Journal of International Money, Banking and Finance
Vol. 6, No. 1, 2025, pp. 137-150

URL: www.arfjournals.com

Petroleum Price and Poverty Paradox in Nigeria

FELIX EMMANUEL DODO[1], NURA MAINASARA[2] AND
ODETOKUN BLESSING ODELEKE[3]

[1]*Ph.D. Economics students, Department of Economics, Federal University Birnin Bebbi.*
E-mail: felixemma@ymail.com
[2]*Department of Accounting and Finances, Federal University Gusau, Zamfara State.*
E-mail: Nura.mainasara@fugus.edu.ng
[3]*Department of Economics and Development studies, Federal University Dutsin-ma, Katsins State.*
E-mail: blessingodeleke@gmail.com

Abstract: The movement in petroleum prices has been regarded as one of the major causes of instability in macroeconomic variables, especially poverty after the COVID-19 pandemic. Consequently, this paper examines the relationship between petroleum prices and poverty in Nigeria, using annual time series data from 1986-2023. However, the unit root test result reports a mixture of 1(0) and 1(1) order of cointegration, which enables the study to adopt the Autoregressive Distributed Lag (ARDL) approach developed by Pesaran, Shin, and Smith (2001) to find out the short-run and long-run relationships between the variables. The empirical findings indicate that petroleum prices have a positive and significant impact on poverty in Nigeria both in the short term and the long term. In light of these results, it is recommended that the government should take policy measures to reduce hardship, pain, deepening economic woes, and poverty that is driven by the rise in petroleum prices in the country.

Keywords: petroleum price, poverty rate, inflation rate and gross domestic products.

Received : 29 April 2025
Revised : 26 May 2025
Accepted : 11 June 2025
Published : 28 June 2025

TO CITE THIS ARTICLE:

Felix Emmanuel Dodo, Nura Mainasara & Odetokun Blessing Odeleke (2025). Petroleum Price and Poverty Paradox in Nigeria, *Journal of International Money, Banking and Finance,* 6: 1, pp. 137-150.

1. INTRODUCTION

Poverty, as a worldwide issue, continues to attract the focus of various governments, civil society organizations and international bodies, particularly in developing nations where the situation is increasingly dire despite the measures implemented to alleviate the problem (Felix et al., 2022). In this connection, the link between petroleum prices and poverty has become a topic of discussion in nearly every economic forum globally, especially following the economic challenges and development initiatives prompted by the COVID-19 pandemic. In this context, a rise in global fuel prices has resulted in an increase in poverty rates within developing countries (International Monetary Fund, 2022).

Additionally, the on-going increase in oil prices has driven countless individuals into poverty. In reality, anywhere from 78 million to 141 million people globally may be forced into extreme poverty due to escalating oil prices. Consequently, elevated oil prices have resulted in a rise in total household spending ranging from 2.7% to 4.8% (Felicity, 2023).

Indeed, Petroleum prices are crucial to Nigeria's economy and have a direct impact on poverty levels due to the country's dependence on oil revenues and fuel for everyday activities. An increase in petroleum prices leads to a sharp rise in transportation and production costs, resulting in higher prices for essential goods and services. As a result, Nigeria, which has the highest number of people experiencing poverty in Africa, has seen more families fall below the poverty line. The removal of subsidies has raised the cost of petroleum products and contributed to rising inflation, further exacerbating poverty (World Bank, 2023).

Moreover, the prices of petroleum are closely linked to poverty because the economy is heavily dependent on oil revenues, and petrol is widely used for transportation and electricity. In Nigeria, increases in fuel prices have led to higher transport fares, which in turn have limited low-income individuals' access to markets and job opportunities. Rural farmers have experienced increased expenses in transporting their goods, which has reduced their profit margins. The rise in transport costs has driven food prices higher, worsening hunger and malnutrition (National Bureau of Statistics, 2023).

In this regards, a significant consequence of rising petroleum product prices in Nigeria is the impact on economic activities that rely on these products for energy. These inflated costs are ultimately passed on to consumers, increasing the price of food items. Moreover, elevated petroleum prices in Nigeria influence household spending and the earnings of food vendors, leading to higher food prices at a time when poverty levels remain notably high and persistent (Kyarem & Felix, 2023).

From a transparent viewpoint, various administrations in Nigeria usually adopt several policies aimed at lowering fuel costs for citizens, intending to enhance economic growth, alleviate poverty and inequality, and uphold social stability. Regrettably, fluctuations in fuel prices continue to greatly affect the lives of residents, particularly those most vulnerable (Onyambayi et al., 2024).

Subsequently, the recent surge in petroleum prices has further destabilized the economy by escalating inflation, leading to business closures and increasing the number of citizens living in poverty. The expenses associated with running a business have surged, product prices have increased, and certain companies may close due to diminished demand amid declining consumer purchasing power. This has resulted in job losses (MeritI, et al., 2024).

Therefore, research on the connection between petroleum prices and poverty has been limited in Nigerian setting. Additionally, some research indicates that fluctuations in petroleum prices increase poverty levels, while other studies suggest that changes in petroleum prices may lower poverty rates. Considering this, the present paper explores the relationship between petroleum prices and poverty in Nigeria from 1986-2023. This study adds to the existing literature regarding the link between petroleum prices and poverty in Nigeria.

The remainder of this paper is organized in the following manner. In Section 2, a review of relevant literature is provided. Section 3 outlines the methodology employed in this study. The results and discussion can be found in Section 4. Finally, Section 5 offers conclusions and recommendations.

2. REVIW OF RELATED LITERATURE

2.1. Conceptual literature

Poverty: A condition in which a person cannot fulfil their fundamental requirements such as food, water, housing, healthcare, and education. It also refers to a state of significant lacking in essential human needs caused by insufficient income and limited access to services (Felix, et al., 2022). There are various forms of poverty in Nigeria, including absolute poverty, which is defined as the lack of resources to fulfil basic physical requirements like food, clothing, and shelter. More than 40% of Nigerians exist below the global poverty threshold of $1.90 per day (World Bank, 2023). Relative poverty is assessed in relation to the economic standing of others within society. A major factor contributing to this issue is income inequality, which worsens poverty in rural regions due to urban-rural disparities (National Bureau of Statistics Nigeria, 2023). The concept of multidimensional poverty includes deficiencies in education, health, and quality of living. Additionally, it is estimated that more than 63% of Nigerians experience multidimensional poverty, with many lacking access to essential services such as electricity and clean water (UNDP, 2022).

Petroleum Price: This denotes the existing market value at which particular petroleum products are sold (Kyarem & Felix, 2023).

Inflation: This refers to an important economic measure that tracks the average price alterations of goods and services purchased by households over time (National Bureau of Statistics, 2024).

Economic Growth: It refers to the increase in the amount of goods and services produced by a country at a given time. Economic growth is anticipated to lead to improved living standards and is also reflected in enhanced job opportunities within the nation (Felix et al., 2024).

2.2. Review of empirical literature

Various researchers have utilized different methodologies to explore how petroleum prices affect poverty levels. For example, Olayemi (2016) investigated the effect of petroleum pricing on the rise in poverty levels in Nigeria from 1981 to 2012. The research employed a Vector Auto-regression (VAR) model, analysing cumulative Impulse-response and variance Decomposition using time series data from that period. The findings indicated that rising petroleum prices correlate positively with increased poverty levels.

Kotagama and Brougham (2016) utilized a simulation model created by the World Bank to assess how rising fuel prices affect poverty levels in Oman. The findings suggest that fluctuations in fuel prices lead to a rise in poverty incidence. It is projected that the recent 33% increase in fuel prices contributes to a 1% rise in poverty rates.

Gatawa and Zakari (2017) investigated how fluctuations in the prices of petroleum products influence household welfare in the Zaria metropolis of Kaduna state. They utilized both descriptive and inferential statistical methods for analysing the data. The findings indicate that changes in petroleum product prices have negative impact on households in the Zaria area.

Gustavo et al. (2023) examined how fuel prices might impact poverty and inequality in Paraguay. They employed micro simulation techniques and relied on the Commitment to Equity framework. The findings indicate that rising fuel prices are likely to lead to increased poverty levels in Paraguay. Additionally, the simulations show minimal effects on income inequality.

Okereke and colleagues (2024) investigated the impact of fossil fuel subsidy reforms on the welfare of Nigerian households, particularly the socio-economic consequences of petrol price fluctuations resulting from the removal of subsidies. Employing the Quadratic Almost Ideal Demand System (QUAIDS) model, the research reveals that the rise in petrol prices after subsidy withdrawal disproportionately harms lower-income families, exacerbating their poverty levels.

Justinah and Oseyemi (2024) assessed how the removal of fuel subsidies affects household income and sustainability in Ondo City. The research utilized a descriptive survey design. The result indicated that the volatility of global oil prices made subsidy removal essential, leading to increased transportation costs that elevate the prices of food items and affects the households' livelihoods.

Anthony (2024) investigated how fluctuations in oil prices affect income inequality in Nigeria, utilizing annual data from 1981 to 2018. To achieve this goal, both a nonlinear autoregressive distributed lag (NARDL) model and vector error correction modelling techniques were used. The results indicate that variations in oil prices have an asymmetric impact on income inequality, which is evident only in the short term. Specifically, declines in oil prices lead to a significant reduction in income inequality, whereas increases in oil prices do raise it income inequality.

Onyambayi et al. (2024) examined the impact of eliminating fuel subsidies on the worsening of poverty in Nigeria. The research utilized secondary data sources. The findings indicated that the removal of fuel subsidies notably affects the increase of poverty levels among Nigerians.

The empirical evidence on the effect of petroleum price on poverty presents two opposing views, some suggesting a negative or positive impact of petroleum price on poverty. In this perspective, the result of this study is inconclusive. Therefore, to fill this gap in this study area, this study used the autoregressive distributed lag (ARDL) approach to examine the effect of petroleum price on poverty in Nigerian setting from 1986–2023, which covers the aftereffects of COVID19 health challenges in Nigeria that is characterised by a lots of poverty alleviation policies and progammes.

2.3. Theoretical framework

Energy poverty theory: This research leveraging the energy poverty theory which illustrates how changes in petroleum prices can affect poverty levels. This theory suggests that the inability to access affordable energy significantly contributes to various dimensions of poverty. Additionally, the theory asserts that rising petroleum prices worsen energy poverty, especially in developing nations where petroleum-based fuels are the main sources of energy. As a result, households are compelled to dedicate a large portion of their income to energy expenses, which reduces the funds available for education, healthcare, and food (Birol, 2007). This theory is applicable to Nigeria since an increase in petroleum prices leads to higher transportation costs and production expenses for individuals and businesses that depend on petroleum products, which subsequently causes inflation. Indeed, this inflation often diminishes the purchasing power of lower-income groups regarding petroleum products, thereby exacerbating poverty levels.

3. METHODOLOGY

3.1. Sources of Data

The research utilizes yearly time series data obtained from secondary sources covering the years 1986 to 2023. The information was sourced from reports by the Central

Bank of Nigeria and the World Bank (2024) regarding petroleum prices, poverty rates, inflation, and gross domestic product in Nigeria throughout the study period.

3.2.Model Specification

The econometric model for this study is specified as follows:

$$PTR_t = \beta_0 + \beta_1 PP_t + \beta_2 IFR_t ++ \beta_3 GDP_t + \mu \tag{3.1}$$

Where:

PTR= Poverty rate

PP= Petroleum price

IFR=Inflation rate

GDP=Gross domestic products

μ =Error Term

t = Time Series

βo = Intercept of the model

β_1 to $\beta_3$are the parameters of the explanatory variables

3.2.1. Estimation procedures

To analyse the effects of fluctuations in petroleum prices on poverty in Nigeria, both in the short term and long term, the study employ an ARDL framework based on the work of Pesaran and Shin (1999) and Pesaran et al. (2001). The dynamic ARDL model, which accounts for both short-run and long-run dynamics, is formulated as follows:

$$\begin{aligned}\Delta[(lnLPTR)] = \beta_0 + \beta_1 \ln(LPTR_{t-1}) + \beta_2 \ln(LPP_{t-1}) + \beta_3 (LIFR_{t-1}) \\ + \beta_4 (LGDP_{t-1}) \sum_{i=1}^{p} \alpha_1 \Delta\ln(PTR_{t-1}) + \sum_{i=1}^{m} \alpha_2 \Delta\ln(LPP_{t-1}) \\ + \sum_{i=1}^{o} \alpha_3 \Delta In(LIFR_{t-1} + \sum_{i=1}^{y} \alpha_4 \Delta In(LGDP_{t-1} + \varepsilon_t\end{aligned}$$

Similarly, the error correction model is specified as:

$$\begin{aligned}\Delta[(lnLPTR)] = \beta_0 + \sum_{i=1}^{p} \alpha_1 \Delta\ln(LPTR_{t-1}) + \sum_{i=1}^{m} \alpha_2 \Delta\ln(LPP_{t-1}) + \sum_{i=1}^{o} \alpha_3 \Delta LIFR_{t-1} \\ + \sum_{i=1}^{u} \alpha_4 \Delta LGDP_1 ecm_t\end{aligned} \tag{3.2}$$

Where Δ represents the first difference operator, ln(LPTR) indicates the natural logarithm of the poverty rate, ln(LPP) signifies the natural logarithm of petroleum prices, ln(LIFR) is the natural logarithm of the inflation rate, and ln(LGDP) denotes the natural logarithm of gross domestic product. The letters p, m, n, o, and u refer to the lag length, while $\alpha 0$, $\alpha 1$, $\alpha 2$, $\alpha 3$, and $\alpha 4$, along with $\beta 0$, $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, and $\beta 5$, are the parameters that need to be estimated in the model. The term et represents the white-noise error term, respectively.

4. RESULTS AND DISCUTIONS

4.1. Statistical Properties of Data Series

According to the methodology outlined in this study, all variables undergo a stationarity test, utilizing two different techniques: the Augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test. The findings are displayed below:

Table 1: Results of Unit Root Tests

Unit Root Tests						
(ADF) Augmented Dickey-Fuller				*(PP) Phillips-Perron*		
Level and First Differences						
Variables	*Constant Without Trend*	*Constant with Trend*	*DF*	*Constant Without Trend*	*Constant with Trend*	*DF*
LPTR	-5.0784*	-5.2053*	1(0)	-5.0744*	-5.2053*	1(0)
LPP	-4.1550**	-4.1123**	1(1)	-3.9436**	-3.6727**	1(1)
LIFR	-3.2174**	-3.4329**	1(1)	-3.4024**	-3.5273**	1(1)
LGDP	-5.9360*	-5.9377*	1(0)	-5.7760*	-5.9424*	1(0)
Note: * and ** show significance level at 1% and 5% respectively						

Source: Researchers' Computation from E-views 10, (2025).

Table 1 presents the findings of the ADF and PP unit root tests. The results reveal that the poverty rate and gross domestic product are both integrated at level 1(0), whereas petroleum prices and inflation are integrated at first difference 1(1). The ** and ** symbols signify significance levels at 1% and 5%, respectively. Based on the outcomes shown in Table 1, the study employs the ARDL technique to examine the co-integration among the variables.

4.2. Co-Integration Test

The paper goes on to perform the ARDL Cointegration Bounds test to determine if a long-run relationship exists among the variables in the model, and the findings are presented as follows:

Table 2: Results of Cointegration Test

F-statistic	9.2299	3
Level of significance	The critical value I(0) Bound	The critical value 1(1) Bound
10%	2.72	3.77
5%	3.23	4.35
1%	4.29	5.61

Source: Researchers' Computation from E-views 10, (2025).

The findings from the cointegration test presented in Table 2 indicate that the F-statistic value of 9.2299 is greater than both the upper and lower bounds at a 1% significance level. Consequently, the null hypothesis, which posits no cointegration, is rejected in favour of the alternative hypothesis suggesting the presence of cointegration. This outcome signifies that a long-term relationship exists among the variables, thus assisting researchers in avoiding the issue of spurious regression concerning the variables being examined.

4.3. Short run Error Correction Model

After discovering evidence of cointegration between the variables, the research moved forward to calculate both the short-run and long-run relationships among the variables, with the findings displayed in table 3 below.

Table 3: Short-run Coefficients- Dependent Variable is LPTR

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
DLPP	1.2267	0.5880	-2.0860	0.0478
DLIFR	1.2560	0.3978	3.1582	0.0042
D(LIFR(-1))	0.9563	0.3678	2.5998	0.0157
DLGDP	0.5447	0.1622	3.3564	0.0026
D(LGDP(-1))	-0.3054	0.1674	-1.8241	0.0806
C	-5.4519	0.8969	-6.0784	0.0000
CointEq(-1)	-0.8273	0. 1594	-6.4447	0.0000

Source: Researchers' Computation from E-views 10, (2025).

Table 3 demonstrates that, in the short term, petroleum prices significantly and positively affect the poverty rate at a 5% level of significance. This indicates that a 1% rise in petroleum prices will result in a 1.2% increase in the poverty rate. Inflation also shows a significant and positive effect on the poverty rate, with a 1% level of significance for the current year. Specifically, a 1% increase in inflation will cause the poverty rate to rise by 1.3%. Furthermore, this effect remains positive and significant at a lag of one year. Gross domestic product exhibits a significant and positive relationship with poverty as well. This suggests that a 1% increase in GDP will lead to a 0.5% rise in poverty for the current year. Additionally, the impact turns negative and remains significant at a lag of one year. More so, the error correction term indicates how quickly adjustments are made towards equilibrium following initial discrepancies. The coefficient for the error correction model ECM (-1) is -0.83 and is statistically significant at the 1% level. This suggests that the rate of adjustment to rectify disequilibrium from the prior year to the current year is 83%.

4.4 Long run coefficient

Table 4: Long run Coefficients- Dependent Variable is LPTR

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
LPP	0.1399	0.1318	-1.0617	0.0029
LIFR	0.5898	0.5498	1.0727	0.0410
LGDP	0.3314	0.1023	3.2403	0.0035

Source: Researchers' Computation from E-views 10, (2025).

According to table 4, in the long run, the price of petroleum has a notable and significant effect on the poverty rate at the 1% significance level. This indicates that a 1% rise in petroleum price will result in a 0.1% increase in the poverty rate. Inflation also has a positive and significant effect on the poverty rate at the 5% significance level. This means that a 1% increase in inflation will lead to a 0.6% rise in the poverty rate. The gross domestic product (GDP) similarly shows a positive and significant impact on poverty; specifically, a 1% uptick in GDP will correspond to a 0.3% increase in poverty levels in Nigeria throughout the study period.

4.5. Post.-Estimation Tests

In this research, the outcomes of various diagnostic tests are shown below.

Table 5: Normality Test

Statistic	Value
Skewness	-0.1605
Kurtosis	2.5906
Jarque-Bera	1.6247
Probability	0.3004

Source: Researchers' Computation from E-views 10, (2025).

Based on the findings presented in table 5, all criteria for normality as outlined by Jarque-Bera (1987) are satisfied. This is evident because the skewness is negative

(-0.1605) and falls below one, the kurtosis value of 2.5906 is near 3, and the Jarque-Bera probability (0.3004) is not significant. Consequently, we can conclude that the data follows a normal distribution.

Table 6: Autocorrelation Test Results

F-statistic	0.9862	Prob. F(2,22)	0.3889
Obs*R-squared	2.8798	Prob.Chi-Square(2)	0.2370

Source: Researchers' Computation from E-views 10, (2025).

In Table 6, the results of the Breusch-Godfrey (1978) test for autocorrelation, represented by a p-value of 0.3889, do not reach significance at any level. This suggests that there is no issue with serial correlation.

Table 7: Heteroskedasticity Test Results

F-statistic	0.8475	Prob. F(10,24)	0.5904
Obs*R-squared	9.1339	Prob. Chi-Square(10)	0.5194

Source: Researchers' Computation from E-views 10, (2025).

In table 7, the results of the Breusch-Pagan-Godfrey (1979) test indicate that the p-value of 0.5904 is not statistically significant. This implies that the variables do not exhibit issues related to Heteroskedasticity.

Table 8: Ramsey R SET Test Results

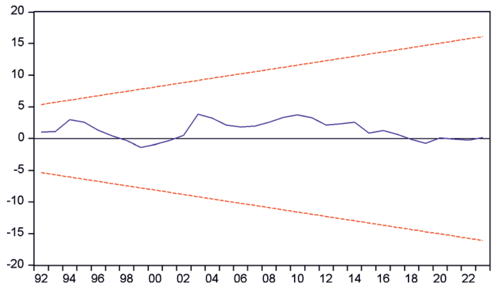
Statistic	Value	Df	Probability
t-statistic	0.9448	23	0.1641
F-statistic	0.7824	(1,23)	0.1641

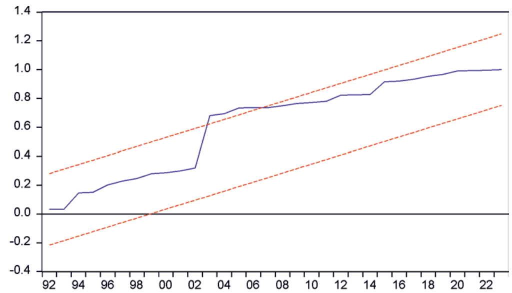
Source: Researchers' Computation from E-views 10, (2025).

The outcomes of the Ramsey Reset (1969) presented in table 8 indicate that the model is not misspecified, as the probability value of 0.1641 is not statistically significant at any level.

CUSUM Test

The current research utilizes the Cumulative Sum of recursive residuals (CUSUM) technique created by Brown, Dublin, and Evans (1975) to assess the stability of the model's parameters at a 5% significance level.





Source: Researchers' Computation from E-views 10, (2025).

The analysis of figures 1 and 2 indicates that both the CUSUM and CUSUMSQ plots exceed the 5% critical boundaries, with the blue line positioned between the two red lines. As a result, the estimated parameters demonstrate stability and there exists a significant relationship among the variables throughout the entire sample period of the research. This also suggests that the likelihood of spurious regression is eliminated.

4.6. Causality Test Results

The research utilized the Toda and Yamamoto (1995) methodology to investigate the causal relationship between petroleum prices and poverty in Nigeria from 1986 to 2023. The results is presented as follows:

Table 9: TY Causality Test

Causality	*Chi-sq*	*df*	*Prob.*
LPP does not Granger cause LPTR	10.4065 2	0.0300**	
LPTR does not Granger cause LIFR	6.0613 2	0.0483**	
LPP does not Granger cause LIFR	14.2460	2	0.0008*
LGDP does not Granger cause LIFR 11.4033	2	0.0033*	

* and ** represent 1% and 5% level of significance.
Source: Researchers' Computation from E-views 10, (2025).

The findings of the causality tests shown in Table 9 suggest that the assumption stating that petroleum prices do not Granger cause poverty rates is dismissed, indicating a one-way causal relationship from petroleum prices to poverty. Additionally, there exists a one-way causality from poverty to inflation, from petroleum prices to inflation, and from gross domestic product to inflation throughout the period under investigation.

4.7. Discussion of results

This study examine the relationship between petroleum prices and poverty in Nigeria from 1986-2023. As such, the results report that changes in petroleum price have a direct impact on poverty levels due to the country's dependence on oil products for everyday activities. This implies that an increase in petroleum prices leads to a sharp rise in transportation and production costs, resulting in higher prices for essential goods and services, further exacerbating poverty. This result is in line with the works of Olayemi (2016), Gustavo et al. (2023), Okereke and colleagues (2024), Anthony (2024) and Onyambayi et al. (2024) that findings indicated that the changes in petroleum price increase of poverty levels. The results further support the energy poverty theory which posited that rising petroleum prices worsen poverty, especially in developing nations where petroleum-based fuels are the main sources of energy.

5. CONCLUSION

This research explores how petroleum prices influence poverty levels in Nigeria, utilizing time series data from 1986 to 2023. The selection of this period is significant as it includes the recent economic downturns caused by the COVID-19 pandemic, which have created imbalances in Nigeria's macroeconomic indicators. The empirical findings indicate that petroleum prices have a positive and significant impact on poverty both in the short term and the long term in Nigeria. Based on the study's findings, it is recommended that the government should stabilise the price of petroleum products to mitigate inflation, alleviate the financial strain of household as well as and persistent economic threats driven rising petroleum price over time.

References

Anthony, E. A. (2024). Oil price shocks and income inequality in Nigeria: Evidence from nonlinear ARDL Approach, *African Journal of Economic Review, 12* (1), 1-24.

Birol, F. (2007). Energy economics. A place for energy poverty in agenda. *Energy policy, 35*(5), 2465-2471

Breusch, T. S., & Godfrey, L. G. (1978). Testing for autocorrelation in dynamic linear models. Australian Economic Papers, 17, 334-355.

Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroskedasticity and random coefficient variation. Econometrica, 47, 400-420.

Brown, R. L., Durbin, J., & Evans, J. M. (1975).Techniques for testing the constancy of regression relationships over Time. *Journal of the Royal Statistical Society, 2,* 149-192.

Central Bank of Nigeria (2024). Statistical bulletin.

Felicity, B. (2023). Rising Energy Prices are pushing millions more people into poverty, Feb 23, 2023, 3:00 PM CST Energy price.

Felix, E. D., Kayit, A. I., & Ismail, H. (2022). Impact of financial inclusion on poverty reduction in Nigeria (1991-2020). *Indian Development Policy Review*, *3*(1), 1-14.

Felix, E. D., Ugwumba J.C., & Babangida, S. G., (2024). Effect of Monetary and Fiscal Policies on Economic Growth in Nigeria. *Studies in Economics & International Finance, 4*(1), 37-49.

Gatawa, N.M., & Zakari, A. (2017). Impact analysis of petroleum product Price changes on households' welfare in Zaria metropolis, Kaduna State, *International Journal of Humanities and Social Science Invention, 6* (4),.40-49.

Gustavo, C., Lyliana, G., Ervin, J. J., Galeano, J., & Pablo. B. (2023). Understanding the distributional impacts of increases in fuel prices on poverty and inequality in Paraguay, *Discussion Paper Series, IZA DP no. 15922.*

International Monetary Funds (2022). World economic outlook, 2022.

Jarque, C. M., & Bera, A. K. (1987). A Test for normality of observations and regression residuals. International Statistical Review, 55(2), 163-172.

Justinah. O. O., & Oseyemi, E. A. (2024). Evaluation of the impact of fuel subsidy removal on family income and sustainability in Ondo City, Nigeria*, International Journal of Home Economics, Hospitality and Allied Research, 3*(1), 117-128

Kotagama, H.B., & Brougham, H. (2016). Exploratory study on the impact of food and fuel prices on poverty in food import dependent and oil exporting economies: The Case of Sultanate of Oman.

Kyarem, R. N., & Felix, E. D. (2023). Impact of petroleum products price changes on prices of food items in the Nigerian Economy. *Journal of Development Economics and Finance 4*(1), 79-95.

Merit, I., Adanna, N., & Okwe, O. (2024). Fuel price hike: More Nigerians to slip into poverty. The Sun, Nigeria 7th September 2024

National Bureau for Statistic (2024). Consumer price and inflation statistics, October 2024

National Bureau of Statistics (2023). Poverty and inequality report, 2023.

Okereke, C., Emenekwe, C., Nnamani, U., Onyeneke, R., & Amadi, M. (2024) Nigeria's fossil fuel subsidy reforms: the welfare effects on households. ODI Research Report. London.

Olayemi S. (2016). Petroleum resources and Nigerias poverty profile, *Journal of Economics and International Finance, 8*(10):168-177

Onyambayi, E. T., Aliyu A., Cynthia, U. A., Yusuf T. A., & Audu, E. (2024). An ex-ray of fuel subsidy removal and deepening of poverty among vulnerable people in Nigeria, *International Journal of Democratic and Development Studies (IJDDS),7* (2),29-42

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of the level relationship. *Journal of Applied Econometrics*, 6, 289-326

Ramsey, J. B. (1969). Test of specification error in classical linear least-squares regression analysis. *Journal of the Royal Statistical Society Series B,* 31, 350-371.

Toda, H. Y., & Yamamoto, T. (1995). Statistical inference in vector autoregressions with possibly integrated processes. *Journal of Econometrics, 66*, 225-250.

UNDP. (2022). Multidimensional poverty index, 2022.

World Bank (2023). Nigeria Development Update, 2023.

World Bank (2024).World Development Indicators.