

## GLOBAL FINANCIAL CRISIS AND NIGERIAN ECONOMIC PERFORMANCE

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### ABSTRACT

This study focused on the impact of global financial crisis on Nigeria economic performance proxied with GDP growth rate. Specifically, this study examined the effect of global financial crisis on real GDP growth rate. Data used in the study covered the period 1991 to 2022 and were analyzed with descriptive statistics, Pearson correlation analysis method, as well as Autoregressive distributed lag co-integration approach. Result then revealed that global financial crisis has significant negative and insignificant positive effect on Nigeria economic performance that is the real GDP growth rate in the short run and long run respectively. The study recommended among others that government needs to enhance efforts geared towards technology advancement in the country as well as put in effort in enhancing agricultural products and other production activities in quantity and quality to reduce global financial crisis implication.

**Keywords:** Global Financial Crisis, Economic Performance, GDP Growth Rate.

### 1.0 INTRODUCTION

Although global financial crisis is claimed to be of little impact in African region, yet implication penetrate largely into some countries such as Nigeria (Njiforti, 2015), Nigeria as one the countries in this region seems to have a significant experience of the shock arising from global financial crisis. As a country with low level of financial integration, it is well understandable that crisis relating to financial sector at the global level would not affect remarkably any of the Economic performance in the country (Hasil, Ibrahim & Catherine, 2017). But, with some financial institution, most especially the capital market as well as the apex bank being involved in international financial institutions, there is dread that the global financial crisis could worsen economic outcome in the country, due to underdevelopment of the financial sector.

Despite this, the country is also deeply involved in dangerous international trade, through which there is high exposure to the woe of the global financial crisis. In one hand, implication of global financial crisis on global oil prices makes the former a threat to the Nigerian economy given that the country financing structure is dependent on oil revenue and that oil prices decrease has the potential of reducing economic activities and raises unemployment rate. On the other hand, there is over-dependent on imports for capital equipment and materials in the industrial sector which may create an avenue for increased cost of production, hence, the possibility of an increase in inflation rate. Therefore, there is the need to investigate how global financial crisis influences key Economic performance in Nigeria.

In empirical literature, several studies had been conducted on the issue of global financial crisis and Economic performance. These studies includes Ahmad et al (2023), Tronzano (2021), Ullah et al (2021), Agrippino and Rey (2020), Isaksen (2019), Ruzzante (2018). However, it is observed that most of these studies were descriptive in nature while those studies that involved inferential statistics were more focused on only economic growth and inflation as Economic performance. This study also identified that much attention had not been given to the possible difference in the flow of Economic performance in the pre and post global financial crisis, most especially among related studies conducted in Nigeria. The remaining part of the studies is divided into literature review, methodology, results and discussion, conclusion and recommendation.

## 2.0 LITERATURE REVIEW

Ahmad, Mobarek and Raid (2023) examined the impact of global financial crisis on firm performance in UK: Moderating role of ESG, corporate governance and firm size. This paper investigates the impact of global financial crisis (GFC; 2007–2010) on financial and non-financial performance of FTSE350 UK firms. Panel data from 2002 to 2018 across 351 UK firms are used in the study. Findings from the study indicate that ESG, firm size and CG are the moderators in the relationship of GFC and firm financial performance. Based on the findings, the study concluded the results/statistics of Hausman test, using random effects model is more suitable to estimate the econometric models. Therefore, the study recommended that results reveal that ESG, CG and firm size are the moderators in the relationship between GFC and firm financial performance.

Li, Farmanesh, Kirikkaleli and Itani (2022) examined the impact of the global financial crisis, and the COVID-19 pandemic on the macroeconomic variables of the US economy. The study used a descriptive format to analyze and compare the global financial crisis and COVID-19 pandemic, in a tabulated and graphical format. For analysis purposes, the tables and average method have been used. For the graphical formats, charts have been used for the later year of 2008, and the beginning of the 2009 global financial crisis. The results from the findings have confirmed that the current COVID-19 pandemic shows more severity in terms of economic activity, than the global financial crisis had experienced. Moreover, the impact of the crisis on the recession probabilities in the current pandemic is lower than that at the time of the global financial crisis.

Antoni (2019) analyzed the impact of macroeconomic indicators on economic growth in the United States and Indonesia by using the co-integration approach. The variables used are Gross Domestic Product, Foreign Debt, Export and Foreign Direct Investment from 1998-2018. The analytical method used in this study is to apply the co-integration approach. The results from the findings showed that, there is a strong long-term relationship between macroeconomic variables in the two countries. Therefore, a more active macro-economic policy is recommended in both countries, especially Indonesia. This also means that the government, especially the State of Indonesia, must make better management in the public sector that supports macroeconomic policies and other variables.

Agrippino and Rey (2020) Examined the U.S. Monetary Policy and the Global Financial Cycle. This paper establishes the importance of U.S. monetary policy as one of the drivers of the

Global Financial Cycle. Using a simple model of international asset pricing with heterogeneous intermediaries. The study concluded that, U.S. monetary policy shocks induce strong movements in the international financial variables that characterize the Global Financial Cycle.

Lesch, Vogel and Hellmich (2017) examined the state and social partners working together: Germany's response to the global financial and economic crisis. The study examines the role of social dialogue and collective bargaining in facilitating the so-called "jobs miracle" in Germany, which saw a drop in unemployment during the peak years of the economic and financial crisis. This was made possible through a combination of flexible use of collective bargaining and extensive labor market reforms to introduce more flexible forms of employment in the 2000s. The study concluded that, the ad hoc structure not only works but also represents a basis for an equally successful response to future crises.

Isaksen (2019) examined the impact of the financial crisis on European attitudes toward immigration. This paper studies changes in attitudes toward immigration over a 10-year period, with an examination of the long-term effects of economic downturn. Data gathered from the study were analyzed using European Social Survey (2002–2014). Findings from the study indicated that economic performance correlates with a change in attitudes. The study concluded that if the unemployment rises and people experience fewer economic opportunities, it may potentially lead to a situation where immigrants are increasingly viewed as scapegoats.

Buiter and Rahbari (2012) Examined the Debt, Financial Crisis and Economic Growth. Debt in the non-financial sector of AEs has almost doubled as a share of GDP between 1980 and 2008— a period during which GDP grew rather briskly. The study concluded that reducing this debt burden to more tolerable levels will take many years unless recourse is had to debt restructuring on a much greater scale than currently contemplated.

Nastase, Cretu and Stanef (2015) examined the effects of global financial crisis. The financial crisis of 2007–2009 has been called the worst financial crisis since the one related to the Great Depression by leading economists, and it contributed to the failure of key businesses, declines in consumer wealth estimated in the trillions of U.S. dollars, substantial financial commitments incurred by governments, and a significant decline in economic activity. The study concluded that, Australia is fortunate to have come into this period in better shape than most, with sound financial institutions, and with more scope than most for macroeconomic policies to respond as needed.

Thalassinou, Pintea and Lulia (2015) examined the recent financial crisis and its impact on the performance indicators of selected countries during the crisis period. The main aim of the paper is to analyze the performance of the stock market indicators during the recent financial crisis in several countries. Quantitative research method was adopted in the study from the period of 2006 to 2009. The study concluded that after several years of accelerated growth, these countries were forced to borrow billions of euros from international institutions to survive the crisis.

### 3.0 METHODOLOGY

This aspect of the paper discusses the research method and the sources of data used for the analysis. The section begins with the model specification.

## 3.1 Model Specification

This study adapted the model of Ahmed, Rostam and Mohammed (2020) in which macroeconomic indicators (gross domestic product, export, inflation and exchange rate) are expressed as function of global financial crisis (GFC), East Asia financial crisis (EFC) and country specific financial (CFC) crisis. As such, the model is specified as:

$$EP = f(GFC, EFC, CFC,)$$

$$EP_{it} = a_0 + a_1GFC_{it} + a_2EFC_{it} + a_3CFC_{it} + \mu_i$$

This study however, used real GDP growth rate, inflation rate and unemployment rate as macroeconomic indicators, expressed as a function of global financial crisis and control variables. Control variables used in the study are gross capital formation labour force, and foreign direct investment in line with major factors identified in growth model as well as government expenditure and money supply in consideration of economic policy. Hence, the model for this study is specified as:

$$EP = f(GFC, FDI, LF, GCF, GEXP, MS)$$

$$GDPgr_t = \alpha_0 + \alpha_1GFC_t + \alpha_2FDI_t + \alpha_3LF_t + \alpha_3GCF_t + \alpha_4GEXP_t + \alpha_5MS_t + \mu_i$$

Where:

EP= is economic performance proxy by real GDP growth rate- GDPgr,

GFC= Global financial crisis (dummy; 1-crisis, 0-no crisis)

GCF= Gross capital formation

LF= Labour force

FDI= Foreign direct investment

GEXP= Government expenditure

MS= Money supply

u= error term of the model

## 3.2 Method of Data Analysis

This study is basically on descriptive statistics and inferential analysis. Specifically, the descriptive statistics covers mean, standard deviation, minimum and maximum values, skewness, kurtosis and jarque bera. The inferential analysis entails time series analysis in line with the objective and hypotheses of this study. Furthermore, the estimating technique also entails the unit root test and applicable co-integration approach, followed by ECM or ARDL estimation techniques

## 4.0 RESULTS AND DISCUSSION

This chapter consist result and discussion derived from the empirical analysis of the effect of global financial crisis on selected macroeconomic indicators in Nigeria. The result presented in this chapter covered descriptive statistics of all the variables engaged, trend analysis, unit root test, ARDL co-integration bound test, ARDL short run and long run estimation and post estimation test. Thereafter, the discussions of the findings are presented.

**Table 1. Descriptive Statistics**

	RGDPgr	GFC	GCF	LF	FDI	GEXP	MS
Mean	4.053702	0.093750	12190.12	59.40156	1.325949	4793.600	18.38859
Median	4.212993	0.000000	7266.445	60.24900	1.452078	2244.448	17.59603
Maximum	15.32916	1.000000	65227.13	60.69700	2.900249	24431.21	27.37879
Minimum	-2.035119	0.000000	285.5900	55.27000	-0.039522	66.58440	9.063329
Std. Dev.	3.782560	0.296145	16231.00	1.538067	0.856987	6359.845	6.125880
Skewness	0.484801	2.787493	2.073635	-1.297988	0.086436	1.782086	-0.033024
Kurtosis	3.786430	8.770115	6.551323	3.502442	1.840694	5.146917	1.367260
Jarque-Bera	2.078133	3.583291	3.974899	3.922052	1.831832	23.08342	3.560272
Probability	0.353785	0.359832	0.383649	0.379457	0.400150	0.000010	0.168615
Observations	32	32	32	32	32	32	32

Note: RGDPgr= Real gross domestic product growth rate (%); GFC= Global Financial Crisis (dummy); GCF= Gross capital formation (billion naira); LF= Labor force (% of total population age 15+); FDI= Foreign direct investment (net inflow as % of GDP); GEXP= Government expenditure (billion naira); MS= Broad money supply (% of GDP)

**Source:** Author's Computation (2024)

Result of descriptive statistics in Table 1 reveals that real GDP growth rate on the average stood at 4.05%, which is higher than the global average of 3.1% and that of regional (sub-Saharan Africa) which stood at 3.8%, although in the year 2022 the country's real GDP growth rate stood at 3.21%.

Nevertheless, result of the standard deviation and skewness depicted that most of the datasets for real gross domestic product growth rate, inflation rate and unemployment clustered around the mean, although the period values are to the right of the average values. This showed that Nigeria has more experienced of periods of better growth, higher inflation rate and unemployment rate relative to the average values revealed. In addition, result showed that these three variables, including global financial crisis, gross capital formation, labour force and government expenditure are platykurtic by peakedness, while others are mesokurtic by peakedness. Lastly, result showed that all the variables of the study are normally distributed.

### 4.1 Unit Root Test

Unit root test was carried out to ascertain the stationarity property i.e. unit root characteristics of variables. The presence of a unit root implies that the time series under investigation is non-

stationary; while the absence of unit root shows that the series is stationary. The test shows the order of integration of each of the variables, which reflect the behavior of each of the variables when exposed to external shock. Unit root test employed in this study is the Augmented Dickey-Fuller (ADF) tests, and the summary is presented in tables 2:

**Table 2: Summary of Unit Root Test Result**

Variables	LEVEL			FIRST DIFFERENCE			Order of integration I(d)
	ADF statistics	1% critical value	5% critical value	ADF statistics	1% critical value	5% critical value	
RGDPgr	-3.16771	-3.69987	-2.97626	-9.13803	-3.67107	-2.96397	I(0)
GFC	-2.44949	-2.64167	-1.95206	-5.00000	-2.65014	-1.95338	I(0)
GCF	-2.75092	-4.28458	-3.56288	-3.92546	-4.29673	-3.56838	I(1)
LF	-2.10305	-3.67932	-2.96776	-4.02627	-3.68919	-2.97185	I(0)
FDI	-1.74450	-3.66166	-2.96041	-5.47387	-3.67017	-2.96397	I(1)
GEXP	-1.89277	-3.67017	-2.96397	-7.74221	-3.67017	-2.96397	I(1)
MS	-3.59752	-4.29673	-3.56838	-3.86971	-4.29673	-3.56838	I(0)

**Source:** Author's Computation, (2024)

Table 4.3 depicted the result of unit root test conducted on the variables employed in the study. Result specifically showed that inflation rate, unemployment rate, gross capital formation, foreign direct investment and government expenditure are not stationary at level, but after the first difference, hence they are integrated of order one, I(1), indicating that innovative shock of these variables in a specified period are carried to the next period. On the other hand, result revealed that real gross domestic product growth rate, global financial crisis, labour force and broad money supply are stationary at level, that is, integrated of order zero, I(0), reflecting that this variable does not retain innovative shock on it more than the same period. Overall, result therefore indicated that series incorporated in the model of this study are integrated of mixed order, specifically I (1) and I (0). Hence, the co-integration approach, specifically, Autoregressive Distributed Lag (ARDL) co-integration approach is conducted.

#### 4.2 Analysis of the effect of Global Financial Crisis on Real GDP growth rate in Nigeria

**Table 3 ARDL Co-integration Bound Test**

F-Statistic	Lower Bound Critical Value	Upper Bound Critical Value
3.578123	2.27	3..28

**Note:** critical values are values at 5% significant level.

**Source:** Author's Computation, (2024)

Table 3. Presented the result of ARDL co-integration bound test presented, precisely in terms of, F-statistics for Wald test, lower bound critical value and upper bound critical value, carried



out to test the joint null hypothesis that the coefficients of the lagged level variables are zero i.e no long run relationship exists between the variables. F-statistics value of 3.578123 relative to lower bound critical values of 2.27 and upper bound critical values of 3.28 revealed that there is no enough evidence to accept the null hypothesis hence, the null hypothesis is rejected. Therefore, there is presence of long run relationship between the variables incorporated in the model of this study.

**Table 4: ARDL co-integration and Long run form Estimation Result**

Short Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GFC)	-1.318348	0.621840	-2.120075	0.0500
D(GCF)	-0.639976	0.947947	-0.675118	0.5092
D(LF)	-17.686904	10.373927	-1.704938	0.1075
D(FDI)	-0.173547	0.151620	-1.144619	0.2692
D(FDI(-1))	-0.633892	0.200572	-3.160422	0.0061
D(GEXP)	0.028363	0.743973	0.038124	0.9701
D(MS)	2.551615	1.273996	2.002844	0.0624
CointEq(-1)	-0.964159	0.144519	-6.671492	0.0000
Cointeq = LNRGDPGR - (0.5362*LNGFC -3.6538*LNGCF -8.9122*LNLF+ 0.5836*LNFDI + 3.8708*LNEXP -3.5893*LNMS + 50.0274 )				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFC	0.536165	0.799501	0.670624	0.5120
GCF	-3.653764	2.092472	-1.746147	0.1000
LF	-8.912206	10.341996	-0.861749	0.4016
FDI	0.583558	0.277257	2.104752	0.0515
GEXP	3.870811	1.948850	1.986203	0.0644
MS	-3.589275	1.331733	-2.695192	0.0159
C	50.027412	45.963955	1.088405	0.2925

**Source:** Author's Computation, (2024)

Table 4 presents ARDL short run and long run estimation result. The result specifically reveals coefficient and probability of -1.318348 and 0.0500 ( $p = 0.05$ ) for D(GFC) which indicated that global financial crisis leads to about 1.32% decrease in real GDP growth rate, such that it can be inferred that global financial crisis has significant negative effect on real GDP growth of Nigeria in the short run. CointEq(-1) which stood at -0.964159 and 0.0000 ( $p < 0.05$ ) shows that about 96.42% of the short run inconsistencies is corrected and incorporated into the long run dynamic annually. Long run result reveals coefficient and probability of 0.536165 and 0.5120 ( $p > 0.05$ ) for GFC which reflects that existence of global financial crisis leads to 0.53% increase in real GDP growth rate, but not statistically significant. Hence, result shows that global financial crisis has insignificant positive effect on real GDP growth rate in the long run.

**Table 5: Post Estimation Test**

Normality Test		
Statistics	Values	Probability
Jarque-Bera Stat	0.459966	0.794547
Serial Correlation LM Tests		
Statistics	Values	Probability

F-statistic	1.863135	0.1917
<b>Heteroscedasticity Test</b>		
<i>Statistics</i>	<i>Values</i>	<i>Probability</i>
Breusch-Pagan-Godfrey	1.403140	0.2575

**Source:** Author's Computation, (2024)

Table 5 reported post estimation test in terms of normality test (Jarque bera), serial correlation LM test and Heteroscedasticity test (Breusch-Pagan-Godfrey). Result showed statistics and probability of 0.459966 and 0.794547 for normality test which indicated that there is no enough evidence to reject null hypothesis that the error term of the estimated model is normally distributed, thus confirming that the error term normally distributed, therefore, confirming that the error term normally distributed. Result of Serial Correlation LM test, in terms of statistics and probability of 1.863135 and 0.1917 revealed that there is no enough evidence to reject the null hypothesis of no serial correlation between successive values of error terms of the estimated model hence there is no problem of serial autocorrelation in the estimated models. Lastly, result of heteroscedasticity test statistics and probability stood at 1.403140 and 0.2575 respectively, revealing that there is no enough evidence to reject the null hypothesis that there is no evidence to reject the null hypothesis of constant variance of the error term (homoscedasticity), thus the test confirmed that there is no problem of heteroscedasticity in the error term of the estimated models.

## 5.0 CONCLUSION AND RECOMMENDATION

Result of this study revealed that there is decline in economic growth captured by real GDP growth rate on the short run with the existence of global financial crisis, but on the long run the real GDP growth rate increases despite global financial crisis. This maybe because in the period of global financial crisis, financial intermediaries, most especially banks are affected, such that there is limited resource pooling towards the real sector of the economy. As a result of this, there is low decline in capacity for ensuring increased production and expansion of businesses. But on the long run, there is adjustment in production capacity such that real GDP growth rate increases, possibly because of the efficiency efforts as well as other strategies pushed forwards to escape from the grip of global financial crisis. Nevertheless, it is identified that global financial crisis is not remarkable enough in explaining the long run behaviour of real GDP growth rate, given the statistically insignificant outcome, probably because the crisis is not domestic in nature coupled with low level of financial integration as well as the role of several domestic factors that are responsible for growth in the economy. Hence, this factors if carefully attended to, may help the country to quick recover from the growth consequence of global financial crisis. This result is similar to that of Ullah et al (2021), Ahmed et al (2020), Raz et al (2012), but against that of Antoni (2019), Ollivand and Turner (2014), Cicoweiz and Machicado (2011), Bechet and Matar (2013) among others.

In conclusion, it is therefore imperative to concluded that real GDP growth rate, as macroeconomic indicator tends to move downward in the short run and upward in the long run when global crisis is considered, although the relevance is short run in nature. It is recommended that government enhances efforts geared towards technology advancement in the country. This will enhance capacity to produce machines, equipment and transportation



tools in large quantities and good qualities and by implication reduces dependency on this among households and businesses.

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