt the most popular form of electronic payment. Startup entrepreneurs are actively coming up with new ways to make online payments as telecommunications manufacturers and network operators try to define the structure of the mobile Internet. The degree to which the mobile Internet will resemble the fixed-line Internet is one of the most significant areas of uncertainty. Future payments will be made through e-payments by Business to Business, Business to Customer, and Customer to Government, thanks to modern technology in telecommunications, infrastructure, and protocols (Raja &Velmurgan, 2008).

2.8 Challenges of Electronic Payments

As pertains to every system there are two sides to everything, and electronic payments is no exception. In spite of the aforementioned benefits electronic payment systems have their own challenges even in the advanced economies. Issahaku (2012) citing Wondwosson et al (2005) identified certain challenges confronting e-payments particularly in Africa, These are poor telecommunications infrastructure, limited readiness by banks, behavioural constraints, inadequate legal and regulating framework and low level of credit card access; which are

generally categorized under the subheads of Security, Infrastructure, Regulatory and Legal issues and Socio-Cultural challenges.

2.8.1 Security

Consumer perceptions of security-related issues are of major importance to electronic payments in banking, reflecting the worries of Elliot and Fowell (2000). In any information systems, the capacity to keep data and information secure is critical. Information security, according to Kumaga (2010), is the set of practises, procedures, and technology in place to ensure that data is protected from tampering or accidental change (integrity), unauthorised access (confidentiality), and is readily available (availability) to authorised users upon request. As a result, a consumer may lose faith in an unsecured e-payment system, which is crucial for user acceptability

E-payment and e-banking apps, according to Worku (2010), provide a security risk because they rely heavily on vital ICT systems, creating weaknesses in financial institutions and enterprises, as well as posing a risk to clients. To fully use the promise of ICTs in delivering e-banking services, banks must solve security problems. Integrity and authorization, secrecy, availability and reliability, and enhancement of the EPS are just some of the conditions that must be met in a secure electronic financial transaction.

Payment system integrity refers to the fact that no money is taken from a customer unless he authorises the transaction. As a result, consumers may demand that no payment be made without their express permission, particularly if they want to avoid uninvited bribery (Asokan et al, 2000).

Asokan et al. (2000) define secrecy as "the restriction of knowledge about various pieces of information related to a transaction, such as the identity of the payer/payee, purchase content,

amount, and so on." Most of the time, the people involved wish to keep their conversations private. When anonymity is sought, it may be necessary to restrict this information to only a subset of individuals (Asokan et al, 2000).

Availability and Reliability: Availability refers to making sure that information systems and data are available when they're needed; it's usually represented as the percentage of time a system may be used for productive work. All parties must be able to send and receive payments at any time (Asokan et al, 2000).

Enhancing E-payments Security: According to Tadesse and Kidan (2005), the most frequent approach of securing e-payments is to use cryptographic-based technologies like encryption and digital signatures. As a result, a trade-off must be made between efficiency and security while using these technologies. Safeguard Electronic Transaction (SET), a technology designed to secure e-payments, is in place to address security issues with the online credit card payment system (Ullah, 2010). Magnetic strip cards, such as debit cards and credit cards, are being phased out, according to Tadesse and Kidan (2005). To ensure that technologies provide maximum security, proper rules, processes, and relevant government legislation must be in place.

2.8.2 Infrastructure

According to Issahaku (2012) electronic payments are either scarce or non-existent in the majority of African countries. Most African countries lack the necessary physical, legal, and regulatory framework for electronic payments (Tadesse&Kidana, 2005). Africa has particularly limited e-payment infrastructure, such as the internet and mobile networks. Additionally, banks and other financial institutions lack the necessary automation to support electronic banking and payments. According to Bassey (2008), there are three types of barriers to e-payment system

adoption in Africa: "infrastructure, regulatory, and cultural-cum-human dimensions." According to Bassey (2008), the most pressing obstacle is infrastructure, which covers issues such as ICT accessibility, affordability, networks, connectivity, and utilisation. Interconnectivity network failure, poor bandwidth, high connectivity expenses, and frequent power outages are all difficulties that are related to these. This assumes that investments in IT infrastructure are inexorably related to Africa's future e-commerce growth. This would undoubtedly need huge expenditures in IT infrastructure by African governments and other stakeholders, as well as the formation of an enabling environment.

2.8.3 Regulatory and Legal issues

The successful deployment of e-payment schemes necessitates a collection of laws, rules, and other regulations at the national, regional, and worldwide levels. Money laundering restrictions, supervisory authority supervision of commercial banks and e-money institutions, central bank control of payment systems, consumer and data protection, collaboration and competitiveness issues are only a few of the important features (Tadesse&Kidān, 2005).

The virtual and worldwide aspect of e-payment also poses legal concerns, according to Tadesse and Kidān (2005), such as which jurisdiction will be competent and whose laws would apply in contested instances, the validity of electronic, electronic contracts, and electronic signature. In order to deploy e-payments, a legislative and regulatory framework that fosters trust and confidence while also supporting technical initiatives is critical. The lack of a sufficient legal and regulatory framework for e-payment in Ethiopia, an African country, is a barrier, according to Worku (2010).

Ethiopian present rules, according to Worku (2010), do not allow for electronic contracts or signatures. Ethiopia has failed to pass legislation addressing e-payments and e-commerce issues such as the enforceability of electronic contracts, digital signatures, and intellectual property rights, as well as limiting the use of encryption technologies. Mishra (2008) argues in a linked paper that no rules or regulations covering the legal status and concerns of e-payments have been enacted. This issue has been given top consideration, and a legislative framework should be in place soon (Mishra, 2008). It is critical to have a national regulatory and legislative framework that is consistent with regional and international accords in order to provide a secure and reliable environment (Tadesse&Kidan, 2005). Adopting model laws at the international level, such as the UNCITAL Model Law on Electronic Signatures (2001), can help achieve this goal.

2.8.4 Socio-Cultural Challenges

The job of building an international electronic payment system is complicated by cultural and historical differences in attitudes and the use of different kinds of money (e.g., credit cards in North America and debit cards in Europe) (Tadesse&Kidan, 2005). According to Tadesse and Kidan (2005), the problem is exacerbated by differences in the degree of desired security and efficiency among people of various cultures and levels of development. Customers are less inclined to accept new technologies because they have faith in the conventional payment mechanism. Customers will not use new technologies until they are convinced that their privacy will be safeguarded, and that suitable security assurance will be provided (Tadesse&Kidan, 2005). Even though new technologies are easier to use and less expensive than older ways, they must be put to the test over time to gain people's trust.

Certain electronic payment devices, such as card payments, do not provide proper security. The absence of security while conducting transactions over the Internet poses a danger to its widespread adoption. In Kumasi, internet fraud is on the rise. The teenagers obtain credit card numbers of others through unlawful means and use them to make mass purchases from online marketing sites such as e-bay and others. Consumers cannot identify fraud until their statement of accounts arrives with credit and debit cards, but credit card providers and banks do not protect against fraudulent use of their cards. As a result, consumers are fully responsible for any illegally acquired debts (Ghana web, 2004). Any electronic payment system must provide security, confidence, reliability, and efficiency. Consumers are more likely to trust and adopt a newly designed electronic payment system if it is secure.

The security precautions around deposit transfer systems are more important than the lack of rapid development of payment solutions. Payment system security is not being implemented and monitored properly. Confidence is a critical condition for the success or failure of a payment solution from the standpoint of both consumers and retailers. Doubts about the implementation of existing laws and regulations, on the other hand, heighten the perceived risk of using electronic retail payment devices.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter examines the research paradigms, the study's purpose, the study's processes, and the study's techniques. It also explains the sampling techniques, the study population, and the sample size. It also includes an outline of the research strategy as well as data collection devices. The procedures utilised to administer the research instrument, the data collection procedure, data analysis, and the measures taken to assure the instrument's validity.

3.2 Research Paradigms

A paradigm, as defined by Taylor et al. (2007, p. 5), is "a comprehensive view or perspective on something." Additionally, Weaver and Olson's (2006, p. 460) defined paradigm as demonstrating how a particular pattern can affect and guide research by stating that "paradigms are forms of beliefs and practices that govern inquiry within a discipline by providing lenses, frames, and processes for investigation." Thus, to clarify the researcher's methodological choices and structure of inquiry, an examination of the paradigm used in this study will be explored prior to discussing the specific procedures used in this investigation.

Numerous research approaches are available. A study can be quantitative, qualitative, or mixed in nature. According to Naoum (2007), the major characteristic of a quantitative study is objectivity, whereas a qualitative investigation is attitudinal in nature, incorporating the researcher's views and judgements. Rudestam and Newton (2011, p.36) define qualitative research as follows: "Whereas a quantitative researcher is likely to record a small number of previously identified variables, a qualitative researcher seeks a psychologically rich, in-depth

understanding of the individual, and would argue that experimental and quasi-experimental methods are insufficient."

Quantitative research produces "hard and reliable" data (Naoum, 2007), which are actual measurements and facts about the research topic, as well as quantities related to it (Biggam, 2008). When conducting a study, this information is useful for answering research questions that begin with "What?" or "How many?" and for obtaining reliable evidence for evaluating research theories. In quantitative research, a hypothesis is formulated at the start of the study and then deductively tested, with data collection and analysis demonstrating or disproving it (Naoum, 2007).

When non-numerical data is used or generated in a study, qualitative data is the most generally used method (Saunders et al. d, 2007). One of the most important purposes of qualitative research is to get insight into research problems (Hair et al., 2006). Qualitative data is largely concerned with gathering primary data with particular by posing questions to small groups of people and seeing their responses (Hair et al., 2006).

A qualitative investigation is considered subjective and is used when it is difficult to distinguish between the issue under discussion and the researcher's own opinions (White, 2007). It encompasses not only the facts provided by collected data, but also their interpretations, as well as the study of links, causes, and effects (Biggam, 2011). Because the purpose of qualitative research is to find answers to "Why?" and "How?" research questions, the theory evolves gradually during the investigation. By comparing actual inquiry results with present hypotheses, a researcher can create a hypothesis using an inductive technique (Naoum, 2007). In this study, the qualitative research method is investigated.

Several researchers and academicians may feel that qualitative data was less powerful and pure than quantitative data. However, qualitative data advantages, such as cost savings and the recognition that truth isn't always linked to sample size, have made qualitative research increasingly appealing for marketing research (Lehmann et al., 2008).

In line with the above, the researcher adopted qualitative approach for the study methodology since qualitative research is more useful in terms of providing insights to research problem as Lehmann et al., (2008) mentioned. And also as a result of less cost associated to using qualitative approach encourage the researcher to adopt qualitative approach.

3.3 Purpose of the Study

According to Babbie (2001), social research serves a variety of aims, with exploration, description, and explanation being three of the most prevalent and helpful. Many studies can, and frequently do, serve many aims, but each has varied consequences for other parts of study design. Exploratory research is widely used to get insights into the research's overall problem and pertinent variables (Aaker et al. 2004 According to Lehmann et al., exploratory research is used to identify basic information about the research area and formulate the hypothesis (2008). Exploratory research is the initial investigation of a speculative or theoretical idea. It's the first step in mastering a new skill. The purpose of exploratory research is to characterise problems, clarify concepts, and produce hypotheses. To begin the exploration phase, conduct a literature search, hold a focus group discussion, or conduct case studies. There is no attempt to explore a random sample of the public when conducting exploratory research; instead, researchers conducting exploratory research look for persons who are knowledgeable about a topic or process. Exploratory research seeks to produce theories rather than test them. Exploratory

research is usually qualitative, and it is important because it prevents pre-existing preconceptions from limiting potentially beneficial conclusions. Examples include brainstorming sessions, expert interviews, and posting a short survey to a social networking website (Lehmann et al., 2008).

Descriptive research is defined as an endeavour to investigate and explain a topic while also offering extra information. Here, researchers are attempting to describe what is happening in greater depth, filling in the gaps and broadening our understanding. This is also when a large amount of data is gathered rather than generating educated assumptions or elaborate models to anticipate the future - the 'what' and 'how,' rather than the 'why' (Babbie, 2001).

There are more guidelines in descriptive research. They are used to describe individuals, products, and circumstances. Descriptive studies typically include one or more guiding research questions, but they are not typically guided by defined study hypotheses. Because this form of research typically tries to explain population characteristics based on data acquired from samples, a probability sampling technique, such as simple random sampling, is frequently used. Quantitative data presentations are usually confined to frequency distributions and summary statistics, such as averages, and qualitative data presentations are usually limited to frequency distributions and summary statistics, such as averages. Descriptive initiatives include customer satisfaction surveys, presidential approval polls, and class evaluation surveys (Lehmann et al., 2008).

The basic goal of explanatory research, according to Babbie (2001), is to explain why phenomena occur and to anticipate future occurrences. Research hypotheses that specify the nature and direction of the relationships between or among variables being researched

characterise explanatory studies. Because the purpose of explanatory research is frequently to generalise the results to the community from which the sample is drawn, probability sampling is usually required. The data is quantitative and establishing the validity of the associations almost always necessitates the application of a statistical test. Explanatory survey research, for example, might investigate the elements that influence customer satisfaction and establish the relative importance of each aspect, or it might try to predict the variables that cause shopping cart abandonment.

An exploratory poll uploaded on a social networking platform may reveal that a company's clients are dissatisfied. An e-mail survey sent to a random sample of consumers who made a purchase in the previous year could be used to report the type and degree of dissatisfaction. Explanatory study would try to figure out how various factors contribute to customer discontent (Babbie, 2001).

The descriptive research approach was more suitable because the goal of this study is to gain a better knowledge of the relationship between consumer attitudes and factors affecting electronic payment systems in Ghanaian banks. The purpose of this study was to investigate and lead the evaluation of the relationship between consumer attitudes and electronic payment systems in the Ghanaian banking industry using a case study technique.

3.4 Sampling Procedures

This covers the study population, the sample size and how it was calculated, and the sampling techniques adopted for this study.

3.4.1 Population and Sample Size

According to Fraenkel and Wallen (2003) population is the group of interest to the researcher, the group to whom the researcher would like to generalize the results of the study. Additionally, Agyedu et al., (1999) explained that the population is the complete set of individuals (subjects), objects or events having common observable characteristics in which the researcher is interested. Furthermore, Jankowicz (2005) points out that in order to draw a sample; one has to know how many people are in the population and how this total is made up from people falling into various subgroups in which one might be interested.

In order to answer the research questions of the study, two populations were studied. The first population was customers who use electronic payment systems of the selected banks and the second population comprise of the bank officials of selected banks who offer services in electronic payment systems within the Kumasi Metropolis. The researcher selected branches of the three major banks (namely, Ecobank, Standard Chartered Bank and Barclays Bank) all located on Harper Road, Adum in the Kumasi Metropolis which practices electronic payments services. The estimated population for the study which consists of both employees and consumers was three Hundred and Thirty three (333).

In order to get a sample size which is representative of the population of customers, Prof David de Vaus' (2002) formula for determining sample size was adopted for each of the category or group as shown below:

$$n = \frac{N}{1 + N(\alpha^2)}$$

Where n = sample size,

N= population universe and

α = Margin of Error.

The formula adopted a confidence level of 90% and the margin of error is therefore 10% which is acceptable in social science research. The break down for each of the groups is calculated as follows:

Bank officials: $N=11$ and $\alpha=10\%$

$$n = 11 / [1 + 11(0.1^2)] = 11 / [1 + 11(0.01)] = 11 / 1.11 = 9.91 \quad \therefore n \approx 10$$

Required Sample size (n) for each Bank is 10 Respondents.

Bank Customers: $N = 34$

Applying Prof. David de Vaus' Formula (2002) $n = N / [1 + N(\alpha^2)]$

$$n = 34 / [1 + 34(0.1^2)] = 34 / [1 + 34(0.01)] = 34 / [1 + 34/1.34] = 25.37 \quad \therefore n \approx 25$$

In summary, one hundred (100) respondents were sampled for the study. For bank customers, 25 respondents were sampled from each of Ecobank and Standard Chartered bank, and 20 respondents from Barclays Bank making seventy (70) customers for all three (3) banks; and for the bank staff, 10 respondents for each bank were sampled making a total of thirty (30).

3.4.2 Sampling Technique

Purposive sampling, also known as judgmental, selective, or subjective sampling, is a non-probability sampling approach that focuses on sampling techniques where the units of investigation are chosen depending on the researcher's judgement. The key informant technique (Bernard 2002, Garcia 2006), in which one or a few people are asked to act as culture guides, is a good example of purposeful sampling. Observant, reflecting people of the community of interest who know a lot about the culture and are both able and ready to share their expertise are key responses (Bernard 2002).

The purposive sampling methodology was used in this study to select sample units or respondents from the staff, whereas the systematic sampling method was used to select

customers. Purposive sampling was used to pick bank employees since the goal was to obtain insight into the phenomenon, necessitating the use of persons who were familiar with electronic payments in the banking business. As a result, members of staff who are directly responsible for all electronic payment processes were sought and interviewed. Purposive sampling was also used to select which branch of the banks to visit within the metropolis for the study. This is guided by the fact that even though there are other branches of the selected banks in the Kumasi Metropolis, only Harper Road branches of Ecobank, Standard Chartered and Barclays banks were selected for the study.

To select staff for the study, stratified random sampling was used at the branches. This is defined as a probability sampling technique in which the researcher divides the entire population into different subgroups or strata, then randomly selects the final subjects proportionally from the different strata. This was directed by the leadership structure used by the banks in their branches. As a result, this sampling approach assured that questionnaires were distributed to employees in the clerical, supervisory, and management categories. Prior to administering the questionnaire, the managers of the branches chosen for the study were approached for approval, and a staff list of their individual branches was collected.

In the case of customers, as was mentioned earlier, the systematic sampling method was used. Systematic sampling method is defined as probability sampling procedure in which the initial sampling point is selected at random, and then the cases are selected at regular intervals (Saunders et al. d, 2007). In this method, every 10th customer that approaches the enquiry counter was served with a questionnaire about study. The customers were chosen from all the classified customer groups, such as salaried workers, retail, small and medium enterprises as well as

corporate clients with basic appreciation of electronic payments. This was intended to ensure representativeness in the sample.

3.5 Data Collection Method

Data is defined as facts, opinions and statistics that have been collected together and recorded for reference or for analysis (Saunders et al, 2007). Primary data is data that is used for a specific purpose for which it was gathered (Saunders et al, 2007). For this study, it was obtained by question guides by an experienced interviewers collect data towards electronic payment system, challenges associated with it and strategies been adopted to promote customer acceptability. The questionnaires were sent initially by the researcher but could not meet some of the key target people. The researcher then used his friends and colleagues who work with the Banks to schedule appointments with the relevant respondents. The researcher visited the banks five times before he could meet the target respondents. The purpose of questionnaires was clearly explained to the various respondents and the respondents asked that the questionnaires was to guide the interviewer in asking the relevant questions to get the required data for discussions.

Secondary data refers to existing raw information that has already been acquired by researchers for various purposes from external sources such as documentation, archive records, periodicals, and the internet (Saunders et al, 2007). Among the numerous other advantages of using secondary data, the most major advantage is that the researcher saves time and money by utilising already collected material (Peters & Mazdarani 2008). Another significant advantage of secondary data collection, according to Ghauri et al. (2005), is that it provides a broad concept of how to perform the research and the best approach to apply. Secondary data were gathered for this study from management reports on bank-commissioned feasibility studies. However, it has flaws in terms of reliability, accuracy, and integrity. The certainty of the information contained:

the data's age, the author's bias, and the location of the writing. Nonetheless, papers, texts, and academic publications authored by researchers who have previously gathered pertinent data to back their writings and who have established their credibility in this discipline were used.

3.5.1 Instruments for Data Collection

The instrument used for collection of relevant data for the study was a structured questionnaire. Two sets of questionnaires were used: one set for employees and the other for customers. The questionnaire used both open and closed ended questions. According to Saunders *et al.*, (2007) the open-ended questions offered the opportunity for the respondents to freely express themselves on the issue of customer acceptability on the use of the electronic payment system. The closed-ended questions on the other hand restricted the respondents to the options offered them. Other issues on which the questionnaire was used to collect data included the problems associated with the electronic payment system and the strategies been adopted to promote customers acceptability of the electronic payment system (Saunders *et al.*, 2007). A 5-point Likert style with Very Much (5) being the highest and Very low (1) the lowest and Average (3) was used to assess various variables for the study.

3.6 Methods of Data Presentation and Analysis

The raw data gathered during a study is meaningless unless and until it is turned into information for decision-making purposes (Emery & Couper, 2003). The data analysis process entailed condensing the raw data into manageable chunks, creating summaries, and making statistical judgments. As a result, the following actions were performed to examine the study's data. The data were adjusted to identify and correct any likely errors or omissions and to guarantee uniformity between respondents. Primary data collected via surveys were processed using the statistical package for social sciences (SPSS) version 16 software, which is commonly used by

researchers for data analysis. The data were displayed in tabular, graphical, and narrative formats. For data analysis, descriptive statistical techniques such as bar graphs and pie charts are used in conjunction with mean, median, and standard deviation. Qualitative explanations were used to provide meaning to quantitative facts and to explain their ramifications. Appropriate recommendations were made based on the research findings

3.7 Quality of Research

The researcher recognized as emphasized by Saunders et al (2007) that the sampling from the target population might not be totally free from errors and as such, efforts were made to minimize such errors. In order to ensure that the questionnaires were delivered to the right respondents, the researcher distributed the questionnaires to the respondents personally. The researcher took time to explain all questions to those respondents that sort clarification to ensure that quality work was produced. Due to strict schedules of the bank staff, the researcher had to go to banks three times a week for the period of three weeks before completed questionnaires were collected. Theses measure put in place assisted the researcher to obtain.

Finally, it is pertinent to reiterate the limitations to the study which is beyond the control of the researcher in the area of questionnaire administration and retrieval despite the efforts and measures. Concerted efforts were made to ensure better response and retrieval of questionnaires from the respondents.

CHAPTER FOUR

PRESENTATION OF DATA ANALYSIS AND DISCUSSION OF RESULTS.

4.1 Introduction

The chapter presents data analysis and discussion of results. It deals with the analysis of data gathered from the administration of field interviewing of respondents (customers and employees) of the studied chosen Banks. To represent the broad opinions of both workers and customers, the study uses descriptive statistics and graphics such as bar charts. Where necessary, frequencies, percentages, mean, standard deviation, and a variety of statistical charts were used to explain the views of the respondent from the survey.

4.2. Respondents Distribution

Purposive sampling was used to choose the sample based on targeted participants, ensuring that representative samples of all known population elements were included in the sample. The provided questionnaire elicited responses from a total of one hundred (100) consumers and thirty (30) employees (ten from each bank) from the target population of the selected banks in the Kumasi Metropolis. The distribution of respondents for the study is depicted in Table 4.1.

Table 4.1: Respondents Distribution

Details	Ecobank	StandChart	Barclays	Total	Percent (%)
Staff	10	10	10	30	30%
Customer	25	25	20	70	70%
Total	35	35	30	100	100%
Percent (%)	35%	35%	30%	100%	

Source: Field Survey, June, 2014

As illustrated in Table 4.1, the respondents selected for the study comprise of thirty percent staffs (ten each from Ecobank, Standard Chartered and Barclays banks) and seventy percent customers

(twenty- five each from Ecobank and Standard Chartered and twenty from Barclays bank) who obviously constitute majority.

4.2.2 Biodata of Respondents

This section of the study covers the gender, age, level of education; the organization the respondent is associated with and number of years they have been with their respective banks as employees and customers. In terms of gender of the respondents, the research detected that the male sample constitutes 46 percent and 54 percent for female as illustrated by Table 4.2 below.

Table 4.2: Gender and Age of Respondents

Detail	Female	Male	Total	Percentage
20-30 years	24	15	39	39.00%
31-40 years	18	15	33	33.00%
41-60 years	11	14	25	25.00%
61 and Above	1	2	3	3.00%
Total	54	46	100	100.00%
Percentage	54.00%	46.00%	100.00%	

Source: Field Survey, June, 2014

Taking a cursory look at Table 4.2, from the view point of age groups, the study revealed 20-30 years as the modal class with total respondents of 39 constituting 39%; this is followed by those within the age limit of 31-40 years which is made up of 33 respondents (representing 33%), while the age group of 41-60 years had 25 respondents (constituting 25.00%) and 3.00% were found to be 60 years plus. The results further show that, the study is made up of 46.00% male and 54.00% female as demonstrated by Table 4.2.

Table 4.3: Number of years being with bank - Customers and Staff

Years	Ecobank	Standchart	Barclays	Total	Percentage (%)
Less than 2 years	4	4	6	14	14%
2 - 4 years	6	8	7	21	21%
4 - 6 years	12	10	9	31	31%
6 - 8 years	8	5	2	15	15%
More than 8 years	5	8	6	19	19%
Total	35	35	30	100	100%

Source: Field Survey, June, 2014

As shown in Figure 4.3 both customers and staff have been with their respective banks in their mentioned capacities for some number of years. In general terms, 65.00% (Ecobank-25%, Standchart-23%, Barclays-17%) have had more than 4 years acquaintances in their banks. The study shows that the majority which is made up of 31.00% (comprising 12%-Ecobank, 10%-Standchart and 9%-Barclays) of the respondents have been with their respective banks between 4-6 years. It came to light that 19% have worked with their banks for more than 8 years; while 15% have worked for 6-8 years and 14% for less than 2 years. This findings show that, the respondents have worked with their respective banks for different years, though majority have been with the bank for more than 4 years as mentioned earlier. This result is a reflection of the fact that majority of the respondents have adequate working experience and have much knowledge on the subject matter of consumer attitude to e-payment.

Table 4.4: Level of education

Level	Staff	Customers	Total	Percentage (%)
Postgraduate	15	9	24	24%
First Degree	5	11	16	16%
Professional	10	7	17	17%
Secondary	0	25	25	25%
O' & 'A' Level	0	10	10	10%
Middle School/JHS	0	8	8	8%
Total	30	70	100	100%
Percentage (%)	30%	70%	100%	

Source: Field Survey, June, 2014

On the educational level of respondents, the study found out that, majority (25%) of the respondents (only consumers) are holders of secondary school certificates; 24% are holders of postgraduate degree, 16% are holders of first degree; 17% (10% of staff and 7% of consumers) holds professional certificates in their respective fields and 10% (only consumers) have Ordinary and Advanced level certificates while 8% are holders of Middle School/JHS certificates. This finding shows the diversity in terms of educational backgrounds of respondents of both staff and

customers of the selected banks who could be assumed to have perfect understanding of the consumer attitude towards electronic payment systems in the banking industry in Ghana.

Table 4.5: Job Position

Level	Percentage (%)
Top Management	4%
Supervisor	5%
Middle Level	6%
Operational Level	15%
Total	30%

Source: Field Survey, June, 2014

As illustrated by Table 4.5 above, top management staff as expected are the least represented with 4.00%, supervisors recorded 5.00%, middle level attained 6.00% and 15.00% are operational level. This in summary is an indication that the organizational structure of the banks are in consonance with the conventional pyramid-structure; it is a fair representation with employees which cuts across all the job positions.

Table 4.6: Departmental representation of staff

Department	Percentage (%)
Sales/Marketing	6%
Finance	10%
IT	4%
Corporate	2%
Others	8%
Total	30%

Source: Field Survey, June, 2014

The study again showed that the staff respondents are a cross section of the entire selected banks who are capable of providing the requisite answers to the questionnaires administered. Sales/Marketing registered 6.00%, 10.00% by Finance, 4.00% for IT, Corporate recorded 2.00% and others which was represented mostly by operations attained 8.00%.

The subsequent paragraphs covers the analysis and discussions of findings gathered from respondents of the various banks that are at the forefront of the application of Electronic

Payment System (EPS) to ascertain their acquaintance of the EPS and their associated perceived influence it might have on the attitude of consumers. The analysis and discussions were made based on the research objectives of the study.

4.3 Determinant Factors for the Consumer to Accept and Adopt EPS in Ghanaian Banks

In affirmation to Guo and Noor (2011), the study identified six (6) factors that affect consumers' attitude towards electronic payment system, namely usability, security, privacy, after-sales service quality, marketing mix, and reputation. The ranking of the above factors in terms of most influential to consumer attitude to e-payment is shown in Table 4.7 below.

Table 4.7: Determinant factors for the consumer to accept and adopt EPS

Criteria	Mean	Rank
Usability	4.51	3 rd
Security	4.73	1 st
Privacy	4.60	2 nd
After-sales service quality	4.45	5 th
Marketing Mix	4.47	4 th
Reputation	4.39	6 th

Source: Field Survey, June, 2014

It was detected that six factors attained very high mean value of over 4.00 (representing 80%); which is an indication of the high level of influence on consumers' attitude to electronic payments by the aforementioned factors. Moreover, in terms of ranking, the study shows that consumers consider security with a mean of 4.73 as the most important factor when contemplating the adoption of e-payment in the banking sector. This result conforms to Elliot and Fowell (2000), stressed that the consumers' perception of security-related issues was one of the most important factors in electronic payments in banking. Furthermore, buttressing the security consciousness of consumers, the respondents indicated that consumers look at privacy (4.60) as the next most influential factor. This is not surprising at all taking cognizance of the

importance consumers attaches to security. The findings of the study on privacy is in agreement with the assertion of Metzger and Docter (2003), which include anonymity, intrusion, surveillance, and autonomy and for that reason many consumers still are indifferent to electronic payments. Usability was ranked third with a mean of 4.51, followed by 4.45 for marketing mix; the fifth position was occupied by ‘After-sales service quality’ which had 4.45 and sixth position taken by ‘Reputation’ with a mean of 4.39 (87.8%). In spite of its low ranking by respondents its rating of 87.8% is high; thereby affirming Melnik and Aim (2002) position that an employees’ overall reputation has a positive and statistically significant impact on the consumers’ willingness to adopt electronic payment.

4.4 Customer Attitudes and Views towards Electronic Payment Systems.

The study looked at the variables in relation to customer attitude and views from both the staff and customers’ point of view and analysis and discussion done using Tables 4.8, 4.9, 4.10, 4.11 and 4.12, respectively.

Table 4.8: Attitudes and Views of Staff

Views	Very Much	Much	Average	Low	Very Low	Mean
To what extent are you acquainted with the concept and application of EPS	11	15	4	0	0	4.22
How important is the implementation of EPS to your company	15	12	3	0	0	4.44

Source: Field Survey, June, 2014

Questions based on attitude and views of staff of the selected banks making use of the EPS were solicited, as shown on Table 4.8. It was detected that there was a registered mass acquaintance with the concept of EPS as majority of the staff of the banks in respect of the resultant mean of 4.22, which indicates a high acquaintance to the electronic payment system. Moreover, it was also recorded that, such as system was very important to the banks as it reduces much work and creates efficiency in terms of payments through the electronic system. This payment system

ensures cashless transaction and improves the accuracy and safety of monetary transaction on the part of the banks. Therefore, the researcher agrees with Byers & Lederer (2004), concluded that changing consumer behaviour and attitudes rather than banks' cost structure determine the adoption of internet banking. Customer attitude is the driving factor to the adoption of EPS. On the part of respondent customers, a 5 point Likert scale was used for the various measurements of the study which intended to know the extent of agreement with an assertion or disagreement with the assertion of consumer attitude on electronic payment in respect of 'value towards the banking needs', 'complexity', 'compatibility' and 'trial ability'. The weighted scaled assumed for the study is as shown below:

For a five-point Likert Scale: 5 – Strongly agree, 4 – Agree, 3 – I am not sure, 2 – Disagree, 1 - Strongly disagree. The Mean measures the average response in a collective manner to each factor given by

$$\mu = \frac{1}{N} \sum_{i=1}^n xy_i \quad StdDev = \sqrt{\frac{1}{N-1} \sum_{i=1}^n x(y_i - \mu)^2}$$

Where:

x is the number of respondents agreeing to the factor?

n is the total number of respondent for extent of agreement or disagreement

N is the total number of respondents involved in the response and

y_i is the assigned weight to the level of agreement or disagreement

Therefore, for the analysis of consumer attitude based on 'value towards the banking needs', 'complexity', 'compatibility' and 'trial ability' weight were assigned to the extent of agreement to each variable in order for the mean and standard deviation of each benchmark to be found as shown in Table 4.9, Table 4.10, Table 4.11, and Table 4.12 and below.

Table 4.9: Value towards the banking needs-customers

Value towards the banking needs	Mean	Std. Dev
I find electronic payment systems by the banks an easier way to solve my banking needs	4.33	0.936
Electronic payment system through the banks gives me greater control over my finances	4.03	0.742
Electronic payment system through the banks allows me to manage my finance effectively	4.14	1.032
I find electronic payment system a convenient way to manage my finance	4.03	0.826
Electronic payment system allows me to manage my finance efficiently	4.02	0.653
Electronic payment system services are fast to use	4.43	0.742
Average	4.16	

Source: Field Survey, June, 2014

As clearly shown in Table 4.9, some of the variables have mean of values approximately to the notion of agreement of better values towards the banking needs by the three selected banks, such as “I find electronic payment systems by the banks an easier way to solve my banking needs” which recorded a mean of 4.33; ‘Electronic payment system through the banks gives me greater control over my finances’ and ‘I find electronic payment system a convenient way to manage my finance’ had a mean of 4.03.

Furthermore it is noted that, consumers’ assessment of ‘Electronic payment system through the banks allows me to manage my finance effectively’ had a mean in the dimension of 4.14 representing 82.4% with ‘Electronic payment system services are fast to use’ registering the least mean of 4.43. In summary, the study shows that with an average of 4.16 representing 83.27 % is an indication of the banks placing values towards the banking needs of consumers by having their hands firmly on the implementation of e-payment system.

Table 4.10: Complexity-customers

Complexity	Mean	StdDev
Electronic payment system requires a lot of knowledge to use	2.456	1.638
Electronic payment system is difficult to use	4.533	1.839
I am reluctant to use electronic payment system service unless it	4.016	1.046

has been tried and tested by others first.

Electronic payment system is an easy way to conduct banking transactions.	1.376	1.201
I always find it easy to remember the password of my ATM card	4.203	1.490
Electronic payment system is technologically easy to get started	2.046	1.084
Average	3.105	

Source: Field Survey, June, 2014

On the issue of complexity, the study found out that, the total average as illustrated in Table 4.10, collectively, the study recorded a level of approximately 3.105 i.e. 62.1%. However, ‘Electronic payment system is difficult to use’, ‘I am reluctant to use electronic payment system service unless it has been tried and tested by others first’ and ‘I always find it easy to remember the password of my ATM card’ are the main factors which were accepted by almost all the consumers involved in the study as evidenced by the recorded mean of 4.533, 4.016 and 4.203 respectively. The study shows that, consumers are really bothered about ‘Electronic payment system requires a lot of knowledge to use’, ‘Electronic payment system is technologically easy to get started’ and ‘Electronic payment system is an easy way to conduct banking transactions’, evident by the 2.456, 2.046 and 1.376 mean respectively. This portrays non-performance by the banks in those three major areas assessed.

Table 4.11: Compatibility-customers

Compatibility	Mean	Std. Dev
Electronic payment system with the banks is well suited to my lifestyle	2.153	0.846
Electronic payments fits well in the way I like to manage my finances	2.078	1.274
I am happy with my old way of banking operations	1.957	1.475
I am knowledgeable about the various methods for accessing my account	1.685	0.674
Automated banking services make me uncomfortable	1.372	1.586
I believe that many transactions can be done by Electronic payment system	2.434	1.085
Using electronic payment system for me is the same as paying by cash	2.746	1.684
Average	2.061	

Source: Field Survey, June, 2014

The total average in Table 4.11 illustrates that with regards to compatibility the banks attained an abysmal mean level of 2.061 i.e. 41.22%. Seven major variables were severally used to assess the compatibility of electronic payments by the selected banks; except for the notion ‘Using electronic payment system for me is the same as paying by cash’ which recorded a mean of 2.746, the rest of the six variable measured means below 2.5; with the least of them being ‘Automated banking services make me uncomfortable’, which attained 1.372 mean.

Table 4:12: Trial ability-customers

Trial ability	Mean	Std. Dev
Before I use the electronic payment system I need to try it for at least one month	4.02	0.933
There are many opportunities about electronic payment system available for us to use	4.43	0.742
Electronic payment system is available to me to adequately try it	4.00	0.663
Average	4.15	

Source: Field Survey, June, 2014

The total average as per Table 4.12 illustrates that with regards to ‘trial ability’, cumulatively, a level of approximately 4.15 i.e. 83% was attained. Three major variables were severally used to assess trial ability. ‘Before I use the electronic payment system I need to try it for at least one month’ had a mean of 4.02; ‘There are many opportunities about electronic payment system available for us to use’, attained 4.43; and ‘Electronic payment system is available to me to adequately try it’ recorded 4.00. The study revealed by the above means that consumers hold in high esteem all the necessary variables needed for trial ability are in place. This shows that, the consumers of the selected banks are actually satisfied with the trial ability with respect to e-payments in the banking sector.

The findings as per the view of the respondent customer agrees with the importance that Mwesigwa (2010) different dimensions of attitudinal belief toward EPS to users’ banking needs relating to the advantages that accrue to the users of the technology in question.

4.5 Degree or Level of Usage of E-Payments by Customers in Ghanaian Banks

Table 4.13: Extent of Adoption of E-Payment

Importance	Very Much	Much	Average	Low	Very Low	Mean
Making payment of almost all services	13	11	6	0	0	4.22
Receiving payments of all services rendered	5	7	6	12	0	3.09
Delivery of goods and services	6	2	7	10	5	2.77
Ordering and payment of inventory purchasing	9	14	7	0	0	4.01

Source: Field Survey, June, 2014

From the staff point of view, concerning issues of the importance and extent of adoption of the e-payments in the systems, it was detected that the banks virtually make all their payments through the e-payments system, as well as ordering and payment of inventory purchasing, which had a higher average score of 4.22 and 4.01 respectively, indicating a mass usage among the banks in making their payments. This is attributed to the fact that the banks make their payments through banking infrastructure which makes use of transfers and electronic payment and not cash due to the high volume and amount of goods of which such payments are made. Furthermore, payment receipts of their services rendered to their clients do not all pass through the e-payment systems. The study revealed that substantial parts of the receipts are not paid through the electronic system but rather, through cash as indicated on Table 4.13

This influenced the average mean to be 3.09 even though some part is paid to the banks through the e-payment systems. Nevertheless, delivery of goods and services of the banks are hugely not been paid through the e-payment system..

Table 4.14: Infrastructure Requirement

Infrastructure	Very Much	Much	Average	Low	Very Low	Mean
Hardware and network (computers, internet, intra/extra-net, email, modem)	13	8	9	0	0	4.12

Software (public and specialized/advanced packages, standardized processes and systems)	5	9	13	3	0	3.60
IT experts	8	12	10	0	0	4.00
Skilled staff (in e-commerce)	11	13	6	0	0	4.20

Source: Field Survey, June, 2014

The study indicated that in order for the electronic payment system to be effective, there is the need for the needed infrastructure to be in place and to make sure that, the stakeholders do have the required human resources and the available technology in place to man the e-payment system. The banks have the requisite hardware and network, the IT experts and skilled staff available for the execution of the electronic payment systems in its effectiveness as indicated by the high mean of over 4.00 (80%) as shown on Table 4.14. This indicates the preparedness and the readiness of the banks to manage and execute the electronic payment systems to its highest benefit to both the banks and their clients. However, the software (public and specialized/advanced packages, standardized processes and systems) recorded a mean of 3.60 (registering a representation of 72%).

The findings of the study agrees with Humphrey, et al (2006) and Appiah and Agyemang (2004) attaches to the importance of EPS since most electronic payments cost only about one-third to one-half as much as paper-based non-cash payment, it is obvious that the social cost of a payment system could be considerably reduced if it is automated.

4.6 Degree or Level of satisfaction of customers with EPS in the Ghanaian banks

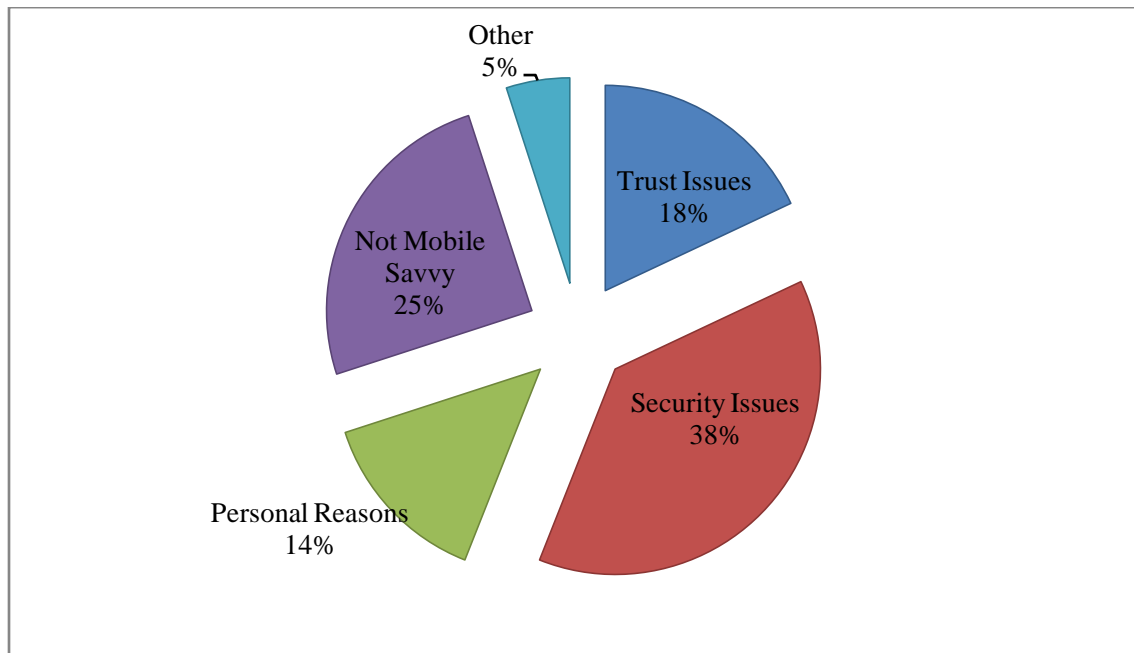
Table 4.15: Awareness of E-Payment System in Ghana

Item	Frequency	Percentage (%)
Very well aware	27	39%
Not really	24	34%
Somehow	8	11%
No, I am not aware	11	16%
Total	70	100%

Source: Field Survey, June, 2014

Contrary to Issahaku (2012) Table 4.19 indicates that 39% (27 in absolute terms) of the consumers were very much aware of the existence of e-payment system in Ghana; 34% (24 in absolute terms) was recorded for 'not really', 'somehow' registered 11% and '16% for 'no, I am not aware'. It could be deduced that the notions of 'not really' and 'somehow' represents the group of respondents who are too sure of their status as far as the awareness of e-payments in Ghana are concerned; and those two classes cumulatively registered 45%. Furthermore, in spite of the 16% of the customers sample for the study registered in respect of 'not aware' of such an existence the study indicated that majority of the populace are abreast with the development of the e-payment existence in one way or the other within the economy of Ghana.

Moreover, all those who indicated an awareness or somehow awareness also indicated that, their banks operate electronic payment system through E-zwich, ATM, money transfer on their mobile networks of which 45% indicated such preference on their mobile phones.

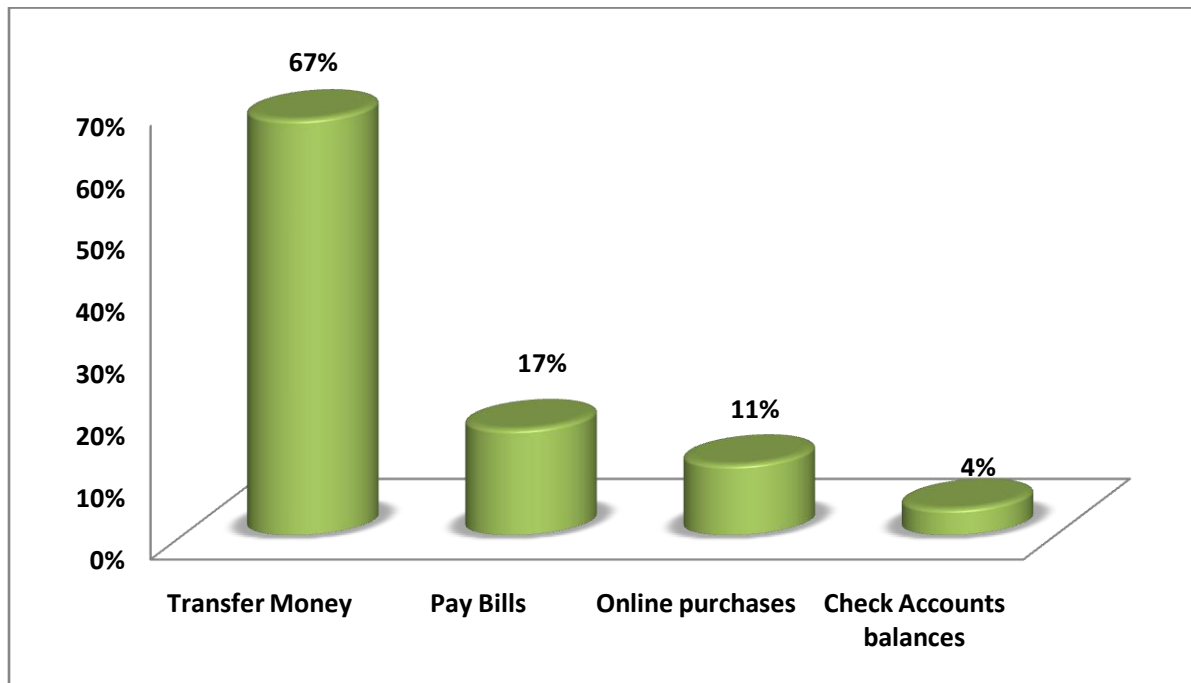


Source: Field Survey, June, 2014

Figure 4.1: Unlikeliness to use electronic-payment on mobile phone

As demonstrated by Figure 4.1, certain reasons were identified by the study as reasons for which consumers of the three selected banks do not fancy the use of mobile phones as a means of e-payment system. It was discovered that 25% of the respondents indicated that their prime reason for not opting for E-payment is 'not mobile savvy'. This is due to the fact that most of those respondents in this particular category are not acquainted with the use of mobile phone for other purpose such as making transaction (buying of goods and services) over the internet and in the shopping mall. They consider the use of mobile phones for only making calls and other social network services but not for financial services.

Besides, the study discovered that the major issue considered by customers are security reasons (registering 38%); followed by issues of trust (represented by 18%) of the usage of the mobile phones; and 14% was recorded for those whose reasons are personal.



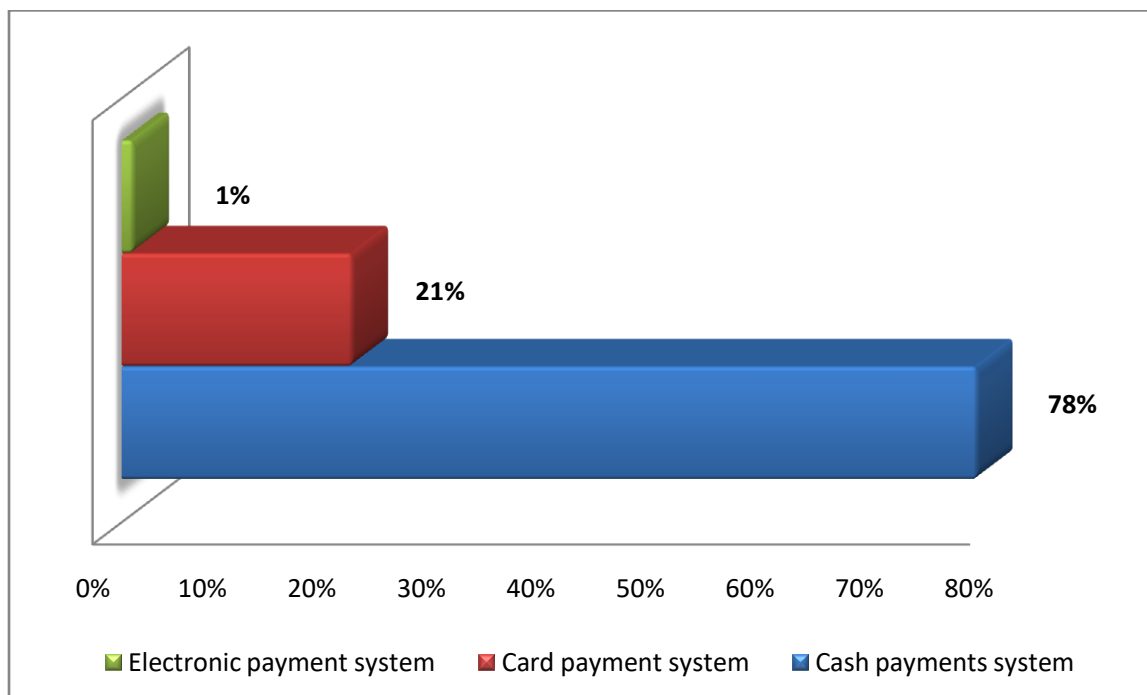
Source: Field Survey, June, 2014

Figure 4.2: Functions of electronic payment system

Consequently, as picturesquely demonstrated by Figure 4.2 above, majority (67%) of the respondents uses the e-payment system mainly for the purpose of 'Transfer Money', 17%

recorded the customers use it for payment of bills (such electricity bills, DSTV, particularly, at Ecobank); 11% for online purchase; and only 4% use it to check their account balances, through the Account alert services which provides the balance of a client the moment there is a deposit or withdrawal of accounts. Nevertheless, the usage of those services recorded a very satisfactory response (69%) as indicated by all the respondents who uses the E-payment for either money transfer, payment of utility bills, online purchases and checking of balances.

Furthermore, it was detected that as much as 78% of the populace prefer cash payment system to the electronic payment system (registering 21%) and the card payment system (1%) as demonstrated by Figure 4.3 below.



Source: Field Survey, June, 2014

Figure 4.3: Payment systems

The main reason assigned by majority of their preference to cash payment is that the Ghanaian populace is sceptical about the use of cards and electronic payment systems basically because of security and privacy matters. The ordinary Ghanaian seems more comfortable with lots of currency notes in the pocket than loading it on their cards.

The study has shown that position of Ackorlie (2009) which mentioned that Ghana has lagged way behind most of the world (including many of its peers in Africa) in the general quest to boost micro economic activity by reducing the role played by physical cash in daily transactions and by encouraging the creation of a cashless society

4.7 Challenges Faced by Consumers as they Adopt EPS in Ghanaian Banking sector

The results as stated below agrees in totality with the assertions held by Issahaku (2012) and Kumaga (2010) on the challenges that confronts Africa in general and Ghana in particular the area of EPS; which have been the bane for the continents to develop a cashless society.

Table 4.16: Major obstacles

Major Obstacles	Very Much	Much	Average	Low	Very Low	Mean
Low internet usage and fewer users	10	12	8	0	0	4.10
Security reservations	11	13	6	0	0	4.20
Expensive and complicated technologies of e-commerce	16	13	1	0	0	4.47
Product complexity and low-interest products	12	8	1	9	0	3.76
Scarcity of skilled staff	5	12	5	8	0	3.60
Inflexible organizational chart and resistance to change	4	6	12	8	0	3.29
Lagging of other supportive sectors(e.g. internet service providers)	9	14	6	1	0	4.04

Source: Field Survey, June, 2014

As shown in Table 4.16 the study identified certain major obstacles hindering the implementation and the usage of the e-payment system in the three selected banks. It was detected that the most ascetic major obstacle facing the banks is ‘expensive and complicated technologies of e-commerce’ with a mean of 4.47 (89.4%); followed closely with a mean of 4.20

was ‘security reservations’; ‘low internet usage and fewer users’ attained a mean of 4.10; ‘lagging of other supportive sectors (e.g. internet service providers)’; ‘product complexity and low-interest products’; ‘scarcity of skilled staff’; and ‘inflexible organizational chart and resistance to change recorded 4.04, 3.76, 3.60 and 3.29 respectively.

Table 4.17: Potential Application

Departments	Very Much	Much	Average	Low	Very Low	Mean
Sales/Marketing	16	14	0	0	0	4.53
Information Technology	13	15	2	0	0	4.42
Accounting and Finance	16	12	2	0	0	4.44
Technical Services	23	6	1	0	0	4.73
Production and Operations	11	15	4	0	0	4.22
Quality Assurance	7	14	9	0	0	3.94

Source: Field Survey, June, 2014

As illustrated by Table 4.17 six major departments were found to have the potential application of the e-payments which impacts on the business execution of the various departments at the selected bank. The ‘Technical Services’ with a mean of 4.73 (94.6%) shown to be the department that has a potential application of the e-payment. The study revealed that Sales/Marketing, Accounting and Finance, IT, Production and operations and quality assurance departments registered 4.53, 4.44, 4.42, 4.22 and 3.94 respectively as departments with the potential application.

Table 4.18: Perceived Benefits

Perceived Benefits	Mean
Brand and image promotion (as a pioneer and modern company)	2.96
Lower investment for establishing the sales and after sales services work	3.03
Decentralization and no restriction imposed by national borders	2.98
Cost reduction in value chain management(product/service development)	3.81
Increase of sales volumes (Premium)	3.92
Mass-customization and innovation	4.10
Promotion enhancement with lower cost desired CRM (customer relation management) through continuous service (24/7) and fast response	3.95

Good knowledge management and better stakeholder relationship	3.86
Job enrichment and high productivity	4.29
Extended corporation with management	3.87
Globally, to what extent is your company ready to embrace e-commerce	4.34

Source: Field Survey, June, 2014

As shown in Table 4.18, the results agrees with Raja &Velmurgan (2008) that the perceived benefits in respect of staff of the banks selected an enormous advantage that might be recouping as a result of the full and smooth usage of e-payment in the economy. The most perceived benefit will be readiness of the banks to embrace global e-commerce as it will make transaction across borders effectively hurdle free and help the banks to compete globally. This had a higher agreement among staff of the banks which had a mean of 4.34, followed by ‘job enrichment and high productivity’ which also had a mean of 4.29 as well as ‘mass customization and innovation’ which also had a mean of 4.10.

These are wheel for expansion of technology and improvement in service quality delivery as well as openness of the global economy to clients and individuals alike. This findings shows that, electronic payment system has a potential benefit which benefits each sector of economy and increase security of individual finance and gives the individual and corporation the openness to access services across the globe.

Therefore, the research results affirms Raja &Velmurgan (2008) position which indicated that with the advent of modern technologies in telecommunications, infrastructure and protocols, future payments will be made through e-payments by Business to Business, Business to Customer, Customer to Government.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This is the final chapter of the study and covers the summary of the findings attained through analysing the questionnaire administered to the respondents. It also looks at the conclusions and the necessary recommendations needed to improve the electronic payment system usage and management in the Ghanaian banking sector.

5.2 Summary of Findings

The following findings were picked from returned and answered questionnaires administered to solicit the opinion of respondents on the subject area of the study.

5.2.1 Determinants factors For Consumers to Accept and Adopt E-Payment Services

The study acknowledged usability, security, privacy, after-sales service quality, marketing mix and reputation as the major factors that affect consumers' attitude towards electronic payment system. In terms of ranking, the study showed that security and privacy are the major factors that consumers consider when considering the usage of electronic payment system in the banking services. Nevertheless, the convenience of usability plays very influential role in consumers' attitude towards the e-payments in the banks.

5.2.2 Customer Attitudes and Views towards Electronic Payment Systems.

Based on attitude and views of staff of the selected banks making use of the electronic payment, the research registered a high acquaintance to the concept. The importance of the concept to the banks could not be overemphasized as it reduces much work and creates efficiency in terms of

payments through the electronic system. Above all, it ensures convenient cashless transaction and improves the accuracy and safety of monetary transaction on the part of the banks.

Furthermore, consumer attitude analysis revealed that the banks places high values towards the banking needs of consumers by having their hands firmly on the implementation of e-payment system. Complexity portrays non-performance by the banks in the areas of ‘electronic payment system requires a lot of knowledge to use’, ‘technologically easy to get started’ and ‘electronic payment system is an easy way to conduct banking transactions. With regards to compatibility, the banks attained an abysmal performance of consumer attitude except for the notion on ‘Using electronic payment system for me is the same as paying by cash’. The study revealed that consumers of the selected banks are highly satisfied with the trial ability with respect to e-payments in the banking sector.

5.2.3 Degree or level of usage of e-payments by customers in Ghanaian banks

Concerning the extent of adoption of E-Payment the study revealed that the banks selected mostly use the electronic payment system a lot in transaction business with its suppliers but not in the same measure of intensity as its customers. It was detected that the banks uses it for making payment of its services and ordering payment of its inventories which are mainly done through the banking system. Nevertheless, delivery of goods and services of the banks are hugely not been paid through the e-payment system. Hence the adoption of the electronic payment system to a large extent is between the banks but not as much adopted between their clients. The study affirmed the existence of infrastructure in place to absorb the pressure that the electronic system might bring. The study shows that as far as the banks are concerned the requisite structures have been built with the needed human resources in place to help the smooth execution of electronic payment across all board and spectrum of the economy. The banks have

the requisite hardware and network, the IT experts, and skilled staff available for the execution of the electronic payment systems in its effectiveness. This indicates the preparedness and the readiness of the banks to manage and execute the electronic payment systems to its highest benefit to both the banks and their clients.

5.2.4 Challenges of EPS faced by customers in the banking sector of Ghana

On the part of the banks on the issues of obstacles to the electronic payment system, the study reviewed that the low internet and fewer users, the expensive and complicated technologies of e-commerce as well as lagging of other supportive sector forms an obstacle whiles the customers have issues with trust and security as their main problem of the usage of the electronic payment system. These findings show that, with the necessary implementation and allay of fears of customers, the electronic payment system can be an effective tool for all payments as consumers who uses it indicated a more satisfactory, convenience and mobility as the main advantage of the e-payment.

Concerning the potential application and benefits of the Electronic Payment System the study showed that, there are a lot of applications of the electronic payment system to all sectors of the economy. It was detected that; it opens the global e-commerce of which transaction can be done worldwide by the usage of the e-payments. Furthermore, it was realized that it has the potential of leading to mass customization and innovation of products which is revolutionary in improvement in products and service across all economies.

5.2.5 Functions of electronic payment system

The study discovered that the main purpose of e-payment system is ‘Transfer Money’, payment of bills, online purchase and for the checking of account balances, through the account alert

services which provides the balance of a client the moment there is a deposit or withdrawal of accounts. Consumers expressed satisfaction of the usage of those services by the banks. Also, consumers were found to prefer cash transaction to card payments and electronic payments. The main reason assigned by majority for their preference to cash payment is that the Ghanaian populace is sceptical about the use of cards and electronic payment systems basically because of security and privacy matters. The ordinary Ghanaian seems more comfortable with lots of currency notes in the pocket than loading it on cards.

5.3 Conclusion

The electronic payment system creates a platform of which payments are made conveniently and comfortably which ensures less cash in the economy and provides security and privacy. However, during the use of technology concerns of privacy and security is still an issue of concern. The study noticed trust and security as the major basis for non-usage of the electronic payment systems. Moreover, the system has a potential benefit to the economy and opens a broader market frontier for both customers and banks alike which usher them into the global payment system.

5.4 Recommendations

The following recommendations are made to help enhance the consumer attitude to electronic payment system in the Ghanaian banking sector.

5.4.1 Harmonization of all platforms of the Electronic Payment System

It is recommended that, platform for the usage of the electronic payment system should be harmonized by the central bank to use the services of all service providers across board. This will increase the usage since it will increase the convenience of the usage of both card payment

system, cash payment system and mobile payment system. This will help the customers who use the system to be sure of acceptability of their payment method throughout the country and hence increase its patronization.

5.4.2 Training of Experts on Security

It is also recommended that, stakeholders of the e-payments should conduct an effective training specifically for experts to tackle issues bordering on security, specifically, cyber-attacks and information storage as trust forms one of the major reasons of the non-usage of the electronic payment system. This will also help in arresting the insecurity of the usage of either card payment system or mobile payment system.

5.4.3 Assurance on Privacy

It is also recommended that, stakeholders should provide enough assurance for usage of electronic payment system on their privacy, since such data through electronic payments systems can be used to monitor and trace users unjustifiably during the global cyber-security and data storage. This will build confidence and trust and restore the needed assurance between companies and their customers to increase the patronization of the electronic payment system.

5.4.4 Intensification of Education

Generally, it is an acceptable fact that Ghana lags the rest of the world in the usage of EPS since consumers have limited knowledge of what services exist, how they operate and the benefits that accrues to the consumer. Most Ghanaians especially the aged, lack the skills and knowledge required to ensure efficient and effective use of the system. Therefore, the banks need to educate consumers about all their payment system options and explaining in depth the pro and cons of all

the services pertaining to EPS. Consumers will need to be informed about the potential liability for the use of new types of electronic payment, so they can understand how it differs from cash.

5.4.5 Capturing the unbanked

According to Appiah and Agyemang (2004) one of the major obstacle to electronic payments in Ghana is the ability to encourage the millions of currently unbanked persons to be part of the mainstream financial system. It is a known fact that, the challenge of the unbanked is a daunting one, to which the banking sector has not devoted much attention and resources. It is therefore recommended that the various banks should adopt strategies which will rope in the unbanked into the EPS without necessary holding accounts with them.

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APPENDIX 1**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY****SCHOOL OF BUSINESS****QUESTIONNAIRE FOR BANK STAFF/MANAGEMENT**

Dear Respondent,

This study seeks to find out Customer attitude towards the use of electronic payment systems (EPS) in the Ghanaian banking industry. The research study is in partial fulfilment for the award of Master of Business Administration Degree (Marketing). I would be very grateful if you could assist me by answering this questionnaire for me. Even though, the study is purely for academic purpose but I would like to assure you that the responses will be treated with the strictest confidentiality and anonymity.

Thanks for your time.

Sign.....

James MadoLambongang

Instructions: Please, kindly tick or mark your preferred answers in the boxes provided and write in the spaces where applicable.

SECTION A: BIO-DATA

Please complete this section by ticking the applicable box

1. Gender: Male Female
2. Age: 20 – 30years 31 – 40 years 41 - 50 years 51 – 60 years 60+ years
3. Which of the following best describes your level of education?
 - 1) Postgraduate
 - 2) First Degree
 - 3) Professional
 - 4) Secondary

- 5) 'O' & 'A' Level [] 6) Middle School/ JHS []
4. Indicate the organization you work for
- Ecobank [] Standard Chartered Bank [] Barclays Bank []
5. Number of years with the company
- 0 – 2years [] 2 – 4years [] 4 – 6years [] 6 – 8years [] over 8 years []
5. Which of the following best describe your current job position?
- Top Management [] Middle Level [] Supervisor [] Operational Staff []
6. Please tick the department in which you work below:
- Sales/Marketing [] Finance [] IT [] Corporate [] Others: Specify.....

SECTION B:

1. Determinant Factors

How would you rank the following factors that affects consumer attitude towards electronic payment system? Rank by circling the number chosen.

Criteria	Rank				
	1	2	3	4	5
Usability	1	2	3	4	5
Security	1	2	3	4	5
Privacy	1	2	3	4	5
After-sales service quality	1	2	3	4	5
Marketing Mix	1	2	3	4	5
Reputation	1	2	3	4	5

2. Attitudes and Views

Views	Very Much	Much	Average	Low	Very Low
To what extent are you acquainted with the concept and application of EPS?					
How important is the implementation of EPS to your company?					

SECTION C: Extent of Adoption of E-Payment:

The following questions are to be answered by only respondents in the following departments: sales, marketing, IT and procurement.

To what extent has the present adoption of e-payments services imparted on each of the following items with respect to your organization?

Importance	Very Much	Much	Average	Low	Very Low
Making Payments of almost all services					
Receiving payments of all services rendered					
Delivery of goods and services					
Ordering and payment of inventory purchasing					

SECTION D: Infrastructure Requirement

To what extent is your company equipped to implement e-payment services for each item listed below:

Infrastructure	Very Much	Much	Average	Low	Very Low
Hardware and network (computers, internet, intra/extra-net, e-mail, modem.....)					
Software (public & specialized/ advanced packages, standardized processes & systems...)					
IT experts					

Skilled staff (in e-commerce)					
-------------------------------	--	--	--	--	--

SECTION E: Major Obstacles

To what degree will each of these items hinder deployment of e-commerce in your bank?

Major obstacles	Very Much	Much	Average	Low	Very Low
Low internet usage and fewer users					
Security reservations					
Expensive and complicated technologies of e-commerce					
Product complexity and low- interest products					
Scarcity of skilled staff					
Inflexible organizational chart and resistance to change					
Lagging of other supportive sectors (e.g. Internet Service Providers)					

SECTION F: Potential Applications

To what extent does each department below has the potential to embrace EPS?

Departments	Very Much	Much	Average	Low	Very Low
Sales/Marketing					
IT					
Accounting and finance					
Technical					
Production/Operations					
Quality assurance					

SECTION G: Perceived Benefits

How much of each of the following potential benefits would your company obtain in the case of implementation of EPS?

Benefits	Very Much	Much	Average	Low	Very Low
Brand and image promotion(as a pioneer					

and modern company)					
Lower investment for establishing the sales and after sales services work					
Decentralization and no restrictions imposed by national borders					
Cost reduction in value chain management (product/service development)					
Increase of sales volumes(premium)					
Mass-customization and innovation					
Promotion enhancement with lower cost Desired customer relation management through continuous service(24/7) and fast response					
Good knowledge management and better stakeholder relationship					
Job enrichment and high productivity					
Extended corporation with management					
Globally, to what extent is your bank ready to embrace e-commerce?					

Any final comment or suggestion on the prospects of EPS in Ghana

.....
.....
.....
.....
.....

APPENDIX 2**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY****SCHOOL OF BUSINESS****QUESTIONNAIRE FOR BANK CUSTOMERS**

Dear Respondent,

This study seeks to find out Customer attitude towards the use of electronic payment systems (EPS) in the Ghanaian banking industry. The research study is in partial fulfillment for the award of Master of Business Administration Degree (Marketing). I would be very grateful if you could assist me by answering this questionnaire for me. Even though, the study is purely for academic purpose but I would like to assure you that the responses will be treated with the strictest confidentiality and anonymity.

Thanks for your time.

Sign.....

James MadoLambongang

Instructions: Please, kindly tick or mark your preferred answers in the boxes provided and write in the spaces where applicable.

SECTION A: BIO-DATA

Please complete this section by ticking the applicable box

1. Gender: Male [] Female []
2. Age: 20 – 30yrs [] 31 – 40yrs [] 41 - 50yrs [] 51 – 60yrs [] 60+ yrs []
3. Which of the following best describes your level of education?

- 1) Postgraduate [] 2) First Degree [] 3) Professional [] 4) Secondary []
 5) 'O' & 'A' Level [] 6) Middle School/ JHS []

4. Indicate the organization you are a customer of (You can tick more than one)

Ecobank [] Standard Chartered Bank [] Barclays Bank []

5. Number of years with the company

0 – 2years [] 2 – 4years [] 4 – 6years [] 6 – 8years [] over 8 years []

Section B: Electronic Payment System in Ghana

1. Are you aware of Electronic Payment System in Ghana?

Very well aware [] Not really [] Somehow [] No, I am not aware

2. Does your bank operate an electronic payment system (EPS)?

Yes [] No [] I don't know []

3. State which type you preferred and why?

.....

Would you like to use an electronic payment system on your phone?

Yes [] No []

4. Why wouldn't you like to have or use an electronic payment system on your phone?

Trust issues [] Security issues [] Personal reasons [] I am not a mobile savvy []

Others [], please specify.....

5. Which functions do you use in your electronic payment system? (please tick as many as apply)

Transfer Money [] Pay bills [] Online purchase [] Check accounts balances []

7. Are you satisfied with the electronic payment system functions and services provided to you?

Very satisfied [] somewhat satisfied [] Not satisfied []

8. Which one do you prefer?

Cash payments system [] Card payment system [] Electronic payment system []

Any reason(s) for your preference? Please state.....

.....

9. Are you satisfied with the cash and card payment systems in Ghana?

Very satisfied [] somewhat satisfied [] Not satisfied []

10. Which other functions would you like to have on your electronic payment system services?.....

.....

11. What kind of transactions do you normally perform with your electronic payment system?

Receiving money [] Cashless purchases [] Savings [] Transfer of funds []

Nothing []

12. In your own words, please state “what can be done” to make electronic payment system catchon in Ghana, and towards a cashlessociety

.....

.....

SECTION: C Consumer Attitudes

The table below shows alternative responses; evaluate each statement and tick in the appropriate box basing on the following scale.

I strongly disagree	I disagree	I am not sure	I agree	I strongly agree
1	2	3	4	5

Value towards the banking needs	1	2	3	4	5
I find electronic payment systems by the banks an easier way to solve my banking needs					
Electronic payment system through the banks gives me greater control over my finances					
Electronic payment system through the banks allows me to manage my finance effectively					
I find electronic payment system a convenient way to manage my finance					
Electronic payment system allows me to manage my finance efficiently					
Electronic payment system services are fast to use					

Complexity					
Electronic payment system requires a lot of knowledge to use					
Electronic payment system is difficult to use					
I am reluctant to use electronic payment system service unless it has been tried and tested by others first.					
Electronic payment system is an easy way to conduct banking transactions.					
I always find it easy to remember the password of my ATM card					
Electronic payment system is technologically easy to get started					
Compatibility					
Electronic payment system with the banks is well suited to my lifestyle					
Electronic payments fits well in the way I like to manage my finances					
I am happy with my old way of banking operations					
I am knowledgeable about the various methods for accessing my account					
Automated banking services make me uncomfortable					
I believe that many transactions can be done by Electronic payment system					
Using electronic payment system for me is the same as paying by cash					
Trial ability					
Before I use the electronic payment system I need to try it for at least one month					
There are many opportunities about electronic payment system available for us to use					
Electronic payment system is available to me to adequately try it					