ELECTRONIC RETAIL PAYMENT SYSTEMS: USER ACCEPTABILITY AND PAYMENT PROBLEMS IN NIGERIA.

ECHEKOBA FELIX NWAOLISA

Lecturer, Banking and Finance Department

Nnamdi Azikiwe University, Awka.

EZU GIDEON KASIE

Lecturer, Banking and Finance Department

Nnamdi Azikiwe University, Awka.

Abstract

Nigeria cannot afford to fold her hands and watch other countries take its pride of place in the electronic payment system. It is a truism that no country can function optimally without an efficient financial system which can be triggered by electronic payment system. The study examines the user acceptability and payment problems encountered by Nigerians in utilizing electronic banking system. It equally ascertains the contribution of electronic retail payment to the elimination or reduction in problems inherent in the payment process in Nigeria. Data were sourced from both primary and secondary sources. Data collected were analysed using tables and percentages. However, we found out that cash usage is still very high in Nigeria irrespective of the efforts of Central Bank of Nigeria towards the adoption of electronic payment system. It is caused by the challenges of inadequate power supply, shortage of critical technological infrastructures, lack of socio-cultural support and absence of regulatory framework that are required to operate seamless and effective electronic payment system in the country. We recommend that 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 Nigeria.

Keywords: Electronic payment systems, payment mechanisms/instruments, retail payments, electronic retail payments, ATM, payment settlement problems.

Introduction

The world has really turned into a global village owing to the introduction of technology in all aspect of our lives. It has really made life easy and enjoyable. On the other hand, some unscrupulous elements in the society have equally used it to perpetrate some heinous crimes. 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. Before the introduction of electronic payment systems in Nigeria, bank customers devote a whole day in their effort to carry some activities in the bank. There were long queues with its attendant dissatisfactions. Some bank officials did not help matters since they normally attend to people they know very well or those who normally offers them some cash after each transaction. The inconveniences caused by these long queues can discourage someone to make payment.

But in recent years banks in Nigeria has witnessed an upsurge of electronic payment instruments meant to facilitate trade and simplify payments. For many years, bankers, technology specialists, entrepreneurs, and others 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 concepts of cashless and “chequeless” society. (Bank for International Settlement, 1998)

Sanusi (2011) maintained that the cashless economy being proposed by the Central Bank of Nigeria would begin in Lagos State. He said, 'The CBN has decided to start the cashless economy in Lagos, using Lagos as the hub, and has taken up partnership with the governor of Lagos State. 'In a few months to come, Lagos will move swiftly into e-banking and there is also the initiative to introduce mobile banking across the country.' The proposed mobile banking system, he said, would cut the cost of running banks by about 30 per cent.

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. Customers can pay their bills without having to actually move 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. 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 Nigeria, 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 technical innovations such as card, telephone and the Internet. (Abor,2004)

Statement of the Problem

Nigeria have not yet realize the full benefits of the technological advances in electronic payment such as the use of cards, automated teller machines (ATM), the Internet, mobile phones, etc. Payment for goods and services in Nigeria is characterized by long queues; long distance travelling and time wasting that generally affect business activities and ultimately economic development. Payment for goods and services, settling utility bills, and money transfers has been a major headache for individual and firms in Nigeria resulting in declined business activities and huge debt to most of the utility providers (Sarpong, 2003) .The payments and clearing system in the country is under developed. There is no central clearing system to clear debit card transactions between banks. The banking halls continue to be immersed with the long queues as people come in to collect their monthly 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. However, faced with such problems in the payment process, only a few payment solutions have been introduced so far in Nigeria to solve them. Cash still remains the most popular retail payment instrument, despite the increase in the introduction of electronic payment schemes in the country.

Objectives of the Study

The broad objective of this research work is to examine the electronic retail payment systems as regards user acceptability and payment problems in Nigeria. The specific objectives are as follows:

1. To describe the different electronic payment schemes available in Nigeria.
2. To ascertain its contribution to the elimination or reduction in problems inherent in the payment process in Nigeria.
3. To describe and briefly analyse recent and potential future trends in electronic payments in Nigeria.
4. To assess and explore issues of user acceptability of the current payments systems.

5. Furthermore, the research will investigate attempts that have been made by some of the banks to introduce such a system, and the successes and failures.
6. To assist consumers, businesses and service providers in Nigeria to understanding the various electronic payment alternatives. It is also in response to the growing need in Nigeria to develop non-cash payment products and clearing systems in order to reduce the over-dependence on cash payments.

Research Questions

For this study, the following are the major research questions:

1. How are customer attitudes about electronic payments changing?
2. Can electronic payment system replace existing payment systems and solve payment problems?
3. What are the impediments to market development and innovation in electronic payments?

Scope of the Study

This research 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 debit 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 research work also limits its focus to schemes available in Nigeria.

Review of Related Literature

The world is changing technologically and Nigeria cannot be left behind. New electronic payment systems are being introduced into Nigeria at an increasing rate. The work carried out by Okoro (2009) analyses of the perception of bank customers pertaining to the effect of technological innovations on banking services in Nigeria. 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. 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). In particular, the Internet's potential for providing communications and payments more conveniently and less expensively is attracting corporations.

Despite the recent remarkable successes in electronic payment in Nigeria, 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.

Recent Trends in Electronic Payments

Some of the new techniques represent automation of existing methods of payment, whereas others are new or revolutionary.

Card Payments

Automated Teller Machine (ATM)

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. 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)

Electronic Purses/Wallets

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

a) E-wallets that store card numbers and cash. It operates like having a virtual savings account where charges are made for ongoing purchases, particularly micro-payments. This 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.

b) 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)

Electronic Funds Transfer at Point of Sale (EFT/POS)

EFT/POS 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 (Okafor 2006)

Smart Cards

A smart card is a plastic card with a computer chip inserted into it and that store and transacts data between users. 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." 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)

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)." 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).

Telephone Banking

Under this mechanism, the customer transacts business by dialing a touch-tone telephone connected to an automated system of the bank. Telephone banking or telebanking is a form of virtual banking that deliver financial services through telecommunication devices. 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.

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)

Online/Internet Payments

Customers can access their bank accounts and make transfers through a web site provided by the bank and complying with some rigorous security checks. This is the means by which customers transact business with a bank through the use of the Internet network. Owoniyi (2001), describes Internet Banking as "the provision of traditional (banking) services over the internet".

The Internet is able to offer 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 & Medvinsky, 1996)

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. E-Check 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.

Research Methodology

Qualitative Analysis of Users Experiences with E-Payment

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.

Survey Participants

Data were gathered from the questionnaire sent to customers and bank staff of First Bank Plc ,United Bank for Africa Plc and Guarantee Trust Bank Plc. These banks were used as a case study since the researcher cannot study all the banks in Nigeria. Questionnaires were equally administered to corporate bodies. A total of 500 questionnaires were sent to bank employees, customers and corporate bodies. Out of the 500 questionnaires administered 484 responded given a response rate of 96.8%, and this was due to the presence of those who administered the questionnaires – making sure that respondents 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.

Data Presentation and Analysis

In this section, questionnaires administered to respondents are analysed.

Table 1:

Educational Level of Respondents

Educational Level	**Respondents**	**percentages**
WASSCE/GCE	321	66
Graduates	115	24
Post- Graduate	48	10
TOTAL	484	100

Source: Field survey 2011

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' Level representing 66% of the respondents. Those with HND and BSc. constitute second largest customers that answered the questionnaire (i.e., 24%). The least on the table are those with Post-graduate certificates which constitutes only 10% of the respondents. Based on the table above, a greater percentage of Nigerians have a low level of education.

Table 2: Customers Personal Preference for E-Payment

Personal Preferences	Respondents	percentages
Control and customer service	47	9.7
Privacy and security	114	23.6
Convenience	322	66.7
TOTAL	484	100

Source: Field survey 2011

Another factor influencing payment instrument choice pertains to customers' personal preferences. Based on the survey questionnaires, three general consumer preferences were identified: (1) control and customer service; (2) convenience; and (3) 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, 9.7% 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. For privacy/security, 23.6% indicated that for e-payments' ability to withhold information that may be detrimental if disclosed, they prefer making payments by electronic means. 66.7% indicated that error resolution are convenient and are tailored to meet their needs.

Table 3: Ranking of Payment Methods by Customers

CUSTOMERS	Respondents	percentages
Cash	400	82.6
Credit Card	50	10.3
Internet Banking	34	7.1
TOTAL	484	100

Source: Field survey 2011

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 favourite. Maybe this was due to maturity of cash usage and the fact that other payment products are not well-developed in Nigeria. The reasons given were that it is easy, carries no interest and payment are resolved immediately.

Over 82% of the respondents ranked cash as their most preferred method of payment. Credit card was the next preferred method of payment (10.3%), followed by Internet Banking (7.1%). 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.

Table 4: PROBLEMS ENCOUNTERED IN MAKING PAYMENT

Payment and Settlement Problems	**Respondents**	**Percentages**
Long Queues	330	68.2
Bad Attitude of Teller officers	40	8.26
Long Distance	14	2.89
TOTAL	484	100

Source: Field survey 2011

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 long queues at bank, Bad attitude of Teller officers and long distance. 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.

Conclusion

As elaborated earlier in this study, the retail payment systems in Nigeria during the past few years have undergone progressive technological developments, but have also remained highly cash-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 Nigeria. Even the developed countries are making every effort to ensure a cashless society and Nigeria 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. We can conclude that consumers have a propensity to show rational payment preferences and behaviours based on the analysis of the consumers' survey. It was observed that consumers' behaviours are consistent with their preferences, which vary but may include convenience, incentives, control, privacy, security, and personal involvement.

8.2 Recommendations

Considering the low level of technological infrastructure in Nigeria, 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 Nigeria, because it is cheaper in an environment where telecommunications is not efficient.

At the moment, most payment cards in Nigeria 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 Nigeria, the majority of merchants are off-line, which makes magnetic stripe cards almost useless. 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 Nigeria.

REFERENCES

Abor, J.E. (2004). Technological Innovation and Banking in Nigeria: An evaluation of customers' perceptions, *American Academy of Financial Management. 33*(4), 76-80.

Annon, B.U. (2003). Survey of retail payment systems: Consumer payment options grow. *ABI/INFORM Global*, 5(4A-13A).

Balachandher, K. G., Santha, V., Norazlin, I., & Prasad, R. (2001). Electronic Banking in Malaysia: a note on evolution of services and consumer reactions. *Journal of Internet Banking and Commerce,* vol. 5, no. 1.

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.

Chorafas, D. S. (1988). *Implementing networks in banking and financial services*. New York, Houndmills.

Federal Reserve Bank (2004). *The 2004 Federal Reserve Payments Study Analysis of Non-cash Payments Trends in the United States*: 2000 – 2003, Dec. p. 1-13 38.

Medvinky, M.O. (1996). Systematic Combining - An abductive approach to case research. *Journal of Business Research,* 55, pp. 553-560

Neuman, B. C. & Medvinsky, G. (1996). NetCheque, NetCash, and the Characteristics of Internet Payment Services. *The Journal of Electronic Publishing,* Vol. 2, Issue 1

Okafor, F.O (2006) *Valedictory Lecture*. Presented to the University of Nigeria, Enugu Campus. B& F Publications.

Okoro, U. (2009). The effects of information system investment in banking industry: *Journal of Management Sciences*. University of Uyo. Kennis Publishers.

Owoniyi, R. (1994). *Case study research: Design and methods* (2nd ed). Beverly Hills, CA: Sage Publishing.

Pierce, P. T. (2001). *The future of electronic payments: Roadblocks and emerging practices.* Fried-Frank-Harris-Shriver & Jacobson. Sep.

Rose, P. S. (1999). *Commercial banking management*, 4ed. Boston, Irwin/McGraw-Hill,

Sanusi, L. (2011). "Cashless Economy in Nigeria". *International Journal of Finance. Vol. 34, p.18-39.*

Zika, J. (2005). Retail electronic money and prepaid payment instruments, *Institute of Economic Studies,* Charles University in Prague, Prague.

Internet Sources

Lagos Daily Mail (2004). New cash card launched, *Money and Finance* (online), available: http://www.clubgh.com/showart.asp?art=139&cat=8 (2005-08-12).

ADB (undated). *Mondex Lunched* (online), available: http://www.adbNigeria.com/story.asp?ID=15 (05-07-16)

Anon (2003). *Nigeria's Banks Now Upgrading Payment System* (online), available: http://www.newsfromafrica.org/newsfromafrica/articles/art_781.html retrieved 04-05-17

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

http://www.centralbanking.co.uk/conferences/archv/2004/PDF/em041broch.pdf#search='reputation%20of%20the%20central%20bank%20Nigeria (04-12-14).