IMPACT OF CASHLESS POLICY ON DEPOSIT MONEY BANK PERFORMANCE IN NIGERIA (2000-2018)

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ABSTRACT
The study examines the impact of cashless policy on deposit money banks performance Nigeria; for the period 2000-2018. Secondary data were used and collected from Central Bank of Nigeria Statistical Bulletin. This study used automated teller machine (ATM), point-of-sale (POS), and mobile banking (MB) as the explanatory variables to measure cashless policy; whereas, return on assets of deposit money banks was proxy for deposit money banks performance and employed as dependent variable. Hypotheses were formulated and tested using Ordinary Least Square (OLS). There is a significant impact of automated teller machine transaction on return on assets of deposit money banks in Nigeria. Point on Sales terminal transactions have a significant impact on return on assets of deposit money banksin Nigeria. Electronic mobile payment has a significant impact on return on assets of banks in Nigeria. .The coefficient of determination indicates that about 47% of the variations in banks profitability can be explain by changes in cashless policy variables ((ATM, POS, MB) in Nigeria. The study concludes that cashless policy has a significant impact on deposit money banks performance in Nigeria. The study recommends that The policy makers should ensure that effective deployment of information technology due to its sophistication since the technology with relative perceived advantage. Policy makers and regulatory authorities should be able to provide security by physically and electronically to check the incidence of hacking by fraudsters .The management deposit money banks should from time to time train customers with regard to electronic banking benefits, its risk exposure, physical and electronic security to avoid financial loss in the hands of fraud stars .The operators should create an enlightenment to their customers on the convenience and importance of adopting mobile banking channel in completing their transactions.

KEYWORDS: Cashless Policy, Deposit, money banks, performance, Nigeria.

INTRODUCTION

An empirical study conducted by Agbjuekere (2018) stressed that today's banking environment is very dynamic and undergoes rapid changes as a result of development and innovations in information and communication technology, increased awareness and demand from customers. Banking industry of the 21st century operates in a complex and competitive environment characterized bythese changing conditions and highly unpredictable economic climate. ICT is at the centre of this global change curve. This has changed the dimensions of competition in the retail banking sector (Ogboke &Fusonmi, 2019). Thus, following the introduction of electronic banking and internet automated teller machines which are the initial cornerstones of electronic finance, the increased adoption and penetration of mobile banking and Internet banking has added a new distribution channel to retail banking: Internet/Online-banking (Ikendegu, 2018).

Adubgoi (2018) posits that the quest 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 information and communication technology 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. 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.

The study conducted by Ugwueze and Nwezeaku(2018)stated that the introduction 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 declining. 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.Since the inception of humanity, various payment methods have been used to purchase goods and services starting with the trade by barter (Nzotta, 2014). 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 (Odior & Banuso, 2018).

THEORETICAL FRAMEWORK

The theoretical framework of this study is anchored on the Quantity Theory of Money (QTM). QTM is a macro- economic policy of government designed to control the level of economic activity in the country. QTM claims that the level of prices in the economy is directly related to the quantity of money in the economy. Milton Friedman and Anna Schwartz had given the quantity theory a specific form known as monetarism, through their hypothesis that shifts in the money supply schedule have been large relative to shift in the money demand schedule. The Quantity Theory of Money (QTM) is an economic idea stating that the supply of money in an economy determines the level of prices and changes in the money supply result in proportional changes in prices. The Quantity Theory of Money in its simplest form can be outlined using the Irving Fisher's equation as: $MV = PT$. The above equation is interpreted as follows. M = Money supply or stock of money in a given economy. V = Velocity of circulation i.e. the number of times the money supply circulates around the economy in a given period of time. P = Average price level of goods and services. T =Transactions total number of goods and services sold or added to stock in a given period of time. MV is the money supply multiplied by the number of times it flows around the economy buying goods and services over a particular period of time. It is the same as the total expenditure, GNE, over that period of time. PT is the total of goods and services produced multiplied by the price at which they are sold on the average. This is the same as total production GNP, over the particular period of time. GNE = GNP. Thus, $MV = PT$, Money spent on goods is necessarily the same as the value of which the goods were sold.

EMPIRICAL REVIEW

Odior and Banuso(2018) carried out a study in Nigeria, observed that 68.2% of the respondent complained about long queues in the bank, 28.9% complained of bad attitude of teller officers (cashiers) while 2.89% complained of long distance of bank locations to their home or work places. Likewise, in her 24th NCS national conference in December 2011, CBN data shows that 51% of withdrawal done in Nigeria was through automated teller machine (ATM), while 33.6% was through over the counter (OTC) cash withdrawals and 13.6% through cheques. Payment was also done through point of sales machine (POS) which accounted for 0.5% and web 1.3%.

Akhalumeh and Ohioka (2018) observed some challenges with the introduction of cashless policy. Their findings show that 34.0% of the respondents cited problem of internet fraud, 15.5% cited problem of limited POS/ATM, 19.6% cited problem of illiteracy and 30.9% stayed neutral - the respondent not been sure of problem been expected or experienced. While in some quarters there was fear of unemployment, some believe it will create more jobs especially when companies manufacturing POS machine are cited in Nigeria. More so, data sourced from Central Bank of Nigeria portal shows that Lagos state, with a population of 17 million people, only has sixty one Point Of Sales, twenty bank branches and twenty four ATMs per 100,000 people which are far less to satisfy the needs of the population.

Ojeedokun (2018) studied the problem of cash based economy and cashless policy in Nigeria. For effective cashless implementation in Nigeria availability of sufficient and well-functioning infrastructure (notably electricity), harmonization of fiscal and monetary

policy, regular assessment of the performance of cashless banking channels, consideration of the present state and structure of the economy, redesign of monetary policy framework and greater efforts towards economic growth whilst managing inflation should be considered.

Ugwueze and Nwezeaku (2018) examined the nexus between financial innovation and bank efficiency as well as the impact of financial innovation on efficiency ratio of deposit money banks in Nigeria from 2006 to 2014. The secondary data covering the period of the study were sourced from the Central Bank of Nigeria statistical bulletin. The unit root test was performed to ensure that the variables were free from stationarity defect linked with almost all time series data due to the nature they were generated. Edwin and Adele-Louise (2018) investigated the extent of the adoption and usage of the mobile phone banking services among banking customers in Nigeria and the associated problems. Mobile phones are now ubiquitous and a standard aspect of daily life for a large percentage of the world population.

METHODOLOGY
The study adopted *ex-post-facto* research design to source requisite information. An *ex-post-Facto* research design is a systematic empirical inquiry that requires the use of variables which the researcher does not have the capacity to change its state or direction in the course of the exercise (Kerlinger, 1973 & Onwumere, 2009). The ex-post-facto research design is used because the data are already documented by reputable institutions like the World Bank, International Monetary Fund (IMF), Central Bank of Nigeria (CBN) and National Bureau of Statistics. Thus, researchers adapt and rely on such official publications for valid and reliable academic exercise.

Model specification
Multivariate linear regression model is used to test the hypotheses proposed for this study. The Ordinary Least Square (OLS) linear regression equation based on the above functional relation for models is econometrically stated as:

ROA = f(ATM, POS, MB)

Where:

ROA = Return of Assets

ATM = Automated Teller Machine transactions

MB = Mobil Banking

POS = Point on Sales services

The econometric form of the model is as follows;

$Ln(ROA)= a_0 + Lna_1ATM + Lna_2POS + Lna_3MB + U$

Where U = Error term

DATA PRESENTATION AND ANALYSIS
The study focused on the impact of cashless policy on deposit money banks performance 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 Automated Teller Machine Payment (ATM), Point of Sales (POS) and Mobile Banking (MB) to measure cashless

policy; whereas, return on Assets was adopted to measure performance of banks for the period 2000-2018.

4.2 Descriptive StatisticsTable 1: Descriptive statistics

	ROA	MB	POS	ATM
Mean	57.6358	6352784	5364746	6354767
Median	50.2030	7465850	5342780	5736480
Maximum	54.2324	6706645	3633374	4736457
Minimum	45.9500	3403628	5473773	4657.638
Std. Dev.	2.153102	148.6905	5.403850	9.617132
Skewness	0.684952	3.146739	1.067069	0.254676
Kurtosis	3.190472	14.19450	5.256220	2.003657
Jarque-Bera	0.352754	138.7151	12.74340	0.214879
Probability	0.002485	0.000000	0.001612	0.213649
Sum	132.3475	33173.45	6354.120	1486.929
Sum Sq. Dev.	1264.846	685474.4	907.1700	1321.166
Observations	19	19	19	19

Source: E-views 9.1 output

Table 1 shows that return on Assets for the period under study had a mean value of58%, Electronic Mobile (MB) had ₦6,352,74 and Point of Sales (POS) had ₦5364746, while Automated Teller Machine (ATM) had ₦5214367. The Jarque-Bera statistic shows that two of the variables, namely return on assets and Automated Teller Machine were normally distributed while Automated Teller Machine and Point of Sales were highly skewed. Furthermore, Mobile Banking has a mean of ₦6354767 this implies that for the period under review the Point of Sales 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), Point of Sales (POS) and Mobile Banking (MB) are tested against the alternative hypotheses. The results were presented on table 2.

Table 2: Unit Root Test Statistics

Variables	Level	1st Differ.	Decision	Remarks
ROA	-5.35467*	2.003693	1(1)	Stationary
ATM	-0.25361	-4.127492*	1(1)	Stationary
POS	-1.02432	3.267612**	1(1)	Stationary
MB	-2.90023	-4.025362*	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 rd" 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 hypothes.	Alternative hypotheses	Eigen value	Likelihood ratio	Critical values	5% Critical	Hypothesized No.
r=0	r=1	0.8475	74.6478	56.64	52.57	None **
rd$\leq$1	r=2	0.7759	64.5374	48.64	44.02	At most 1
rd$\leq$2	r=3	0.6850	52.8674	37.04	32.84	At most 2
rd$\leq$3	r=4	0.5543	44.5668	26.74	28.04	At most 3

Source: E-views Econometrics 9.1

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

Vector Error Correction Model

The Error Correction coefficient contains information about whether the past values affect the current values of the variable under study. ECM is related to the speed of adjustment of the system towards long-run equilibrium and the short-run dynamics are captured through the individual coefficients of the difference terms Ibenta (2012).

Table 4: Vector Error Correction Estimates Results

Dependent Variable: ROA
Method: Least Squares, Time: 45:25
Sample: 2000-2018
Included observations: 19

Date: 24/07/2019	Coefficient	Std. Error	t-Statistic	Prob.
(ECM$_{-1}$)	-0.642427	-0.007383	2.736678	0.000001
D(ROA($_{-1}$))	7.363838	0.073653	3.635489	0.000031
D(ROA($_{-2}$))	5.074546	0.012633	2.736360	0.000298
LnATM	5.657446	0.005488	1.862231	0.000092
LnPOS	6.735465	0.163874	3.846558	0.000028
LnMB	313.0358	0.253757	2.263582	0.000022
C	313.2638	0.129376	9.745363	0.000003
R-squared	0.474053	Mean dependent var		122.7586
Adjusted R-squared	0.422533	S.D. dependent var		23.37466
S.E. of regression	12142526	Akaike info criterion		123.2536
Sum squared resid	32818.10	Schwarz criterion		136.4369
Log likelihood	-14.1156	F-statistic		8.946354
Durbin-Watson stat	1.954684	Prob(F-statistic)		0.000000

Source: Author's computation with the use of E-view 9.1

The results on table 4 show that the error-correction coefficient is statistically significant and has a negative sign, which confirms a necessary condition for the variables to be co-integrated. This also implies that the speed with which Automated Teller Machine Payment (ATM), Point of Sales (POS) and Mobile Banking (MB), adjust from short-run disequilibrium to changes in performance of the Nigerian economy in order to attain long-run equilibrium is 64% within one year. Hence, the coefficient of determination (R^2=0.474053) indicates that about 47% of the variations in commercial banks profitability can be explained by changes in cashless variables (ATM, POS, MB) in Nigeria. This implies that a significant portion of deposit money banks performance is explained by cashless policy variables. The F-Statistics of (8.946354) which is significant at 5% confirms the impact of cashless policy on deposit money banks performance in Nigeria; for the period 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 concludes that cashless policy has a significant impact on deposit money banks performance in Nigeria. This corroborate the work of Sudongere (2019) who analyze the effect of cashless system on the growth of the Nigerian economy. However, it becomes clear that few studies presented a comprehensive evaluation of cashless banking policy implications in developing countries. Thus, even payments instruments that look similar across countries on the surface may be different due to historical and legal variations (Chiwendu & Queenuowa, 2017).The study recommends are the policy makers should ensure that effective deployment of information technology due to its sophistication since

the technology with relative perceived advantage. Government and regulatory authorities should be able to provide security by physically and electronically to check the incidence of hacking by fraudsters. The management deposit money banks 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. The monetary authorities create an enlighten to their customers on the convenience and importance of adopting mobile banking channel in completing their transaction.

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Appendix1:
Impact of Cashless on Banks Performancein Nigeria 2000-2018

Years	Return on Assets (%)	POS Bill (₦' Billion)	ATM (₦' Billion)	MB (₦' Billion)
2000	3.96	77.80	465.54	465.54
2001	4.82	125.30	584.54	584.54
2002	2.63	139.70	733.76	733.76
2003	2.00	152.30	825.05	825.05
2004	2.58	158. 00	871.58	871.58
2005	0.49	101.10	854.83	854.83
2006	2.65	206.50	695.00	695.00
2007	5.92	148.10	574.93	574.93
2008	4.29	150.70	471.93	471.93
2009	-9.28	87.00	797.48	797.48
2000	3.91	95.60	1,277.10	1,277.10
2011	-0.04	770.00	1,727.91	1,727.91
2012	2.62	133.86	2,122.93	2,122.93
2013	2.81	227.04	2,581.55	2,581.55
2014	2.23	357.18	2,815.52	2,815.52
2015	2.81	227.04	2,772.87	2,772.87
2016	2.23	357.18	2,679,23	2,679,23
2017	3.96	231.34	2,236.35	2,236.35
2018	4.82	243.36	2,536.83	2,344.76

Source: Central Bank of Nigeria Statistical Bulletin, 2018.