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Foreign Direct Investment and Poverty Reduction: Evidence from Nigeria

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Abstract:
This study empirically assessed the nexus among foreign direct investment, unemployment and poverty reduction in Nigeria from 1990 to 2023. Secondary time series data were extracted from the Central Bank of Nigeria Statistical Bulletin, and World Bank Database, 2023 publications. The study adopted Augmented Dickey-Fuller Breakpoint tests to check for maximum order of integration of the variables used, and all the variables were integrated at order I(0) and I(1). The ARDL Bounds test for cointegration analysis showed evidence of long run relationship among the variables. Findings from the Multidimensional approaches of FMOLS, CCR, and QREG revealed that foreign direct investment inflows contribution to GDP (FDI_GDPr) is positive and statistically significant (P(t)= 0.0028, 0.0020, & 0.0070<0.05) in determining the final consumption expenditure of households, and hence poverty level in the long run, whereas unemployment rate (UNEMPLr) exhibited a negative relationship with final consumption expenditure of households in the long run. The Granger causality result showed evidence of no causality relationship between FDI_GDPr, UNEMPLr, GFCF, GDPPCa and HFCE, but a unidirectional causality (HFCE→CPI) between household consumption expenditure and consumer price index in Nigeria within the period under review. The study recommends that the government should provide an enabling environment in the aspect of single-digit and investment friendly interest rate scheme for the attraction of more foreign direct investment inflows into the Nigerian economy so as to improve the lives of the ordinary citizens.

Keywords*: **foreign direct investment, unemployment, poverty reduction, households' final consumption expenditure, FMOLS, CCR, QREG, Granger causality.***

Introduction

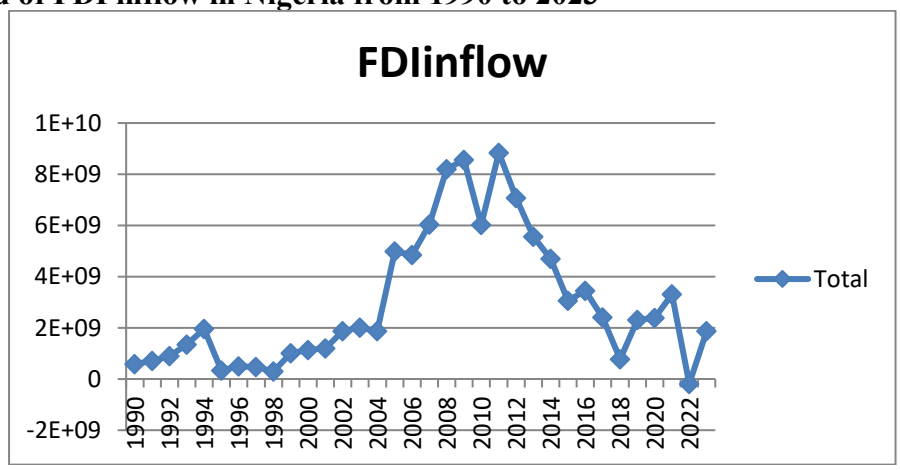
It has been argued in the literature that there is no country sufficient on its own, including the developed countries of the world. In this wise, countries of the world often require one level of foreign investment or the other to complement the capacity of domestic investment for more employment creation, growth and development (Romanus, et al., 2020). Foreign direct investment (FDI) is often seen as the main factor in developing economies, which has resulted in a rise in employment rate, economic growth and development (Jibir, et al., 2017). FDI in developing economies is also seen to augment the domestic investment and an indispensable source of financing deficits in the current account (Onimisi, 2014; Afolayan, et al., 2019).

The Nigerian economy is faced with a twofold constraint. Firstly, Nigeria has low domestic revenue, and also a low level of government investment in infrastructure and provision of social services. Secondly, Nigeria has low capital and low investment in the private sector due to the high rate of poverty (Okunlola, et al., 2019). In respect to this, FDI becomes a very

important source of private finance (Chea, 2011). As a result of the major role of FDI in host economies, the global FDI inflows rose from about USD 160 billion in 1988 to about USD 1,229 billion in 2014. Accordingly, available statistics recorded that net FDI inflows were $3.06 billion in 2015, $2.39 billion in 2016, $2.31 billion in 2017, $2.41 billion in 2018, $3.45 billion in 2019, $3.06 billion in 2020, $3.31 billion in 2021, $5.3 billion in 2022, and $3.9 billion in 2023 (World Bank, 2023). FDI also played a major role in the economic growth and development strategies of many developing countries like Nigeria.

Nigeria is faced with a double constraint. Firstly, Nigeria has low domestic revenue, and also a low level of government investment in infrastructure and provision of social services. Secondly, Nigeria has low capital and investment in the private sector due to the high rate of poverty (Okunlola, et al., 2019). Hence, FDI becomes a very important source of private finance (Chea, 2011). As a result of the major role of FDI in host economies, the global FDI inflows rose from about USD 160 billion in 1988 to about USD 1,229 billion in 2014. FDI also played a major role in the economic growth and development strategies of many developing countries like Nigeria.
Specifically, the FDI inflow into the shores of Nigerian economy has been erratic and fluctuating; although with a fair share of increment than declining. Going by stylized fact, the value of FDI inflow into the Nigerian economy reached an all-time high between 2005 and 2009 which represents about 2.8% of GDP and 2.9% of GDP respectively as is evident in the statistical information provided by World Bank above.

Figure 1.1: The trend of FDI inflow in Nigeria from 1990 to 2023

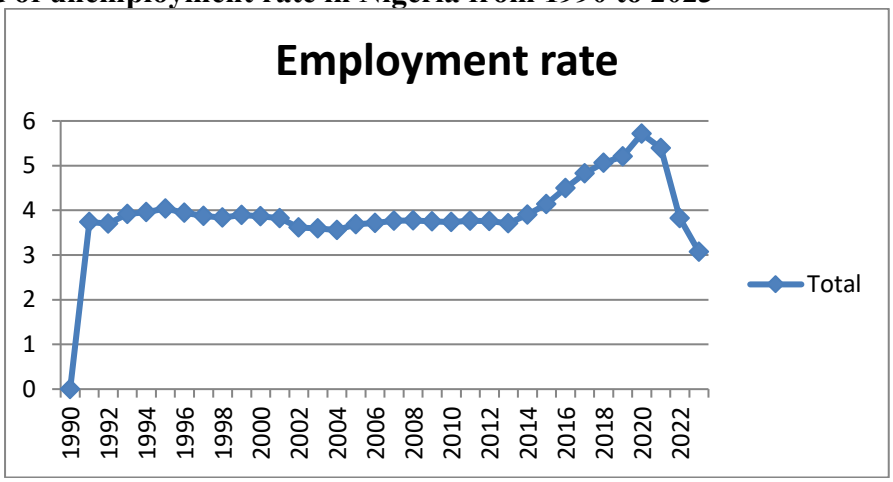


However, the emergence of the economic downtown in 2015/2016 as well as the outbreak of the global pandemic in 2019 caused a record of significant declines in the FDI inflows in the country's economy.

FDI is a major component of the world economy and globalization, as well as helping to improve the employment rate, technology advancement, productivity developments, and, finally, the economy's growth (Asiedu, 2006). The FDI plays an important role in enhancing the level of development, investments, foreign exchange, among others, in emerging economies (Smith, 1997; Quazi, 2007). The problem of unemployment has been a major concern across the developing economies of the world. This problem of unemployment, which has eaten deep into developing economies, is one of the major reasons for the macroeconomic objective of full employment level. However, despite the increasing efforts

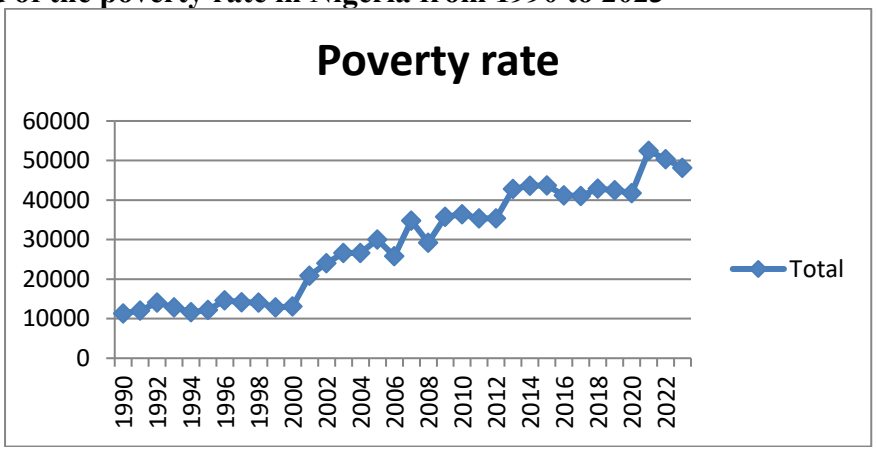
by both the public and private sectors to cushion the evil effects of unemployment in the Nigerian economy, the percentage of the unemployed citizens continues unabated.

Figure 1.2: The trend of unemployment rate in Nigeria from 1990 to 2023



It follows that unemployment issue has become an increasing phenomenon in the history of Nigerian economy. Figure 1.2 above indicates that rate of employment in the country has never reached an all-time high of 10 percent. Hence, the unemployment rate has maintained a double-digit trend in the history of Nigerian economy. Thus, the much of the unemployed populace the Nigerian economy could have ever gulped up remains below 6 percent. The aftermath of this dreary is the exacerbation of the already infiltrated poverty rate.

Figure 1.3: The trend of the poverty rate in Nigeria from 1990 to 2023



From the foregoing, it is evident from the available statistical data above that the affordability of cost of living amongst Nigerians has often been very high; thus, depicting the incessant and unabated poverty prevalent in the country over time. The above figure shows the increasing trend of poverty rate amongst the populace in the country. On the other hand, the inequality gap between the few haves and immeasurable haves-not is further epitomized by the values of the Gini coefficient indices, which shows widely scattered values of 45.0 in

1992, 51.9 in 1996, 40.1 in 2003, 35.7 in 2010, 35.5 in 2012, 35.9 in 2015 and 35.1 in 2018 (with unavailable data for all the unnamed years). This clearly entails the high rate of dependent populations amongst Nigerians despite the somewhat increasing trend of FDI inflow and its dividends witnessed in the country's economy over time.

The general effect of the FDI on unemployment as well as poverty reduction may not be easily assessed in Nigeria. The reason for this assertion is due to data paucity, the difficulty in managing the exogenous factors and conceptual problems in job creation in Nigeria. From the literature, it is debatable that plethora of the previous studies were overly concentrated on analyzing the relationship between either foreign direct investment and the overall economic growth or foreign direct investment and poverty. However, the area that is yet to be demystified is the triumvirate interaction between foreign direct investment, unemployment, and poverty reduction in Nigeria. As a departure from the previous studies, the present study seeks to empirically investigate the relationship between foreign direct investment, unemployment, and poverty reduction (as an iconic measure of economic development of the country using the final consumption expenditure of households as a proxy). Thus, this is the focus of the present study, as this study area has been neglected by the extant studies. Consequent upon this, it is very important to undertake such a study to examine if there is a significant relationship between FDI, job creation and poverty alleviation in Nigeria.

The study has the following objectives:

i. to estimate the impact of foreign direct investment inflow on poverty reduction in Nigeria.
ii. to analyze the impact of unemployment on poverty reduction in Nigeria.
iii. to determine the direction of causality relationship among foreign direct investment inflows, unemployment and poverty reduction in Nigeria.

2. Review of Related Literature

Foreign Direct Investment

Kasim (2020) sees foreign direct investment as an investment made by an individual or a company (investor) in a country which is not the country of origin of the investor, in the form of either establishing business or acquiring business assets in the country. FDI is the extra resource a country needs in order to achieve economic growth. It is a combination of technology, marketing, capital and management. It provides a firm with new markets, marketing channels, easy admittance to new technology, skills and product, financing and production facilities. Foreign direct investment can be defined as a foreign investment that is a part or share of GDP which grows rapidly; it is turning into the largest origin of capital moving from developed countries to developing countries.

Foreign direct investment can also be seen as the degree of ownership of productive assets; this includes land, mines and factories (Omaku and Okwori, 2019). The growing economic integration and globalization is as a result of increasing foreign investment (Gnansonuou, 2008 cited in Omaku and Okwori, 2019). For many years direct foreign investment is in the form of machinery, building and equipment. In addition, multinational corporations make a large percentage of Foreign Direct Investment (Uremadu, Umezurike, and Odili, 2016).

Unemployment

In the words of Dewet & Chand (2005), unemployment is regarded as a condition that exist in an economy when able-bodied, capable and qualified persons willing to work cannot find paid and productive job to earn a decent living. It is a situation whereby people or citizen of a country who are professionally qualified, capable and willing to offer themselves for employment at the prevailing wage rate could not obtain jobs. According to Iyoha (2002), unemployment is an indication of human resource waste. It refers to non-utilization or under-utilization of vast number of employable people in a country -people who are unsuccessfully but actively seeking work. The International Labour Organization (ILO, 2016) defines unemployment as numbers of the economically active population who are without work but available for and seeking work including people who have lost their jobs and those who have voluntarily left work. Thus, a person is said to be unemployed if he is capable and willing to work at the prevailing wage rate but is unable to obtain suitable employment at the current market wage. Unemployed people can be classified into two; those who have never worked before and are actively seeking for work and those who have lost their jobs thereby seeking re-entry into the labour market. Unemployment rate is the number of unemployed persons as a percentage of labour force.

Poverty

Poverty is a universal woe that affects nearly every nation in one dimension or the other. Oloyede (2014) stated that the issue of poverty is a global phenomenon, which affects continents, nations and people differently. There is no nation that is absolutely free from poverty. The main difference is the intensity and prevalence i.e., the highest level of social insecurity, violence, social unrest and generally unacceptable low standard of living. Poverty, being a multifaceted phenomenon has been defined by researchers from different stand point. World Bank Report (1990) in Oloyede (2014) defines it as a condition in which a person is deprived of, or lacks the essentials for minimum standard of living. It is also the inability to attain a minimum standard of living. Ijaiya, Ijaiya, Bello and Ajayi (2011) and Encyclopedia Americana (1989) view poverty from two different perspectives: (i) “moneylessness” which means both an insufficiency of cash and chronic inadequacy of resources of all types to satisfy basic human needs, such as, nutrition, rest, warmth and body care; and (ii) “powerlessness” in reference to those who lack the opportunities and choices open to them and whose lives seem to them to be governed by forces and persons outside their control.

Aku, Ibrahim and Bulus (1997) as cited by Oloyede (2014) saw poverty from five dimensions of deprivation: (i) personal and physical deprivation experienced from health, nutritional, literacy, educational disability and lack of self-confidence; (ii) economic deprivation drawn from lack of access to property, income, assets, factors of production and finance; (iii) social deprivation as a result of denial from full participation in social, political and economic activities; (iv) cultural deprivation in terms of lack of access to values, beliefs, knowledge, information and attitudes which deprive the people the control of their own destinies; and (v) political deprivation in terms of lack of political voice to partake in decision making that affects their lives. According to Omoniyi (2013) and Sachs (2009), poverty can be defined in terms of three distinguishable degrees. These are: Extreme poverty, moderate poverty and relative poverty. Extreme poverty means the household cannot meet basic needs for survival. Moderate poverty on the other hand generally refers to conditions of life in which basic needs are met, but just barely. Relative poverty is construed as a household income level below a given proportion of average national income. In high income countries, they lack access to

cultural goods, entertainment, recreation, quality health care, education and other prerequisites for upward social mobility.

According to Omoniyi (2013), the World Bank has been defining poverty in statistical terms of income of one US dollar per person per day, measured at purchasing power parity to determine the number of extreme poor around the world. Going by the World Bank definition of poverty adopted by most researchers whereby poverty measurement is based on income which is used as a baseline for poverty level measured at less than US$1 per day or US$1.25 per day (Oni, 2014), we conclude that both the quantitative and qualitative measurements attest to the growing incidence and depth of poverty in the country. According to Oke & Olayemi (2014), this situation however presents a paradox considering the vast human and physical resources that the country is endowed with. It is even more disturbing that despite the huge human and material resources that have been committed to poverty reduction by successive governments in Nigeria, no noticeable success has been achieved in this direction. The Human Development Report (1999) reveals that Nigeria is one of the poorest among the poor countries of the world. Nigeria ranks 54th with respect to the human poverty index (HPI) - making it the 20th poorest country in the world. It is also ranked 30th in gender related development index (GDI) while occupying 40th position from below in its human development index (HDI).

Empirical Review

Eunice (2023) evaluated the impact of gross domestic product, population growth and foreign direct investment on the rate of unemployment in Nigeria, using annual data spanning from 1991-2021. Quantile Regression was used for the analysis and results revealed that gross domestic product although not significant impacted negatively on unemployment. Population growth and foreign direct investment both negatively and significantly impacted on unemployment thereby reducing the rate of unemployment. Government should focus more on attracting foreign direct investment, increasing gross domestic product and maximizing the ever-growing population to control the rate of unemployment in the country.

Akinmulegun & Adekunle (2022) in their study on insight on the linkage between foreign direct investment and unemployment: evidence from Nigerian data, from 1986 to 2018, used the Autoregressive Distributed Lag (ARDL) technique. The findings showed evidence of a long-run association-ship existed between FDI and the unemployment rate in Nigeria. The short and long-run estimates suggested that foreign direct investment contributed significantly to the unemployment rate in Nigeria. These findings imply that FDI through assets expansion, technology, and knowledge diffusion generates employment opportunities thereby pushing the unemployment trend downward in the economy.

Muhammad & Sallahuddin (2022) examine the long run and short run linear and non-linear impact of foreign direct investment (FDI) inflows on poverty in Nigeria from 1980 to 2019. Autoregressive Distributive Lag (ARDL) and non-linear and linear autoregressive Distributive Lag (NARDL) estimators are employed to examine the long run and short run impact of the coefficients of the variables and diagnostic check. The study finds under the NARDL shows FDI positive shock and FDI negative shock reduces poverty substantially in the long-short run, respectively.

Aladelusi & Olayiwola (2021) investigated the impact of foreign direct investment on employment creation in Nigeria for the period of 35years (1985-2019). The study used five

regressors (foreign direct investment, trade openness, government expenditure, infrastructural development, and exchange rate) and one explained variable (employment rate). Analysis was carried out using unit root test, ordinary least square and granger causality test. The findings revealed that there is negative and insignificant relationship between trade openness, government expenditure, infrastructures and employment rate. However, positive relationship exists between foreign direct investment, exchange rate and employment but statistically insignificant at 5% level of significance. Based on the f-statistic result, the study concluded that foreign direct investment played a crucial role in creating employment for the citizens of Nigeria. It was therefore recommended among others that government should improve the state of infrastructures and security in the country as the present economy is characterized by terrorisms, kidnapping and robbery and this may drive out the investors in the country and discourage the potential ones.

Bisiriyu & Osinusi (2020) investigated the impact of FDI and GDP on unemployment in Nigeria using time series data spanning 1981 to 2017, using descriptive and inferential statistics of ordinary least squares (OLS) method. Results of the analysis reveal there is growth and expansion in both FDI and GDP over the years, while further results from OLS show that both FDI and GDP have significant impact on unemployment rate in Nigeria for the period under study. In view of this, it is recommended amongst others that government should develop a reliable and attainable macroeconomic framework that will accelerate and ensure employment generation through the expansion and increase in FDI and GDP in the country.

Onyeoma (2020) studied the influence of the rising population on poverty and unemployment in Nigeria using Autoregressive Distributed Lag Bounds (ARDL) approach on annual data from 1980-2018. It explores the dynamic relationship between population growth and selected macroeconomic variables of economic growth, poverty, and unemployment as well as the direction of causality between them. The study found that population growth and its components exerted a negative impact on the overall economic conditions in Nigeria.

Musa (2020) examined the link between foreign direct investment inflows and unemployment rate in Nigeria using annual time series data from 1986-2018. The study used unemployment rate being the dependent variable while the independent variables include foreign direct investment, real GDP, gross fixed capital formation, and total government expenditure. The Augmented Dickey Fuller Unit Root test and ARDL Bounds test were used to test the stationarity and the long run equilibrium relationship between the variables. The study employed autoregressive distributed lag (ARDL) model for the data analysis. The results showed that FDI had negative and significant effect on unemployment both in the short run and long run. Based on the findings, the study recommended that Nigeria government should adopt appropriate policies aimed at encouraging the inflow of foreign direct investment to boost employment in the country.

Okumoko & Akarara (2019) examined the nexus between foreign direct investment and unemployment in Nigeria using annual time series data for 1981-2016. The study utilized Johansen cointegration and error correction model for the analysis. The variables utilized are unemployment rate, foreign direct investment, real gross domestic product, government recurrent expenditure and gross fixed capital formation. The result revealed an inverse relationship between FDI and unemployment in Nigeria.

Tsaurai (2018) explored whether the complementarity between foreign direct investment (FDI) and natural resources availability led to poverty reduction in Southern and Western African nations using panel data analysis (fixed effects, random effects, pooled ordinary least squares (OLS) and dynamic generalised methods of moments (GMM) with data spanning from 2002 to 2012. Three measures of poverty were used in the current study, namely life expectancy at birth, total (years), household consumption expenditure as a ratio of gross national product and mortality rate and infant (per 1000 live births). Generally, all the four panel data analysis methods produced similar finding: the interaction between FDI and natural resources reduced poverty levels in African countries studied. Southern and Western African nations are therefore urged to implement FDI enhancement policies which attract foreign investors into the natural resources extraction sector if they want to sustainably reduce poverty. Future studies should investigate other macroeconomic factors that must be available in the host country before FDI reduce poverty in all its forms.

Nwosa (2016) examined the effect of macroeconomic policies on unemployment and poverty rates in Nigeria from 1980 to 2013 with implication to achieving inclusive growth. The study adopts the Ordinary Least Squares (OLS) technique. The study observed that among macroeconomic policy variables only exchange rate significantly influenced unemployment rate while only fiscal policy significantly influenced and poverty rate. This implies that present macroeconomic policies in Nigeria do not guarantee the attainment of inclusive growth in Nigeria. The contribution of the paper is that to achieve inclusive growth that guarantees high employment and reduced poverty rate, there is the need for a re-examination of macroeconomic policy management in Nigeria.

From the reviewed literature and trend analysis above, the relationship among foreign direct investment, unemployment and poverty reduction in Nigeria is still obscure or ambiguous which calls for further research hence, the emergence of this study. The inability of the previous studies to incorporate consumer price index as a key explanatory variable to determine the influence of FDI on poverty in Nigeria, is wanting. This is because the affordability of goods and services and the determination of the cost-of-living hinges, to a large extent, on consumer price index in any giving period.

3. Methodology

The unit root test for stationarity and descriptive statistics are two of the preliminary tests that are performed on the time series variables that are used to ascertain the connection between the variables. The Multi-dimensional approach of Fully Modified Ordinary Least Squares (FMOLS), Canonical Cointegration Regression (CCR) and Quantile Regression (QREG) models is used to estimate the parameters for the selected model. Additional post-estimation tests were performed to ensure the rationality of the findings.

This method takes care of endogeneity in time series data while estimating model parameters. FMOLS was developed by Phillips and Hansen (1990) to find the robustness of the parameter estimates. The FMOLS uses a semi-parametric approach in estimating the long-run parameters (Adom, Amakye, Barnor, & Quartey, 2015; Priyankar (2018). FMOLS yields consistent parameters even when the sample is of small sample. It overcomes the problems of endogeneity, omitted variable bias, measurement errors, serial correlation, and allows for the heterogeneity in the long-run parameters (Agbola, 2013; Priyankar (2018). FMOLS estimates a single cointegrating relationship which is having a combination of $I(1)$ variables (Bashier& Siam, 2014). The time series variables used in evaluating the relationship between the variables are subjected to preliminary tests including descriptive statistics and unit root test

for stationarity. The parameter estimates for the chosen model were estimated using the Quantile Regression Model

This study builds a multiple regression model and makes use of econometrics procedure in estimating the relationship between the economic variable discussions of economic theory and the preceding literatures.
Thus, the functional form of the model is specified as follows.
HFCE = f (FDI_GDPr, UNEMPLr, CPI, GFCF, GDPPCa)…… …….(1)

The modified econometric semi-log-linear form of the model is as follows:
HFCFt = βo + β1FDI_GDPrt + β2UNEMPLrt + β3CPIt + β4GFCFt + β5GDPPCat + μt…. (2)
Where;
HFCE = final consumption expenditure of household (a measure of poverty level in the economy)
f = functional relationship
FDI_GDPr = foreign direct investment-to-GDP ratio
UNEMPLr = unemployment rate
CPI = consumer price index (measure of macroeconomic stability)
GFCF = gross fixed capital formation (measure of real investment)
GDPPCa = gross domestic product per capita
βo= intercept (constant)
β1-β5 = regression coefficients
μ= unpredictable random variable
t = Time period
Where, β1>0, β2<0, β3>0, β4>0, β5>0

Results and Discussion
The Multidimensional Approaches/Models (FMOLS, CCR, QUANT)
Table 4.4: Summary of the FMOLS, CCR and QREG Regression Results

Variables	**Coef**	**SE**	**T-stats.**	**Prob.**
FULLY MODIFIED ORDINARY LEAST SQUARES (FMOLS)				
FDI_GDPr	2,529.98	769.09	3.28***	*0.0028*
UNEMPLr	-1,914.79	1,161.94	-1.64	*0.1110*
CPI	-32.82	17.02	-1.92	*0.0644*
GFCF	115.66	15.86	7.29***	*0.0000*
GDPPCa	7.87	0.82	9.49***	*0.0000*
	C	6,351.70		*0.2135*
CANONICAL COINTEGRATION REGRESSION (CCR)				
FDI_GDPr	2,657.06	778.27	3.41***	*0.0020*

UNEMPLr	-1,542.73	737.29	-2.09***	*0.0459*
CPI	-29.92	16.74	-1.78	*0.0851*
GFCF	113.04	14.77	7.65***	
0.0000				
GDPPCa	7.91	0.81	9.76***	
0.0000				
	C	4,664.51		*0.1326*
QUANTILE REGRESSION (QREG)				
FDI_GDPr	2,911.38	1,000.48	2.90***	
0.0070				
UNEMPLr	-751.27	939.30	-0.79	
0.4305				
CPI	-28.36	26.34	-1.07	*0.2908*
GFCF	109.00	22.88	4.76***	
0.0001				
GDPPCa	7.03	1.94	3.61***	
0.0012				
	C	3,377.83		*0.3589*
R-sq.	0.951, 0.951, 0.811			
Adj. R-sq.	0.942, 0.942, 0.777			

ARDL-Coint .test

Critical Value Bounds

Significance	F-stat	k	I0 Bound	I1 Bound
10%	5.86	5	2.26	3.35
5%	5.86	5	2.62	3.79
2.5%	5.86	5	2.96	4.18
1%	5.86	5	3.41	4.68

Post-Estimation Summary

Normality	P-value (JB) = 0.439	
Serial Corr, Test	F-stats = 0.259	(0.773) [0.716]
Heteros, Test	F-stats = 0.493	(0.778) [0.738]
Ramsey Test	QLR L-stats = 0.338	(0.560)
	QLR Lambda-stats	(0.561)

Source: Author's computation using EViews 13.0

The suppositions detailed previously in this study stood tested using the combinations of ARDL and Granger causality models or econometric techniques. In reaching a conclusion, the following procedures were heeded; A. the test results were presented and analyzed and, B. the suppositions were reaffirmed in null and alternate forms, C. the decision rule involving the rejection or acceptance of the null hypothesis based on the decision criterion of the techniques of analysis was made.

The outcome of the examination is the focus of discussion in accordance with the research objectives and in response to the research questions.

Foreign direct investment inflows contribution to GDP (FDI_GDPr) is positive and statistically significant (P(t)= 0.0028, 0.0020, & 0.0070<0.05) in determining the final consumption expenditure of households, and hence poverty level in the long run. This result

is surprising; however, it is feasibly and practically obtainable in the Nigerian economy currently. This result could be justified on the ground that the value of the foreign direct investment inflows is declining following the current rising trend of insurgency scaring away both operating and potential foreign investors from Nigerian business environment; thereby making the country fall short of foreign earnings from direct investments from abroad.
The sign of the coefficient of FDI_GDPr meets a priori expectation in the long run model. The positive coefficient implies that there is a direct relationship between foreign direct investment inflows contribution to GDP and HFCE (final consumption expenditure of households). A unit change in the FDI_GDPr invariably leads to significant increases in final consumption expenditure of households by approximately 2, 529.98, 2, 657.06 and 2,911.38 units in the long run comparing the results from the Fully Modified Ordinary Least Squares (FMOLS), Canonical Cointegrating Regression (CCR) and Quantile Regression (QREG). In other words, a high foreign direct investment inflows growth level triggers a positive growth in the households' consumption expenditure growth level. This is because increasing foreign direct investment inflows (which is an injection into the economy via the circular flow of income) would invariably make more funds available for households in the economy.

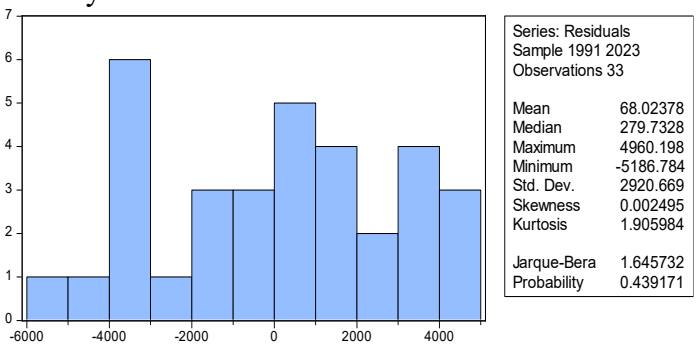
Unemployment rate (UNEMPLr) exhibited a negative relationship with final consumption expenditure of households in the long run. The sign of the coefficient of UNEMPLr is in tandem with the a priori expectation in the long run model. A unit change in UNEMPLr leads to approximately 1,914.79, 1,542.73, and 751.27 units' declines in final consumption expenditure of households in the long run. This translates to an increasing cost of living in the economy in the long run.

The results of the Granger causality test showed evidence of a one-directional causality relationship running from final consumption expenditure of households to consumer price index (HFCE→CPI) between final consumption expenditure of households and consumer price index (CPI), within the period under the study. This was evident in their probability values (*p-values = 0.0335 & 0.5895)* which were less and greater than 0.05 respectively. On the contrary, the result also showed evidence of no causality relationship between FDI_GDPr, UNEMPLr, GFCF, GDPPCa and HFCE. This was evident in their probability values (*p-values = 0.2401, 0.5797, 0.4476 & 0.7881)* which were greater than 0.05.

For the Diagnostics Test results, the BG-LM depicts the test for higher autocorrelation. The insignificant p-value of the BG-LM test shows that there was no higher autocorrelation for the chosen ARDL model. HET (BPG) entails the test for heteroscedastic residuals. The insignificant p-value of the BPG (HET) test meant that the chosen ARDL model was without heteroscedastic residuals. The Regression Equation Specification Error Test (RESET) being insignificant implies that the ARDL model was without misspecification.

The Jarque-Bera Test of normality of the residuals, which had its probability value (0.439171) to be greater than 0.05 indicated that the residual maintained a normal distribution; otherwise, they were normally distributed.

Figure 1.1: Normality Test Result



The CUSUM and CUSUM of Squares graphs which were helmed between two dotted red lines provides indication in courtesy of parameter firmness which showed that the CUSUM and CUSUM of Squares tests demonstrated that the models were stable as depicted in Figure 1.2 below;

Figure 1.2: Stability (CUSUM) Test Result

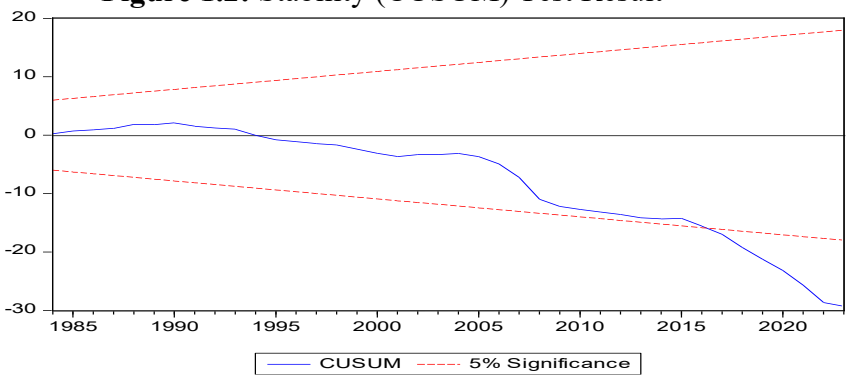
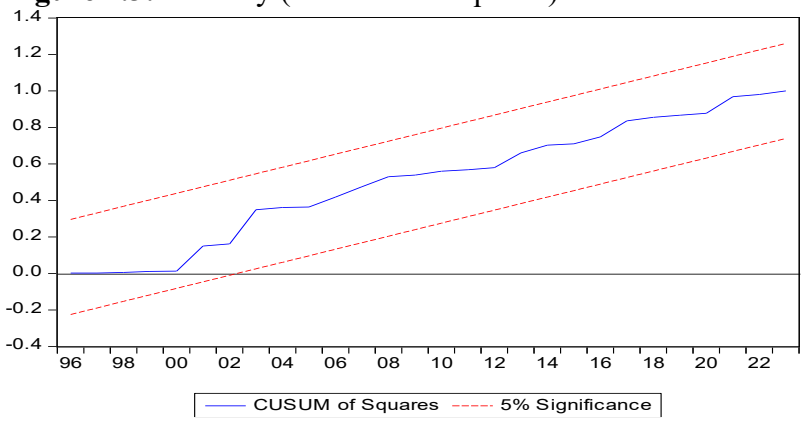


Figure 1.3: Stability (CUSUM of Squares) Test Result



In a nutshell, the models were best, linear and unbiased. This is due to the R^2 goodness test of fit. There was no higher autocorrelation, alluding the diagnostics tests, specifically the BG-LM test. The lack of heteroscedastic residuals in the outcome was demonstrated by the BPGs' insignificance.

Conclusions and Policy Implications

The core sector of the Nigerian economy vis-à-vis foreign direct investment has experienced a stalled growth recently, which has caused alarming uproars, hunger/destitution, lags of expansions and degrades of foreign firms/companies, low incomes to the households, increasing unemployment rate, low productivity, high rate of importation, phasing out of local commodities by their foreign counterpart products. Thus, this could be attributable to certain constraints posing grievous threats to the sector, including low domestic private savings, over-reliance on the fortunes of crude petroleum (the Resource Curse issue) as the principal foreign exchange earner, oil spillages, the perilous consequences of fuel subsidy, erratic currency movements, low consumer purchasing power, loss of investors' confidence, corruption, etc.

The study empirically assessed the nexus among foreign direct investment, unemployment and poverty reduction in Nigeria from 1990 to 2023, with the application of correlation analysis technique, bounds test cointegration analysis, multi-dimensional approach, and various diagnostic test techniques in analyzing the annual secondary time series data spanning from 1981 to 2023, which were extracted from the 2023 editions of both the Central Bank of Nigeria

Statistical Bulletin and World Bank Indicators Database. The descriptive statistics result of this study demonstrates that the datasets for the variables (HFCE, FDI_GDPr, GFCF & GDPPCa) were normally distributed, whereas (UNEMPLr & CPI) were not normally distributed, given their probability values of Jarque-Bera. The results of unit root test suggest that the variables in the model are integrated between orders 1(0) and 1(1) as summarized in Table 4.3. Following the outputs from the Multidimensional models, the regression results indicated a pseudo-reality (a representation or archetype of reality) trend or movement of the explanatory variables in the Nigerian economy within the period under study. From the results, it could be summarized that the key explanatory variables: foreign direct investment inflows and unemployment rates had impacted significantly-positive and insignificantly-negative on final consumption expenditures of households in the Nigerian economy. This is apparent in the impressive available statistics of these variables in the recent times.

The above results (especially the R-squared given in the four Multidimensional approaches as: 0.951, 0.951, & 0.811) indicated that there is very clear evidence of the modeled explanatory variables to be regarded as relatively the key macroeconomic determinants of private sector individuals' welfare or standard of living via household consumption expenditures in Nigerian over the period studied. This was apparent in the manner of interactions or responses amongst the variables. To say the least, therefore, these exogenous variables, which are truly macroeconomic variables, need be given thorough attention by the government via various liberalization policies so as to help improve the welfare of the citizens.

Finally, the Granger causality result implies that five of the modelled explanatory variables (FDI_GDPr, UNEMPLr, GFCF, & GDPPCa) had no significant causal relationship with household consumption expenditure in Nigeria within the period under review. However, there was a significant one-directional causality relationship running from HFCE to CPI, between household consumption expenditure and consumer price index.

As evidenced by the revelations in the research, the under-listed policy recommendations are put forward:

From the results of the Multidimensional models, foreign direct investment was seen as an ardent booster of economic growth through the improvement of the welfare of the private individuals in Nigeria over the period of the study. Therefore, it is important to suggest that the government should provide an enabling environment for the attraction of more foreign direct investment inflows into the Nigerian economy so as to improve the lives of the ordinary citizens. This can be done through the provision of adequate security and conducive business environment favourable to the private sectors; which remains a strong catalyst for investments, economic growth and expansion, etc.

The issue of unemployment in the economic history of Nigeria has remained a worrisome topic over the decades. Unemployment decelerates the consumption strength of the private sector individuals. On this note, it is worthy suggesting that considering the unbearable statistics of unemployment rate prevalent in Nigerian economy, both the public and private enterprises should be given the nod to see their capital investments as a way to boost productivity but not a waste. This could be made manifest through a robust security, cost of credit reduction, investment incentives and encouragements, etc.

From the regression outcomes, there was significant one-directional (HFCE→CPI) causality relationship between household consumption expenditure and consumer price index. It is imperative therefore, for the monetary authorities to review the monetary, fiscal and trade (stabilization) policy measures in the economy; so as to accommodate a reasonable and easy-to-assuage inflationary spiral in the economy, as against the existing trend.

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