

EFFECT OF E-PAYMENT SYSTEM ON THE GROWTH OF NIGERIAN ECONOMY

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ABSTRACT

This study is on the role of e-payment system on the growth of the financial sector of the Nigerian economy. The study adopts a descriptive research design which employed secondary data from the Central Bank of Nigeria. The data is on volume and channels of e-payment systems in Nigeria and the GDP of financial sector which was used as proxy for the growth of the financial sector. The two factor Analysis of Variance (ANOVA) and correlation measures were used in testing the various hypotheses of interest at 5% level of significance. The factors were the payment channels and the year. This is aimed at calculating changes that might have occurred in the volume of e-payment systems across the channels and over the years in relation to economic growth in Nigeria. The results of the analysis in this study have been presented. The study found that ATM channel transactions contribute the highest volume of e-payment transactions towards the growth of the financial sector. This affirms existing fact that almost every Nigerian makes use of ATM for various forms of transaction. The

Introduction:

The increase in automation and computerization of systems and processes especially of monetary transaction is one of the most welcome developments in recent decades. This is seen to significantly influence commercial operations and financial systems around the globe. The significant success in process automation by information and communication technology (ICT) has made it possible for information to be digitalized and transmitted cheaper and faster in mega or tetra bytes (Sadeghi & Schneider, 2001). Nigeria payment system has been primarily cash-based for various reasons: due to its instant convertibility to other forms of value without intermediation of any financial institution and due to its anonymity and information

charges accruing from such volume of transactions contribute significantly to revenues of the financial sector and in the long run to the growth of the financial sector. The result also shows that there is significant change in volume of e-payment across the channels and over the years. This is as a result of the various cashless policies of the Central bank of Nigeria and Nigerian government and automation of various payments especially in the government sector like JAMB, CAC, FIRS, Immigration, Tertiary institutions levies, fines and other payments, and so on. Based on the findings, this study therefore concludes that the e-payment systems have significant effect on the growth of the financial sector of the Nigerian economy. The study therefore recommend that Nigerian should imbibe the culture of cashless policy which encourages e-payment over the various channels so as to further boost the growth if the financial sector and Nigerian economy in general. This study also recommends further and stringent fight against cyber crime and internet scam which discourages people from such online and e-payment transactions.

Keywords: *E-Payment, System, Growth, Nigerian, Economy*

From mechanizes to computerized system (Slater, 2000). Though, e-payment is a modern innovation in the financial industry, it greatly needs new commerce systems that will support its further development (Abrazhevich, 2002).

The invention of electronic based payments systems has done a lot to increase the convenience of bank's customers, staffs as well as the society at large (Kelvin, 2012). Presently, receiving and payment of money between parties are not essentially done with raw cash. Such payment can be made through e-payment channels such as Mobile money solutions, internet, Point of Sale terminals, ATM, (POS).

The use of these payment channels are however not totally free from problems. Customers often experience delay in accessing the services provided through this electronic channels (Olakah, 2012). One principal challenge in the use of (EPS) is power outage. Power problem is a monster threatening every business in Nigeria. It may fluctuate for hours and sometimes not available in days. These payment systems may experience failure at any time or malfunction and as a result frustrate transaction which may be urgent in most cases. The most common problem in the use of ATM is the trapping of customer's cards for days

by the channels thus preventing customers from making transactions until s/he is able to retrieve his card from the machine, which most times take days. Sometimes, the Automated Teller Machine (ATM) may debit a customer's account without dispensing cash, in such a case the customer accepts liability or reports such a case to the bank. Generally, electronic card based payment channel more often than not experiences network failure making the machine temporarily unable to function properly or process instructions by customers. The introduction of e-payment in Nigeria was done initially to eliminate the unacceptable delay and hurdles in the payment of government contractors by minimizing interaction between government officials and contractors. Concerns have been raised on the payment system process and policies. One of the prerequisite for developing economy of any nation according to Ajayi and Ojo (2006) is to encourage a payment system that is convenient, secure, and affordable. Consequently, developed countries to a large extent are gradually moving away from cash instruments toward electronic instrument especially payment cards (Humphrey, 2004). The current transition to e-payment in Nigeria economy raises a lot of concerns and there is still no considerable evidence to justify its implementation in the e-commerce and consequent effect on the Nigerian economy especially that of the financial sector. The paper will thus identify the effect of e-payment system on the growth of Nigeria.

Objective of the Study

The main purpose of the study is to ascertain the effect of volume of e-payment on the growth of the financial sector. The specific of objectives include:

1. To ascertain the contributions of the various e-payment channels on the growth of the financial sector.
2. To ascertain if there is significant change in the contribution of the various e-payment channels to the growth of the financial sector over.
3. To determine the relationship that exist between e-payment system and the growth of the financial sector with respect to the various e-payment channels

Research Hypotheses

The following hypotheses are formulated for this study.

1. H_0 : the various e-payment channels do not have significant contribution to the growth of the financial sector.

2. H_0 : there is no significant relationship between e-payment system and the growth of the financial sector with respect to the various e-payment channels.
3. H_0 : there are no significant changes in the contribution of the various e-payment channels to the growth of the financial sector over the years.

LITERATURE REVIEW

This study is anchored on Solow (1956) neo-classical theory of economic growth which *posits that increasing Capital leads to diminishing returns, thus, increasing capital has only a limited and temporary impact on increase on the economic growth. As capital increases the economy maintains its steady state rate of economic growth. This brings to fore that dependence of internal capitals of the financial sector can only be proven through mechanism of capital accumulation.* The economy of Nigeria relies more on financial transactions mainly umpired by the financial institutions which results in more revenue to the financial sector and Nigerian economy in general.

Several studies have been carried out in the area of electronic payment systems and the growth of the financial sector. Some of such studies are reviewed herein. Odusina and Onakoya (2017) studied the relationship between Customers' Retention in Banks for entrepreneurial development in Nigeria and Electronic Payment System. The research made use of of selected banks in Nigeria based on their level of ICT compliance, their standing in the financial sector and competitiveness. The study used questionnaire to capture grey area of Electronic Payment System, customers' retention and entrepreneurial development in banks using a total of 200 respondents. The result of the study revealed positive and significant relationship between Electronic Payment System and Customers' Retention.

Adeyelure, Pretorius and Kalema (2014) investigated electronic payment system in Nigeria focusing on the implementation and the constraints antagonizing it with the aim solving the constraints so identified. The study employed contractors, banks and government agencies as the population of study with total of 200 respondents. E-payment system comes with more benefit compared to the legacy system of cash and cheques. The findings in the study reveals that bank draft is mostly the systems used by government agencies for payment; the cost effectiveness of the system was low both to the

government agencies and contractors; and that there is no linkage between the bank payment platform and e-payment system adopted by the government. Tijani, and Ilugbemi, (2015) examined the impact of electronic payments systems on National development using the survey design targeted at savings and current accounts customers of deposit money banks in Nigeria. The study administered 120 questionnaires in 6 banks in Ado –Ekiti metropolis, Ekiti State, Nigeria. Chi-square test of independence was used in analyzing the responses. The findings of the study reveal that electronic payment channels have significant and positive impact on the economy and national development. The study recommended that Central Bank of Nigeria should mount other e-payment channels for commerce and trade promotion in Nigeria; that the Central Bank of Nigeria should embark on rigorous campaign for full adoption of e-payment channels especially at the grassroots level..

Taiwo et al (2016) they appraised the implementation of cashless policy since its introduction into the Nigerian financial system in 2012 and also to examine the persistent challenges facing its implementation. The study employed primary data collected with the aid of the questionnaire randomly administered to 120 respondents across First Bank, Zenith Bank and United Bank for Africa. The data were analyzed with the aid of descriptive statistics and one-sample t-test menu of SPSS. The study concluded that the cashless policy will have the desired impact if the implementation of an effective cashless system is ensured. Ayodele (2015) reviewed the electronic banking transactions as implemented in Nigeria. The author argued since the introduction of cashless policy was introduced, that cash transaction has greatly reduced, there has been fast settlement of bill, convenience in cash withdrawals. However, with the review of the various e-payment systems, a lot still need to be tackled by the various agencies concerned. The author further noted that provision of security, upgrading of infrastructural in the country, education of the illiterates, internet connection, observing the CBNs monetary rules are vital issues to smooth-run the electronic-banking policy. The study suggested that electronic banking policy would be successful if properly handled so as to improve the economy of Nigeria.

Akporume (2015) appraised the electronic payment infrastructure towards an efficient cashless policy in Nigeria. 250 questionnaires were distributed to bank customers 220 of which were returned. The study used Tables and percentages to present the responses while Chi-square test was used to test the hypothesis.

The study revealed that bank customers are faced with challenges such as insecurity of personal data and online frauds. Also poor interconnectivity and Operator's service fluctuation poses major challenge to the efficient use of mobile banking services. The study further confirms that effective e-payment system is an essential tool towards achievement of efficient cashless policy in Nigeria. The study therefore recommended that more POS and ATM should be deployed and properly managed and that all efforts should be geared toward ensuring efficient telecommunication services delivery and stable electric power.

Ayo and Babajide (2006) their paper reviewed the e-readiness of Nigeria as a country: the available payment methods; the motivation and opportunity for e-commerce; and the challenges motivating its wider applications. The study recognized two categories in the e-payment industry and employed two methods- the service providers: telecoms, banks, switching companies and cards manufacturers. The second category is the consumers- the generality of the populace. The questionnaire, personal observation and interview were the major tools for collecting data. The study proposed a legal framework among the government and stakeholders to guide the operations of the scheme and public-private-partnership initiative to manage the entire system towards guaranteeing security, effective control, confidence and robust e-payment architecture.

Oluwatosin and Fatokun (2015) cited that so much has been invested in the re-galvanizing of the national aggregator- a mechanism that facilitates both cash and electronic payment systems. The CBN and other financial institutions are quite optimistic about the success of the policy. The study tested the short term dynamics of the cashless policy to establish the prospects of cashless policy. The result of their study reveals that the national aggregator has facilitated more of electronic payments than cash payments within the last ten months of the study period, although with some fluctuations.

Ezeamama et al (2014) studied the impact of cashless policy in Nigeria (Economy using survey research design which adopted questionnaire as data collection instrument. The responses from the respondents show that cashless policy will reduce cash related corruption and attract more foreign investors to the country; cashless policy will increase employment; reduce cash related robbery thereby reducing risk of carrying cash. The study concluded that the impact of the introduction of cashless economy in Nigeria will be felt in of

Nigeria payment system and it will bring about reduction in the cost of banking services, safety risks, reduction in high security and also curb banking related corruptions.

Edesiri and. Kigho (2013) conducted analysis on the problems and prospects of electronic transaction in the Nigeria using a sample of 350 questionnaires and formulated two hypotheses for the study. The Chi-square tool was employed in testing the hypotheses. The results of the study revealed significant relationship between electronic transaction in promoting economic growth and the attitude of corporate bodies, individuals and government pose a serious problem to e-transaction of fears resulting from insecurity, anonymity, technical problems, cultural problems, etc. The study recommended that issuers of electronic transactions need great care in ensuring that the danger of counterfeiting is minimized and they must be vigilantly monitoring their operations and systems in order to quickly detect fraud when it occurs.; They should constantly upgrade hardware and software whenever a new feature of enhancing security becomes available.

Ogedebe, Babatunde and Jacob (2013) presents E-payment system as means of speeding up the implementation of government policies through the elimination of delays in government payment system and minimizing interactions between government officials and contractors to eliminate opportunity for corruptive tendencies. These are with the view of achieving economic and efficient transactions in government finances and improve quality of reporting system in the Nigerian public sector. Though the e-payment system is faced with challenges, like public acceptability, lack of uniform platform being operated by the banks, lack of adequate infrastructure and issues of security, with the proper use of the E-payment system, corruption which is a cancer in the public sector will be adequately addressed.

RESEARCH METHOD

This study is a descriptive research study which employed secondary data from the Central Bank of Nigeria. The data is on volume and channels of e-payment systems in Nigeria and the GDP of financial sector which was used as proxy for the growth of the financial sector. The two factor Analysis of Variance (ANOVA) and correlation measures were used in testing the various hypotheses of interest at 5% level of significance. The factors were the payment channels and the year. This is aimed at calculating changes that might have occurred in the

volume of e-payment systems across the channels and over the years in relation to economic growth in Nigeria.

RESULT AND DISCUSSION OF FINDINGS

The main purpose of this study is to ascertain the effect of volume of e-payment on the growth of the financial sector. The data used were of secondary source collated from the 2017 Nigerian Statistical Bulletin. The data were on volume of e-payment from various e-payment channels. The data covers the period of 2012 to 2017. The channels include: Cheques, NEFT, ATM, POS, WEB and NMO. The data on GDP of Financial sector was used as proxy for the economic growth of the financial sector. The results of the various analyses are presented below:

Table 1: Anova: Two-Factor Without Replication

<i>SUMMARY</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	<i>Year Rank</i>
Channel				
Cheques	77,651,996.00	12941999.33	2.80451E+12	6th
NEFT	178,191,052.00	29698508.67	5.9236E+11	5th
ATM	2,895,682,799.00	482613799.8	3.36706E+16	1st
POS	276,526,737.00	46087789.5	2.87501E+15	3rd
WEB	61,805,078.00	10300846.33	1.02122E+14	7th
MMD	184,763,841.00	30793973.5	3.53727E+14	4th
NIP	658,102,333.00	109683722.2	1.92025E+16	2nd
(Year/GDP)				
2017(3330.09)	1,436,326,192.00	205189456	8.48841E+16	1st
2016(3099.87)	910,186,115.00	130026587.9	4.35211E+16	2nd
2015(2842.39)	632,957,015.00	90422430.71	2.33468E+16	3rd
2014(2426.65)	540,203,348.00	77171906.86	2.04239E+16	4th
2013(2076.21)	384,823,358.00	54974765.43	1.13085E+16	5th
2012(1756.88)	428,227,808.00	61175401.14	1.93059E+16	6th

Table 1 shows the summary statistics for the factors (years and channels) in the ANOVA result. On the contribution of e-payment channels to the growth of the financial sector, the summary statistics result shows that ATM contributes the highest volume of transaction to e-payment channels. This is followed by NIP and POS respectively. The volume of transaction in ATM is found to double the volume of transaction in the rest channels.

Table 2: ANOVA test Results

Source of Variation	SS	Df	MS	F	P-value	F crit
Rows	1.05E+18	6	1.74681E+17	31.07109381	0.000	2.420523
Columns	1.12E+17	5	2.24756E+16	3.997814421	0.006738	2.533555
Error	1.69E+17	30	5.62196E+15			
Total	1.33E+18	41				

S = 74979747 R-Sq = 87.31%

The ANOVA hypothesis test result is presented in table 2. The result shows that over the years, the total volume of e-payment transaction has consistently increased with increasing GDP of the financial sector.

The test also leads to the conclusion that there is significant change in volume of e-payment across the channels and over the years. The R-squared of 87.31% shows that 87.31% of changes in GDP of financial sector is attributable to the changes in the volume of e-payment system over the years and across the channels.

CONCLUSION

The results of the analysis in this study have been presented. The study found that ATM channel transactions contribute the highest volume of e-payment transactions towards the growth of the financial sector. This affirms existing fact that almost every Nigerian makes use of ATM for various forms of transaction. The charges accruing from such volume of transactions contribute significantly to revenues of the financial sector and in the long run to the growth of the financial sector.

The result also shows that there is significant change in volume of e-payment across the channels and over the years. This is as a result of the various cashless policies of the Central bank of Nigeria and Nigerian government and automation of various payments especially in the government sector like JAMB, CAC, FIRS, Immigration, Tertiary institutions levies, fines and other payments, and so on. Based on the findings, this study therefore concludes that the e-payment systems have significant effect on the growth of the financial sector of the Nigerian economy.

The study therefore recommend that Nigerian should imbibe the culture of cashless policy which encourages e-payment over the various channels so as to further boost the growth if the financial sector and Nigerian economy in

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