

**E-BANKING AND ITS IMPACT ON ECONOMIC GROWTH IN NIGERIA
(2000-2018)**

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ABSTRACT

The study investigates the impact of e-banking on economic growth in Nigeria for the period 2000-2018. Secondary data are used and collected from Central Bank of Nigeria Statistical Bulletin. The study used Gross Domestic Product as proxy for economic growth and employ as the dependent variable; while, electronic mobile payment (EMP) and automated teller machine (ATM) to measure e-banking. Hypotheses are formulated and tested using Ordinary Least Square (OLS). The study shows a significant impact of automated teller machine transaction on Gross Domestic Product in Nigeria. Electronic mobile payment has a significant impact on Gross Domestic Product in Nigeria. The coefficient of determination indicates that about 47% of the variations in economic growth can be explained by changes in e-banking variables ((ATM, EMP) in Nigeria. The study concludes that e-banking has a significant impact on economic growth in Nigeria. The study recommends that the banking industry should adjust to full and effective deployment of information technology due to its sophistication since the technology with relative perceived advantage. That bank should be able to provide security by physically and electronically to check the incidence of hacking by Fraudsters. That banks management should from time to time train customers with regard to electronic banking its benefits, its risk exposure, physical and electronic security to avoid financial loss in the hands of hackers. It is also recommended that the monetary authorities and commercial banks enlighten their customers on the convenience and importance of adopting mobile banking channel in completing their transactions.

KEYWORDS: Examines, Impact, Electronic Banking, Economic Growth, Nigeria.

INTRODUCTION

The work of Gbenga (2017) stated that the emergence of electronic banking, online transactions and mobile banking in Nigeria has paved way for a new era of development where the use and demand for physical cash is gradually reducing. These recent evolution of technology in the Nigerian financial institutions possess interesting questions for economist, financial institutions, business analyst and the government regarding the current economic status, logistics, and availability of instruments to guarantee economic growth and stability, efficiency and effectiveness of the cashless policy Odedokun (2018). Hence, since the inception of humanity, various payment methods have been used to purchase goods and services starting with the trade by barter. The trade by barter method of transaction has been the foundation for the introduction of money and coins to solve the problem of double coincidence of wants and divisibility faced by trade by barter. The use of money/coins was introduced after the use of trade by barter method, and it has solved various challenges associated with trade by barter, but the use of money as an exchange medium has its own challenges and dis-advantages and can still be replaced with a better payment system-the cashless policy/banking Douada(2018).

The study by Ogueke and Abinbele (2018) posits that several merits enjoyed by more developed nations such as the US has prompted the Central Bank of Nigeria to adopt the cashless policy. At the end of the 1980s the use of cash for purchasing consumption goods in the US has constantly dropped with inflation (Humphrey, 2017). Nigeria aims to be among the biggest economy by 2020 has driven her to gradually move from a pure cash economy to a cashless policy. Thus, since Nigeria gained her independence in 1960, there have been several constitutional reforms, change in economic and banking policies mainly aimed at stabilizing the economy, enhancing social welfare to achieve growth and development of the economy Ugwueze & Nwezeaku (2016). In view of being one of the best and biggest economies in 2020, the CBN has started implementing the cashless policy/banking in Nigeria in one form or another. The CBN and other proponents of cashless policy have asserted reduction in crime rates, minimized risk associated with carrying huge sums of money, reduction in political corruption, reduction in banking cost, improvement on monetary policy in management of inflation and the overall growth and development of the economy of Nigeria as advantages associated with the implementation of the cashless policy.

The work Chiwendu (2018) stressed that the need for banks in Nigeria to have efficient customer service delivery and maintain global relevance in the system has led to the exploitation of the many advantages of ICT through the use of automated devices imperative in the industry. Many studies have also been conducted to establish the relevance of ICT to commercial bank performance. Another motivation for the numerous studies on e-banking is customer satisfaction. Customer satisfaction holds the potential for increasing an organization customer base, increase the use of more volatile customer mix and increase the firm's reputation(Eze & Egoro, 2016). Consequently, obtaining competitive advantage is secured through intelligent identification and satisfaction of customers' needs better and sooner than competitions and sustenance of customer's satisfaction through better products/services. A satisfied customer will definitely continue

his patronage but unsatisfied customer will withdraw his patronage. There is need to provide evidence on the extent to which ICT operations have impacted on customer service delivery in Nigeria deposit banks (Ugwueze & Nwezeaku, 2018).

THEORETICAL FRAMEWORK

The study is predicated on This study is anchored on the financial intermediation theory by Gurley and Shaw (1967). The theory explains the role of bank credit in an economy. The theory states that the business of financial intermediation in any modern economy is to provide a mechanism to draw financial flows from financially exceeding agents to those having a financial need in the economy. This was further supported by the Gurley and Shaw (1967) financial intermediation theory. The theory explains the role of bank credit in an economy. According to the theory, the business of financial intermediation in any modern economy is to provide a mechanism to draw financial flows from financially exceeding agents to those having a financial need in the economy. This means that a financial institution can affect private sector growth by efficiently carrying out its functions, among which is the provision of credit.

Intermediation is the process whereby potential borrowers are brought together with potential lenders by a third party, the intermediary. Financial institutions, in intermediating between the surplus and the deficit units bring sustained economic development. The role of financial intermediaries includes risk reduction, aggregation, maturity transformation and financial intermediation. By lending to a wide variety of individuals and businesses, financial intermediaries reduce the risk of a single default resulting in total loss of assets. By pooling many small deposits, financial intermediaries are able to make much larger advances than would be possible for most individuals. Most borrowers wish to borrow in the short term whilst most savers are unwilling to lock up their money for the long term. Financial intermediaries, by developing a floating pool of deposits, are able to satisfy both the needs of lenders and borrowers.

EMPIRICAL REVIEW

Ugwueze and Nwezeaku (2018) studied the relationship between electronic banking and the performance of Nigerian commercial banks. The study became necessary due to the increased adoption of the electronic banking which has redefined the banking service both in Nigeria and internationally. Electronic banking was proxied by value of Point-of-Sale transactions while commercial banking performance was proxied by customers' deposits. Engle-Granger cointegration model was used to analyse data for the sample period January 2009 to December 2013. The results show that POS is not cointegrated with both the savings and time deposits but are cointegrated with demand deposits. It is recommended that the monetary authorities and commercial banks should embark on an all-inclusive enlightenment campaign for the banking public on the benefits, convenience and importance of adopting e-banking channels in completing their transactions.

Eze and Egoro (2016) examined impact of electronic banking on the profitability of commercial banks in Nigeria. The study sought to examine the relationship between different e-banking channels and the profitability of commercial banks in Nigeria. Four e-banking channels (automatic teller machines, electronic mobile banking, internet banking transactions, and point of sales services) were identified and regress against the profit

before tax of commercial banks operating in Nigeria between 2006 and 2014. The study used the confirmed ECM model (via residual diagnosis) to test the formulated hypotheses. The results revealed that the over impact of electronic banking on the profitability of commercial banks was significant; whereas, the impact of the individual channels was varied. The study recommends, amongst others that, commercial banks should intensify effort to deploy more ATM delivery points and also make them more effective and efficient and that the regulatory authorities should also collaborate with the banks to put in place an enabling operating environment and regulatory framework to bring out optimal deployment of these services to customers. This is especially with respect to addressing the issue of failed transactions.

Oladejo (2016) observed that commercial banks in Nigeria have adopted one form of e-payments or the other. However, the pattern of adoption is yet to be substantiated. Therefore, the influence of such adoption on profitability of the adopting banks is worthy of exploration. This study focuses on the impact of four (ATM, POS, web/Internet and mobile) e-payments adoption and banks specific variables on profitability of the Nigerian Deposits Money Banks (DMBs). Secondary data were obtained from annual report and accounts of ten quoted (DMBs) between 2005 and 2012. Data were analysed using panel logistic regression. The overall result from data analysis shows that when bank adopt e-payment systems, their performance level, such as gross margin, profits after tax, return on assets and return on equity changes.

Abaenewe, Ogbulu and Ndugbu (2018) investigated the profitability performance of Nigerian banks following the full adoption of electronic banking system. The study became necessary as a result of increased penetration of electronic banking which has redefined the banking operations in Nigeria and around the world. Judgmental sampling method was adopted by utilizing data collected from four Nigerian banks. These four banks are the only banks in Nigeria that have consistently retained their brand names and remain quoted in the Nigerian Stock Exchange since 1997. The profitability performance of these banks was measured in terms of returns on equity (ROE) and returns on assets (ROA). With the data collected, we tested the pre- and post-adoption of e-banking performance difference between means using a standard statistical technique for independent sample at 5 per cent level of significance for performance factors such as ROE and ROA. The study revealed that the adoption of electronic banking has positively and significantly improved the returns on equity (ROE) of Nigerian banks.

METHODOLOGY

The study adopted *ex-post-facto* research design to source requisite information. It is a careful articulated set of suggested instrument for effective execution of the research project. It specifies the framework on which the project is based. It tries to ensure that the required data are collected economically and accurately. In this study, explanatory type of research will be used. This method enables the researcher to gather analysis and interpret data obtained with a view to explain the phenomenon under investigation.

Model Specification

In testing the relationship between utilization of insurance company's resources and Nigerian economy, the study specifies the functional relationship of the models as:

$$GDP = f(ATM, EMP)$$

The econometric model is specified as follows:

$$GDP = a_0 + a_1ATM + a_2EMP + \varepsilon$$

Where;GDP = Gross Domestic Product as proxy for economic growth in Nigeria

ATM = Automated Teller Machine, EMP = Electronic Mobile Payment, a_0 = constant, $a_1 - a_2$ = Coefficient of Independent Variables, ε = Stochastic Error Term.

DATA PRESENTATION AND ANALYSIS

The study focused on the impact of e-banking on economic growth in Nigeria; over a period of 2000-2018. Data for this study consist of 19-years annual observation period of (2000-2018). The study used annual data, because quarterly data may not be accessed for some of the variables. The study used Electronic Mobile Payment (EMP) and Automated Teller Machine (ATM) to measure e-banking; whereas, Gross Domestic Product was adopted to measure economic growth,for the period 2000-2018.

4.2 Descriptive Statistics

Table 1: Descriptive statistics

	GDP	EMP	ATM
Mean	5486588	4752534	5364246
Median	4743500	4243550	5253480
Maximum	4323240	3546245	4326774
Minimum	3839500	3142628	4132473
Std. Dev.	2.153102	148.6905	5.354650
Skewness	0.684952	3.146739	1.013249
Kurtosis	3.012472	14.19450	5.256220
Jarque-Bera	0.224754	123.7151	12.83540
Probability	0.812485	0.000000	0.001612
Sum	112.3475	3173.45	596.4000
Sum Sq. Dev.	1264.846	685474.4	907.1700
Observations	19	19	19

Source: E-views 9.1 output

Table 1 shows that Gross Domestic Product for the period under study had a mean value of 54,865.88, Electronic Mobile Payment (EMP) had ₦47,525.34; while Automated Teller Machine (ATM) had ₦53,642.46. The Jarque-Bera statistic shows that two of the variables, namely Gross Domestic Product and Automated Teller Machine were normally distributed while Automated Teller Machine and Point of Sales were highly skewed. Furthermore, Electronic Mobile Payment has a mean of ₦47,525.34 this implies that for the period under review the Automated Teller Machine was very high.

Unit Root Test

The Augmented Dickey-Fuller (ADF) unit root test statistics was used to test for stationarity; and to establish the order of integration of each. The null hypotheses of non-stationarity of Automated Teller Machine Payment (ATM) and Electronic Mobile Payment (EMP) are tested against the alternative hypotheses. The results were presented on table 2.

Table 2: Unit Root Test Statistics

Variables	Level	1 st Differ.	Decisio	Remarks
GDP	-5.39927*	3.273693	1(1)	Stationary
ATM	-0.25361	-4.73522*	1(1)	Stationary
EMP	-1.26372	3.61612**	1(1)	Stationary

Source: E-views Econometrics 9.1, *(**) indicate statistical significance at the 1 percent and 5 percent level, respectively. The critical values at the 1 percent and 5 percent significance levels and the critical values of ADF are from Mackinnon.

Test for Co-integration

The results of the test are presented on table 2 and the null hypotheses of no co-integration among the variables (that is, $r=0$) is tested against the alternative hypotheses of co-integration among the variables (that is $r=1$). The null hypotheses of no co-integration is rejected at the 5 percent significance level. However, the null hypothesis that $r \geq 1$ could not be rejected against the alternative $r=2$ and $r=3$, suggesting the presence of a unique co-integrating relationship among variables. Thus, a long-run relationship exists among the variables as indicated by the likelihood ratio as indicated on table 2.

Table 3: Multivariate Johansen’s Co-Integration Test Result. Lags interval: 1 to 2

Null hypotheses	Alternative hypotheses	Eigen value	Likelihood ratio	Critical values	5% Critical	Hypothesized No.
$r=0$	$r=1$	0.7375	72.8468	54.64	50.57	None **
$rd \leq 1$	$r=2$	0.6239	62.5374	40.64	42.02	At most 1
$rd \leq 2$	$r=3$	0.5340	50.8094	35.04	30.84	At most 2

Source: E-views Econometrics 9.1

Note: *(**) denotes rejection of hypothesis at 5% (1%) significance level.

Table 4: Ordinary Least Square (OLS) Estimation Results

Dependent Variable: GDP

Method: Least Squares, Time: 16:34

Sample: 2000-2018

Included observations: 18

Date: 13/08/2019

	Coefficient	Std. Error	t-Statistic	Prob.
C	132.5985	1.003375	2.476946	0.000002
ATM	5.263546	0.153434	1.756585	0.000005
EMP	6.978675	0.012646	3.243658	0.000020
R-squared	0.471834	Mean dependent var		362.7586
Adjusted R-squared	0.381323	S.D. dependent var		23.73566
S.E. of regression	12.25344	Akaike info criterion		121.0658
Sum squared resid	32818.10	Schwarz criterion		10.00369
Log likelihood	-14.1156	F-statistic		8.908690
Durbin-Watson stat	1.847567	Prob(F-statistic)		0.000000

Source: Author's computation with the use of E-view 9.0

From table 4 the coefficient of determination ($R^2=0.471834$) indicates that about 47% of the variations in economic growth can be explained by changes in e-banking variables (ATM,EMP) in Nigeria. This implies that a significant portion of economic growth is explained by e-banking variables. The F-Statistics of (8.908690) which is significant at 5% confirms the impact of e-banking on economic growth in Nigeria; over a period of 2000-2018. The influence of the explanatory variables on the dependent variable is statistically significant and this is also confirmed by the F-probability which is statistically zero.

CONCLUSION AND RECOMMENDATIONS

The study concluded that e-banking has a significant impact on economic growth in Nigeria. This is consistent with the work of Awgu and Carter (2017) which shows that electronic banking has a significant effect on return on assets of banks in Nigeria. However, another motivation for the numerous studies on e-banking is customer satisfaction (Agbarere & Ogbonna, 2019). Therefore, customer satisfaction holds the potential for increasing an organization customer base, increase the use of more volatile customer mix and increase the firm's reputation. Consequently, obtaining competitive advantage is secured through intelligent identification and satisfaction of customers' needs better and sooner than competitions and sustenance of customer's satisfaction through better products/services. The study recommends that the banking industry should ensure effective deployment of information technology to achieve efficient service delivery. Regulatory authorities and policy makers should be able to provide security by physically and electronically to check the incidence of hacking by fraudsters. Operators should be informed from time to time about the advantages of e-banking. The monetary authorities and commercial banks should enlighten their customers on the convenience and importance of adopting mobile banking channel in facilitating their transactions.

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**Appendix1:
Impact of E-Banking on Economic Growth in Nigeria (2000-2018)**

Years	Gross Domestic Product(₦' Billion)	ATM (₦' Billion)	EMP Bill (₦' Billion)
2000	6,713.57	465.54	641
2001	6,895.20	584.54	5,290
2002	7,795.76	733.76	52,450
2003	9,913.52	825.05	450,900
2004	11,411.07	871.58	350,470
2005	14,610.88	854.83	550,817
2006	18,564.59	695.00	555,700
2007	20,657.32	574.93	548,750
2008	24,296.33	471.93	544,258
2009	24,794.24	797.48	530,700
2000	54,204.80	1,277.10	530,425
2011	63,258.58	1,727.91	542,900
2012	71,186.53	2,122.93	549,870
2013	80,222.13	2,581.55	646,202
2014	83,193.463	2,815.52	638,330
2015	87,576.474	2,772.87	786,320
2016	94,144.960	2,679,23	978,330
2017	101,144.49	2,236.35	988,360
2018	101,263.20	3,465.56	998,374

Source: Central Bank of Nigeria Statistical Bulletin, 2018.