

Sustainable Banking in Nigeria: Empirical Perspective

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Abstract: - The quest to increase the share of green sectors to the GDP as well as invest in products and services that reduce climate change has led to adoption of sustainable banking in different countries. This study examined sustainable banking in Nigeria with emphasis on determining whether ATM usage, POS usage and commercial banks' credit to the agricultural sector, as instruments of sustainable banking, had contributed to the Nigeria economy. Quarterly data collected from the Central Bank of Nigeria (CBN) for the period 2012-2018 was adopted for the study and the data was analyzed using the Ordinary Least Squares (OLS) method. Findings revealed that ATM usage, POS usage and commercial banks' credit to agricultural sector had led to increase in Nigeria's economy. However, the effect of these instruments on the Nigerian economy had not been significant. The implication of this is that although sustainable banking had increased economic growth in Nigeria, but its effect on Nigeria's economy had not been significant. The study recommended that the Central Bank of Nigeria should make policies that would eliminate frivolous charges on ATM and POS usage as a way of increasing ATM and POS usage which would reduce the use of paper and ensure clean environment in Nigeria.

Keywords: Sustainable banking, Green economy, agricultural sector

I. INTRODUCTION

In recent years, firms have been encouraged to engage in 'green' practices and policies in their operations. Such 'green' practices and policies are expected to increase the share of green sectors to the GDP, decouple economic growth from resource use and environmental impacts, increase private and public investments channeled into green sectors and change composition of aggregate consumption so that the share of environmentally friendly products and services are increased (Oyegunle & Weber, 2015). To key into the global trend in 'green' practices and policies, the banking system had been made to embrace and invest in products and services that would eliminate climate change. It is in the light of the above scenario that the Sustainable Banking Principles (SBPs) was introduced by the Central Bank of Nigeria (CBN) in Nigeria in 2012 for Deposit Money Banks (DMBs), Discount Houses (DH) and Development Financial Institutions (DHIs) and the first full Sustainable Banking Report was laid on the 31st December, 2014. (Dugelay, Asiru, Atuluku & Thomas, 2017). According to the CBN (2012), the main objective of the Sustainable Banking Principles (SBPs) was to deliver positive development impact to society while protecting the communities and environment in which the financial

institutions and their clients operate. To achieve the broad objective of the Sustainable Banking Principles (SBPs) as stated above, three sectors were adopted as priority sectors in Nigeria namely; power sector, agricultural sector, and oil and gas sector (Aro-Gordon, 2016).

Prior to the advent of sustainable banking, the cost of providing banking services was high for the banks. This was because the banks were made to grapple and work with large volumes of papers and also the banks were often compelled to transport these papers from one branch to another in situations where they needed to be worked with (Islam, & Das, 2013). With such large amounts of papers and the cost associated with transporting them from one point to another, operational costs for the banking industry was very high. Beyond the cost to the banks, demands for large volumes of papers meant devastating cost to the environment as more trees needed to be felled to make papers thereby leading to deforestation. As more trees are felled, it becomes more apparent that climatic degradation would be exacerbated (Aro-Gordon, 2016). The implication of this is that if the banks must operate, then the environment must bear some costs through deforestation and other environmental degradations. Because of these high costs to the banks as well as the environment, there was a need to fashion out ways of reducing these costs (Korshlund, 2013). This led to the advent of sustainable banking. Sustainable banking has been defined as a banking approach that recognized the role of banks in driving long term economic development in an economy which is not only economically viable but also environmentally responsible and socially relevant (Noh, 2018). Thus, sustainable banking refers to a mode of banking that centers on giving quality service to humanity through ethical banking principles. Most importantly, sustainable banking ensures that banking services are carried out at low cost to the banks because it enthrones the use of technology and technological innovations in carrying out banking services. More so, it was argued that sustainable banking ensured that bank lending was made with emphasis on eco-friendly business practices (Noh, 2010; KEI, 2012). Given the importance of banks in the value chains of critical sectors of an economy, it had been argued that the role of sustainable banking in an economy could not be overemphasized. Is this assertion true for the Nigerian economy? Does sustainable banking spur economic growth in Nigeria? To provide answers to these questions necessitated this study.

II. THEORETICAL FRAMEWORK

Two key theories that encourage the use of technology in the banking industry were reviewed in the study and they are namely: Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory.

2.1 Technology Acceptance Theory

The technology acceptance theory was postulated by Fred Davis in 1989 and it argued that individuals come to accept and use a particular technology or set of technologies based on two key factors namely; perceived usefulness (PU) and perceived ease-of-use (PEOU). In the technology acceptance theory, perceived usefulness captures the degree to which an individual believes that accepting a particular technology or a set of technologies would enhance his/her job performance. The implication is that the higher the ability of a particular technology or a set of technologies to enhance the job performance of individuals, the higher the perceived usefulness of the said technology or set of technologies. On the other hand, perceived ease-of-use captures the degree to which individuals believe that the use of a particular technology or a set of technologies would be effortless. Thus, a lesser cumbersome technology would be highly accepted by individuals while a more cumbersome technology would be less accepted by individuals. In both cases, the level of acceptance of technological innovations in the banking industry would influence sustainable banking as well as influence the level of economic growth. Basically, perceived usefulness and perceived ease-of-use determined the degree to which sustainable banking has been accepted in the society.

2.2. Diffusion of Innovation (DOI) Theory

Diffusion of information theory was postulated by Gabriel and Rogers in 1962. DOI theory argued how new ideas, why new ideas and at what rate new ideas as well as new technologies spread through cultures. In the DOI theory, culture plays pivotal role in determining how individuals living in a community, state or a nation accepts or rejects any technological innovations. Thus, diffusion of innovation theory explained why some countries or parts of the society embraced sustainable banking while others have not embraced it. By and large, diffusion of innovation explained the extent to which a society’s embrace for innovations determined her economic growth.

III. METHODOLOGY

The study adopted the *ex-post facto* research design which is associated with foisting a link between the dependent and independent variables. The beauty of using the *ex-post facto* research design is that the researcher relies on already existing data devoid of manipulations (Osuala, 2010). Anchoring the study on the technology acceptance theory and diffusion of information theory, with both explaining why individuals in particular and the society in general accept a technology or innovation thereby influencing the level of economic growth, the model for the study was formulated to accommodate

instruments and banking activities that are key to sustainable banking. Thus, the model for the study was specified as:

$$GDP = f(ATM, POS, AGC) \dots\dots\dots (1)$$

Where;

GDP = Gross Domestic Product (proxy for economic growth)

ATM = Automated Teller Machine

POS = Point of Sale

AGC = Credit to agricultural sector

Transforming equation (1) into its linear econometric form, the regression equation is specified as:

$$GDP_t = \beta_0 + \beta_1 ATM_t + \beta_2 POS_t + \beta_3 AGC_t + \varepsilon_t \dots\dots (2)$$

Where:

β_0 = Constant term

$\beta_1, \beta_2, \beta_3$ = Intercept (slope) coefficients of the explanatory variables

ε = Stochastic error term

t = time series notation

By a priori, $\beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 > 0$

IV. DATA ANALYSIS

Table 1: Ordinary Least Squares (OLS) Result

Dependent Variable: LOGGDP				
Method: Least Squares				
Date: 09/08/19 Time: 22:08				
Sample: 2012Q1 2018Q4				
Included observations: 28				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.912800	0.375149	10.43000	0.0000
LOGATM	0.047131	0.047246	0.997578	0.3284
LOGPOS	0.030833	0.030915	0.997343	0.3285
LOGAGC	0.146714	0.126679	1.158152	0.2582
R-squared	0.511769	Mean dependent var		4.220237
Adjusted R-squared	0.450741	S.D. dependent var		0.035016
S.E. of regression	0.025951	Akaike info criterion		-4.333639
Sum squared resid	0.016163	Schwarz criterion		-4.143324
Log likelihood	64.67095	Hannan-Quinn criter.		-4.275458
F-statistic	8.385698	Durbin-Watson stat		1.915419
Prob(F-statistic)	0.000548			

Source: Author’s Computation (2019) from E-views 9.0 software package

From the result above, it is evident that 1 percent increase in ATM usage led to 4.7 percent increase in economic growth in Nigeria. The probability value of ATM (0.3284) was greater

than the test significant level (i.e. $p > 0.05$). Thus, the researcher concluded that ATM usage, as a sustainable banking instrument, had a positive and non-significant impact on economic growth in Nigeria. This finding corroborates Siyanbola (2013) which argued in favour of a positive relationship between ATM usage and economic growth in Nigeria. Perhaps, this finding may be attributed to the huge penetration of ATM usage among Nigerians. With the increased usage of ATM, the orthodox use of large quantities of paper in doing banks' jobs was replaced by electronic instrument. Less usage of paper meant fewer trees needed to be cut for the purpose of producing the papers thereby enhancing 'green' practices. More so, beyond the enhancement of green practices and policies, usage of ATM has increased the efficiency of carrying out banking transactions thereby increasing the economic growth of Nigeria.

Similarly, the study showed that usage of POS as a sustainable banking instrument had a positive and non-significant impact on economic growth in Nigeria. From the result, 1 percent increase in the use of POS led to 3.08 percent increase in economic growth in Nigeria. The probability value of POS (0.3285) exceeded the test significant level (i.e. $p > 0.05$). Thus, the researcher concluded that POS usage, as a sustainable banking instrument, had a positive and non-significant impact on economic growth in Nigeria. This finding corroborates Tijani and Ilugbemi (2015) which argued that Point of Sale (POS) banking instrument effectively increase bank performance. This finding could be attributed to the fact that most businesses and institutions in Nigeria today have the POS machine and equally encourage their clients to make use of them. Increased acceptability of POS led to reduction in the use of papers by the banks thereby enhancing banking sector sustainability as well as increasing economic growth in Nigeria.

Finally, the study showed that there was a positive and non-significant impact of commercial banks' credit on agriculture and economic growth in Nigeria. From the result, 1 percent increase in commercial banks' credit led to 14.7 percent increase in economic growth in Nigeria. The probability value of AGC (0.2582) exceeded the test significant level (i.e. $p > 0.05$). Thus, the researcher concluded that commercial banks' credit, as a sustainable banking instrument, had a positive and non-significant impact on economic growth in Nigeria. This finding corroborates Ayeomoni and Aladejana (2016) which argued in favour of a positive relationship between commercial banks' credit to the agricultural sector and economic growth in Nigeria. This finding could be attributed to the fact that offering credits to the agricultural sector enhances the 'green' economy which implied driving long term economic development in a sector which is not only economically viable but also environmentally responsible (which is central to the tenets of sustainable banking).

The coefficient of determination (R-squared) showed that 51 percent of the variations in economic growth (proxied by

GDP) in Nigeria were due to variations in sustainable banking instruments such as Automated Teller Machine (ATM), Point of Sale (POS) and agricultural sector credit. Thus, the remaining 49 percent of the variations in economic growth were due to other factors not included in the model. The probability value (0.000548) is less than the test significant level (0.05) and this had indicated that the model was significant as well as reliable. Finally, the Durbin-Watson statistic (1.92) lied within the acceptable region and indicated that there was no presence of autocorrelation being that $2 \leq DW < 4$ and this also showed that the regression result was not spurious.

V. CONCLUSION

This study examined sustainable banking in Nigeria. Because no empirical study had been done in Nigeria to determine how sustainable banking affects the Nigerian economy, this study adopted ATM usage, POS usage and commercial banks' credit to agricultural sector as sustainable banking instruments. Given that sustainable banking ensured that banking services were carried out at low cost to the banks using technology and technological innovations as well as ensured that bank lending was granted to eco-friendly business practices, the researcher felt that making use of ATM, POS and granting credit to agricultural sector enhanced sustainable banking and therefore could be regarded as sustainable banking instruments. From the empirical analysis, the study argued that sustainable banking had positive relationship with economic growth in Nigeria as increase in the use of ATM, POS and granting of credit facility to agricultural sector increased economic growth in Nigeria. However, none of these instruments had significant effect on economic growth in Nigeria. The implication of this finding is that sustainable banking led to increase in the economic growth of Nigeria but it had not grown to the point of significantly increasing Nigeria's economic growth.

VI. RECOMMENDATIONS

The following recommendations were made in line with the findings of this study:

- (i) For sustainable banking to make significant effect on Nigeria economy, Central Bank of Nigeria should make policies that would eliminate frivolous charges on ATM and POS usage. Increased usage of ATM and POS would reduce the use paper and ensure clean environment thereby achieving green economy.
- (ii) Commercial banks in Nigeria should fashion out ways of sustaining and increasing credits granted to the agricultural sector. This could be achieved through selective interest rate charges on agricultural sector loans.

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