IMPACT OF CURRENCY REDESIGN AND CASHLESS POLICY ON HOUSEHOLD STANDARD OF LIVING IN SOKOTO METROPOLIS

[1]Adamu Hassan, [2]Mansur Bala and [3]Murtala Marafa

1&2Department of Economics, Sokoto State University, Sokoto, Nigeria
3Department of History, Sokoto State University, Sokoto, Nigeria

Corresponding Address: adamu.hassan@ssu.edu.ng

Abstract

This study investigates the impact of currency redesign and cashless policy implementation on household standard of living in Sokoto Metropolis using a survey dataset for a sample of three hundred and sixty-five (365) respondents. In the analysis, this study used Ordinary Least Squares regression and the results reveal that currency redesign has significant negative effect on household standard of living while the cashless policy has had a positive and significant effect on household living standards. Additionally, broader economic and environmental conditions, such as political instability, transportation costs, climate change, and rising commodity prices, have also played a significant role in shaping household welfare. However, the adverse effects of currency redesign highlight the need for policymakers to carefully manage the implementation of such reforms to minimize disruptions to the economy. The findings suggest that the cashless policy has been effective in driving financial inclusion, reducing transaction costs, and creating economic opportunities for households. Moreover, the significant influence of macroeconomic and environmental factors underscores the importance of adopting a holistic approach to policymaking, addressing both financial sector developments and broader economic challenges. To build on the benefits of the cashless policy, the study recommends that policymakers focus on addressing implementation challenges, strengthening supporting infrastructure, and ensuring the transition is inclusive. Concurrently, efforts should be made to mitigate the negative impacts of currency redesign and other macroeconomic risks through appropriate policy interventions and coordination across relevant sectors. By adopting this comprehensive approach, Nigeria can maximize the potential of the cashless economy to drive sustainable economic development and improve the overall standard of living for its citizens.

Keywords: Currency redesign, Cashless policy, Standard of living, Sokoto

INTRODUCTION

The Nigerian Central Bank in the year 2023 has introduced a currency redesign program, along with the revival of a cashless policy first implemented in Lagos in 2012 (Eechi & Rufus, 2016). The currency redesign aims to mitigate the consequences of high inflation due to the excessive money in circulation, which has driven up nationwide prices of essential commodities (Olujobi, 2022). The cashless policy is intended to protect the economy from illicit financial activities such as fraud, robbery, corruption, and fund mismanagement (Acha et al., 2017). According to the Central Bank-CBN (2022), approximately 85% of the total currency in circulation, amounting to N2.73 trillion out of N3.23 trillion, is outside the bank vaults, contributing to inflationary pressures (Olujobi, 2022). The currency redesign program is expected to control the money supply, reduce inflation, curb hoarding, and mitigate corruption and embezzlement

of funds (Iwedi et al., 2023), as studies have shown that currency redesign is an effective approach to managing the money in circulation.

Despite the potential benefits of currency redesign as a macroeconomic monetary policy tool to tackle inflation (IMF, 2022; Whelan, 2010; Kregel, 2010), the implementation of this policy in Nigeria has faced significant challenges. Policy-making and implementation in the country have historically been inconsistent, leading to public skepticism and the perception that such policies are intended to make people's lives more vulnerable. The currency redesign program has resulted in a severe shortage of cash, disrupting market transactions and causing broader economic and social problems (Olabimtan, 2023). However, the policy changes have far-reaching implications for the everyday lives of Nigerian households, particularly in the Sokoto Metropolis, which is the focus of this study. Sokoto, as one of the states in the northern part of Nigeria, is likely to be significantly affected by the currency redesign and cashless policy initiatives, given the state's unique socioeconomic and cultural dynamics (Adekunle & Oladejo, 2021). The adverse effects on local populations prompted the state governments of Kaduna, Kogi, and Zamfara to file a lawsuit against the Central Bank, challenging the "haphazard implementation" of the program. In response, the Supreme Court ruled that the old currency notes should be brought back into circulation and remain legal tender until December 31st, 2023 (Olabimtan, 2023).

Economic policy transformations, such as Nigeria's currency redesign program and the revival of the cashless policy, often bring about significant challenges during the initial implementation stages (Akhalumeh & Ohiokha, 2011). The policies have caused widespread economic hardships, including shortages of currency notes, essential commodities, and difficulties in adapting to e-banking systems, leading to poverty, starvation, and the inability to meet basic needs across many parts of the country. While currency redesign is a macroeconomic tool to tackle inflation, the haphazard implementation has disrupted business transactions and daily life (Olabimtan, 2023). Similarly, the adoption of the cashless policy faces various obstacles, such as poor electronic and networking services, inadequate electricity, and a lack of financial literacy among many Nigerians (Akhalumeh & Ohiokha, 2011). Akhalumeh and Ohiokha's (2011) study found that 34.0% of respondents cited the problem of internet fraud, 15.5% cited limited POS/ATM access, and 19.6% cited illiteracy as challenges to the successful implementation of the cashless policy in Nigeria. This study is motivated by the issues mentioned above, specifically the impact of the recent currency redesign and cashless policy by the Central Bank of Nigeria (CBN) on the household standard of living in Sokoto metropolis. The focus of this study on evaluating the effects of these policies on the household standard of living fills an important research gap. It is believed that this study will contribute novel insights to the field and hold great significance for policymakers. Additionally, this study adds to the existing knowledge in this area.

To accomplish the objectives, this study is structured into five sections. The initial section serves as the introduction. The second section explores the theoretical framework and reviews relevant empirical studies. The third section outlines the methodology implemented in the study. The fourth and fifth sections present the findings and discussions, and draw conclusions and provide recommendations, respectively.

LITERATURE REVIEW

The theoretical basis for analyzing the currency redesign and cashless policy in Nigeria is the Technology Diffusion Theory developed by Rogers in the year 2003. This theory explains the

process by which new technologies are adopted and spread within a society over time (Rogers, 2003; Adeyemi, 2019). The successful implementation of the cashless policy in Nigeria heavily depends on the diffusion and adoption of electronic payment technologies, such as mobile banking, POS terminals, and internet banking, among the population. The challenges highlighted in the study, such as poor electronic and networking services, inadequate electricity, and a lack of financial literacy, can be seen as barriers to the effective diffusion and adoption of these payment technologies (Adesina, 2020). The study's findings, which indicate that issues like internet fraud, limited POS/ATM access, and illiteracy are hindering the adoption of the cashless policy, align with the factors that can influence the rate of technology diffusion according to the theory (Rogers, 2003).

Furthermore, the barriers to the effective diffusion and adoption of electronic payment technologies, such as poor infrastructure, inadequate electricity, and a lack of financial literacy, can further exacerbate the challenges faced by the population in accessing and utilizing the necessary financial services. This can result in limited access to essential goods and services, restricting economic opportunities and ultimately diminishing the overall standard of living.

The existing empirical studies on the effects of the Naira redesign monetary policy in Nigeria have produced diverse findings. Abdullahi and Ahmed (2022) examined the impact of the Naira redesign policy on Nigeria's economy using annual time series data from 1970 to 2021, and found a significant positive relationship between the policy and GDP, with the exchange rate and interest rate also having a positive and significant impact, while inflation rate had a negative and significant impact. Additionally, Iwedi et al., (2023) studied the economic implications of the Naira redesign, revealing that the key objectives were to reduce money hoarding by wealthy Nigerians, mitigate currency counterfeiting, and control the money supply to curb inflation. These empirical findings underscore the multifaceted effects of the Naira redesign policy on various economic indicators in Nigeria, highlighting the need for a comprehensive understanding of its implementation and implications for the country's economic growth and development.

The literature further highlights the multifaceted impacts of the Naira redesign policy in Nigeria. Olujobi (2022) found that the policy was aimed at reducing excess money supply, improving monetary policy effectiveness, and curbing inflationary pressures, while also enhancing the exchange rate policy. Similarly, Akinleye (2023) observed that the currency redesign can have significant implications for inflation, exchange rate, and monetary policy in the country. Additionally, Pillah's (2023) review of the literature suggests that the policy was implemented for economic reasons, such as reducing inflation, combating counterfeiting, addressing financial insecurity, and controlling the money in circulation. The studies collectively underscore the diverse rationale and potential effects of the Naira redesign, underscoring the need for a comprehensive evaluation of its implementation and impact on Nigeria's economic development.

The empirical studies further explored the impacts of the Naira redesign policy and related monetary policies on specific economic sectors and activities in Nigeria. Ogbonne's (2023) study found that while the cash withdrawal limit and currency redesign policies significantly impacted the operations of POS merchants in Enugu State, the currency redesign policy had a more significant effect. Additionally, previous studies have found that monetary policies, including currency redesign, can have varied impacts on the Nigerian economy. Onyeiwu (2012) found that monetary policy positively impacted GDP growth and the balance of payments, but negatively affected the inflation rate.

Furthermore, Ejoh et al., (2014) revealed a significant relationship between the implementation of the cashless policy and the adoption of information and communication technology (ICT) in the Nigerian financial system. Furthermore, Michael and Emeka's (2016) study confirmed positive relationships between factors such as market discipline and financial inclusion, and the move towards a cashless economy, while standard of living had a negative impact. These findings indicate the complex implications of the transition to a cashless economy, particularly for smaller businesses, and the need for policymakers to consider the diverse factors and stakeholders involved in implementing such a significant economic shift.

Other studies further examined the socio-economic impacts of the cashless policy on small-scale businesses in Nigeria. Eechi and Rufus (2016) found that if necessary measures were not put in place and stakeholders were not adequately considered, the cashless policy could adversely affect and lead to the failure of small-scale businesses. Similarly, Ernest and Fadiya (2013) found that while cashless banking had the potential to transform economic activity and achieve developmental goals in Nigeria, its implementation faced various challenges. Acha, Kanu, and Agu (2017) also revealed that despite increasing adoption of cashless options by Nigerians and the identified benefits, several factors still impeded the successful implementation of the cashless policy. These findings underscore the complex and multifaceted implications of the transition to a cashless economy, particularly for smaller businesses, and the need for policymakers to carefully consider the diverse stakeholders and potential challenges involved in implementing such a significant economic shift.

The research also examines the specific impacts of various cashless economy components on entrepreneurship and small business development in Nigeria. Obananya et al., (2021) found that internet banking services, automated teller machine services, and crowdfunding had a positive and significant effect on entrepreneurship development in Anambra state. Additionally, Kirigano et al., (2016) analyzed the effect of mobile payment applications on the performance of micro and small enterprises in Kitale town, and revealed that the use of such innovations helped bring more customers, saved time and money, and contributed to increased profits for these businesses. These findings suggest that the transition to a cashless economy can have positive effects on entrepreneurship and small business development, particularly through the adoption of various digital finance and payment technologies, though the impacts may vary across different regions and business sectors.

Finally, Mpho (2017) found that the cashless economy had largely positive effects on Nigeria's GDP, unemployment rate, and money supply, though the study was limited by the short time frame. Similarly, Taiwo et al., (2016) conducted an in-depth appraisal of the implementation of the cashless economy since its introduction in 2012, and determined that the development of an innovative cashless system had the potential to transform economic activities and achieve developmental goals in Nigeria. These findings suggest that the transition to a cashless economy, while faced with various challenges, can yield significant macroeconomic benefits for Nigeria, including increased economic growth, employment, and financial system development, though the full impacts may take time to materialize and require sustained, innovative implementation efforts.

METHODOLOGY

The aim of this study is to investigate the impact of currency redesign and cashless policy on the standard of living in Sokoto metropolis, Sokoto State, Nigeria. The research methodology employed is a survey research approach, with data collection conducted through a survey questionnaire. The target population for this study includes the entire population of Sokoto,

specifically Sokoto North and Sokoto South local governments, which have a combined population of 581,300 people according to the National Population Commission-NPC (2022). The sample size for the study is 384 and was determined using the Raosoft sample size calculator, considering a margin of error of 5% (0.05) and a confidence level of 95%. The respondents for this study were selected through a random sampling procedure.

This study utilized a survey questionnaire that employed a five-point Likert scale, ranging from "Strongly disagree" to "Strongly agree," to measure the items. The data collected was then analyzed using multiple regression, specifically the Ordinary Least Square (OLS) regression technique. This statistical method allows for capturing and examining the impact of currency redesign and cashless policy on the living standards of households in Sokoto metropolis. Hence, the mathematical expression of multiple regression is given as:

$$HSL_i = \beta_0 + \beta_1 CRR_i + \beta_2 CLP_i + \beta_3 OFT_i + \mu_i \dots\dots\dots\dots\dots\dots\dots\dots\dots. (1)$$

Where HSL is the dependent variable (households standard of living); CRR represents currency redesign, CLP is the cashless policy, OFT represents other factors (i.e., political instability, costs of transportation, climate change, rising prices commodities) affecting households' standard of living, β_0 is the intercept; β_1 to β_3 denotes the coefficients of the estimated parameters and finally, μ is the error term explaining other factors that are not captured by the model.

RESULTS AND DISCUSSIONS

A total of 384 questionnaires were distributed to the respondents in the study area, but 19 of them were not returned, resulting in 365 successfully collected responses. This indicates a response rate of 95.05%, which is considered quite high and provides sufficient data for drawing reliable conclusions. The high response rate suggests that a significant portion of the target population was captured, enhancing the reliability and validity of the study's findings. The descriptive statistics for the study variables can be found in Table 1, providing an initial overview of the data collected through the survey instrument.

Table 1: Summary Statistics of the Variables

Variables	Obs.	Mean	Std. Dev.	Min	Max
HSL	365	1.9835	0.8152	1	3
CRR	365	2.9808	1.4227	1	4
CLP	365	3.0515	0.7799	2	4.5
OFT	365	4.3458	0.6384	3.25	5

Source: Authors' Computation from STATA Output.

Table 1 presents the summary statistics of the variables used in the study, namely household standard of living, currency redesign, cashless policy, and other factors such as political instability, transportation costs, climate change, and rising commodity prices. Moreover, the mean value of the household standard of living variable is 1.9835, with a standard deviation of 0.8152. This suggests that, on average, the respondents perceived their standard of living to be relatively low. The currency redesign variable has a mean value of 2.9808 and a standard deviation of 1.4227. The cashless policy variable has a mean value of 3.0515 and a standard deviation of 0.7799. These findings indicate that, on average, the respondents had a moderate perception of the impact of currency redesign and cashless policy on their standard of living. Furthermore, the other factors variable has a mean value of 4.3458 and a standard deviation of 0.6384. This suggests that the respondents perceived other factors such as political instability, transportation costs, climate change, and rising commodity prices to have a relatively high

impact on their standard of living. Nevertheless, Table 2 presents the results of the correlation analysis conducted to verify the descriptive findings.

Table 2: Correlation Analysis of the Variables

Variables	HSL	CRR	CLP	OFT
HSL	1.0000			
CRR	-0.4261	1.0000		
CLP	-0.2888	0.5079	1.0000	
OFT	-0.3953	-0.7359	-0.1809	1.0000

Source: Authors' Computation from STATA Output.

Table 2 displays the results of the correlation analysis conducted on household standard of living, currency redesign, cashless policy, and other factors such as political instability, transportation costs, climate change, and rising commodity prices. The correlation coefficient between household standard of living and currency redesign is -0.4261, indicating a negative correlation. This suggests that as the perception of currency redesign increases, the perceived standard of living tends to decrease. The correlation coefficient between household standard of living and cashless policy, is -0.2888, also indicating a negative correlation. This implies that as the perception of the impact of cashless policy increases, the perceived standard of living tends to decrease as well. Furthermore, the correlation coefficient between household standard of living and other factors is -0.3953, again indicating a negative correlation. This suggests that as the perception of the impact of other factors such as political instability, transportation costs, climate change, and rising commodity prices increases, the perceived standard of living tends to decrease. The coefficients also show absence of multicollinearity among the variables. This is because none of the variable has the correlation coefficient greater than 0.7. However, Table 3 displays the results of the OLS regression analysis conducted to examine the relationship among the variables.

Table 3: Currency redesign, Cashless policy and Household standard of living

Dependent Variable: Household standard of living

Variables	Coefficient	Std. Err	T	Prob.
CRR	-0.1452	0.0177	-8.18	0.000
CLP	0.6720	0.0351	19.14	0.000
OFT	-0.6124	0.0545	-11.22	0.000
CONS	3.0275	0.3519	8.60	0.000

$R^2 = 0.84$, F-stat. = 655.90 (0.000), H-test = 6.26 (0.3123), Mean VIF =3.04

Source: Authors' Computation from STATA Output.

The regression results presented in Table 3 provide valuable insights into the relationships among the key variables of interest and household standard of living. From the result, currency redesign has significant negative effect on household standard of living at the 1% level. This indicates that a unit increase in currency redesign is associated with a 0.1452 decrease in household standard of living, holding other factors constant. This suggests that the implementation of currency redesign may have had adverse effects on household living standards, potentially due to disruptions in economic activities or increased costs associated with the transition. Previous studies in the Nigerian context have also documented the disruptive impacts of currency redesign on economic activities, particularly for low-income households and the informal sector (Okafor & Ezeaku, 2017; Adekunle et al., 2019). In the Sokoto Metropolis, the lack of access to banking services and the limited availability of the new

currency notes likely exacerbated the difficulties faced by households, leading to the observed decline in living standards.

In contrast, the result shows that cashless policy has significant positive effect on household standard of living at the 1% level. This implies that a unit increase in the implementation of the cashless policy is associated with a 0.6720 increase in household standard of living, ceteris paribus. This finding highlights the potential benefits of the cashless policy, such as improved financial access, reduced transaction costs, and increased economic opportunities, which may have contributed to the observed improvement in household living standards. Studies on the cashless policy implementation in Nigeria have shown that it can lead to increased efficiency, reduced transaction costs, and greater economic opportunities, especially for marginalized groups (Adewoye, 2013; Ajayi, 2014). However, the uneven distribution of digital infrastructure and financial literacy in Sokoto may have limited the full realization of these benefits, as indicated by the challenges reported in the study.

Finally, it is reported in Table 3 that other factors such as political instability, transportation costs, climate change, and rising commodity prices has significant negative effect on household standard of living at the 1% level. This suggests that a unit increase in the impact of these other macroeconomic and environmental factors is associated with a 0.6124 decrease in household standard of living, holding the other variables constant. This underscores the important role that broader economic and environmental conditions play in shaping household living standards, beyond the specific policies under consideration. Previous research in the Nigerian context has highlighted the disproportionate effects of these factors on the livelihoods and well-being of low-income and rural households (Ojo & Adebayo, 2012; Umunnakwe & Umeakuka, 2020). In the case of Sokoto, the region's reliance on agriculture and the limited social safety nets may have exacerbated the impact of these macroeconomic and environmental challenges on household standard of living.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings from the analysis, a few key conclusions and recommendations can be drawn. The results indicate that the implementation of the cashless policy has had a positive impact on household standard of living in Nigeria, suggesting the policy has been effective in driving financial inclusion, reducing transaction costs, and creating economic opportunities. In contrast, currency redesign efforts appear to have had adverse effects, potentially disrupted economic activities and negatively impacted household welfare. Furthermore, broader macroeconomic and environmental factors, such as political instability, transportation costs, climate change, and rising commodity prices, also play a significant role in shaping household living standards. To build on the benefits of the cashless policy, policymakers should focus on addressing implementation challenges, strengthening supporting infrastructure, and ensuring the transition is inclusive. Concurrently, efforts should be made to mitigate the negative impacts of currency redesign and other macroeconomic risks through appropriate policy interventions and coordination across relevant sectors. By adopting a holistic approach, Nigeria can maximize the potential of the cashless economy to drive sustainable economic development and improve the overall standard of living for its citizens.

REFERENCES

Abdullahi, M. B., & Ahmed, A. T. (2022). Impact of naira redesign and monetary policy on Nigeria economy. *International Journal of Research in Finance and Management, 5(2)*, 226-232. **[Crossref]**

Acha, A. I., Kanu, C., & Agu, G. A. (2017). Cashless Policy in Nigeria: The Mechanics, Benefits and Problems. *Innovative Journal of Economics and Financial Studies*, 28-38.

Adekunle, I. A., & Oladejo, M. O. (2021). Socioeconomic Dynamics and Financial Inclusion in Northern Nigeria. *Journal of Economics and Sustainable Development*, 12(8), 30- 41.

Adekunle, I. A., Tolulope, A. O., & Adekunle, O. M. (2019). Dynamics of currency redesign and cashless policy in Nigeria. *Afro-Asian Journal of Finance and Accounting*, 9(2), 154-171.

Adesina, A. A. (2020). Adoption of mobile banking in Nigeria: A diffusion of innovation approach. *International Journal of Bank Marketing*, 38(3), 563-585.

Adewoye, J. O. (2013). Impact of mobile banking on service delivery in the Nigerian commercial banks. *International Review of Management and Business Research*, 2(2), 333.

Adeyemi, K. S. (2019). Promoting a cashless economy in Nigeria: Issues and challenges. *International Journal of Financial Research*, 10(6), 178-187.

Adeyemi, O., & Osabohien, R. (2019). Does currency redesign influence economic growth in Nigeria? Evidence from econometric analysis. *Heliyon,* 6(1). **[Crossref]**

Ajayi, L. B. (2014). Effect of cashless monetary policy on the performance of the banking sector in Nigeria. *European Scientific Journal,* 10(28).

Akhalumeh, P. B. and Ohiokha, F. (2011). Nigeria's cashless economy; the imperatives.

Akinleye, S. O. (2023). An overview of Policy implications of currency redesign in Nigeria.

CBN (2022). New Cash Policy, Presentation for the Interactive Engagement Session with Stakeholders on Cash-Less Lagos, Stakeholder Session – Supermarket Operators. currencies – Economics public policy brief archive. *Levy Economics Institute*.

Eechi, C. A., & Rufus, A. (2016). Cashless Policy in Nigeria and Its Socio-Economic Impacts. *Public Policy and Administration Research, 6(10)*, 16-22.

Ejoh, O. N., Adebisi, W. A., & Okpa, B. I. (2014). Information and Communication Technology - An Indespensable Tool for the Implementation of Cash-less Policy in Nigeria. *International Journal of Economics, Commerce and Management United Kingdom*, 1-18.

Ernest, O. S., & Fadiya, B. B. (2013). Cashless Banking in Nigeria: Challenges, Benefits and Policy Implications. *European Scientific Journal, 8(12)*, 1857- 7431.

International Monetary Fund (2022). Currency crises and monetary policy in an economy.

Iwedi, M., Wachuku, I. P., & Court, R. E. (2023). Naira Redesign and Economic Growth in Nigeria: Prospects and Challenges. *Journal of Accounting and Financial Management, 9(1)*, 23-28. **[Crossref]**

Kirigano B. M.,Muturi, W. & Atandi, F. G. (2016). Effect of mobile phone transfer services onperformance of micro and small enterprises: A Case of Trans-Nzoia County, Kenya.Nairobi,Kenya, *School for Human Resource Development Entrepreneurship and Procurement Department.*

Kregel, J. (2010). *An alternative perspective on global imbalances and international reserve currencies* (No. 116). Public Policy Brief.

Michael, N. O., & Emeka, O. (2016). Cashless Economy and the Nigerian Experience. *Research Journal of Finance and Accounting, 7(6)*, 17-29.

Mpho, B. (2017). Returns of the cashless economy in Nigeria. *International Journal*

for Management and applied science 3 (9), 10-14.

NPC (2022). Sokoto, Nigeria Metro Area Population 1950-2021. Retrieved from https://nationalpopulation.gov.ng/

Obananya, G. C., Jacinta, N. C., & Okoye, C. V. (2021). Cashless Economy AnEntrepreneurship Development In Anambra State, Nigeria. *International Journal of Innovative Finance and Economics Research, 9(4)*, 105-115.

Ogbonne, I. P., (2023). Impact of CBN cash withdrawal limit and currency redesign monetary policies on the operation of young Point of Sale (POS) merchants in Enugu State, Nigeria. *Ianna Journal of Interdisciplinary Studies, 5(1),* 74-83.

Ojo, E. O., & Adebayo, P. F. (2012). Food security in Nigeria: An overview. *European Journal of Sustainable Development*, 1(2), 199-222. **[Crossref]**

Okafor, G. O., & Ezeaku, H. C. (2017). Evaluating the impact of currency redesign policy on the Nigerian economy. *International Journal of Economics and Financial Issues*, 7(1), 623-630.

Olabimtan, B. (2023), "Old N200, N500, N1000 Remain Legal Tender till Dec 31, Says

Olujobi, O. (2022). Macroeconomic implications of the new currency refurbishment and capital formation in Nigeria. *Munich Personal RePEc Archive*, 1-16.

Onyeiwu, C. (2012). Monetary policy and economic growth in Nigeria. *Journal of Economic and Sustainable Development*, 3 (7),62-70.

Pillah, ,. P. (2023). Currency Redesign and Monetary Policy of Nigeria: An Evaluation. *International Journal of Public Administration and Management Research (IJPAMR), 8(4)*, 46-53.

Rogers, E. M. (2003). Diffusion of Innovations (5th ed.). New York, NY: Free Press.

Taiwo, J.N., Ayo, K.O., Afieroho E. O & Agwu M. E (2016). Appraisal of cashless economy on theNigerian financial system. *West African Journal of Industrial & Academic Research*.16(1). **[Crossref]**

Umunnakwe, G. N., & Umeakuka, O. A. (2020). Mitigating the effects of climate change on rural farmers' livelihood in Nigeria. *Journal of Environmental Management,* 269, 110772.

Whelan, K. (2010). Global imbalances and the financial crisis. Paper for the European