

GLOBAL INNOVATIONS IN THE ELECTRONIC PAYMENT SYSTEM: A LOOK AT FUTURE OF BANKS IN NIGERIA

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Abstract

Electronic payments are financial transactions made without the use of paper documents such as physical cash or cheques. Payment instruments under e-payments include ATM card, debit card, credit card, smart card, e-wallet, e-Cash, electronic cheques etc. E-payment systems have received different acceptance level throughout the world; some methods of electronic payments are highly adopted while others are relatively low. This study using secondary source of data from the entire Nigeria banks universe aimed to highlight the use of this new technological innovation and identify areas for improvement in the electronic payment systems. The study also aims to offer some suggestions for improvement on the e-payment. Although this paper observed that made some significant progress over the past years, increasing the skills and educational attainment of Nigerians especially of telecommunication technology must be a priory of the country's leadership. The paper concludes with a call to be mindful of the requirements of the youth and cooperation between government and the private sector in Nigeria in order to raise the literacy level of e-payment providers and users in line with international best practice.

Keywords: Bank externalities, e-payment innovation, cashless policy, Nigeria

JEL Classification: L4

1.0 Introduction

All over across the globe people rely more and more on electronic-payment system. Data on card payments through the Point of Sale (PoS) terminal, instant payment transfer and electronic fund transfer are currently the most comparable and consistent cross-country e-payment systems. Unlike most other industries, innovations are putting the traditional bank-based payment system under pressure both within and across borders (CPMI, 2015). The banking sector has been affected in monumental proportion by the power of globalized creative technology such as in the form of the Automated Teller Machine (ATM), and the Point of Sale (PoS) terminals. It is no gain saying that, the internet and mobile devices have positive impact in the way individuals and organisations relate with financial institutions such as the banking industry (Kung, 2018; Mustapha, 2018). It is no surprise therefore to say that banking especially in developing economies such as Nigeria has moved from “brick and mortar” to electronic or digital platform (Adu, 2016). Banking is therefore no longer “somewhere you go but something you do” (Kung, 2018). Thus, electronic banking services have now become the leading edge that has traumatized the previous ways of doing business. Using digital technology has now enabled quicker and more efficient decision making in both volume and value by business customers and business managers.

The growing importance of digital technology in the banking landscape can be appreciated by the increase in the volume of transactions conducted through the electronic podium. According to the Boston Consulting Group (BCG) the global non-cash transactions handled electronically amounted to \$40 trillion in 2015 up from the meager \$357.9 billion of 2013 (BCG,2015). BCG further confirms that, the non-cash transaction through the digital platform is more than five times the entire global Growth Domestic Product (GDP) within the same period. From the above figures therefore, it is pertinent to deduce that, financial technology is a promising podium that is soon taking the centre stage in global banking transactions. It is in the light of the above and taking cognisance of developments in global business using electronic platform that this paper seek to provide an overview of the Nigerian electronic banking nexus both in terms of volume and value as promising innovation for boosting business transactions aimed at accelerating the economic development of Nigeria.

2.0 Literature Review

Across the globe people are relying much more on e-payment system with many types of transactions usually done with cash now done electronically (Bech, Faruqui, Ougaard & Picillo, 2018). According to the Committee

on Payments and Market Infrastructures (CPM) innovations in new instant electronic payment services through mobile payment system is putting the hitherto bank-based payment system under pressure locally and across borders (CPMI, 2016). Little wonder that today both Fintech applications and crypto currencies have taken over the existing business models. More startling is the revelation that some Central Banks are due to start issuing a digital version of cash in the last quarter of 2018 (Carstens, 2018).

Manyika, Lund, Bughin, Woetzel, Stamenov, Dhingra (2016) and (Bech & Garratt, (2017) observed that card payment otherwise known as the e-payment system has been relied more and more around the world. For example, usage of the electronic payment system has increased from 13% in 2000 to an astronomical 40% in 2016. Furthermore, the value of card payments usage in countries such as Germany, Japan and Mexico was 10% of the total transaction per annum. Moreover, e-payment was within the range of 15% to 35% in countries such as Australia, Brazil, Canada, India, Korea, Russia, Singapore, Sweden and Switzerland, Belgium, China, France, Hong Kong, Italy, the Netherlands, South Africa, Turkey. However, the use of e-payment was most significantly felt in Saudi Arabia, the United Kingdom and the United States that have up to 40% application (Carstens, 2018).

According to the Committee on Payments and Market Infrastructures (CPMI) the reason why e-payments are increasingly being used is because it is better, more widespread and more convenient mode of transaction (CPMI, 2016). This is due to the fact that, the internet is now global and its pervasive application can best be understood as a general purpose technology used in deepening and broadening the capacity of government, business and people. For instance, businesses are hocking up to digital services such as cloud computing to reduce IT costs and thereby increase their overall value in domestic and global markets.

Falk and Hagsten (2015) notes that, internet platforms are providing small and medium-sized enterprises and having access to global consumers thus providing an opportunity for countries to expand their participation in the international trade arena. The use of internet is also increasing the global importance of the services industry in international trade market. For instance over 17.5 percent of the international trades are done on line.

2.1 E-Payment systems around the world

There are various types of electronic payment (e-payment) system practiced around the world presently. However, the following are most pronounced.

2.1.1 Electronic funds transfer (EFT):

EFT involves electronic transfer of money by banks and other financial institutions. The following are the major instruments for the transfer.

2.1.2 Payment Cards (PCs):

These cards contain stored financial value that can be transferred from the customer's computer to the businessman's computer.

2.1.3 Credit Cards (CCs):

These are the most popular method of payment used in the electronic payment system (EPSs) and are used by charging customer's credits.

2.1.4 Smart Cards (SCs):

These cards contain stored financial value and other important personal and financial information used by the owner for online transactions.

2.1.5 Electronic Money (e-money/e-cash):

This is standard money converted into an electronic format using plastic encrypted card to pay for online transactions.

2.1.6 Online Payment (OP):

This is a medium of payment used to pay for services rendered monthly. Such services may include payment for Internet, phone bills, etc.

2.1.7 Electronic Wallets (e-wallets):

These are similar to smart cards as they because they also include stored financial value for online payments.

2.1.8 Micro-Payment Systems (Mic-Pay):

These modes of transaction are similar to e-wallets in that they are encrypted with stored financial value for online payments. However, as the name implies, Micro-Payment Systems are only used for small payments.

2.1.9 Electronic Gifts (EGs):

These are platforms for sending money or gifts electronically from one individual to another. The beneficiary of e-gift can spend it in their favorite online stores provided they accept this type of currency. In all of these payment systems however, the bottom line is for businesses offering domestic and international services to have assurance that valid payment will be securely received. It further the case for transacting customers to be assured that what they paid for electronically is received and goods or services purchased are delivered on time.

2.2 Benefits of E-payment Systems

There are various benefits accruing in the use of electronic payment system. Some of which include: simplified record and accounting system, improved efficiency in business transactions, reduced administrative costs of doing business and enhanced financial security

2.3 Shortcomings of the E-payment Systems

Previous studies have identified obstacles in the use of e-payment. These obstacles include the following:

2.3.1 Lack of Usability

Electronic payment system requires large amount of information from end users. However, the complex nature of website interface makes transactions more difficult. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form (Laudon & Traver, 2002).

2.3.2 Lack of Security

Kolkata and Whinston, (2000) argue that online payment systems using the internet are an easy target for fraud and personal information. Customers are asked to provide their credit card, account details and other personal information online. This information is transmitted in an

un-secured way. Providing these details by mail or over the telephone also entails security risks.

2.3.3 Issues with e-Cash

According to Guttman (2003) e-cash has a problem of universal acceptability because not all commercial establishments accept it as payment method. Another problem is that when payment is made using e-cash, the client and the salesman must have accounts in the same bank that issue e-cash hence, payment is not valid in other banks.

2.3.4 Lack of Trust

Electronic payments have a long history of fraud, misuse and low reliability. Electronic payments systems are new without established positive reputation hence potential customers often mention this risk as the key reason why they do not trust this payment services and therefore fear to make internet transactions (Lietaer, 2002).

2.4 Uses of E-payments

Table 2.1 depicts usage of the e-payment around the world. The electronic payment systems (EPSs) have of recent gained wider recognition because enable customers to pay for goods and services online by using integrated hardware and software systems. The main objectives of EPS are to increase efficiency, improve security, and enhance customer convenience and ease of usage.

Table: 2.1

Uses of e-payment system around the world

Countries	Transaction Types	Payment Types
China	Fast Foods	Smile to pay facial recognition
Denmark	Church Donations and Street performances	Mobile payments using phones
India	External business	Universal payment interface
Kenya	Various transactions	Pesalink payment through mobile phones and WhatsApp
Nigeria	Small transfers	ATM, mobile phones & PoS
Poland	Port fees	Elixir real time
Singapore	Fast foods & Eateries	Fast lets & various tap-and-go payment mode
United States of America	Pizza & Beer	Broadcast purchase payment

Source: Mamta, Tyagi & Shukla (2016).

Although the e-payment systems are in their immaturity, some significant development has been made. These developments can be noticed in both the quantum, volume of individual transactions and the percentage of use by countries around the world as depicted in Table 2.1

Table: 2.2

Quantum of e-payment use by country in %

Countries	Quantum of use/transaction	Volume of use/indiv./annum	Percentage of use
Australia	\$60	300 times	40
Germany	\$20	75 times	10
Japan	\$20	75 times	10
India	\$25	25 times	15
Korea	\$60	300 times	40
Mexico	\$20	25 times	10
Nigeria	\$05	25 times	>5
Saudi Arabia	\$60	300 times	40
Sweden	\$40	300 times	35
United Kingdom	\$60	300 times	40
United States of America	\$60	300 times	40

Source: Bech, Faruqi, Ougaard & Pacillo, (2018)

2.5 A case for a digital Nigeria

Realizing the need for global best practice because of the huge potential opportunities of the internet, Nigeria requires a comprehensive enabling environment for the e-payment to thrive using the internet. Areas that is pausing the greatest challenge includes expansion of the internet base and its accessibility, lowering costs of production and adequate capacity building skills base that can maximize the opportunities of the internet innovation.

2.5.1 Acceptance of Electronic Payment Systems in Nigeria

Electronic payment system is an innovative way for online payments. Prior studies document user's attitude as a pivotal factor determining the success or failure of any information system project (Abrazhevich, 2002; Bhasker, 2013; Davis, 2004). However, a research by Mamta, Tyagi and Shukla (2016) found four reasons that may inspire an increase in the use of electronic payment system. These include:

2.5.2 User Awareness

Making online payment is not an easy task. Even educated people also face problems in making online payments. Therefore, they always prefer traditional way of payments instead of online. Some of the issues complaint of by users include technical problem in server. Often time's customers tried to do online payments but they fail to do so due to server related issues. As a result they avoid it.

2.5.3 Feasibility in Rural Areas

Majority of the rural population are not very literate and therefore not able to operate computers or even computer related devices. Since they are unaware about technological innovations, they are not interested in

online payments. Hence, online payment systems are not feasible for villagers.

2.5.4 Highly Expensive and Time Consuming

Mamta, Tyagi and Shukla, (2016).found that electronic payment system are highly expensive procure. According to the authors, the final assembly in the e-payment technology includes set up cost, machine cost, management cost etc and this mode of payment to acquire this modern technology usually take more time than the physical or market based mode of payment.

2.5.5 Lack infrastructural facilities

The facilities required for the electronic payment system such as electricity, internet connectivity and bank branches are not available in developing economies such as Nigeria. Consequently, because of its lack of frequent usage, people in developing economies and some emerging nations still prefer the traditional payment system than the cash less transactions via e-payments.

3.0 Methodology

This study is based solely on a conceptual review and analysis of research data from various secondary sources such as articles, published and unpublished scholarly papers and books, various international and national conference proceedings, local and international journal articles, policy pronouncements and speeches by authorities in the field of finance and innovation technology, newspapers and internet sites. This paper begins with the growing importance of this new innovative technology that is today driving away the hitherto traditional bank based system into extinction. The paper discusses the present status of Nigerian government and private sectors collaborative effort on the need for literacy on the new e-payment innovation technology. The paper concludes by saying that the aim

of this new technology is not to force a cashless society or drive away banks from business, but to enable everyone to enjoy the convenience and efficiency of e-payments.

4.0 Findings

A lot has been written on the e-payment revolution around the world (e.g. Carstens, 2018; Falk. & Hagsten, 2015; Kung, 2018; Mustapha, 2018). Countries especially the developed economies such as Singapore, India and have gone very far both in innovation and use (Kung, 2018). The empirical findings in all these studies highlight benefits of the e-payment system over the traditional cash based system in terms of security and ease of doing business across borders. The case of developing capital markets are somewhat mix. While countries like china, UAE have since gone digital in terms of application and use of the e-payment innovation for instance, the study of Nigeria in terms of application and use is not that glowing (Acha, Kanu & Agu, 2017; Adu, 2016; Ailemen, Enobong, Osuma, Evbuomwan & Ndigwe, 2018; Mustapha, 2018). Reason adduced by various authorities include lack of political will on the side of policy makers, in-adequate infrastructural facilities needed such as the communication, electricity and computer education (Acha, Kanu & Agu, 2017; Mustapha, 2018).

5.0 Conclusions

Although Nigeria is still very far away from the desired destination in the entire e-payment revolution, the ATM cash withdrawals are very much encouraging. For example in 2016 it was almost 75% and almost 60% of all e-payment transactions in 2017. The aim is however to follow the international best practice to drastically bring this down to 20% in 2020 (Kung, 2018). As stated earlier, Nigeria don't need to literally be a cashless society as some people must use cash for their transactions especially in the rural areas where there are no enough facilities. However, Nigerians especially in the urban areas and those in businesses can certainly transact with a lot less cash and need not visit the ATM all the time.

According to Adesanya, (2017) electric payment (E-payment) requires bank accounts. Therefore, commercial banks in Nigeria should ensure low initial deposits to enable prospective customers open an account and allow for minimum account balances especially by the not so literate persons as done in other climes. For example, commercial banks in Singapore allow zero account balance in respect of the elderly, the young ones, recipient of government financial assistance and full time national security men such as the police, army and others. Government and public sector should collaborate

to raise the literacy level and familiarity with new digital technologies.

Government and the private sector have been working hard to ensure the take-up of e-payment which so far has been very promising (Adesanya, 2017). Individuals and business entities are increasingly showing interest in the e-payment system as about 20 % of Nigerians have adopted e-payments. On its own, the value of e-payments transactions has been growing every year although the use of cash and in some instances cheque is still predominant in Nigeria in recent years. It will be worthwhile for Nigeria to set target for reducing ATM cash withdrawals and completely eliminate cheque transactions in line with developed nations of the world. As stated earlier, the aim is not to force a cashless society, but to enable everyone to enjoy the convenience and efficiency of e-payments. The system is very simple with some training, it is swift, safe and seamless both for individuals and businesses (Kung, 2018).

Over all, Nigeria has no doubt made some significant progress over the past years in trying to grow its economy and reduce its citizen's poverty level. However, a lot more challenges remains for her to catch up with the international bench mark in growth rates, increased prosperity, and improved security. Government leadership is still required to reduce income inequality, improve productivity and competitiveness across the economy. Increasing the skills and educational attainment of Nigerians especially of telecommunication technology must be a matter of priority by the government. Finally, in the build up towards global electronic commerce, according Maldonado (2015) governments through the regulatory authorities such as the Central Bank of Nigeria must proactively bring in certain policy consideration aimed at achieving desirable results. This policy issues includes:

1. Putting the customer first. The customer should not be part of the business; he should be centre of the business.
2. Paying attention to the youth age group between 18 and 35 years and are known for their skepticism is the best to test new means of payment owing to their familiarity with the internet
3. Focus on the ideal future means of payment method which is likely to be universal, ubiquitous, simple, practical, inexpensive, and secure with a rich user interface.
4. Mobility ecosystem is the key as exemplified by the huge success of mobile phones being the choice made by the youth for communications and many other things, which empirical evidence show, include e-payments.

5. Be proactive because the various traditional market players will surely work to defend their old business strongholds threatened by newcomers or gain

traction in new business segments that promise lucrative revenues.

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