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Branch Network Growth and Banks Performance in Nigeria (1981-2013)

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Abstract
Despite significant technological innovation in retail banking services delivery, the number of Nigerian bank branches has grown steadily over time. This paper assesses the implications of these developments by examining the contribution of the branches to banks performance. The study uses the whole banks in Nigeria during the period 1981 and 2013 using a pooled data analysis on ordinary least square(OLS).The variables used include the total number of banks branches in rural and urban area and those domiciled abroad regarded as foreign branches. It also considered the total number of banks at each period and year of study while the growth in Total Asset is proxied as the dependent variable. Our findings showed that there is a positive relationship between the growths of the branches in the rural, urban and foreign centres which implies that there is need to open more branches if the banks wants the Asset to grow. We find no systematic relationship between number of banks and Asset growth perhaps because banking organizations optimize the size of their branch network operations as part of an overall strategy involving both branch-based and non-branch-based activities. The study suggested that branching activities should be a major work and decision of the banks so as to bring more customers to the bank who will now use the various electronic platforms for service installed by the banks.
Keywords: Banking, Bank Branches, Deposits, Retail banking, Total Asset,1981-2013

INTRODUCTION

The banking sector has been regarded as the hub of any countries growth and development as they channel fund from the surplus sector to the deficit sector of the economy (Levine 1996). To help drive the service delivery to their customers, banks makes use of different channels which comes in form of branches (physical and e-branch) and other electronic service points.

Recent innovations in the delivery of retail financial services have raised questions about the role of banks and their branches in the delivery of highly prized financial services as this has prompted a rapid and significant branch office expansion program with its attendant significant increases in the volume of customers' transactions in banking industry for survival and profitability (Johnson, 2005). The advent of Internet banking, the proliferation of automatic teller machines (ATMs), and the increasing reliance on centralized call centers, all seemed to challenge the traditional branch method of delivering banking services.

The number of full-service branches in the Nigeria has increased steadily since the early 1990s (1855 by 1989 and 2023 by 1991) see table 1. It is expected that the increased branches will have a considerable effect on the profitability of banks in Nigeria due to the fact that the branches will need to undertake a lot of cost while performing their statutory duties of servicing the customers. Cost to be undertaken could come in form of startup cost, research and development cost, cost of deploying staff to the branches and feasibility cost to determine the viability of the branch. In addition, there will be need to consider a lot of political cost needed to sustain the functionality of the branch.

Aladwan (2015)posited that no matter the benefit accrued to increased branch network, there is every evidence that there a lot of cost to be incurred that will reduce the profitability of banks any day as witnessed in Jordan despite increased technology and the need to open more branches to meet the needs of customers in the country.

Various research works have attempted finding out factors that affect banks profitability and performance without giving consideration to the cost of running the banks and it branches. Also, the need to meet the needs of customers scattered throughout the country of operation of the banks will surely affect the growth of the banks. In all these postulations, recent growth in branch networks as listed by Central Bank of Nigeria (CBN) gives so much to be considered when it comes to the issue of banks branch size and the general performance of banks in Nigeria.

This study is aimed at examining the growth of Nigerian banks through the growth and spread of the branches of these banks over the period 1981 to 2013.The period witnessed an unprecenteded growth in branch network which will be enough for this study. The extensive literature to be reviewed and the quantitative

analysis to be done on the various branch available will open the way for the dearth of studies and research works on banks size and the growth of Nigerian banks.

STATEMENT OF PROBLEM

The major reason for establishing banks is profit making. In order to make profit banks must ensure that it attract customers patronage. To attract customers, there must considerable good services in form of various platforms for their transactions. The need to create an interface between the banks and their customers in account opening, deposit and withdrawals and other services has led the banks to opening various branches.

However, innovations leading to different platforms for servicing the customers is expected to reduce the number of branches having interface with the customers but the reverse is the case as more and more branches are been opened daily.

Hirtle (2009) is of great concern that the implication of these branching trends have been greatly unexplored, and as a result could have serious effect on banks performance. An interface is highly needed but cost implication of these interface must be considered so that it does not outweigh the benefits. Banks growth through branching is expected to have substantial impact on banks profitability and this has been tested and proved with substantial evidence.(pastory and swai, 2013).

The implication of the various aversion to branch growth despite considerable improvement in e-banking platforms stems from the fact that it may affect the fortune of the banks in the long run and this may reduce the returns to shareholders or make the spending's on the branch not commensurable with innovations expected from the banks by the customers.

OBJECTIVES OF THE STUDY

The research work is intended to achieve the following objectives:

- To determine if the number of urban branches has effect on the performance of banks
- To determine if the number of rural branches has effect on the performance of banks
- To determine if the number of foreign branches has effect on the performance of banks
- To determine if the number of banks has effect on the performance of banks.

RESEARCH QUESTIONS

To achieve the objectives of the research work, the following research questions are treated:

- To what extent does urban branches has effect on the performance of banks?
- Is there any relationship between the number of banks branches and the performance of banks?
- To what extent does the number of foreign branches has effect on the performance of banks?
- Will the total number of banks affect the performance of banks?

RESEARCH HYPOTHESES

H_{O1} There is no significant relationship between the growths of urban branches and banks performance
H_{02} There is no significant relationship between the growths of rural branches and banks performance
H_{03} There is no significant relationship between the growths of foreign branches and banks performance
H_{04} There is no significant relationship between the number of banks and banks performance

IMPORTANCE/SIGNIFICANCE OF THE STUDY

In an environment where there is a dearth of research on how banks size and branches affects the performance of banks, the study is intended to be very revealing as it shows the growth of the branches over the years and the number of banks that has created these branches. The study will reveal a lot about the performance of bank through the contribution of branches. The study is also important as it review the relationship between asset growth of the banks and it branches effort over the period of study. Nigeria is a secular state with different perception and also a developing nation with a strong emerging markets and therefore need a study like this to formulate necessary policies for banks in establishing and managing branches for good performance by the banks. Lastly, the study is intended to be an opener for students and researches who will built on this study to do more researches.

LITERATURE REVIEW

Despite the fact that the country has not been blessed with literatures on branch growth and banks performance (cum profitability), many literatures exist worldwide which have taken studies on banks size and profitability, branch growth and performance. However they all established the relationships between the growth of branches and varying level of performance of the banks in the country of study. Many of these scholars have established the fact that bank size affect to a great extent the profitability and performance of banks in their countries. While

a majority accepted the fact that banks size and branch growth affects the performance, others in their conclusion do not see this as been true and this has led to some arguments which are therefore reviewed in this study.

In a study conducted by Aladwan (2015) the Jordanian banking sector was used to determine the effect of bank size on profitability. The aim of the study was to examine the relationship between the size of a bank measured by its assets and its profitability measured by its ROE. To effectively check the relationship, there were two hypotheses proposed by the study and these were to check the effect of banks size on profitability of banks with different assets. The banks were divided into three parts. Also to test the effect of the banks size on the whole banks in the country using regression. The result from the various test conducted indicated that increase in branch networks and size reduces the profitability of banks in Jordan. From the Jordanian test, we can infer that increase in branch networks will reduce the profitability of banks while a simple bank with small branch networks will increase asset and profitability in the years of operation.

Spieker (2005) conducted a test on the continuity of Americas bank branch growth and raise many questions that could determine the future of Americas bank. His submission was that the number of insured banks have been on the decline since 1994 and it reached its height between 1994 and 2003 when it dropped by 29%.However alarming, was the fact that the number of branches of banks increased by 15% during this period. The oddity to the scenario was that the growth in physical branch occurred during the period of great technological breakthrough that would have reduced the need for physical branches with hyper internet banking and more deployment of automated teller machines (ATM).

To him the reason for all these were as follow: (1) changes in bank branching laws that led to structural shifts in branching; (2) branching, when well executed, appears to improve performance; and (3) favorable economic and demographic trends encourage branching in certain markets.

Spiegel et al (1996) maintained the fact that reshaping financial services include the use of high technology which will reduce the effect of branching in banking. However, in a recent survey conducted by the Federal Reserve Board and with increased advancement in technology it seems banking consumers likes the convenience of bank branches as most respondents indicates that their choice of banks is influenced by the location of the branches.

Hirtle (2007) conducted a study for the Federal Reserve Board on the impact of network size on Bank branch performance. She asserted that recent innovations notwithstanding in the delivery of retail financial services have raised questions about the increased patronage of banks branches as these branches are found to be on the increase. To her" *The advent of Internet banking, the proliferation of automatic teller machines (ATMs), and the increasing reliance on centralized call centers, combined with post-merger pushes for efficiency, all seemed to challenge the traditional branch method of delivering banking services. Yet the number of full-service branches in the United States has increased steadily since the early 1990s. Further, consistent with the general trend toward consolidation in the banking industry, these branches have become increasingly concentrated within the large branch networks of a limited number of institutions.*
The implications of these branching trends have been relatively unexplored, though they could have significant consequences for bank performance".

To assess the impact of the branch network size on performance, the study was undertaken with the use of reports from the National Deposit insurance commission with a verifiable result which indicates that in most cases the profitability of these branches and the banks as a whole do not have significant bearing with the increased branches over the period of study.

No matter the form of banking licence undertaken by the banks,the use of branch network to grow the banks is an important factor for any system,Oshadare(2015)

Studies in some of European countries has helped to shed more lights on these research interest though they are few. Hensel (2003) finds that larger European banks are less likely to realize additional cost efficiencies from expanding their branch networks than smaller institutions.

Carbó Valverde et al. (2004) find that the number of bank branches and the relationship between the number of bank branches and the number of ATMs help explain a significant portion of cost inefficiency across Spanish banks. Also, Zardkoohi and Kolari (1994) examine branch networks in Finland and find that branch-level efficiency increases with the number of branches in a network, but that this effect levels off at a relatively small network size (5 branches).

The various works have had one issue or the other concerning the effect of growth in branch networks on performance of banks, however this study was undertaken so that the various forms of branches inform of urban, rural and foreign are looked at to determine the way they will affect the performance of banks in Nigeria. This study has also incorporated the use of total asset of the banks which is regarded as a factor in performance testing it effectiveness using various regression variables.

TABLE 1: TABLE SHOWING THE BRANCH NETWORK DISTRIBUTION OF NIGERIAN BANKS 1981---2013

PERIOD	NUMBNK	URBAN	RURAL	FOREIGN	TOTAL ASSET N'm
1981	20	622	240	7	19.5
1982	22	676	308	7	22.7
1983	25	694	407	7	26.7
1984	27	810	432	7	30.1
1985	28	839	451	7	32.0
1986	29	879	481	7	39.7
1987	34	947	529	7	49.8
1988	42	1057	602	6	58.0
1989	47	1093	756	6	64.9
1990	58	1169	765	5	83.0
1991	65	1253	765	5	117.5
1992	65	1495	774	6	159.2
1993	66	1577	775	6	226.2
1994	65	1634	763	6	295.0
1995	64	1661	701	6	385.1
1996	64	1727	675	5	458.8
1997	64	1727	675	5	584.4
1998	54	1466	714	5	694.6
1999	54	1466	714	5	1,070.0
2000	54	1466	722	5	1,568.8
2001	90	1466	722	5	2,247.0
2002	90	2283	722	5	2,766.9
2003	90	2520	722	5	3,047.9
2004	89	2765	722	5	3,753.3
2005	25	2345	465	5	4,515.1
2006	25	2587	646	12	7,172.9
2007	24	3540	744	12	10,981.7
2008	24	4184	768	14	15,919.60
2009	24	4656	780	13	17,522.9
2010	24	5055	754	12	17,331.6
2011	24	4725	729	12	19,396.6
2012	21	4851	713	14	21,288.1
2013	24	4954	685	14	24,301.2

Source: Central bank of Nigeria stastical bulletins, 2013, 2013 and 2015.

RESEARCH METHODOLOGY

This study is on the impact of branch growth on the performance of Nigerian banks. It uses the cause effect relationship to test the relationships and correlations between the variables. Secondary data were used and were extracted from the annual report of Central Bank of Nigeria statistical bulletin for 2015 and the Nigeria stock exchange fact book for 2014. The analytical methods used for the study include the test from regression analysis and interpretation. The analysis considers all the banks in Nigeria for a period of 33(thirty three) years.

MODEL SPECIFICATION

The effectiveness of any research work is premised on a good model which must pass the fitness test before it can be accepted as a basis for discussing the result of the data. The technique of analysis for this research work is least square regression. The model is functionally given as:

TS=f (NUMBNK, URBAN, RURAL, FOREIGN)……. 1

From (1) above the functional form can be transform to the econometric form as:

$TS_t = \alpha_O + \alpha_1 NUMBNK_t + \alpha_2 URBAN_t + \alpha_3 RURAL_t + \alpha_4 FOREIGN_t + \mu$…….2

In order to improve the goodness of fit of the model and to examine whether there is a J –curve effect the model was re-specified to accommodate an Auto-regressive scheme one, AR (1)process as follows:

$TS_t = \alpha_O + \alpha_1 NUMBNK_t + \alpha_2 URBAN_t + \alpha_3 RURAL_t + \alpha_4 FOREIGN_t + \mu + AR(1) + \mu$.....3

Where

TS= Total Asset
NUMBNK= Total Number of Banks during the Period
URBAN=Total Number of Branches in the Urban Area
RURAL=Total Number of Branches in the Rural Area
FOREIGN=Total Number of Branches in Foreign Countries
AR (1) COEFFICIENT
μ= stochastic error term
t = Time series dimension and ranges from 1 to T
α_1 α_2 α_3 and α_4 are the parameters estimated
The entire explanatory variables in the model are expected to impact positively on the dependent variables which is Total Asset. Hence, the following apriori expectation exists:
$\alpha_1>0$ $\alpha_2 > 0\alpha_3> 0$ and $\alpha_4 >0$

RESULTS AND DISCUSSION

RESULT AND DISCUSSION ON DESCRIPTIVE DATA

TABLE 2: DESCRIPTIVE STATISTICS

	NUMBNK	URBAN	RURAL	FOREIGN	TOTALASSETS
Mean	46.09091	2126.939	649.1212	7.515152	4734.263
Median	42.00000	1577.000	714.0000	6.000000	584.3750
Maximum	90.00000	5055.000	780.0000	14.00000	24301.20
Minimum	20.00000	622.0000	240.0000	5.000000	19.47750
Std. Dev.	23.50979	1415.277	147.0852	3.202745	7447.096
Skewness	0.540907	1.011679	-1.336945	1.092713	1.468729
Kurtosis	2.003159	2.650703	3.650024	2.554732	3.616656
Jarque-Bera	2.975520	5.796983	10.41181	6.839732	12.38727
Probability	0.225878	0.055106	0.005484	0.032717	0.002042
Observations	33	33	33	33	33

Source: Authors computation using e-view 7.0

The descriptive statistics tries to establish the accuracy and effectiveness of the data used for the study as found in table 1.The results of the descriptive statistics show that all the variables are positively skewed with the exception of rural branch. Using the Jarque – Bera statistic, the results revealed that all the variables pass the normality test.The variables show minimum deviation from the point of central tendencies with low value for mean. Since the variables pass the normality test, then we can rely on the data as being accurate, efficient and capable of being used to establish the relationship that exist between banks branch growth and banks performance

RESULTS AND DISCUSSION ON HYPOTHESES TESTING

TABLE 3: PARTIAL CORRELATION RESULTS

	NUMBNK	URBAN	RURAL	FOREIGN	TOTALASSETS
NUMBNK	1.000000	-0.266573	0.478795	-0.670084	-0.451788
URBAN	-0.266573	1.000000	0.479069	0.809473	0.959073
RURAL	0.478795	0.479069	1.000000	0.134993	0.318717
FOREIGN	-0.670084	0.809473	0.134993	1.000000	0.899627
TOTALASSETS	-0.451788	0.959073	0.318717	0.899627	1.000000

Source: Authors computation using e-view 7.0

The correlation result is intended to answer various questions asked by the research work while trying to achieve the objectives of the work through the acceptance or rejection of the hypotheses.

The result from table 3 show that there is a negative relationship between Total Asset and number of banks at 0.451788 which makes us to accept the null hypothesis 4 that the number of banks in Nigeria does not affect the performance of banks. However, the same result from table 3 indicates that there is positive relationship between urban, rural and foreign branches of Nigerian bank 0.959073, 0.318717 and 0.899627 respectively. The implication is that we reject the null hypotheses and accept the alternate hypothesis. This establish our interest that growth of banks branches in Nigeria has surely affected the performance of the banks.

RESULTS AND DISCUSSION ON MODEL FITNESS

TABLE 4: SUMMARY OF FIXED EFFECT PANEL REGRESSION RESULT

	1st regression		2nd regression		3rd regression	
VARIABLES	value	standard	value	standard	value	standard
R^2	0.967847	0.01	0.983822	0.01	0.99267	0.01
R^2 -Adjusted	0.964282	0.01	0.980711	0.01	0.99084	0.01
Durbin-watson stat	0.717378	≥1.5	1.433536	≥1.5	1.82023	≥1.5
F-statistics	216.9790	3.0	316.2235	3.0	542.147	3.0
Prob(f-statistics)	0.000000	0.000000	0.000000	0.000000	0.00000	0.000000
t-statistics	-2.91394	5% LOS	0.00222	5% LOS	-2.5052	5% LOS
AR(1)	-		1.00		.23	

The regression results are presented in table 4 above to show the fitness of the model and to determine its efficiency in answering questions related to the study. The result shows that the model for determining the impact of some variables on the performance of banks using Total Asset as a proxy explained the systematic variations in the dependent variable. The model parameters performed considerably well using the coefficient of determination value of 99.27% and adjusted coefficient of determination value of 99.08% showing good fitness of the model and the F – statistic of 542.15 with a probability value of 0.000000 which is significant at both 5% and 1% level of statistical significance shows that the model on the overall is statistically significant in providing explanations for the objective of the study. The result of the Durbin Watson statistic of 1.82023 shows that there is no presence of autocorrelation in the model which allows for reliance on the validity of the output from the model, however, this is arrived at after running the regression for the third time as the two previous results in table 4 shows the presence of autocorrelation and there will be need to use Cochran occult test to eliminate the presence of autocorrelation in the model

Using the t-statistics, the results revealed that the variables are statistically significant at 5% level of significance in providing explanation for the changes in the variable. From the analysis we can safely conclude that the branches in form of urban, rural and foreign have significant impact on the performance of Nigerian banks while only the number of banks do not affect the performance of banks in Nigeria.

CONCLUSION

This paper examine the impact of banks branches growth on the performance of Nigerian banks. It has been able to answer various questions on the effect of different branches on the growth of the banks especially in their Total Asset.

Based on the panel data regression analysis used for the research work, it was discovered that irrespective of the new servicing and electronic banking platforms, there will be need to open more branches to aid prompt and effective customer service. It can be concluded that the more the branches are opened, the better the performance of these banks in their Asset and other forms of measuring performance.

Also, to help the banks to keep doing well the branches should filled with well-behaved customer service officers and cashiers. The branches should also engage in a lot of promos, discounts and promotions or special service banking that could attract the customers to patronize the many branches that will be opened.Despite,the increased branch network, more branches should be opened in the rural areas of the country because the branch to customer ratio in Nigeria is still very minut.

REFERENCES

Aladwan, S.M (2015). The Impact of Bank Size on Profitability*: An Empirical Study on Listed Jordanian Commercial Banks. European Scientific Journal, 11(34).*

Carlson, Mark. (2004). "Are Branch Banks Better Survivors? Evidence from the
Depression Era." *Economic Inquiry* Vol. 42(1), 111-126.

Central bank of Nigeria (2013) Annual Report and Statistical bulletin, Abuja, CBN.

Central bank of Nigeria (2013) Annual Economic Report and Statistical bulletin, Abuja, CBN.

Central bank of Nigeria (2014) Annual Report and Statistical bulletin, Abuja, CBN.

Central bank of Nigeria (2014) Annual Economic Report and Statistical bulletin, Abuja, CBN.

Central bank of Nigeria (2015) Annual Report and Statistical bulletin, Abuja,CBN.

Central bank of Nigeria (2015) Annual Economic Report and Statistical bulletin, Abuja, CBN.

Hirtle, B. (2010). The Impact of Network Size on Bank Branch Performance. *Federal Reserve Bank of New York Current Issues in Economics and Finance* 10(8).

Johnson, M. (2005).Overview of Electronic Payment Systems in Nigeria, Strategic and Technical Issues. *Central Bank of Nigeria Bullion*, 29(2).

Levine, Ross. (1996). "Foreign Banks, Financial Development, and Economic Growth."In *International Financial Markets: Harmonization versus Competition,* edited by Claude Barfield. Washington, DC:

AEI Press, 224-54.

Mark, C and K.J Mitchener (2005). Branch Banking, Bank Competition, and Financial Stability. *Journal of money, credit and banking*, NBER Working paper.

Pastory, D and Swai, J.P (2013). The Relationship between Bank Growth and Profitability, Emperical Evidence from Eac: Panel Data Analysis. European, Journal of Business and Management, 5(26).

Oshadare, S.A., Adelowotan O, and Apelogun, H (2015) Regulation of Microfinance institution in Africa major economies: A Comparative analysis. *The International Journal of Business & Management,* 3(4) 77-84.

Simon –oke, O and Afolabi, B (2011). Capital Structure and Industrial Performance in Nigeria (1999-2007). Journal of International *Business and Management,* 2(1)100-106.

Spieker, R.L (2008). Continuation of bank branch growth and it steadiness. *Federal Deposit insurance corporation future of banking study,* Draft FOB–2004–08.1