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Original Research Article

Monetary Policy and Financial Performance of Consumer Goods Manufacturing Firms: Evidence from Flour Mills Nigeria Plc

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Abstract

This study examines the effect of monetary policy on the financial performance of Flour Mills Nigeria plc using an annual dataset from 1990 to 2021. The financial performance is measured as return on assets while monetary policy is a proxy by monetary policy rate. Other control variables in the model are exchange rate, inflation rate and managerial efficiency. In the estimation, this study employed the autoregressive distributed lag (ARDL) model. The results of this study reveal that monetary policy has a significant negative effect on the financial performance of flour mills plc while the exchange rate and inflation rate have no significant influence on the financial performance of the company. The result further suggested that managerial efficiency has a significant positive effect on the financial performance of the sampled firm. According to the results, this study recommended that monetary authorities should cut down the monetary policy rate. The foregoing will serve as an incentive for the company to increase its production operation and in the long will help to boost output and financial performance. Finally, the study recommends the need for the company to strengthen its efforts in improving managerial efficiency because of its positive influence on financial performance.

Keywords: Monetary policy, financial performance, exchange rate, managerial efficiency, ARDL.

INTRODUCTION

Monetary policy is a deliberate attempt by the monetary authorities to influence the availability, cost, and quantity of money credit for the purpose of achieving anticipated macroeconomic objectives. The action is carried out by changing the money supply and interest rates with a view to stabilizing the quantity of money in the economy (Ufoeze *et al*., 2018). In addition, the monetary policy tools are aimed at accomplishing the macroeconomic goals of inflation and output targets as well as controlling any potential risk to the financial system's stability (Babangida & Khan, 2021). Furthermore, monetary policy is one of the fundamental measures taken by the central bank of Nigeria which is aimed at promoting economic growth and development, price stability, full employment, a favourable balance of payment, exchange rate stability and improving the level of consumption among others. These objectives have recently been expanded to include smoothing of the business cycle, prevention of financial crisis and long-term stabilization of real exchange rate and interest rate and promotion of industrialization (Adesina, Nwidobie & Amadi 2018; Uju & Ogochukwu, 2021).

However, the proponents of economic development have described industrialization as an avenue that faster economic growth and poverty reduction (Perkins, Radelet & Lindauer, 2006). The Nigerian government has made intensive efforts at diversifying the economy. The efforts were directed at policies that could enhance the growth of the different sectors of the Nigerian economy including the manufacturing sector (Osakwe, Ibenta & Ezeabasili, 2019). Moreover, understanding the accurate channels of monetary policy to the manufacturing sector can help in achieving sustainable growth and development of any nation's economy. Thus, the manufacturing sector is very important to the development of economies of countries globally because it is considered the cornerstone of industrialization as well as an engine of growth that provides an avenue for employment generation, wealth creation, sustainable development and economic prosperity. However, it also played a substantial role in the transformation of the economy as

it is also a medium for increasing productivity related to export expansion and import replacement, creating foreign exchange earning capacity and per capita income which led to single consumption patterns (Uju & Ogochukwu, 2021).

Apart from the foregoing development, previous studies on monetary policy and financial performance largely concentrated on the banking sector (Amechi, e tal, 2020; Adesina, Nwidobie & Amadi 2018; Babangida and Khan, 2021; Gimba, vicent & Oyedokun 2020; Kennedy, 2021; Mbabazize *et al*., 2020; Oparah & James, 2020), economic growth (Ezeibekwe,2020; Srithilat, & Sun, 2017; Ufoeze *et al*., 2018) and on monetary policy and manufacturing sector (Osmond, Egbulonu & Emerenini, 2015; Osakwe, Ibenta, & Ezeabasili, 2019; Uju & Ogochukwu, 2021). But none of these studies examines the effect of monetary policy on a specific company and they measured manufacturing performance using manufacturing value added to GDP. This study is different from the previous study because it sought to examine the effect of monetary policy on a single firm (Flour Mills Nigeria plc) and measured financial performance using return on assets. This is because understanding the effect of monetary policy on a specific company will help the stakeholders of the company to take an appropriate decision whenever there is a change in the policy rate.

This study, therefore, seeks to bridge the research gap by examining the impact of monetary policy on consumer goods manufacturing firms in Nigeria with specific reference to flour mills Nigeria Plc. To achieve the foregoing, this study is divided into five sections. Following the introduction, section two presents a theoretical framework and review of related empirical studies. section three consists of data and methodology. Section four consists of results and discussions while section five comprises conclusions and recommendations.

LITERATURE REVIEW

The theory that underpins this study is the Keynesian on monetary policy. In the Keynesian analysis, monetary policy plays an important role in influencing economic activities. It expressed that a change in money supply can permanently change the variables such as interest rate, aggregate demand and level of employment, output and income (Jhinghan, 2016). The proposition rejected that the velocity of money in circulation is not constant. Keynes further believed that expansionary monetary policy increases the supply of loanable funds available through the banking system, causing interest rates to fall. With lower interest rates, aggregate expenditures on investment, manufacturing sector and interest-sensitive consumption goods usually increase, causing real GDP to rise. Hence, monetary policy affects manufacturing firms via interest rate channel.

Empirically, Osmond, Egbulonu and Emerenini (2015) examine the effect of monetary policy on manufacturing in Nigeria using an annual dataset from 1981 to 2012. By applying the Johansen cointegration test and error correction model (ECM), the results revealed that money supply and credit to the private sector exert a significant positive influence on the manufacturing sector in Nigeria. In another development, Osakwe, Ibenta, and Ezeabasili, (2019) examined the effect of monetary policy on the performance of the manufacturing sector in Nigeria. By applying the Autoregressive Distributive Lag (ARDL) model, the study revealed that monetary policy has a significant positive effect on the manufacturing sector output in Nigeria. Furthermore, Uju and Ogochukwu, (2021) examine the effect of monetary policy on industrial growth in Nigeria using an annual time series dataset from1986 to 2019. By applying Ordinary Least Square (OLS) regression, the findings suggested that open market operation and cash reserve have a significant positive effect on industrial growth, while monetary policy rate has a significant negative effect on industrial sector growth.

However, the related studies on the link between monetary policy and banking sector performance were conducted by Adesina, Nwidobie and Amadi (2018), Gimba, vicent and Oyedokun (2020), Oparah and James (2020) and Okwudili (2021). Beginning with the work of Adesina, Nwidobie and Amadi (2018), the study revealed that in the short run, monetary policy has a significant positive effect on banking sector performance while in the long run, monetary policy has no significant influence on the performance of the banking sector. Additionally, Gimba, vicent and Oyedokun (2020) analyzed the effect of monetary policy on the financial performance of listed deposit money banks in Nigeria from 2006 to 2018. They revealed that monetary policy has a significant positive effect on the performance of listed deposit money banks.

Furthermore, Oparah and James (2020) examine the influence of monetary policy on financial stability in the Nigerian banking industry for the period 2008 to 2016. The study revealed that monetary policy has a significant positive influence on the financial stability of the banking sector. In addition, Okwudili (2021) examined the effect of monetary policy on the financial performance of twelve listed deposit money banks in Nigeria from 2010 to 2019. They revealed that the loan deposit ratio has a significant positive effect on financial performance while the loan to asset ratio has a significant negative effect on banking sector performance. The study further revealed that the CBN lending rate has no significant effect on banking sector performance. Mbabazize *et al.*, (2020) analyzed the influence of monetary policy on the profitability of commercial banks in Uganda using an annual dataset from 2010 to 2018. By employing the System

Generalized Method of Moments (GMM) model, the study revealed that the lending rate has a significant positive effect on the profitability of the banking sector while inflation has a significant negative effect on the banks' performance.

On economic growth, the studies were carried out by Ufoeze *et al*., (2018) and Igharo *et al.*, (2020). For instance, Ufoeze *et al*., (2018) examined the impact of monetary policy on economic growth in Nigeria using an annual dataset from 1986 to 2016. They applied Ordinary Least Squared (OLS) regression and revealed that money supply has a significant positive effect on growth while monetary policy rate and investment have no significant influence on economic growth. Finally, Igharo *et al*., (2020) estimated the effect of monetary policy transmission mechanism and innovation in the banking system on economic growth in Nigeria from 1981 to 2015. They applied the ARDL model and found that monetary policy has not been effective and also supervisory and intermediary financial institutions lack dependence due to frequent government interventions.

DATA AND METHODOLOGY

This study used an annual time series dataset from 1990 to 2021 sourced from the Central Bank of Nigeria Statistical Bulletin and annual financial reports of Flour Mills Nigeria plc. The period selected coincides with numerous economic challenges and policy reforms in both monetary policy and Manufacturing in Nigeria. The variables incorporated in the model are financial performance (measured as Return on Assets which profit after tax to total assets), monetary policy (measured by monetary policy rate), exchange rate, inflation rate and managerial efficiency (measured by total revenue to total assets). The functional model is specified as:

ROA = f (MPR, EXR, INF, MGE) ……. 1

The econometric equation of the function above is presented as:

$$ROA_t = \beta_0 + \beta_1 MPR_t + \beta_2 EXR_t + \beta_3 INF_t + \beta_4 MGE_t + \mu_t \quad \text{……..……..…. 2}$$

From equation 2, ROA is the return on assets which is a measure of financial performance, MPR donates monetary policy rate which is the measure of monetary policy, EXR is the exchange rate, INF represents the inflation rate and MGE is the managerial efficiency. β_0 to β_4 are the coefficients of the dependent variables while μ is the error term in the equation.

To capture both short-run and long-run effects, equation 2 is estimated using the Autoregressive Distributed lag (ARDL) approach developed by Pesaran, Shin and Smith (2001). Thus, the equation becomes:

$$\Delta ROA_t = \beta_o + \sum_{i=1}^{m} \beta_1 \Delta ROA_{t-i} + \sum_{i=1}^{m} \beta_2 \Delta MPR_{t-i} + \sum_{i=1}^{m} \beta_3 \Delta EXR_{t-i} + \sum_{i=1}^{m} \beta_4 \Delta INF_{t-i} + \sum_{i=1}^{m} \beta_5 \Delta MGE_{t-i}$$
$$\alpha_1 ROA_{t-1} + \alpha_2 MPR_{t-1} + \alpha_3 EXR_{t-1} + \alpha_4 INF_{t-1} + \alpha_5 MGE_{t-1} + \mu_t \quad \text{…..……. 3}$$

Where Δ is the first difference operator, L represents natural logarithm; m stands for optimal lag, β_1 to β_5 are the coefficients of the short-run parameters, while α_1 to α_5 are the long-run coefficients of the variables in the equations. β_0 is the constant and μ is the error term. All other variables are as defined in equation 2. However, the error correction representation of equation 3.3 is formulated as:

$$\Delta ROA_t = \beta_o + \sum_{i=1}^{m} \beta_1 \Delta ROA_{t-i} + \sum_{i=1}^{m} \beta_2 \Delta MPR_{t-i} + \sum_{i=1}^{m} \beta_3 \Delta EXR_{t-i} + \sum_{i=1}^{m} \beta_4 \Delta INF_{t-i}$$
$$+ \sum_{i=1}^{m} \beta_5 \Delta MGE_{t-i} + \Omega ECM_{t-1} \quad \text{……..……. 4}$$

Where ECM is the error correction term generated from the ARDL models and Ω is the coefficient of the ECM which express the speed of adjustment back to equilibrium in case of any distortion in the economy. To avoid spurious regression and ensure that no I(2) series is included in the models, this paper applied Augmented Dickey-Fuller (ADF) and Philips-Perron unit root approaches.

RESULTS AND DISCUSSIONS

This section presents the results of descriptive and inferential statistics generated from the analysis. Beginning with descriptive analysis and the results are reported in Table 4.1.

Table 4.1: Summary Statistics of the Variables Under Estimation

Variables	ROA	LMPR	LEXR	LINF	MGE
Mean	-0.1377	2.5851	4.4913	2.6318	-2.3506
Std. Dev.	0.9927	0.2888	1.1174	0.6424	22.7435
Skewness	-5.3346	-0.7232	-0.7061	1.1960	-5.3603
Kurtosis	29.6631	4.8649	2.2875	3.8141	29.8399
Jarque-Bera	1099.678	7.4269	3.3361	8.5130	1113.749
Probability	0.0000	0.0243	0.1886	0.0141	0.0000
Observations	32	32	32	32	32
Source: *Author's Computation using Eviews version 9.*					

Table 4.1 results show that there are thirty-two (32) observations per variable. The mean of the monetary policy rate, exchange rate and inflation rate are all positive while that of financial performance and managerial efficiency are negative. This show that monetary policy, exchange rate and inflation recorded positive growth over the study period while the flour mills' financial performance and managerial efficiency recorded negative growth rates over the sampled period.

However, the results show that managerial efficiency has the highest standard deviation while monetary policy has the lowest standard deviation. This implies that the fluctuation of managerial efficiency is higher whereas the variability in monetary policy is the lowest in the distribution. The results further attest that financial performance, monetary policy, inflation and managerial efficiency are all not normally distributed while the exchange rate is normally distributed. This is due to the significant probability values of the affected variables. However, in the inferential analysis, this study started with unit root tests using Augmented Dickey-Fuller and Phillips Perron. The results are reported in Table 4.2.

Table 4.2: Unit Root Test (Augmented Dickey-Fuller and Phillips-Perron)

Variables	Augmented Dickey-Fuller		Phillips-Perron	
	Level	First Diff.	Level	First Diff.
ROA	-5.4664***	-9.0000	-5.4656***	-29.6621
LPR	-2.7214	-6.8619***	-2.6713	-7.0779***
LEXR	-2.3080	-5.2984***	-2.3343	-5.4095***
LINF	-2.9475	-4.5167***	-3.1500	-4.4932***
MGE	-5.5264***	-9.0033	--5.5270***	-30.0876
*Note: ***, ** and * indicate significant at 1%, 5% and 10% respectively.*				
Source: *Authors computation from Eviews output.*				

Based on the results presented in Table 4.2, it is accounted that financial performance measured as return on assets and managerial efficiency are all stationary at level values according to both tests while monetary policy, exchange rate and inflation rate are stationary after the first difference as indicated by the two testing approaches. Since unit root tests show that the variables have different orders of integrations, some stationary at level value and other stationery after the first difference. Based on these, it is attested that the suitable technique to handle such results is Autoregressive Distributed Lag (ARDL) model. Thus, this study goes further and estimates the bound test of the ARDL model and the results are reported in Table 4.3.

Table 4.3: Bound test and run coefficients of the ARDL

F-Statistics		5.36		
Critical Value Bounds				
Significance levels	I(0) Bounds		I(1) Bounds	
10%	2.2		3.09	
5%	2.56		3.49	
1%	3.29		4.37	
Dependent Variable: Financial Performance (measured as Return on Assets)				
Variables	Coefficients	std. Error	t-Statistics	Prob.
Monetary policy	-0.1143	0.0251	-4.5493	0.0001
Exchange rate	0.0061	0.0064	0.9501	0.3515
Inflation Rate.	-0.0041	0.0104	-0.3947	0.6965
Managerial efficiency	0.0433	0.0003	115.9323	0.0000
Constant	0.2434	0.0807	3.0167	0.0060
R^2 = 0.58, Adj. R^2 =0.47, AIC = 3.1359, SIC = 3.4597, HQC= 3.2415, DW = 1.91, F-Stat. = 5.38 (0.0012)				
Source: *Authors calculation Using Eviews Version 9.*				

From Table 4.3, the results of the bound test show that there is evidence of cointegration among the variables. This is because the F-statistics value (5.36) is greater than the critical value bounds even at a 1% level of significance. The evidence of cointegration permitted this study to estimate both the long-run and short-run coefficients of the ARDL model.

However, the results reported in Table 4.3 indicate that the monetary policy rate has a significant negative influence on the financial performance of flour mills plc at a 1% level. The results attest that an increase in the monetary policy rate will lead to a decrease in the financial performance of the sampled firm and vice versa. This is expected because an increase in the policy rate will induce the lending institutions to increase the interest rate and it affect the ability of the company to borrow more. Hence, the lending difficulties will reduce the rate of investment, output and financial performance. Nevertheless, the result is contrary to the works of Osmond, Egbulonu and Emerenini (2015), Uju and Oguchukwu (2021) and Osakwe *et al*., (2019) who found a significant positive relationship between monetary policy and manufacturing sector performance.

Furthermore, the results also show that the exchange rate and inflation rate have no significant influence on the financial performance of the flour mills plc. An increase or decrease in the exchange rate and inflation rate do not increase or decrease the financial performance of the sampled firm. This is because whether there is an increase or decrease in both the exchange rate and inflation rate, a firm must produce to sustain its operations.

Moreover, the result presented in Table 4.3 shows that there is a positive and statistically significant relationship between managerial efficiency and financial performance of flour mills plc. This implies that a 1% increase in managerial efficiency will lead to a 0.04% increase in the financial performance of the target firm. This is expected because effective management of resources in the company will lead to improving operational levels and financial performance of the company.

Table 4.4: Estimated Short-Run Coefficients of the ARDL Model

Dependent Variable: ΔFinancial Performance (measured as Return on Asset)				
Variables	Coefficients	std. Error	t-Statistics	P-value
Δ (Monetary policy)	-0.0307	0.0222	-1.3837	0.1792
Δ (Exchange rate)	-0.0079	0.0177	-0.4504	0.6564
Δ (Inflation Rate)	-0.0053	0.0107	-0.5029	0.6196
Δ (Managerial efficiency)	0.0432	0.0001	271.5413	0.0000
Error Correction Model (-1)	-0.9244	0.1606	-5.7538	0.0000
Corr. = 2.42 (0.1118), Het. = 2.21 (0.0772), Res. = 1.08 (0.3080)				
Source: Authors' computation Using EViews Version 9.				

Table 4.4 show the results of the short-run relationship among the variables. From the results, it is acknowledged that monetary policy, exchange rate and inflation rate have no significant influence on the financial performance of flour mills producing companies in Nigeria. This means that an increase or decrease in the monetary policy rate, exchange rate and inflation rate do not produce any influence on the financial performance of the company. Furthermore, the result shows that managerial efficiency has a significant positive effect on the financial performance of flour mills Nigeria plc. An increase or decrease in managerial efficiency will lead to an increase or decrease in the financial performance of the sampled company in the short run.

The error correction term has the correct sign, it is negative, less than one (-0.92) and statistically significant at 1%. This is confirming the evidence of a long-run relationship between the series. Additionally, in the case of any distortion in the economy, the error correction term will correct itself to the equilibrium level at the speed of 92%. Finally, to ensure the reliability of the results, this study conducted post-estimation tests using autocorrelation, heteroskedasticity and Ramsey RESET and the results are summarized at the button in Table 4.4. The test shows that the model is free from serial correlation and heteroskedasticity problems. This is because the probability values of the tests are not significant at the 5% level. The Ramsey RESET test shows that the model is well specified and there is no evidence of misspecifications. This is connected to the fact that the probability value of the test is not statistically significant even at the 10% level. This study further conducted stability tests using Cumulative Sum of Square and Cumulative Sum of Squares of Recursive. Residuals and the results are presented in Figure 1 and Figure 2.

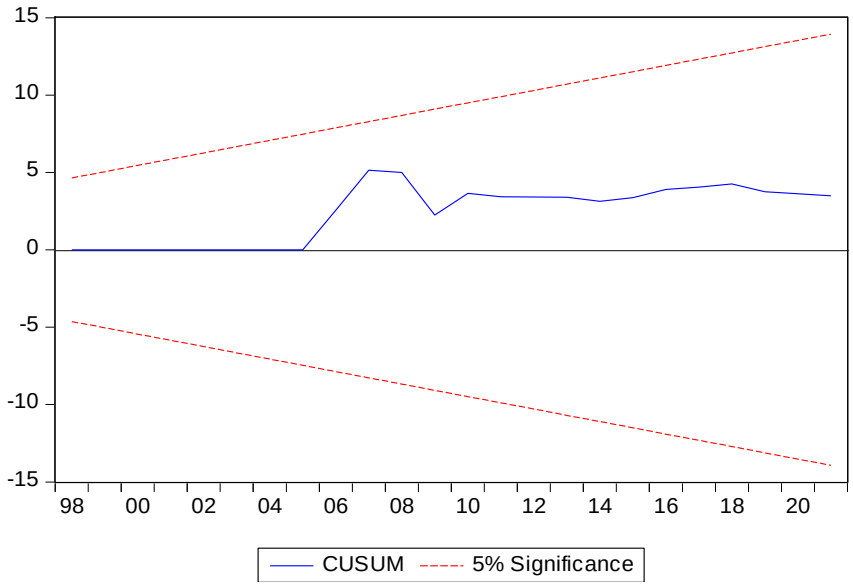

Figure 1: Cumulative Sum of Square

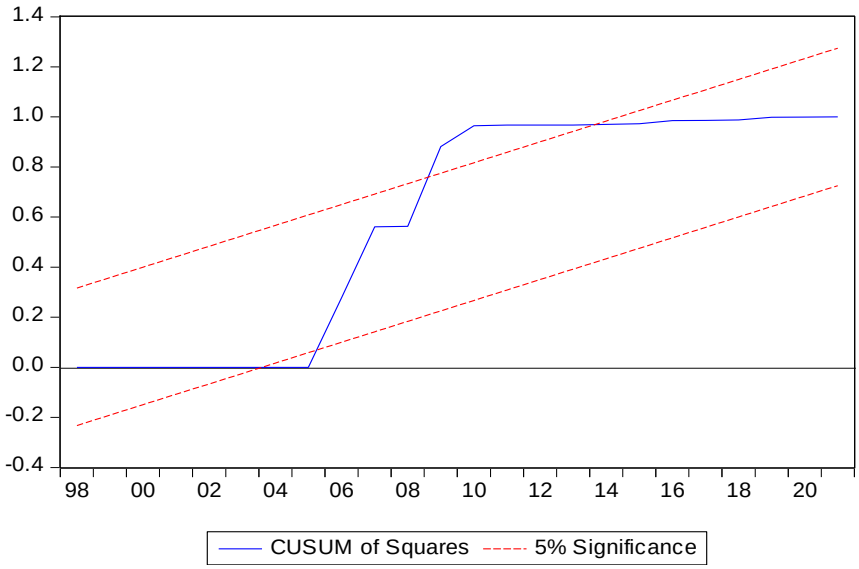

Figure 2: Cumulative Sum of Squares of Rec. Res

The CUSUM and CUSUMQ tests are presented in Figure 1 and Figure 2. Going by the CUSUM test, the model and estimated parameters are stable, because the recursive lines fall within the two critical lines. Therefore, the results suggest that the model and estimate parameters are stable. However, the CUSUM of squares test indicates that the model and parameters are not stable. The instability in the model and parameters are associated with policy shocks such as rising inflation, decrease in return on assets and managerial efficiency, global economic crisis, policy reforms and other macroeconomic shocks.

CONCLUSIONS AND RECOMMENDATIONS

Going by the results, this study concludes that monetary policy has a significant negative influence on the financial performance of flour mills plc while the exchange rate and inflation rate have no significant influence on the financial performance of the company. The study also concludes that managerial efficiency has a significant positive influence on the financial performance of the sampled firm. Based on the results, this study recommends the need for the monetary authority to reduce the monetary policy rate to increase the financial performance of the consumer goods manufacturing companies such as flour mills and alike. Finally, the study recommends the need for the company to intensify its efforts in improving managerial efficiency because of its positive influence on financial performance.

REFERENCES

- Adesina, J. B., Nwidobie, M. B., & Amadi, A. N. (2018). Monetary policy and financial performance of Nigerian deposit money banks. *Asian Economic and Financial Review*, 8(7), 853-869.

- Ezeibekwe, O. F. (2020) monetary policy and domestic investment in Nigeria: the role of the inflation rate. *Economics and Business*, 34, 139–155.
- Gimba J T, Vincent H S., & Oyedokun G E, (2020). Effect of monetary policy on the performance of listed deposit money banks in Nigeria. *The Annals of the University of Oradea. Economic Sciences Tom*, XXIX (1), 1582-5450.
- Igharo, A.E., Osabohien, R., Onyemariechi, G. O., & Ibidapo, D. T. (2020). Monetary policy transmission mechanism, innovative banking system and economic growth dynamics in Nigeria. *Int. J. Business Innovation and Research*, 21(1), 1–22.
- Jhinghan, M. L. (2016). *Macroeconomic Theory*. 13th Edition, Virnda India.
- Mbabazize, R. N., Turyareeba, D., Ainomugisha, P., & Rumanzi, P. (2020). Monetary Policy and Profitability of Commercial Banks in Uganda. *Open Journal of Applied Sciences*, 10, 625-653.
- Oparah, F. C., & James, T. H. (2020). Monetary Policy and Financial Stability in the Nigerian Banking Industry. *International Journal of Financial Research*, 11(1).
- Osakwe, A. Ibenta, S. N., & Ezeabasili, V. N. (2019). Monetary Policy and the Performance of the Manufacturing Sector in Nigeria (1986-2017). *International Journal of Academic Research in Business and Social Sciences*, 9(2), 399–413.
- Osmond, N. O., Egbulonu K. G., & Emerenini, F. M (2015). Monetary Policy and the Manufacturing Sector in Nigeria. *SSRG International Journal of Economics and Management Studies (SSRG-IJEMS)*, 2(1).
- Pesaran, H., Shin, R., & Smith, Y. (2001). Bound testing approach to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289-326.
- Srithilat, K., & Sun, G. (2017). The impact of monetary policy on economic development: Evidence from Lao PDR. *Global Journal of Human Social Science*, XVII(II-1), 8-1.
- Ufoeze, L. O., Odimgbe, S. O., Ezeabalisi, V. N., & Alajekwu, U. B. (2018). Effect of monetary policy on economic growth in Nigeria: An empirical investigation. *Annals of Spiru Haret University, Economic Series*, *9*(1), 123-140.
- Uju, E. A., & Ugochukwu, P. O. (2021). Effect of Monetary Policy on Industrial Growth in Nigeria. *International Journal of Entrepreneurship and Business Innovation* 4(1), 47-60.