

CHRISTIAN SERVICE UNIVERSITY COLLEGE



SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING AND FINANCE

**USER ACCEPTABILITY OF ELECTRONIC PAYMENT SYSTEM AND PAYMENT
PROBLEMS IN KUMASI:
(A CASE STUDY IN THE KUMASI METROPOLIS)**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND
FINANCE, CHRISTIAN SERVICE UNIVERSITY COLLEGE SCHOOL OF
BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
AWARD OF A DEGREE IN BACHELOR OF BUSINESS ADMINISTRATION**

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STATEMENT OF AUTHENTICITY

We have read the university regulations relating to plagiarism and certify that this report is our own work and do not contain any unacknowledged work from any other source. We also declare that we have been under supervision for this report herein submitted.

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DEDICATION

We dedicate this project work to our parents.

ABSTRACT

The purpose of our study was to examine the different electronic payment schemes used by financial institutions within Kumasi Metropolis. The study was to enable us to assess and explore the issues of user acceptability of electronic payment systems and problems associated with payments.

The design of the study was both exploratory and descriptive. We used both survey and case study techniques. The study population was 685, which included bank managers, employees, customers and corporate bodies. We sampled 600 of the total population. We administered questionnaires to the customers and employees. We also conducted structured interviews with the managers of the banks due to their busy schedules. The questionnaire enabled us ascertain quantitative data whereas the structured interview provided qualitative data for our study. We analyzed the quantitative data with the Statistical Package for Social Scientist (SPSS) and drew inferences from the qualitative data.

In our study we found out that, 25.6% of respondents saw electronic payment as incentive and low cost to their services provided by banks in terms of time etc. 27.3% of respondents view electronic payment as a control system of banking. 20.0% of the respondents saw electronic payment as an easy way of budgeting and recording keeping. 16.1% of our respondents view electronic payment as a convenient mode of banking. 11.0% of our respondents saw electronic banking as a way of maintaining their privacy and security. Generally electronic banking has provided a convenient way of banking by providing the fastest and secured payment system to customers.

We recommend future studies to be conducted on the level of security and safety of electronic payment systems. This would provide a holistic study related to customers' account security.

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CHAPTER ONE

1.1 Background to the study

Mankind has witnessed an improvement of electronic payment instruments meant to facilitate trade and make payments much easier. Before the introduction of electronic payment, Customers had to queue up and spend more hours to interact with a teller to make transactions (Abor, 2004). The inconveniences caused by these long queues can discourage someone to make payment (Abor, 2004).

Over the years, individuals have advocated for the replacement of physical cash and the introduction of more flexible, efficient and cost-effective retail payment solutions. Countless conferences and seminars have been held to discuss the concept of “cashless and chequeless” society (Bank for International Settlement, 1998).

Electronic retail payment has been designed to help individual customers and companies as well as the banks itself in eliminating or reducing some of the problems inherent in the settlement and payment process (Federal Reserve Bank of New York, 1996). Customers can make payment without actually moving to the bank’s premises. They may also have access to their account information and even transfer money to other accounts in the comfort of their homes. This is also designed to increase productivity if less time is spent in monetary transactions. Electronic services such as Online Retail Banking are making it possible for individuals and small institutions to take advantage of new technologies at quite reasonable costs (Abor, 2004).

In Ghana, Electronic Retail Payments are being continuously developed, to replace or reduce Paper-based payments. Many new payment services have come into existence in recent

years, most of which are based on technological innovations such as card, telephone and the Internet (Abor, 2004).

1.2 Statement of the Problem

Payment for goods and services in Ghana is characterized by long queues; long distance traveling and time wasting that generally affect business activities and ultimately economic development. (Sarpong, 2003)

The payments and clearing system in the country is under developed. For instance, cheques drawn on different regions can take several weeks. The banking halls continue to be immersed with the long queues as people come in to collect their wages or salaries. Many people have been holding large sums of money outside the banking system as a result of the ordeal one has to go through before withdrawing money or making payment. (Sarpong,2003)

However, the financial institutions in Kumasi and Ghana in general have introduced an electronic payment system to help ease congestions in banking halls but only few customers seem to have adopted this system of payment as congestion still exist in banking halls.

The research work therefore seeks to assess User Acceptability of the Electronic Payment System and Problems associated with this system and make recommendations. This research is conducted within the Kumasi Metropolis but is applicable to other financial institutions in Ghana.

1.3 Research Questions

With any new payment product, it is important that the key features of the product are clearly explained to the consumers and ensuring that the product actually works as described.

Customers who fail to fully understand how the system work and the benefits to be derived from its use may take inadequate precautions in using the product. For this study, the following are the major research questions:

-) Can electronic payment system replace existing payment systems and solve payment problems?
-) How can customer attitudes about electronic payments change?
-) What are the impediments to market development and innovation in electronic payments?
-) What measures can be put in place to ensure maximum security in e-payment transactions?

1.4 Objective of the Study

-) To describe the different electronic payment schemes available in Kumasi.
-) To discuss patronage and ascertain its contribution to the elimination or reduction in problems inherent in the payment process in Kumasi.
-) The research aims to evaluate recent and potential future trends in electronic payments in Kumasi.
-) To assess and explore issues of user acceptability of the current payments systems.
-) To assist consumers, businesses and service providers in Kumasi to understand the various electronic payment alternatives.

1.5 Scope of the Study

The discussion will concentrate on electronic retail payment systems – focusing particularly on the needs of consumers. While there are many emerging types of electronic retail payment schemes, special emphasis will be given to payment methods that utilize the services of banks. Such schemes include ATMs, the Internet, mobile phone, debit and credit cards, etc.

It is not possible to capture all the important details about an entire payment application; however, an insight into a selection of these payment systems can be valuable in helping people understand different payment systems in relation to ones that they may already be familiar with.

This study limits its focus to schemes available in Kumasi and sometimes comparisons are made with schemes pertaining to other parts of the country. The research aims to put the current developments into a broader context; to describe, classify and analyze a specified segment of initiatives. The research tends to cover these banks on its area of study. These are Agricultural Development Bank, National Investment Bank Ltd, Barclays Bank of Ghana Ltd, Cal Bank Ltd, Ecobank Ghana Ltd, Access Bank Ltd and Ghana Commercial Bank Ltd.

1.6 Significance of the Study

Since the late 90s, many African countries have started to implement policies that will enhance the electronic retail payment systems. Following advances in electronic payment, information technology have created both the opportunity to improve the effectiveness of existing payment transactions. Advances in networked information technology, more computing power and lower computing costs are driving more and more firms toward the paperless world of electronic commerce. In particular, the Internet's potential for providing

communications and payments more conveniently and less expensively is attracting corporations. (Financial Services Technology Consortium, undated)

Despite the recent remarkable successes in electronic payment in Ghana, there is more room for improvement to promote non-cash payment systems since a reliable and efficient payment system is crucial to the orderly operation of a nation's banking and financial system, its real economy and to the reputation of the central bank. (Central Banking, 2004)

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

New electronic payment systems are being introduced into Ghana at an increasing rate. Forecasts indicate that this trend will continue for foreseeable future. Early work concerned with technological innovations and banking in Ghana Abor (2004). Additional work by Deutsche Bank Research (2001), Vartanian (2000) and Birch (1998) looks at the future of electronic payments.

Several researchers have addressed the problem of retail payment, Ferguson (2000), Malek (2001), Bank for International Settlements (2000), Mester (2000) and OECD Information Technology Outlook (2000) studied various aspects of this subject.

The work carried out by Abor's analyses the perception of bank customers pertaining to the effect of technological innovations on banking services in Ghana. A number of studies have also concluded that information technology has appreciable positive effects on bank productivity; cashiers' work, banking transaction, bank patronage, bank services delivery, and customers' services (Balachandher et al, 2001; Hunter, 1991; Yasuharu, 2003). In effect, it enhances savings mobilization and financial intermediation. Efficient payment systems rely on non-cash payments, and that an efficient and reliable payment system facilitates economic development. (Annon, 2003)

2.1 Theoretical Framework

The theories explained in this chapter deals with the reasons why consumers adopt electronic payment and whether this can alleviate some of the problems inherent in the traditional

payment schemes (i.e. cash payment). As explained earlier in chapter two, there are no single or widely accepted theories that explain the adoption of electronic payment instruments. We will develop our own theories which would be used to analyze whether electronic payment mechanisms have reduced or eliminate the problems associated with cash payments in Ghana.

Payment methods based on electronic instruments have undergone many changes recently. This chapter will also provide a brief overview of the recent trends and map the current situation.

2.1.1 Definitions of Electronic Payment Systems

Due to the nature of electronic payment systems, there have not been a widely or universal definition for it. But we have attempted to bring some few notable definitions given by some writers. These range from now-familiar automated teller machines (ATM) to Internet bill payments.

According to Humphrey et al (2001), electronic payment refers to cash and associated transactions implemented using electronic means. Typically, this involves the use of computer networks such as the Internet and digital stored value systems. The system allows bills to be paid directly from bank accounts, without being present at the bank, and without the need of writing and mailing cheques.

E-payment can be 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’. (Agimo, 2004) It was also defined as “a payer’s transfer of a monetary claim on a party acceptable to the beneficiary (European Central Bank, 2003) . “Electronic payment is a financial exchange

that takes place online between the seller 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.” According to Kalakota & Whinston (1997, p. 153), For the purpose of this thesis, the term “electronic payment” refers to as convenient, safe, and secure methods for payment of bills and other transactions by electronic means such as card, telephone, the Internet, EFT, and etc. Electronic payment gives consumers an alternative to paying bills and debts by cash, cheque, money order, etc. Its main purpose is to reduce cash and cheque transaction.

For the achievement of effective and efficient retail payment systems, the following considerations that shape the choice of payment method for consumers and businesses should be taken into account; the convenience, reliability and security of the payment method, the service quality, involving such features as the speed with which payment are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improve the speed, convenience and flexibility of different payment systems. According to Pariwat & Hataiseere (2004)

2.1.2 Customers’ Wealth/Levels of Income

Consistent with Kwast and Kennickell (1997) research, wealth has an important role to play in terms of consumer’s decisions on payment choice. Consumers’ wealth may influence payment choice and the availability of payment instruments that one can choose. For instance, while wealthy consumers may be able to fund their obligations generally, consumers that experience brief financial shortfalls may not find electronic bill payment

desirable as a payment instrument. (Mantel, 2000) In such a situation, the consideration of the risk factor will let some consumers to avoid using pre-authorized electronic bill payment

2.1.3 Educational Level

On the bank customers' survey, we also focused on education, because this might affect the demand for electronic banking products. For example, Kwast and Kennickell (1997) have illustrated how education play important role in determining household use of e-money products. Kwast and Kennickell concluded that the US market for such products is still highly specialized, with the demand coming almost entirely from higher income, younger, and more educated households that have accumulated significant financial assets.

Educational levels of customers determine whether consumers will adopt electronic payment or not. Studies have shown that highly-educated people patronize electronic payment products than less-educated people. The technicalities involved in some electronic payment transactions discourage less educated customers to patronize its use. (Annon, 1999)

2.1.4 Employment Levels

Those employed who receive their pay through the banks are more likely to use electronic meansof payment. Employees, through their constant contacts with banks are more exposed to paymentproducts, and are therefore, likely to patronize the products. According to Ferguson (2000), morethan half of the workers in the US, in 2000 receive a direct deposit of their pay through theAutomated Clearing House (ACH).

2.1.5 Personal Preferences

Another factor influencing payment instrument choice pertains to customers' personal preferences. The following six general consumer preferences were identified:

- 1) Control and customer service
- 2) Budgeting and record keeping
- 3) Incentives and low cost
- 4) Convenience
- 5) Safe, easy and convenience
- 6) Privacy and security.

In our analysis of the empirical data, we may highlight these preferences but not in detailed.

2.1.6 Transaction-Specific Factors

Transaction-specific is another factor that influences consumer decision-making in payments. This relates to the specific nature of the payment being made, where it is being made, and how the consumer views their relationship with the merchant. (Mantel, 2000) The use of a particular payment instrument may depend on the value of the bill (whether it is large or small). Also the availability of payment infrastructure determines the choice of payment instrument. (Mantel, 2000)

2.1.7 Marketing Campaigns

Another factor that influence consumer decision-making relate to marketing campaigns. Increased use of electronic payment instruments are believed to have been achieved through large-scale consumer marketing campaigns funded by some financial institutions. The

marketing activities employed by the financial institutions are expected to aid utilities by educating consumers as to the benefits, ease of use, convenience, and security of paying bills electronically. (Mantel, 2000)

2.2 Recent Trends in Electronic Payments

In this section, we will provide a brief background to some of the rapid emergence of methods which use electronic means to make payment. Some of the new techniques represent automation of existing methods of payment, whereas others are new or revolutionary.

2.2.1 Card Payments

Automated Teller Machine (ATM)

ATM is a combined computer terminal, with cash vault and record-keeping system in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN). It can also be accessed by punching a special code number into the computer terminal linked to the bank's computerized records. (Rose, 1999) Mostly located outside of banks, it can also be found at airports, shopping malls, and places far away from the home bank offices, and offering several retail banking services to customers. First introduced as cash dispensing machines, it now provide a wide range of services, such as making deposits, funds transfer between two or more accounts and bill payments. (Abor, 2004)

Electronic Purses/Wallets

There are two categories of e/wallet, these are;

- a) E-wallets that store card numbers. This is a virtual wallet that can store credit card and debit card information. Other information that can be stored on this card is passwords, membership cards, and health information. Some of the e-wallets make it easier for consumers to buy goods using the card. (Rudl, undated)
- b) E-wallets that store card numbers and cash. The second category of a digital wallet is where consumers store digital cash, which has been transferred from a credit card, debit card or virtual cheque inside their e-wallets. It operates like having a virtual savings account where charges are made for ongoing purchases, particularly micro-payments. (Rudl, undated)

Electronic Funds Transfer at Point of Sale (EFTPOS)

EFTPOS is an online system that involves the use of plastic cards in terminal on merchants' premises and enables customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases. It uses a debit card to activate an EFT process. (Chorafas, 1988) It actually comprises two distinct mechanisms: debit and credit cards.

Credit Cards

This is a plastic card that assures a seller that the person using it has a satisfactory credit rating and that the issuer will see to it that the seller receives payment for the goods or items delivered. This represents the automated capture of data about purchases against a revolving credit account. (Pierce, 2001)

Debit Cards

These were a new form of value-transfer, where the card holder after keying of a PIN, uses a terminal and network to authorize the transfer of value from their account to that of a merchant. Introduced more recently, debit together with credit cards represent the most rapidly growing method of payments in several OECD countries. (Pierce, 2001)

When a payment is made through a debit card, the funds are immediately withdrawn from the purchaser's bank account. The advantage is that the buyer has the funds to make the purchase and paid for right away, so there's no credit card shock when the statement arrives in the mail. (Pierce, 2001)

Smart Cards

A smart card is a plastic card with a computer chip inserted into it and that store and transacts data between users. (Smart Card Basics, 2004) The data, in a form of value or information is stored in the card's chip, either a memory or microprocessor. "Smart card-enhanced systems are in use today throughout several key applications, including healthcare, banking, entertainment and transportation." (Smart Card Basics, 2004) One of the features of this card is that it improves the security and convenience of transactions. The system works in virtually any type of network and provides security for the exchange of data. (Smart Card Basics, 2004)

2.2.2 Mobile

According to Zika (2005), "a mobile payment is an electronic payment made through a mobile device (e.g., a cell phone or a PDA)." 1 This uses a mobile device to initiate and

confirm electronic payment. In the field of payments, mobile phones opportunity is seen in the embedded SIM (smart) card used to store information of users. The advantage of not needing to use other devices such as modems, point of sale terminals, and card readers for mobile payments is also quite clear. (Zika, 2005)

Costello (2003) envisaged that further developments in the mobile payments content were inevitable in the near future. Mobile devices might be used in micro-payments such as packing-tickets, and charging mobile phones.

2.2.3 Telephone Banking

Telephone banking or telebanking is a form of virtual banking that deliver financial services through telecommunication devices. Under this mechanism, the customer transacts business by dialing a touch-tone telephone connected to an automated system of the bank. This is normally done through Automated Voice Response (AVR) technology”. (Balachandher et al, 2001). Telebanking has numerous benefits for end users. For the customers, it provides increased convenience, expanded access and significant time saving. Instead of going to the bank or visiting an ATM, retail banking serves the same purpose for customers to get the services at their offices or homes. This saves customers time and money, and gives more convenience for higher productivity. (Leow, 1999)

2.2.4 Personal Computer Banking (Home Banking)

This term is used for a variety of related methods whereby a payer uses an electronic device in the home or workplace to initiate payment to a payee. In addition to computer technology, it can be performed using the telephone and IVR2. (Chorafas 1988)

“PC- Banking is a service which allows the bank’s customers to access information about their accounts via a proprietary network, usually with the help of proprietary software installed on their personal computer”. (Abor, 2004) It is used to perform a variety of retail banking tasks, and offers the customer 24-hours services. “PC-banking has the advantage of reducing cost, increasing speed and improved flexibility of business transactions.” (Balachandher et al, 2001)

2.2.5 Online/Internet Payments

This is the means by which customers transact business with a bank through the use of the Internet network. Customers can access their bank accounts and make transfers through a web site provided by the bank and complying with some rigorous security checks. The Federal Reserve Board of Chicago’s Office of the Comptroller of the Currency (OCC) Internet Banking Handbook (2001), describes Internet Banking as “the provision of traditional (banking) services over the internet”.

The Internet is able to offers instantaneous settlement of transactions and the prospect of a highly cost effective payment system for low value transactions. The Internet has the potential to reach majority of customers since it can disseminate "advertising material" through World Wide Web home pages and product databases. (Neuman and Medvinsky, 1996).

2.2.6 Electronic Cheque.

Electronic cheques are used in the same way as paper cheque – the clearing between payer and payee is based on existing and well known banking settlement system. The only difference between paper and electronic cheques are the dematerialization of the payment

instrument which is passed on via computer networks like Internet in the later technology. ECheck proposed by Financial Services Technology Consortium (FSTC) is an example of the electronic cheque. (United States Department of the Treasury Conference, 1996)

Electronic cheques also known as e-cheques are virtual cheques that allow consumers to use Internet in making cheque payments. The buyer fills out a form (that looks like a cheque on the screen) with the necessary information, and then clicks the "send" button. The information then goes through a computer or a transaction service, depending on which way one chooses to accept check payments. (Rudl, undated).

2.2.7 Digitized 'E-Cash' Systems

E-cash payment system takes the form of encoded messages and representing the encrypted equivalent of digitized money. One key attraction is that it avoid the time and expense associated with becoming an approved credit card accepting merchant. It does not require the use of intermediary; therefore anyone can effect payment directly. (Crede, undated). However, most present schemes require the direct involvement of a bank for its system of digital cash issuance. According to Crede (undated), "a bank is integral to the scheme, since it is required to hold collateral and to provide ultimate settlement of e-cash to more directly convertible currencies."

2.2.8 Digital P2P Payments

Bank-based P2P3 system allows users to send money from bank accounts and credit card electronically. It employs e-mail services to notify recipients of an impending funds transfer.

Most bank-based P2P requires the sender to register with the P2P site. Most of the providers allow users to move money a limited amount of money around the world. (Rudl, undated)

P2P e-mail payments are offered mainly through Yahoo!, the Postal Service, and some banks. Example of companies that offers P2P payment services is MasterCard which enable users to use digital wallet to make payments from a credit or debit account to any person in the world, in their local currency, directly into their bank account or as a check mailed to that person. (Rudl, undated)

2.3 Empirical Data on electronic payment system in Ghana

It describes the various forms of electronic payment mechanisms integrated into the banking system in Ghana. Each of these evolved in different ways, but in recent years different groups and industries have recognized the importance of working together.

As pertains in many other countries (both developed and developing), cash is by far the most widely means of payment in Ghana. (Acquah, 2001) Whereas cash is use for payment of low values in other developed countries, a significant portion of both medium and large-value transactions are made through cash in Ghana. This is particularly true in the capital, regional, district capitals. The intent of this section is to provide some key information necessary for a more detailed analysis in the next section. The various electronic delivery channels in Ghana are discussed below.

2.3.1 ATM Card

A major advance in the electronic aspect of the payment systems was the introduction of automatic teller machines (ATMs). The goal is to reduce over-the-counter workload of

human tellers. Banks in Ghana, providing this service are currently engaged in finding ways whereby banks could have reciprocal use of each other's ATMs. This would imply that customers would not be limited to the use of their bank's ATM, thus providing greater convenience for their customers. (Abor, 2004)

The first bank to introduce this service in Ghana was The Trust Bank, which has installed ATMs since 1995 that allow customers 24-hour access to their funds. The Trust Bank has networked all its branches to an ACH4 so that customers can withdraw funds at any of their branches. Following closely are Standard Chartered Bank and Barclays Bank. The two banks have centralized operations at their respective head office, and have networked all their branches to enable customers to check their balances, make withdrawals, or deposit funds into their accounts. (Abor, 2004)

According to Abor (2004), Ghana Commercial Bank (GCB) in collaboration with Agricultural Development Bank started to offer ATM in 2001.

2.3.2 Credit Card

Major international credit cards such as Visa, MasterCard, American Express and others such as Maestro are accepted as a medium of payment in major shops, hotels, restaurants, supermarkets and travel agencies in Ghana. Most of these cards may be also used at ATMs belonging to some of the banks to collect small amounts of local currency. (Ghanaweb, undated)

2.3.3 Debit Card

Standard Chartered Bank was the first bank to launch debit card in Ghana in 2001. This has been incorporated with the ATM cards, which have increased its availability to the public. The card gives customers access to their funds through SCB ATMs or any VISA branded ATM throughout the world. In 2004, the First Atlantic Merchant Bank (FAMB) introduced the widely regarded American Express into the Ghanaian market. Most of the categories of the Express card – the Basic Green Card, the Golden Card, and the Platinum Card, are on offer to its customers with appropriate credit rating.

Today, majority of the banks operates ATMs in Ghana and it has been the most successful in the country. ATMs have made it possible for people to transact business without having to visit their branch for the same services. GCB have is known as READYCASH where customers can access his/her current or savings account. Through any of their READYCASH dispensers networked, customers can do all sort of transactions throughout the day. These cash dispensers can be found in fifteen locations in the country.

2.3.4 Electronic Cards

SG-SSB introduced the first major cash card in May 1997. This card is known as ‘Sika Card’, onto which a cash amount is electronically loaded. Currently, First Atlantic Bank has launched a new product called ‘eTransact’. This also operate as the ‘Sika Card.’ (Abor, 2004) Transaction Management Services (TMS) based in Ghana introduced a domestic online debit card POS (point of sale) services in June 2002 that allows consumers to effect immediate payment for goods and services from their accounts through the online electronic transfer of funds with banks connected to TMS inter-bank switch. Three banks – Ecobank,

Cal Merchant Bank and The Trust Bank with their domestic debit card “E-Card” was the first to utilize the system in 2002. The card is online in real time, and permits holders to instantly purchase goods and services without paying cash but simultaneously debiting the cardholder’s account and crediting the merchant’s bank account.

Barclays Bank Ghana has launched another unique product called Travelex Cash Passport. It is a card that enables customers to carry funds easily and access the Visa ATM machine with a PIN. The cash is loaded with US dollars but can be withdrawn in local currency from any of Visa ATM machines worldwide. The bank has also partnered with VISA and Travelex World Wide Money (Wildcard) to make the product accessible in all countries. (Accra Daily Mail, 2004)

2.3.5 PC Services

Some banks have started to offer PC banking services, mainly to corporate clients, to initiate a range of automated transactions from their own offices or homes. “The banks provide the customers with the proprietary software, which they use to access their bank accounts, sometimes via the World Wide Web (WWW). This is on a more limited scale though, as it has been targeted largely at corporate clients.” (Abor, 2004) Four banks currently offer PC banking services in Ghana – GCB, Eco bank, SCB, and Barclays. StanChart with their Domestic Payment Service (DPS), allows subscribers to transfer payment and direct debit information in an electronic format from their computers to the bank.

2.3.6 Mobile

Currently, only Standard Chartered Bank provides active mobile banking services known as SMS Banking. This allows customers to do some banking enquires on their mobile phones. Customers do not need to go to their branch to do the following transactions: balance enquiry, transaction enquiry, cheque book request, statement request, and payment of utility bills. SG-SSB Bank also launched a product called Sikatext. This is a smart banking service that enables customers' access to their financial information by a text message via their mobile phone any time in the day. With this product, customers can easily check their account balance. Although, the services this offered do not include payment services, the bank has indicated to include such service in future. (SG SBB, undated)

2.3.7 Internet

Stanchart has started the first Internet Based On-line Banking Service in Ghana. SSB Bank Ghana is one of the three banks in Ghana to offer Internet banking services via the installation of the state-of-the-art software called Flexcube. Twelve (12) branches of the bank have already gone live on Flexcube. (Mishra, 2002) Currently, Internet payment is not well-developed in Ghana.

2.5.8 Telephone

Telephone banking is on the ascendancy in Ghana. "Barclays Bank (Gh.) launched its telephone banking services in August, 2002. SSB Bank also launched its "Sikatel" or SSB Call Centre telephone banking in 2002. The services available with this system are; to

ascertaining credible information about the bank's products, the customers' complaints, bank statements and cheque book request and any other complaints and inquiry." (Abor, 2004)

2.3.9 Electronic Purse

Standard Chartered Bank Ghana and Visa International launched the first domestic Visa Horizon– a chip-based, pre-authorized card, offline payment card (COPAC). The chip is an electronic purse that enables funds to be loaded from their account and has offline capabilities. The card can be used to make purchases or withdraw cash. GCB and ADB in collaboration with Mondex introduced the Mondex system into Ghana in 2003. The system is based on a smart card that can be "charged" with money from a bank account, effectively turning the card into an electronic purse. Other cards that can be regarded as e-purse are SSB's "Sika Card", Trust Bank's "Auto Cash Card", SCB's "Money Link Card", and Barclays Bank's "Barclay Cash Card".

2.4 How E-Payment has helped to solve Retail Payment Problems

The introduction and use of electronic payment instruments holds the promise of broad benefit to both business and consumers in the form of reduced costs, greater convenience and more secure, reliable means of payment and settlement for a potentially vast range of goods and services offered worldwide over the internet or other electronic networks. (Humphrey et al, 2001)

One such benefit is that electronic payments enable bank customers to handle their daily financial transactions without having to visit their local bank branch. E-payment products could save merchants time and expense in handling cash.

The resource cost of a nation's payment system can account for 3 percent of its GDP (Humphrey, Pulley, and Vesala 2000). Since most electronic payments cost only around one third to one-half as much as paper-based non-cash payment, it is clear that the social cost of a payment system could be considerably reduced if it is shifted to electronics. Automating could increase operational efficiency. Automating and streamlining electronic payments made from self-serve channels such as ATMs, branch office terminals, and point-of-sale (POS) systems and also can reduce paper-based errors and costs.

New payment mechanisms have enhanced consumer convenience. Bill-payment over the Internet is growing in popularity among people who have adopted other new technologies, such as computer and ACH credit (debit deposit). New payment arrangements, such as the government's Electronic Benefit Transfer system (EBT) or payroll cards, enable people without bank accounts to use ATM services or POS debit services. For consumer-to-business point-of-sale and bill payments, electronic payments will reduce the need for business working capital associated with the delay in processing paper-based non-cash payments.

2.5 Positive Benefits for using E-Payment

The use of e-payments has had some benefits for consumers in a form of choice, convenience, cost reduction, control, and trust, some of these cannot be provided by the conventional payment methods. For the economy, it promotes economic growth through fundamental benefits such as:

- ❖ increasing levels of security and consumer empowerment
- ❖ greater economic transparency
- ❖ increasing economic stimulation

- ❖ widened participation in the banking system;
- ❖ enhancing transactional efficiency
- ❖ Expanding payment channels.

2.6 Barriers to retail payment systems in Ghana

2.6.1 Introduction

It has long been clear that electronic payment products offer a series of benefits to all parties- Governments, consumers, merchants, and financial institutions. For about two decades now, business journalists and economists have heralded the coming of a paperless society in which electronic payments will replace the use of cash and paper cheques in retail transactions.

(Experts on Electronic Commerce, undated).

Although tremendous improvements in telecommunications and computing have facilitated the development of safe, electronic retail payments, neither the number nor volume of paper-based transactions has dropped appreciably in most economies worldwide. Ghana is of no exception. While prospects for electronic payments in Africa and in particular Ghana continue to improve, problems persist. There are a number of impediments of different dignity for the use of electronic payment products. These seek to highlight on the various barriers to the efficient and effective use of the electronic payment products in Ghana.

2.6.1 High Cost of Access

Before users can engage in electronic retail payments they must invest in devices that give access, and then purchase that access to the networks that constitute the Internet. In an attempt to connect to the Internet and other networks, users in Ghana need to overcome

potential barriers such as high cost of Internet access, lack of local loop infrastructure and high cost of international interconnection.

Cost of research and development is militating against electronic retail payments in Ghana. It has therefore been identified that merchants are not willing to invest in terminals, thereby denying potential customers access to the use of electronic retail payment systems. The central problem confronting the developers of this electronic payment system according to consumers and retailers is whether, given the small size of the market, the investment will be recoup within the foreseeable time span. This problem looks more pressing because the market is characterized by a great diversity of players. Unlike in most part of the developed countries, it is only the customers of Cal Merchant Bank Ltd, and Ecobank Ghana Ltd banks who have access to these terminals. Besides, it has also been discovered that most of the customers of the three banks are interested in shopping at other shops which do not have the terminals and that comparatively offer better prices.

2.6.2 Confidence and Security

There is lack of adequate security with the use certain electronic payment devices like card payments. The lack of security when processing transactions over the Internet is posing a great threat to its adoption. Internet fraud is on ascendancy in Accra, the national capital. The youth through dubious means lay hands on credit card numbers of other people and ultimately using them to make bulk purchases from online marketing sites like e-bay and others. With credit and debit cards, consumers cannot detect fraud until their statement of accounts arrives but credit card companies and banks do not insure against fraudulent use of

their cards. Hence consumers bear the full responsibility of any debts fraudulently accrued. (Ghana web, 2004)

Security, confidence, reliability and efficiency are fundamental features of any electronic payment solution. Security makes consumers more inclined to trust and to use a newly developed electronic payment solution. The OECD (1997) stated that in developed countries, “it was only after the credit card industry assured users that their exposure to criminal misuse of cards was limited that confidence in that form of payment developed.” Since electronic retail payments relies heavily on credit cards for identification and payment, the credit card companies refusal to insure its customers against fraud will inhibit its adoption.

More so, the lack of rapid development of the payment solutions is the security measures surrounding deposit transfer systems. There is lack of adequate implementation and monitoring of payment systems security. From the consumers’ and retailers’ perspective, the crucial criterion for the success or failure of a payment product is confidence. However, doubts as to the applicability of existing laws and regulations increase the perceived risk of using electronic retail payment products.

2.6.3 Telecommunication Infrastructure

The telecommunication infrastructure in Ghana is underdeveloped. But for electronic retail payments to thrive, this infrastructure is a primary requirement. The telecommunication services are generally of poor quality, which impedes against the development of retail payment technologies. The speed and quality of line is unsatisfactory, especially outside metropolitan areas.

2.6.4 Lack of Knowledge and Skill

Both consumers and business enterprises have limited knowledge of what services exist, how they operate and what benefits to be derived. Due to high level of illiteracy, most of the people do not recognize the economic importance of electronic retail payments. Most Ghanaians especially the aged, lack the skills and knowledge required to ensure efficient and effective use of the system. Our investigation showed that only a few number of the adult population have computer knowledge and skills. The low level of knowledge in the payment devices and how each of them works has led to low patronage of the existing retail payment products. Information on practical issues with regard to handling, confidence-related issues on security, integrity and consumer law issues concerning internal and external trade are necessary to increase patronage.

2.6.5 The Special Challenge of the Unbanked

One of the greatest challenges to electronic retail payments in Ghana is the ability to encourage the millions of currently unbanked persons to be part of the mainstream financial system. According to the Ghanaian Chronicle (2004), only 5% of Ghana's 20 million populations had bank accounts. However, his troubling paradox was the low interest payments on customers' savings vis-à-vis their increased lending rates.

This work reveals that the predominant reason for low patronage of banking products is due to lack of sufficient income to be able to afford the costs of conventional accounts. More so, most of the unbanked in Ghana are not payment recipients like their counterparts in the developed countries, hence their marginal benefit for holding the account is lower than the marginal cost. Besides, most of the banks have an interest penalty for their customers who

withdraw below the banks minimum deposit requirements. All the above problems have led to the underdevelopment of the banking industry in Ghana.

2.6.6 Attitude to New Products

The problem of reaching a critical mass is explained by the reluctance of people to use new schemes until a sufficient relative number of their associates use them. It is difficult to convince customers to switch providers especially if they are not particularly dissatisfied with the systems they have been using.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The study seeks to find out how electronic payment can solve retail problems. In order to come out with organized and widely accepted research findings, the various methods and techniques used in conducting this research must succinctly be clarified. The purpose of this chapter is to come out with the various processes involved in collecting the data. The chapter lays more emphasis on the research design, target population and sampling technique, method of data collection, administration of instruments and their justifications and reliability.

3.2 Research Design

In this study it was necessary to first examine the area of electronic retail payment and its influence in retail payments. Through in-depth case study of Ghana, how electronic payment has influence the retail payment market in Ghana were investigated and analysed. This study is based on both primary and secondary data and it provides a framework for considering how electronic payment can help solve retail payments problems.

This study used primary sources in a form of "consumer survey" questionnaire in obtaining the perceptions of bank customers (mostly individual customers) and interviews of bank's staffs. The study collected data from secondary sources such as the Internet, articles, databases, and books, and were analyzed and interpreted. In the rare situations when official statistics are available, the recentness of the data determined its usefulness.

The study is exploratory in nature. Data was both quantitative and qualitative in nature. Quantitative in the sense that sample size was large enough, instruments like questionnaires and interviews were employed to get all the needed information for analysis. On qualitative, all possible efforts were employed to collect the accurate and reliable information to make generalization and reliability on the work possible.

This research work involves the use of survey interviews of some employees of the banks under study. Those involved include bank managers and staffs. On the other hand, questionnaires were sent to bank depositors or customers to ascertain how the various electronic payment products have proved to be a solution to their payment problems. For the banks, we selected branch, sales/marketing, customer relations' managers, IT executives and other middle-level employees to ascertain the various electronic payment mechanism in use at the banks, how customers have patronized their products and how it has helped to reduce retail payment problems faced by Ghanaians. The selection of the bank's customers was based on a random selection of bank customers at the various banks premises during the normal banking hours and represented a wide diversity in terms of years of employment, educational background, and job positions. For corporate bodies, a few were selected based on the information obtained from some of the banks about their regular payment activities through the banks.

The survey questionnaires to the bank customers was focused on the different electronic retail payments methods available in Ghana, customers views about them, and customers experiences, elicited from their response to structured statements. The questionnaire covered factors influencing payment instrument choice pertaining to customers such items as educational level, wealth, personal, and employment; problems encountered in withdrawing

money and paying bills. It also consisted of structured statements concerning customer's preference for electronic payments products, and customer's use and experience with e-payments.

Some of the unstructured interviews to consumers asked questions on their recent payment experiences, the options that were considered, what they did and why. This was done for various reasons; first, because of the personal nature of the subject matter, consumers tend to guard their experiences with money and payments.

Apart from the primary data, we also collected secondary data from individual banks, the Bank of Ghana (BOG), books, the Internet, magazines, trade journals. The analysis of the impact of electronic payment on bank activities and problems in payment relied on secondary data supplemented by primary data from the survey questionnaires.

3.3 Population and samplings

This research work involves the use of survey interviews of some employees of the banks under study. These banks are Agricultural Development Bank, Amalgamated Bank Ltd ,Barclays Bank of Ghana Ltd, Cal Merchant Bank Ltd ,Ecobank Ghana Ltd, First Atlantic Merchant Bank Ltd ,Ghana Commercial Bank , National Investment Bank Ltd, Prudential Bank Ltd, Societe General SSB Bank Ltd ,Standard Chartered Bank and Unibank (Gh) Ltd.

Those involved include bank managers and staffs. On the other hand, questionnaires were sent to bank depositors or customers to ascertain how the various electronic payment products have proved to be a solution to their payment problems.

For the banks, we selected branch, sales/marketing, customer relations' managers, IT executives and other middle-level employees to ascertain the various electronic payment

mechanism in use at the banks, how customers have patronized their products and how it has helped to reduce retail payment problems faced by Ghanaians. The selection of the bank's customers was based on a random selection of bank customers at the various banks premises during the normal banking hours and represented a wide diversity in terms of years of employment, educational background, and job positions. For corporate bodies, a few were selected based on the information obtained from some of the banks about their regular payment activities through the banks.

3.4 Data Collection Instruments

We used questionnaires, interviews and personal observation as the major instruments in collecting data. Because the focus of this study is on contemporary phenomenon with some real-life context and which includes direct observation and systematic interviewing, the case study method is the preferred choice in this study.

Questionnaire: The questionnaire was modified to better reflect the specific objectives of the study intention towards the use of study. The reasons for choosing this instrument are; it produces quick response and it is less expensive.

Interviews: A well-structured interview and personal observations were conducted at the management level for the following reasons; other vital information may be obtained and it saves time.

Apart from the primary data, we also collected secondary data from individual banks, the Bank of Ghana (BOG), books, the Internet, magazines, trade journals, etc. The secondary data were based on the various electronic retail payment instruments being made available by the banks, user acceptability and how these have helped to reduce the payment problems in the

Ghanaian economy. The analysis of the impact of electronic payment on bank activities and problems in payment relied on secondary data supplemented by primary data from the survey questionnaires.

3.5 Data Collection Procedures

Data which was collected via questionnaire, structured and unstructured interviews that were administered to the randomly selected beneficiaries. Participation was voluntary and confidential

3.6 Data Analysis

Given the exploratory nature of the study and the small sample size, only descriptive statistics were calculated pending future research. We made use of tables to put the data collected into proper perspective. The tables were used to enhance the readers understanding of the data presented in the reports. We then made use of percentages as a statistical tool to analyse the data collected.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF RESULTS

4.0 Introduction

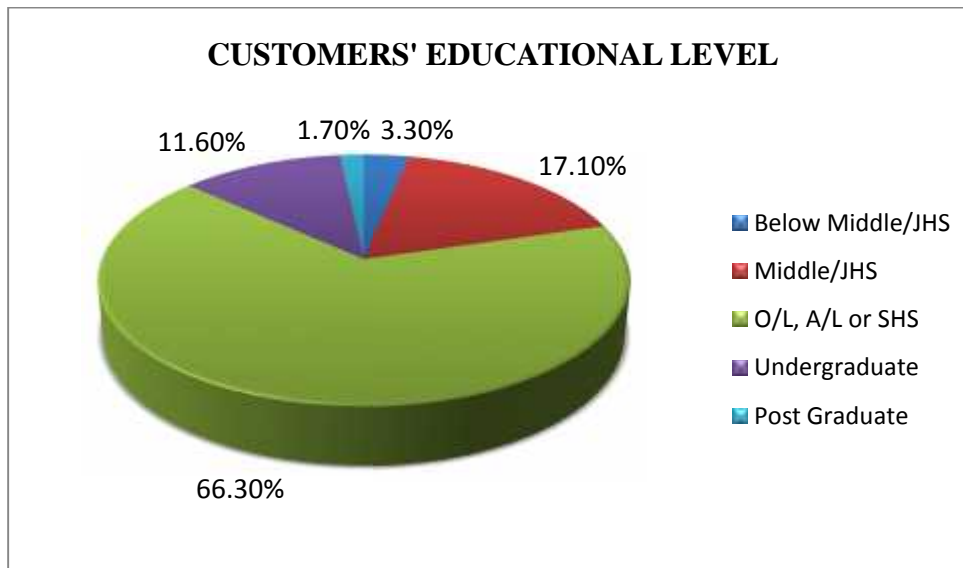
To analyze the survey data obtained from the survey questionnaire, we employed descriptive statistics to ascertain the level of customer's reaction to e-payment products. We analyzed the results of the survey questionnaire administered.

4.1 Survey Participants

Data were gathered from the questionnaire sent to customers, bank staffs, and corporate bodies. A total of 685 questionnaires were sent to bank employees, customers and corporate bodies. Questionnaires were sent to each of the 12 banks studied, while 600 questionnaires were also given to customers and corporate bodies to solicit for their views. Of the 85 questionnaires sent to the banks, 54 responded representing approximately 63.5% response rate. Out of the 600 questionnaires given to bank customers to answer, 430 responded given a response rate 71.7%, and this was due to the presence of those who administered the questionnaires – making sure that customers have actually responded. All those who agreed to respond to the questionnaires were made to provide instant answers, and those questions that they found it difficult to understand were explained to them.

4.2 Customers' Educational Level

Figure 4.1



Source: Field work. February, 2015

Most of the respondents were not willing to reveal their educational background, but after a thoughtful explanation to them about the importance of this to the survey, all of them agreed to provide this information. The analysis of educational level of those who responded to the questionnaire revealed the following trend: majority of those who answered the questionnaire falls within the O/L or A/L or SHS. Those with this level of education are 321 representing 66.3% of the respondents. Those with postgraduate degrees constitute the least customers that answered the questionnaire (i.e., 1.7%). A greater percentage of Ghanaians have a low level of education (i.e., SHS and below), but constitute a greater proportion of those that patronize banking services (86.7%). Most of these are school dropouts and are engaged in trading activities.

4.3 Employment Levels of Customers

Table 4.1 Respondents Employed

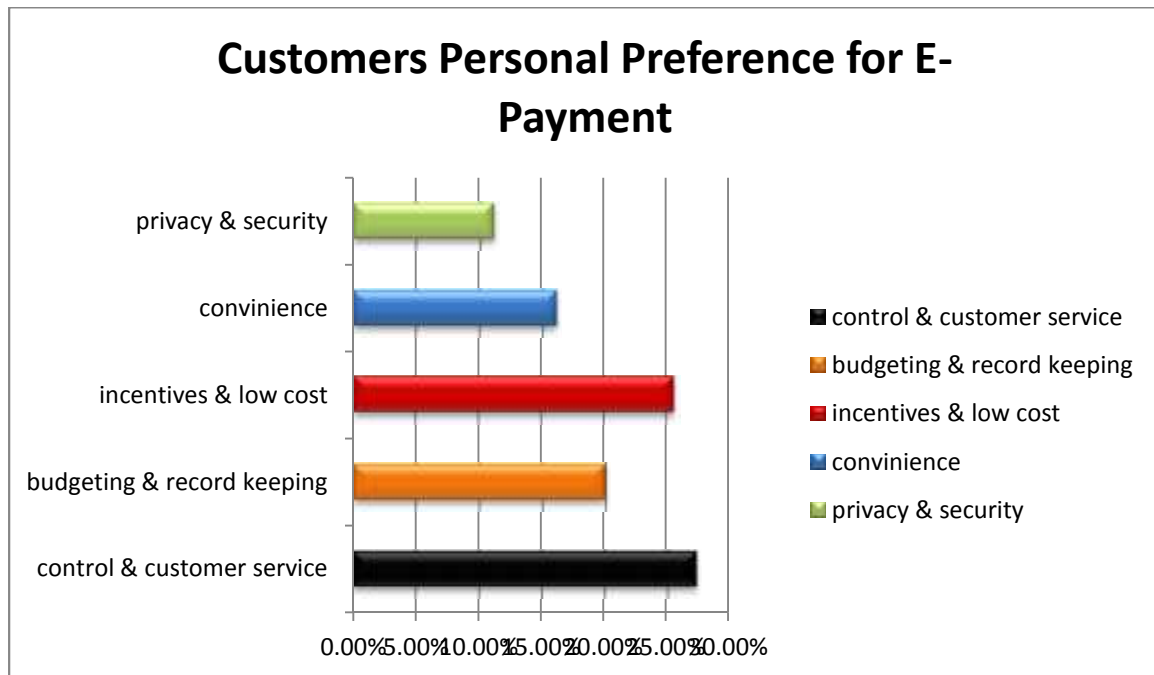
| Educational Level | Below JHS | JHS | O/L,A/L Or SHS | Under-graduate | Post-Graduate | Total | Percentage |
|-------------------|-----------|-----|----------------|----------------|---------------|-------|------------|
| Employed | 9 | 68 | 272 | 42 | 9 | 400 | 82.6 |
| Unemployed | 7 | 15 | 55 | 7 | 0 | 84 | 17.4 |
| Total | 16 | 83 | 327 | 49 | 9 | 484 | 100 |

Note: Employed, include part-time and self-employed, Source: Field work, February, 2015,

For the respondent to the survey, 82.6% (400) of the customers are employed, meaning that a high proportion of bank customers are employed as compared to those unemployed. Out of this figure, 272 fall within the SHS level. Customers with postgraduate certificates/degrees that answered the questionnaire were all employed. The study shows that most of bank customers have SHS certificates and form the largest bank customers in Ghana. Those employed as shown on the table include self-employed and those engaged in part-time employment. The education levels appear to correlate with employment as shown above. Those with a higher education are more likely to be employed and as such patronize electronic payment mechanisms.

4.4 Personal Preferences

Figure 4.2 Customers Personal Preference for E-Payment



Source: Field work, February, 2015.

Another factor influencing payment instrument choice pertains to customers' personal preferences. Based on the survey questionnaires, five general consumer preferences were identified:

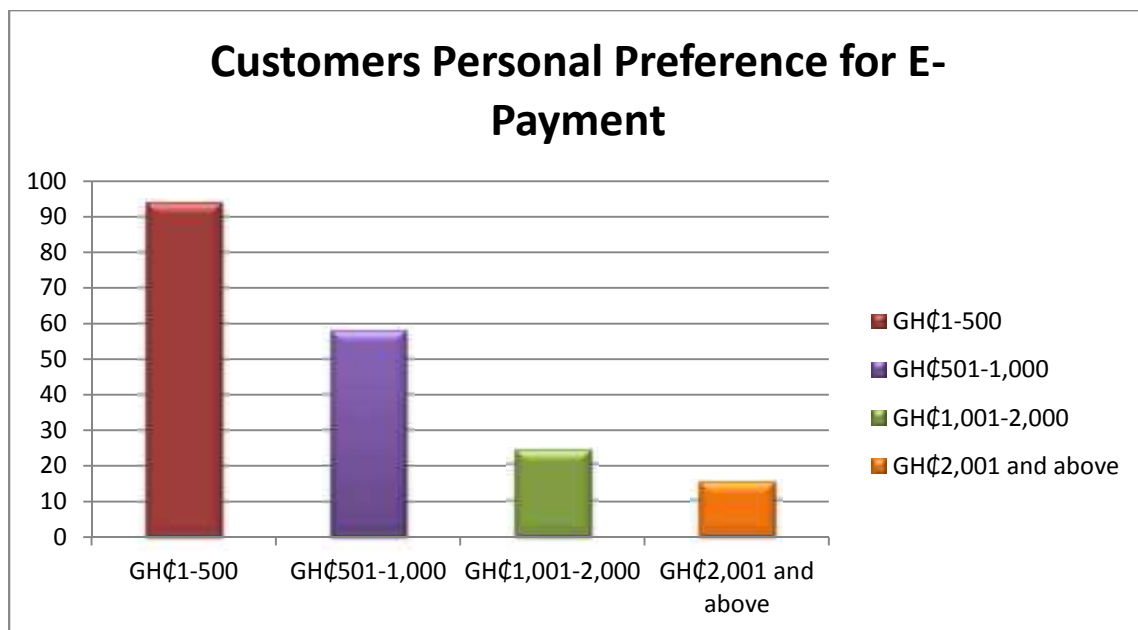
- 1) Control and customer service
- 2) Budgeting and record keeping
- 3) Incentives and low cost
- 4) Convenience
- 5) Privacy and security.

Most of the respondents to the questionnaire who have initiated payment using electronic means valued more than one preference, but it appeared that most were primarily driven by just one or two preferences across different payments they were making. For instance, 27.3%

confirmed that their desire for e-payment includes the ability to review, initiate, stop, and record payments as well as customer service if problems arise. 25.6% indicated that using e-payment will minimize cost, while 16.1% felt that error resolution are convenient and are tailored to meet their needs. For privacy/security, 11.0% indicated that for e-payments' ability to withhold information that may be detrimental if disclosed, they prefer making payments by electronic means.

4.5 Transaction-Specific Factors

Figure 4.3 Amounts Transferred



Source: Field work, February, 2015.

Transaction-specific is other factor that influences consumer decision-making. This relates to the specific nature of the payment being made, where it is being made, and how the

Consumer views their relationship with the merchant. Many customers indicated that since they can sit in the comfort of their homes to effect payment, they prefer e-payment to the traditional payment methods. Since most of the amounts indicated to have been transferred by the respondents are of smaller values, there is the likelihood that they will use electronic means.

4.6 Ranking of Payment Methods by Customers

Table 4.2 Ranking of Payment Methods

| Customers Responses | Cash | Cheque | Credit Card | Debit Card | Electronic Cards | E-Zwich Card | Telephone Banking | Pc Banking | Internet Banking |
|----------------------------|-------------|---------------|--------------------|-------------------|-------------------------|---------------------|--------------------------|-------------------|-------------------------|
| No. of Customers | 198 | 54 | 41 | 87 | 28 | 67 | 12 | 11 | 23 |
| Percentage | 40.9 | 11.2 | 8.5 | 10.0 | 5.8 | 13.8 | 2.5 | 2.3 | 4.8 |

Source: Field work, February, 2015.

A series of questions were designed to examine the perception of bank customers about the different payment services. Customers were asked to rank the various means of payment available to them, and as expected, cash was overwhelming favorite. Maybe this was due to maturity of cash usage and the fact that other payment products are not well-developed in Ghana. The reasons given were that it is easy, carries no interest and payment are resolve immediately. Over 40.9% of the respondents ranked cash as their most preferred method of payments. E-Zwich was the next preferred method of payment (13.8%), followed by cheque (11.2%) and credit cards (8.5%).

Most respondents were of the view that they are not used to the electronic payment methods, but majority indicated that they would like to shift into e-payment if the banks will introduce more of them with enough education. 10.0% indicated they prefer to use debit cards since it

can be used to make purchases, at the same time to pay bills. 41 respondents indicated that they prefer credit cards, because that would allow them to make purchases even if they are not present at the point of sale.

4.7 Customers in Favour of Electronic Payment Products

Table 4.3 Customers in Favour of Electronic Payment Products

| Customer Type | SHS Education & Above | Below SHS Education |
|-------------------------|----------------------------------|----------------------------|
| No. of Customers | 385 | 99 |
| Percentage | 79.5 | 20.5 |

Source: Field work, February, 2015

Customers were asked to indicate whether they are in favor of a nation-wide introduction of e-payment products in the country. In all, 385 respondents answered in the affirmative, with the rest indicating that they disfavor its introduction. Specifically, 385 out of 484 (representing 79.5%) with senior high school certificates and above were more in favour of e-payment instruments while these with education below SHS were less in favour of e-payments (i.e., 99 out of 484 representing 20.5%).

4.8 Actual Usage of Electronic Payment Methods by Customers

Table 4.4: Use of Electronic Payments by Customers

| Customers Response | Once | Twice | Many Times | Total |
|---------------------------|-------------|--------------|-------------------|--------------|
| No. of Customers | 61 | 119 | 52 | 232 |
| Percentage | 12.6 | 24.6 | 10.7 | 47.9 |

Source: Field work, February, 2015

It was surprising to find out that over 52.1%(252) responded indicated that they have not used any of the electronic payment mechanisms to make payment. Only 47.9% confirmed that they have actually used one or more of the electronic channels for payment. This shows that the number of customers who have embraced the use of electronic payment is low in Ghana.

4.9 Problems Encountered in making payment

Table 4.5 Payment and Settlement Problems

| TYPE OF PROBLEM | NO. OF RESPONDENTS | PERCENTAGE (%) |
|--------------------------|---------------------------|-----------------------|
| Long Queues | 79 | 16.3 |
| Bad Attitude of Tellers | 42 | 8.7 |
| Time Wasting | 68 | 14.1 |
| Long Distance | 63 | 13.0 |
| Few Bank Branches | 38 | 7.9 |
| Armed Robbery Attacks | 33 | 6.8 |
| Use of counterfeit Notes | 21 | 4.3 |
| Bulky Bank Notes | 42 | 8.7 |
| Dishonoured Cheques | 25 | 5.2 |
| Short Banking Hours | 37 | 7.6 |
| Few Payment Methods | 36 | 7.4 |
| Total | 484 | 100 |

Source: Field work, February, 2015.

Customers were asked to enumerate some of the problems confronting them in bills payment, payment for goods and services, and settlement of debt. Customers' response to this part of the survey was very revealing. Problems range from bad nature of bank notes to long queues at bank and utility payment premises. Of the 484 response received from bank customers, majority cited long queues and time wasting at bank premises and at utility collection point

as a major problem that needs a critically look. The most common problems that the respondents cited are long queues and time wasting at bank premises and utility collection points. Out of the 484 customers surveyed, 79 (16.3%) and 68 (14.1%) cited long queues and time wasting at bank premises respectively as the major problems confronting them.

4.9.1 Long Queues and Time wasting

Even though the introduction of computers and ATMs has improved waiting time at the banks, many customers still complained about the long waiting time. 68 of the respondents indicated that they had to wait about 30 minutes to 2 hours to get served at the banks. Most of the respondents indicated that there were no proper queuing systems at many of the banks. The majority of the respondents indicated that the absence of queuing system has at times led to confusion about the order of customers to serve. Some customers also bypass the queue and receive services from the tellers.

4.9.2 Bad Attitudes of Bank Tellers

Some of the respondents felt that the behaviors of some bank tellers leave much to be desire. 42 of the respondents representing 8.7% indicated that some of the bank tellers' behavior does not much with the overall goals of the banks, and that this needs to be checked. They cited this as the main reason why they prefer other mode of payment such as e-payments to avoid encounters with bank tellers. Some of the reasons they gave are that some of the bank tellers are slow, unduly delay customers, always attend to other social or private matters, and sometimes allows other customers to bypass the queue to be served.

4.9.3 Few Bank Branches

Others were of the view that since the banks in Ghana are not connected together and with fewer branches, it makes cash withdrawals cumbersome since customers have to travel long distance to the branch where they have their accounts. 38 (7.9%) of the respondents shared this sentiment and most of them agreed to the assertion that this situation sometimes discourage them from visiting the banks to withdraw money for onward payment for goods and services.

4.9.4 Armed Robbery Attacks

6.8% of the respondents cited armed robbery attacks as the main reason why they prefer e-payment to cash or cheque. Recent incidents of armed robbery attacks on customers who Withdraw huge sums of money from the banks have heightened customers' fears about Withdrawing large sums of money from the banks. It is uncommon in Ghana to find a whole business organization withdrawing physical cash to pay workers wage manually. Some of them end up being attacked on their way from the banks resulting in huge losses to those organizations.

4.9.5 Use of Counterfeit Bank Notes

The use of banks notes for most business transactions has brought about the notorious activities of people who circulate counterfeit money. 4.3% of the respondents were of the view that, with a good business strategies, if more e-payment products are introduce into the payment system, it will help put a check to the activities of these people. In Ghana, counterfeit bank notes make up only a tiny percentage of the total number of genuine notes in

circulation. Nevertheless, every effort should be made to combat counterfeiting to limit its impact on Ghanaian businesses and its potential to diminish public confidence in Ghana's money.

4.9.6 Bulky Nature of Bank Notes

The persistent inflation in Ghana has resulted in items being prized in higher value terms. In Ghana, it is uncommon to find someone with about two hundred million cedis in a sack meant to pay for, example, a motor vehicle. Such situation normally exposes carriers to armed robbers. The country currently uses twenty thousand (¢20,000) notes denomination. 8.7% of the respondent indicated that due to the bulky nature of bank notes, they would prefer using a card or any other e-payment mode.

4.9.7 Cheques Dishonoured

Most respondent (5.2%) were of the view that they will not like to issue or accept cheques. This group indicated that the bank charges for cheques issued are prohibitive while they cited dishonoured or bounced cheques as the other reason why they prefer cash or e-payment. The increasing incidence of dishonored cheques due to insufficient funds has resulted in many customers refusing them.

4.9.8 Banking Hours

In terms of banking hours, 37 (7.6%) indicated that they found the banking hours very inconvenient. Of those who expressed dissatisfaction with the banking hours, over 68% indicated their preferences for longer hours from 8:30 a.m. - 4:00 p.m. Furthermore, 32%

indicated their preference for bank opening hours on Saturdays, as in other developed countries.

4.9.9 Few Payment Methods

One other problem identified is the narrow scope of banking services provided. 36 of the respondents indicated that the major constraint in payment for goods and services, and the settlement of bills is the availability of just a few payment mechanisms. This group cited this reason as the major factor discouraging them from making payments.

4.9.10 Bank employees and officials

The interviews with bank employees and officials revealed that majority of the banks faces problems ranging from technical to infrastructure. Some of the constraints are: lack of technical expertise, lack of capital, lack of cooperation by different banks, lack of uniform accounting systems in the banks examined, and lack of communication with the headquarters in Accra due to telephone problems.

Some of the bank employees were of the view that electronic payment instruments when made available, promoted and accepted by consumers will go a long way if not to eliminate the payment problems, will reduce it to the minimum. Some cited the heavily use of electronic payment instruments in the Scandinavian countries and how this has helped to enhance efficient retail payment systems. Others also felt that the, for example, the use of e-zwich terminals are suitable for low value payments and will bring about efficiency in the numerous consumer daily payments.

Almost all the respondents were reluctant to provide any information about the status of their wealth or income levels. We wanted to use this information to ascertain how wealth influence or affect payment choice of respondents. The number of responses for income is insignificant for our analysis, so we did not include this in the analysis but it is worth mentioning.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Conclusions and areas for further research

This study has covered some issues associated with payment transactions, instruments, and systems prevailing in Ghana. It contains a description and analysis of various electronic payment instruments from the viewpoint of end-users. Furthermore, it looked into the trend and the use of electronic payment in some selected countries. Finally, it included a description of innovations in electronic retail payments in Ghana.

As elaborated earlier in this study, the retail payment systems in Ghana during the past few years have undergone progressive technological developments, but have also remained highly paper-based and inefficient. The outcome of the study shows that cash transactions continue to play a significant role in almost all countries and in particular Ghana. Even the developed countries are making every effort to ensure a cashless society and Ghana cannot wait to embrace this concept.

As consumers seek out new ways to do business, the market must provide innovative electronic payment solutions that can eliminate or reduce some of the problems they faced. Banks will have to determine what kind of electronic payments services best fit their customers' needs, and which could lead to smooth operating payment systems. There are also numerous problems in processing cash and cheques that electronic payments can eliminate. Both cash and cheques are labor-intensive – must be physically transported and counted, and risk loss or theft throughout their processing.

We can conclude that consumers have a propensity to show rational payment preferences and behaviors based on the analysis of the consumers' survey. It was observed that consumers' behaviors are consistent with their preferences, which vary but may include convenience, incentives, control, privacy, security, and personal involvement. The study showed that, one of the significant impacts pertaining to payment instrument choice on consumer decision-making is consumers' financial positions and the nature of specific transactions.

We see improve adoption of electronic payment products. Its adoption is growing steadily over the past few years. We are convinced that many people are going to flock to electronic payments as it becomes easier to use. Because of its ease of use and familiarity, it has made it easy for consumers to focus on electronic bill payment in developed countries. If electronic payments can carry the broader features similar to those of cheques and cash, and that could solve their problems, consumers will migrate towards electronic payments at an increasing rate.

The banks are doing well in promoting electronic payments products but majority of Ghanaians still pay their bills by paper cheques and cash. Therefore, there is the need to create more awareness to entice the unbanked people into the banking system. The result demonstrate low user acceptance of existing payment products – a pivotal factor in determining the success or failure of any payment system.

An area that is worth for further research is, giving the current low level of savings and account holders, how can the banks be motivated to introduce more electronic payment mechanisms as well as motivating the people to patronizing the products? Another area that needs to be look into is how the new electronic payment system can reach the under-served

populations, like low income or ethnic communities as many of them may not afford several thousand of money to buy computers to link the new systems?

5.1 Recommendation

The use of cash for frequent transactions apart from the problems enumerated in this study, it is risky, costly and inefficient for consumers. The need therefore to migrate from the use of paper to electronic payment instruments cannot be overemphasized.

At the moment, most payment cards in Ghana utilize a magnetic stripe and need an on-line connection to the issuing bank for the approval of transactions. This means that if the bank is offline, the transaction will be denied. But in emerging markets such as Ghana, the majority of merchants are off-line, which makes magnetic stripe cards almost useless. Considering the low level of technological infrastructure in Ghana, chip cards are best for the country because it has been successful in environments where the communication infrastructure is lacking. Chip-based payment products can bring payment to people who lack the infrastructure required for conventional magnetic stripe payments. Off-line technology is likely to succeed for some time in Ghana, because it is cheaper in an environment where there is without any form of telecommunications.

Government needs to ensure that the cost of telecommunications, hardware and software are made cheap, which will involve examining existing taxes and import duties. New technology and changes in the banking laws can produce change. Therefore, there is the need for the government to remove barriers to innovation, including regulatory barriers to pave way for rapid development of the electronic payment systems in Ghana.

The emergence of electronic payment systems raises a whole range of both legal and regulatory issues that needs to be taking a look at. An effective national low value electronic payment system will certainly remove what is currently a major obstacle to the expansion of general business activities.

The emergence of an electronic payment system which is easy to use, cheap to process, and boost trade, is likely to have a range of only partly anticipated side effects. For example, it could result in the creation one currency for the Economic community of West African States (ECOWAS) which the countries are yearning for.

There is the need for banks to educate consumers about all of their payment system options and the pro and cons of each. 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. Although, Ghana can learn valuable lessons from the experiences of other countries, the country must develop its own payment system.

Simply importing another country's electronic payment system without adjusting for geography, infrastructure, banking and legal structures, business practices, culture, and needs could lead to a suboptimal system.

REFERENCES

- .Alexander and fred(Undated) . Electronic payment system in Ghana.
- Abor, J. (2004). Technological innovation and banking in Ghana: An evaluation of customers' perceptions, *American Academy of Financial Management*.
- Annon (1999). Survey of retail payment systems: Consumer payment options grow. *ABI/INFORM Global*, p. 4A-13A.
- Bank for International Settlements (1998). Managing change in payment systems. *Monetary and Economic Department*, no. 4, Basle.
- Bank for International Settlements (2000). Survey of electronic money developments. *Committee on Payment and Settlement Systems*, Basle.
- Deutsche Bank Research (2001). *Electronic money – the payment instrument of the future?*
- Ferguson, J. W. (2000). Electronic commerce, bank and payments, 36th Annual *Conference on Bank Structure Competition*, Chicago, may
- Humphrey, D. B., Pulley, B. L. and Vesala, J. M. (1996). Cash, paper, and electronic payments: A cross-country analysis, *Journal of Money, Credit, and Banking* 28, p. 914- 39.
- Internet Banking Handbook (2001). *Federal Reserve Board of Chicago's Office of the Controller of the Currency (OCC)*.
- Malek, M. (2001). E-Commerce Technologies – Electronic Payment Systems. *Stevens institute of Technology Telecommunications Management Department*.
- McAndrews, J. (1997), "Making Payments on the Internet", *Fed. Reserve Bank of Philadelphia Review*, Jan/Feb., Philadelphia.

Vartanian, P. T. (2000). *The future of electronic payments: Roadblocks and emerging practices*. Fried-Frank-Harris-Shriver & Jacobson.Sep.

Yasuharu, U. (2003). The effects of information system investment in banking industry, Research Center of Socio network Strategies, the Institute of Economic and Political Studies, *Journal of Economic Literature*, Kansai University, no.12., p. 30.

Internet Sources

Accra Daily Mail (2004). New cash card launched, *Money and Finance* (online), available:

<http://www.clubgh.com/showart.asp?art=139&cat=8> retrieved(21/02/15).

Acquah, P. A. (2001). The payments system and monetary policy (online), available:

ADB(undated). *Mondex Lunched* (online), available:

<http://www.adbghana.com/story.asp?ID=> retrieved 12/01/2015

Agimo (2004). *Better Practice Checklist for ePayment*. Australia Government Information Management Office (online), available:

http://www.agimo.gov.au/publications/2000/04/better_practice_checklist_for_epaym
[entassessed](#), 20-12-14.

Anon (2003). *Ghana's Banks Now Upgrading Payment System* (online), available:

available:www.ghanaweb.com. Retrieved 21/12/14

Business Wire (2000). *New Horizon for Visa in Africa; Standard Chartered Bank First to Issue and Acquire Visa in Ghana; Visa Horizon Card Makes Its Debut in the Ghana Consumer Market*, San Francisco (online),

available:<http://www.findarticles.com>(assessed 20-01-15)

Central Banking (2004). Effective oversight of payment and settlement systems, *Central Banking Publications Ltd*, London (online), available:

European Central Bank (2003). *Electronification of payments in Europe*, Monthly Bulletin, May, Frankfurt Main (online), available: <http://www.ecb.int> (25-04-15).

Experts on Electronic Commerce (undated). *Electronic payment systems: FTAA Joint Government-Private Sector Committee of Experts On Electronic Commerce* (online), available: <http://www.ftaa-alca.org>(20-12-15)

Financial Services Technology Consortium (undated). *The bank Internet payment system (BIPS): Leading the way to electronic commerce*, FSTC Projects, (online), available:

Ghanaian Chronicle (2004). *Only 5% of Ghanaians have bank account* (online),

GhanaWeb (2004). *Internet fraud on the ascendancy in Accra* (online), available: <http://www.centralbanking.co.uk/conferences/>(assessed 04-12-14).

http://www.newsfromafrica.org/newsfromafrica/articles/art_781.html.assessed, 21-12-14.

Pariwat, S &Rungsun, H. (2004). Managing payment and settlement system reform: A

Pierce, Michael. (2001). *Payment mechanism designed for the Internet* (online), available: <http://ganges.cs.tcd>.Assessed 20-12-15

Sarpong, S. (2003). *Banking system fails the test*. (online), assessed 25/01/15

Sarpong, S. (2003). *Banking system fails the test*.Assessed 21/01/15.

SG-SSB (undated). *Sikatext*(online), assessed 21/01/15

www.bog.gov.gh(20-12-14).

www.fstc.orgretrieved, 04-12-14

www.ghanaweb.com retrieved 20- 02-15.

APPENDIX
QUESTIONNAIRE

Dear Respondents,

We are final year students of the Christian service university college and now conducting partial studies with regard to explore “electronic payment system: user acceptability and payment problems in Kumasi”. This research is the fulfillment of completing our bachelor of business administration study”. This research is the fulfillment of completing our Bachelor of Business Administration study. We would appreciate if you could spare sometime and thought in completing the survey Questionnaire. We hope that you would co-operate in completing the questionnaire with the best of your ability. Your response will be treated as confidential as used for research purposes only. There is no right or wrong answer.

Thank you for your willingness to participate in this study.

GENERAL INFORMATION

1. Age a,15 – 30 [] b, 31 - 45 [] c, 46 – 60 [] d, Above 61 []
2. Gender : a, male [] b, female []
3. Marital status: a, single [] b, married [] c, divorced [] d,widow[]
4. Are the head of your household?a, Yes [] b, No []
5. Are you working? a, Yes [] b, No []
6. What is your profession?
7. Are you employed? a, Part time [] b, Full time []
8. What is your educational level?
a, Below/middle/JHS []
b, Middle/JHS []

c, O'level/A 'level/SHS[]

d, Under-graduate []

e, Post- Graduate []

FINANCIAL TRANSACTION HISTORY.

9. Do you have a bank account? a, Yes [] b, No []

10. What type of bank account do you keep?

a, Savings account [] b, current account [] c, investment account []

11. How many payment systems do you know?

12. Name them by ticking

a, Cash [] b, Cheque [] c, Credit Card []

d, Debit Card [] e, Electronic Card [] f, e-zwich card []

g, Telephone Banking [] h, PC Banking [] i, Internet Banking []

13. Have you used any of the electronic payment mechanism to make payment?

a, Yes [] b, No []

14. Rate / rank the various means of payment available to you by the frequency of its use.

Please tick

| RANKING | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Cash | | | | | | | | | | |
| Cheque | | | | | | | | | | |
| Credit Card | | | | | | | | | | |
| Debit Card | | | | | | | | | | |
| Electronic Card | | | | | | | | | | |

| | | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|--|
| e-zwich Card | | | | | | | | | | |
| TelephoneBanking | | | | | | | | | | |
| PC Banking | | | | | | | | | | |
| InternetBanking | | | | | | | | | | |

15. How do you assess electronic payment system in relation to cash and cheque payment system?

.....
.....

16. Do you prefer electronic payment to the traditional system of payment?

a, Yes [] b, No []

i, If Yes, why?

ii, If No, why?

17. Have you transferred money to another person using electronic payment before?

a, Yes [] b, No []

18. What amount have you transferred to others before?

a, 1-500 []

b, 501-1,000 []

c, 1,001-2,000 []

d, 2001 and above []

21. What are some of the problems confronting you in bills payment? Please tick

- a, Long Queues [] g, Bad Attitude of teller []
- b, Time Wasting[] h, Long Distance []
- c, Few Bank Branch [] i, Armed Robbery Attacks[]
- d, Use of Counterfeit Notes [] j, Bully Bank Notes []
- e, Dishonored Cheque [] k, Short Banking Hours []
- f, Few Payment Methods []

22, What are some of the problems confronting you in using electronic payment system?

.....
.....

23, Are you in favor of nationwide introduction of electronic payment product in the

country? a, Yes [] b, No []