POLAC INTERNATIONAL JOURNAL OF ECONS & MGT SCIENCE (PIJEMS)
DEPARTMENT OF ECONOMICS & MANAGEMENT SCIENCE NIGERIA POLICE ACADEMY, WUDIL-KANO

THE EFFECT OF FUEL SUBSIDY REMOVAL ON INFLATION IN NIGERIA.

Member Ahemen Moses Orshio Adasu University, Makurdi (Formally Benue State University, Makurdi)

Kelvin Songo Moses Orshio Adasu University, Makurdi (Formally Benue State University, Makurdi)

Mpase Gbande Moses Orshio Adasu University, Makurdi (Formally Benue State University, Makurdi)

Abstract

This study examines the effect of fuel subsidy removal on inflation in Nigeria using monthly time series data from January 2020 to December 2024. Anchored on the Keynesian cost-push inflation theory, the Autoregressive Distributed Lag model was employed to assess both short-term and long-term relationships between the variables and the pairwise granger causality test was applied to determine the direction of causality among the key variables. The study findings revealed a unidirectional causal relationship from Premium Motor Spirit prices to inflation, affirming cost-push inflation dynamics. The study finds that PMS prices significantly and positively affect inflation in both the short and long run. The study concludes that fuel subsidy removal contributes to inflationary pressures in Nigeria. It recommends policies such as fuel price regulation, investments in alternative energy and efficient government spending to mitigate inflationary shocks in Nigeria.

Keyword: Fuel Subsidy Removal, Inflation, ARDL, Nigeria

1. Introduction

Nigeria's limited local refining capability has made her a net importer of refined crude oil products due to the country's dilapidated refineries (Itsekor, 2020). Thus, an increase in the global crude oil price is often associated with an increase in premium motor spirit (PMS) price. To cushion the effect of such price increases over the years, the Nigerian government subsidized the PMS Price to aid affordability. Nigeria has a long history of fuel subsidies dating back to the 1970s when the government began regulating fuel prices to keep them artificially low for consumers. Fuel subsidies have been a significant and contentious issue in Nigeria for many years, plagued by inefficiencies in the subsidy systems, corruption and fuel smuggling, where subsidized fuel was often illegally sold in neighboring countries for a higher price (McCulloch, Moerenhout & Yang, 2021). Several administrations have attempted to reform the fuel subsidy system by removing fuel subsidy to reduce the burden on the government and increase transparency, the federal government of Nigeria fully deregulated PMS prices in May 2023. This policy shift, aimed at enhancing revenue generation and reducing fiscal deficits has resulted in immediate economic disruptions, particularly in the form of transportation cost, increase in food prices, exchange rate depreciation and increased living costs. The sharp rise in fuel prices from ₦185 per liter to over ₦1000 per liter has had a cascading effect and disproportionately affecting low and middle-income earners (Omotosho & Yang, 2024). This has unequivocally reshaped the country's inflationary landscape. While the policy is intended to foster economic sustainability and fiscal discipline, its inflationary aftermath needs to be investigated. This study therefore investigates the effect of fuel subsidy removal on inflation in Nigeria. The rest of this paper is organized in five sections; section 1 is the introduction; section 2 discusses literature review. Methodology is presented in section 3 while section 4 presents, discusses and interprets the empirical results. Section 5 offers conclusion and policy recommendations.

2. Literature Review

2.1 Conceptual Issues

Subsidy is defined by Steenblik (1995) as a payment or tax concession from the government. Subsidies are state expenditures which are applied to support the production of goods and services, the government follow a subsidy policy to encourage the use of certain goods (Mehtiyev & Madgda, 2021). Fuel subsidy refers to a government policy that aims to reduce the fuel cost for consumers by providing financial support to keep fuel prices lower than the market rate. Governments typically subsidize fuel prices by compensating oil suppliers or retailers for the difference between the actual cost of production and the reduced price paid by consumers at the pump.

Inflation on the other hand is one of the most frequently used terms in economic discussion. Abedi, (1997) define inflation as the continuous increase in the prices of all goods and services over a long period of time. According to Samuelson et al., (2004), inflation occurs when the general level of prices is rising. Changes in the individual prices or any combination of the prices cannot be considered as inflation. However, a situation may arise such that a change in an individual price could cause the other prices to rise, an instance is the rise in prices of petroleum products in Nigeria. Furthermore, the rise in the aggregate price level must be continuous for inflation to have occurred. The aggregate price level must show a tendency of sustained and continuous rise over different time periods.

2.2Theoretical Literature

The study adopts inflation theory propounded by classical economists. The major tenet of the theories lies in prices responding to a rise in production costs. The theories considered here are the Cost-Push Inflation Theory. Cost push inflation theory posit that inflation is caused by an increase in prices of inputs like labour, raw material (Bowen, 1965). He assumed that pressure by trade unions would increase wages, and that business entities, in a bid to combat a decline in income, would increase product/service prices, leading to inflation. In subsequent years, it was discovered that not only can labour cost lead to an increase in price and then inflation, but also an increase in taxes and component costs such as the cost of raw materials and other components used in processing. Therefore, in an industrialized economy where most productive facilities run on oil products as a source of power, an increase in such cost components will lead to an increase in product prices in order to maintain stable profit levels, thus leading to inflation.

The cost push theory of inflation also x-rays the implication of fuel subsidy removal on macroeconomy, it posits that removal of subsidy prompts an increase in pump prices of petroleum products due to unsubsidized fuel price making transport operators to adjust their fairs to absorb the additional cost and subsequently, the producers in other sectors factor in the marginal transport costs into their cost of production and reflect it at a profit in their product pricing.

2.3 Empirical Review

The issue of fuel subsidy removal has been a topic of interest for several decades; this section presents a review of empirical studies that delve into the dynamics of fuel subsidy removal on inflation. Oladipo and Ajayi (2023) conducted a study on fuel price adjustments and inflation dynamics in Nigeria. The study found that fuel price increases significantly influenced inflationary trends, particularly through transportation and energy costs, which had ripple effects on general price levels. The study concluded that fuel price deregulation should be implemented cautiously, with strong social safety nets in place to protect the economically vulnerable. In a different study, Olatunji and Yusuf (2021) examined the relationship between PMS prices and core inflation in Nigeria. The study utilized an Autoregressive Distributed Lag (ARDL) model with annual time-series data from 1990 to 2020. The results indicated that subsidy removals led to sharp inflationary spikes in the short term, while in the long run, the inflationary effect diminished as markets adjusted. The study concluded that phased subsidy removals could help mitigate inflationary shocks. Adebayo (2020) conducted a study on fuel price dynamics and inflationary pressures in

Africa: a panel GMM analysis." The study employed the Generalized Method of Moments (GMM) technique using panel data from 10 African countries to evaluate the long-term effects of PMS prices on inflation. The findings revealed that economies with weaker industrial bases experienced more severe inflationary pressures due to fuel price increases, as businesses passed higher costs onto consumers. The study concluded that structural economic weaknesses exacerbate inflationary effects, recommending increased investments in alternative energy sources to reduce dependency on imported refined petroleum products. A study by Chinanuife et.al (2021) examined the effect of oil price volatility on inflation level in Nigeria from the period of 1981Q1 to 2020Q2, the study used an exponential generalized autoregressive conditional heteroscedasticity approach and found that negative shocks in real oil price affects the volatility of inflation level in Nigeria. Akidi and Ikue (2024) conducted a study on retail energy prices, exchange rate and food prices in Nigeria. The study employed a Structural Vector Autoregressive (SVAR) model and found that increase in fuel prices drive up the cost of production and transportation thus intensifying inflationary pressures in Nigeria.

3. Methodology

3.1 Model specification

The simple theoretical model for this study is embedded on the cost-push theory which emphasized that fuel is important to industrialized economies, and a large increase in its price due to subsidy removal can lead to the increase in the price of most products which potentially effects other macroeconomic variable and thus raising the price level. Following this reasoning, we can therefore develop a simple functional model where inflation is a function of fuel subsidy removal as seen below;

INF = f (FSR)……(1)

Where INF =Inflation, FSR = Fuel Subsidy Removal

In line with the broad study objectives, this study has considered inflation as a dependent variable while fuel subsidy removal is considered as independent variable. Sequels to the specific objectives, controlled variables exchange rate and government expenditure represented by federal allocation are also included to examine the effect of fuel subsidy removal dummied by the price of premium motor spirit (PMS) on inflation and the modified model is specified as:

INF= f (PMS+EXR+FA) ……..(2)

The stochastic form of the model is written as:

$INF_t=\beta_0+\beta_1PMS_t+\beta_2EXR_t+\beta_3FA_t+\epsilon_t$……(3)

INF = Inflation rate at time t (%)

PMS = Price of Premium Motor Spirit (₦ per liter)

EXR = Exchange rate (₦ per USD)

FA= Federal Allocation (₦)

In order to make highly skewed distributions less skewed, the data was transformed. This helps in making patterns in the data more reliable. Variables in percentages and rates were not logged since there are already transformed. The transform model is written as:

$INF_t=\beta_0+\beta_1\ln PMS_t+ \beta_2EXR_t+\beta_3\ln FA_t+\epsilon_t$….(4)

3.2 Data and Sources

The study used time series monthly data from January 2020 to December 2024 acquired from secondary sources pertaining to the study variables. The data were sourced from publications by the Central Bank of Nigeria (CBN) and World Governance Indicators of the World Bank.

The price of PMS refers to the market cost per liter of petrol as determined by government regulation or market forces following the removal of subsidies. This price is influenced by several factors, including international crude oil prices, exchange rates, domestic refining capacity, and transportation costs. In Nigeria, PMS pricing has historically been government-regulated

through subsidies, but recent subsidy removals have led to a deregulated market where fuel prices fluctuate based on supply and demand dynamics. It serves as an important economic indicator, affecting inflation, transportation costs, and overall economic activity. The price of PMS is monitored by government agencies such as the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), and it is subject to change based on global oil market trends, refining capacity, and foreign exchange fluctuations.

Exchange rate refers to the value of the Nigerian Naira (₦) relative to foreign currencies, particularly the United States Dollar (USD), the British Pound (GBP), and the Euro (EUR). It is determined by foreign exchange markets, government monetary policies, and global trade balances. In Nigeria, exchange rates are influenced by oil revenue fluctuations, foreign investments, inflation, and economic stability. Exchange rate is the amount of Nigerian currency required to purchase one unit of a foreign currency, often measured by the official rate set by the Central Bank of Nigeria (CBN) or the parallel market (black market) rate. Exchange rate stability is crucial for economic growth, foreign investment inflows, and price stability.

Federal allocation refers to the total amount of money shared by government as proceeds from subsidy removal spent by the various tiers of government on goods, services, and public projects to fulfill its economic, social, and administrative responsibilities. It is used for recurrent expenditures such as salaries, subsidies, and interest payments, as well as capital expenditures on infrastructure, education, healthcare, and defense. In this study, government expenditure which is the proceeds from federal allocation is measured in monetary terms, using official data from national budgets, central banks, and statistical agencies, and is analyzed in relation to its impact on inflation and economic stability.

3.3 Techniques of Data Analysis

The study employed the Autoregressive Distributed Lag (ARDL) Model. Autoregressive Distributed Lag Stationarity model is used to analyze the long and short run relationships between different time series variables. The AR component in the ARDL model represents the lagged values of the dependent variable. It captures the short-term dynamics of the relationship between variables.

Descriptive Statistics is employed to characterize the properties of the dataset. The unit root test is utilized to assess the level of stationarity in the series under examination, aiming to determine the order of integration for each series.

The Granger causality test is used to detect the presence and the direction of the causality between each pair of the variables. Co-integration Test is done to establish a long-run relationship between or among the variables; in other words, to examine whether the variables will drift apart in the future.

4. Results and Discussion

Table 1: Descriptive Statistics

	INF	PMS	FA	EXCH
Mean	21.16271	360.9682	467.3942	661.8560
Median	18.60000	172.6800	619.3400	416.1001
Maximum	34.80000	1441.280	990.1890	1696.700
Minimum	12.13000	128.8800	1.030000	87.54030
Std. Dev.	7.085705	316.8223	359.1716	443.6494
Skewness	0.596632	1.658023	-0.381835	1.343164
Kurtosis	2.097191	5.365583	1.463068	3.256653
Jarque-Bera	5.504067	40.78901	7.240656	17.90215
Probability	0.063798	0.000000	0.026774	0.000130
Sum	1248.600	21297.12	27576.26	39049.51

Sum Sq. Dev.	2912.018	5821831.	7482245.	11415837
Observations	59	59	59	59

Source: Author's Computation from E-views 10.

The descriptive statistics in Table 1 indicated that a monthly inflation (INF) rate from January 2020–December 2024 had maximum and minimum values of 34.8% and 12.13% respectively. The Jarque-Bera statistic value of 5.50 with the 0.064 probability value greater than 0.05, shows that the inflation data is normally distributed. This suggests that the inflation rate in Nigeria was evenly distributed during the study period. Similarly, Premium Motor Spirit (PMS) had a mean value of ₦360.97, a maximum values of ₦1441.28 and a minimum value of ₦128.88. The Jarque-Bera statistic value of 40.79 and the probability value of 0.00 is statistically significant at 1% level of significance, implying that the series is also not normally distributed.

Furthermore, the table shows that government expenditure by federal allocation has a Jarque-Bera statistic value of 7.24 and is statistically significant at 5% level, in the same vein, the variable exchange rate (EXCH) has a Jarque-Bera statistic value of 2.09 is also statistically significant at 1% level, this implies that both series are not normally distributed.

4.2 Unit Root Test

Table 2: Unit Root Test Result at levels

Method		Statistic	Prob.**
ADF - Fisher Chi-square		14.2835	0.0747
ADF - Choi Z-stat		2.57243	0.9950
** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.			
Intermediate ADF test results			
Series	Prob.	Lag	Max Lag	Obs
INF____	0.9022	1	10	59
PMS__N_	1.0000	0	10	59
FA___N_	0.0009	0	10	59
EXCH__N_	0.9890	0	10	59

Table 3: Unit Root Test Result at first difference

Method		Statistic	Prob.**
ADF - Fisher Chi-square		125.864	0.0000
ADF - Choi Z-stat		-10.1408	0.0000
** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.			
Intermediate ADF test results D(UNTITLED)			
Series	Prob.	Lag	Max Lag	Obs
D(INF____)	0.0000	1	10	59
D(PMS__N_)	0.0000	0	10	59
D(FA___N_)	0.0000	2	10	59
D(EXCH__N_	0.0000	1	8	59

Source: Extract from Author's computation using E-views 10

Tables 2 and 3 presents the result of the unit root test for the study variables. from the tables, FA achieved stationarity at levels, while the rest of the variables, INF, PMS and EXCH achieve stationary at their first differences. Thus, the mixed order of integration justifies the application of ARDL technique. Hence the ARDL technique was used to determine the long-run and short run effect of fuel subsidy removal on inflation in Nigeria.

4.3 Bounds Test for Co-integration

Results in Table 4 shows a test of bounds to confirm if the variables are co-integrated and will not diverge as time passes.

Table 4: ARDL Bound Test Result

Test Statistic	Value	Signif.	I(0)	I(1)
			Lower Bound	**Upper Bound**
F-statistic	10.81773	10%	2.01	3.1
		5%	2.45	3.63
		2.5%	2.87	4.16
		1%	3.42	4.84

Source: *Author's computation from E-views 10*

The ARDL bound test results presented in Table 4 indicates that there is long-run relationship among the variables incorporated in the model. This is because; the F-statistic Value of 10.81773is greater than the Pesaran Lower and Upper Bound critical value of 2.45 for actual sample size and 3.63 for finite sample size at 5% level of significance. Therefore, the null hypothesis of no long-run relationship between variable is rejected, meaning that there exists a long-run relationship among the variables at 5% level of significance. Given the existence of long-run relationship, the short-run and long-run estimates were computed and the results are presented in Tables 5 and 6 respectively.

4.4 Short-run Result

Table 5: Short-Run Estimate of ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LPMS)	6.5761	2.9028	2.2654	0.0290
D(LFA)	-3.3208	2.2500	-1.4758	0.0478
D(LFA(-1))	-7.2554	2.6431	-2.7449	0.0090
D(LFA(-2))	-9.8813	2.8791	-3.4320	0.0014
D(LFA(-3))	-3.9337	2.4649	-1.5958	0.1184
D(EXCH)	-0.0022	0.0033	-0.6568	0.5150
D(EXCH(-1))	-0.0086	0.0033	-2.6200	0.0124
CointEq(-1)	-0.9010	0.1321	-6.8202	0.0000
R-squared	0.5919			
Adjusted R-squared	0.5255			

Source: Author's Computation Using E-views 10

The error correction coefficient (ECM factor) in Table 5 is negative, high (-0.9010) and statistically significant at 1% level. This implies that deviations will be reverted or corrected back to the equilibrium with an adjusted speed of 90% within the shortest possible time. The study shows the R-square value of 0.59 and the Adjusted R-square value of 0.52. The goodness of fit of the mode as explained by R-square implies that 59% of variations in inflation rate is explained by the independent variables in the model. The explanatory power of the model as reveals by Adjusted R-square is 52% which shows the effectiveness and efficiency of the predictors.

The result shows the short run estimates which revealed that premium motor spirit (PMS) price has a positive effect on inflation and is statistically significant at 5% level. This is due to the fact that, an increase in premium motor spirit has a transmission mechanism through increased transport fare, and increases in consumer price index which translate to inflation in Nigeria.

4.5 Long-run Result

Table 6: Long-run Estimate of ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INF(-1)	-0.901060	0.145594	-6.188846	0.0000
LPMS(-1)	8.880520	1.906948	4.656929	0.0000
LFA(-1)	-1.129183	0.294049	-3.840114	0.0004
EXCH(-1)	0.001629	0.002352	0.692480	0.4926
D(LPMS)	6.576110	3.131833	2.099764	0.0421
D(LFA)	-3.320871	2.472319	-1.343221	0.1868
D(LFA(-1))	-7.255468	2.896725	-2.504715	0.0164
D(LFA(-2))	-9.881398	3.241048	-3.048828	0.0041
D(LFA(-3))	-3.933782	2.693903	-1.460254	0.1520
D(EXCH)	-0.002209	0.004221	-0.523461	0.6035
D(EXCH(-1))	-0.008681	0.003643	-2.382677	0.0220

Source: Author's Computation Using E-views 10

The ARDL long run result in Table 6 reveals that premium motor spirit (PMS) prices have a positive and significant effect on inflation in Nigeria in the long run at 5% level. The result implies that an increase in premium motor spirit (PMS) prices increases inflation rate in Nigeria in the long run. The findings also show that higher federal allocations to states do not create inflationary pressures in the long run. This could be attributed to the role of government spending in stabilizing the economy. On the other hand, exchange rate exerts a positive effect on inflation in the country during the study period.

Table 7: Pairwise Granger Causality Test Result

Null Hypothesis:	Obs	F-Statistic	Prob.
PMS__N_ does not Granger Cause INF	59	3.88467	0.0270
INF does not Granger Cause PMS__N_		0.89782	0.4139
FA_BN_ does not Granger Cause INF	59	0.21052	0.8108
INF does not Granger Cause FA_B_N_		6.77257	0.0024
EXCH__N_ does not Granger Cause INF	59	5.37229	0.0077
INF does not Granger Cause EXCH__N_		6.23126	0.0038

FA__B_N_ does not Granger Cause PMS__N_	59	0.09657	0.9081
PMS__N_ does not Granger Cause FA_B_N_		9.70080	0.0003
EXCH__N_ does not Granger Cause PMS__N_	59	2.22811	0.1190
PMS___N_ does not Granger Cause EXCH__N_		3.88188	0.0275
EXCH__N_ does not Granger Cause FA__B_N_	59	6.88057	0.0023
FA__B_N_ does not Granger Cause EXCH__N_		5.74874	0.0657

Source: Author's Computation Using E-views 10

Table 7 shows the summary of the causal relationship among the variables. The table reveals that there is unidirectional causal relationship running from Petrol Motor Spirit (PMS) prices to Inflation (INF) in Nigeria since the p-value (0.0270) is less than 0.05, we reject the null hypothesis and conclude that Premium Motor Spirit prices (PMS) significantly influence inflation (INF). The second null hypothesis reveals a p-value 0.4139. Since the p-value (0.4139) is greater than 0.05, we fail to reject the null hypothesis and conclude that inflation does not significantly influence petrol motor spirit. This result implies that increases in fuel prices could contribute to inflationary pressures in the economy. As fuel prices rise, transportation and production costs may increase, leading to higher consumer prices (cost-push inflation). This result is generally consistent with economic theory and empirical evidence, particularly in the context of developing countries like Nigeria.

Table 7 also reveals a unidirectional causality running from inflation (INF) to government expenditure in the form of federal allocation (FA) with no feedback from the later. This indicates that inflation (INF) significantly influences federal allocations (FA). Table 6 shows bidirectional causality between exchange rate (EXCH) and inflation (INF) in Nigeria given that the respective p-values of 0.0077 and 0.0038 are less than 0.05. This bidirectional relationship highlights the importance of exchange rate stability in inflation control.

The result also shows that there exists a unidirectional relationship between federal allocation and Premium Motor Spirit prices. This implies that revenue allocation changes do not directly affect petrol pricing. However, Premium Motor Spirit prices significantly predict federal allocations, possibly due to fuel-related revenue generation such as petroleum taxes and government earnings from fuel price fluctuations. Similarly, a unidirectional relationship exists between PMS prices and Exchange rate. This shows that exchange rate movements significantly predict fuel prices, Table 6 also indicates that fluctuations in the exchange rate can considerably affect the revenue flows of federal allocations. A primary reason for this influence is the natural linkage to oil exports, where currency depreciation means that the government receives higher revenues in naira when oil prices are converted.

4.6 Discussion of Major Findings

The study also found that Premium Motor Spirit prices have a positive and significant effect on inflation both in the short long run in Nigeria. This conforms with the studies of Oladipo and Ajayi (2023) Olatunji and Yusuf (2021) and Adebayo (2020), who found that fuel price hikes lead to increased costs of goods and services, fueling inflation across the economy. The relationship highlights the critical role of Premium Motor Spirit pricing policies in managing inflation in Nigeria. in contrast, the study further found that, federal allocations had a negative effect on inflation both in the short and long run, suggesting that government revenue allocations did not exert immediate inflationary pressure.

5. Conclusion and Recommendations

Centered on the findings of this study, it concludes that fluctuations in Premium Motor Spirit prices significantly influence inflation, validating the cost-push inflation mechanism. The study also concluded that exchange rate depreciation was shown to have a long-term significant impact on inflation, underlining the importance of exchange rate management in economic stability. The study concludes that the removal of fuel subsidy

resulting in an increase in the price of premium motor spirit will lead to inflation in Nigeria.

Based on the findings and conclusions, the study has the following recommendations:

i. Fuel Price Regulation and Alternative Energy Investment. Since PMS price increases significantly contribute to inflation, the government should explore policies that mitigate sudden fuel price hikes, such as strategic fuel reserves, improved domestic refining capacity, and investment in alternative energy sources to reduce reliance on imported petroleum products.

ii. Exchange Rate Stability Measures. Given the bidirectional relationship between inflation and the exchange rate, policies aimed at stabilizing the naira should be prioritized. These may include strengthening foreign exchange reserves, diversifying export earnings, and promoting non-oil revenue sources to reduce exchange rate volatility.

iii. Targeted Inflation Control Policies. Inflationary pressures from fuel price increases require proactive measures such as subsidies on essential goods and transport systems to mitigate rising logistics costs.

iv. Fiscal Policy Adjustments. Since federal allocations do not have a direct inflationary impact, fiscal policies should focus on enhancing revenue generation and prudent government spending. This includes reducing wasteful expenditures, improving tax collection efficiency, and ensuring that federal allocations are directed toward productive investments that promote economic stability.

References

Adebayo, T. S. (2020). Fuel price fluctuations and inflation in Nigeria: An empirical analysis. *African Journal of Economic Policy*, 27(1), 112-130. https://doi.org/10.4314/ajep.v27i1.6

Adejor, G. A., Ogwuche, D. D., Dabish, N. D., & Garba, R. I. (2024). *Assessing the impact of fuel subsidy removal on economic growth in Nigeria: A VECM approach*. Retrieved from AJOL.

Akidi, V, and Ikue N.J. (2024). Retail energy prices, exchange rate and food prices in Nigeria: SVAR approach *Bussecon Review of Social Sciences. (2687-2285), 6*(4),19-31. https://doi.org/10.36096/brss.v6i4.695

Akinola, A. T., Akinola, A. A., & Kuye, O. T. (2024). *Insightful information on fossil fuel subsidy removal, exchange rate, inflation, and economic welfare: Evidence from Nigeria*. Retrieved from *Arabian Journal of Business & Management.*

Alli, N. G., Jubril, T. S., & Bello, L. T. (2024). Impact of fuel subsidy removal on Nigeria's supply chain: A case study analysis. *International Journal of Studies in Business Management, Economics and Strategies, 3*(4), 125–142.

Balogun, E. D. (2025). The short-term effects of gasoline price subsidy removal in Nigeria: An analysis of the economic and social impacts. *Munich Personal RePEc Archive*. https://mpra.ub.uni-muenchen.de/123659/

Bowen, W. G. (1965) "Wage Behavior and the Cost Inflation Problem," Labor and the National Economy. Edited by W. G. Bowen. New York: Norton

Chinanuife E., Magboo, K & Zekeri, M. (2021) Oil price volatility and inflation level in Nigeria: an exponential garch approach. *International Journal of Advanced Research* 9 (8) 1-8..

Itsekor, L. U. (2020) A Need for Investment in Nigerian Crude Oil Refining and Infrastructures: A Panacea to Refined Petroleum Shortages and Economic Growth. Archives of Business Research, 8(4). 31-46

Mehtiyev, J. & Madgda, R. (2021) Subsidies and its effects *Hungarian Agricultural Engineering* http://hae-journals.org/ HU ISSN 0864-7410

McCulloch, N., Moerenhout, T., & Yang, J. (2021). Fuel subsidy reform and the social contract in Nigeria: A micro-economic analysis. Energy policy, 156, 112336.

Oladipo, S. E., & Ajayi, M. A. (2023). Fuel price adjustments and inflationary trends in Nigeria: A sectoral analysis. *Journal of Energy Economics and Policy*, 15(2), 101-118.

Olatunji, O. A., & Yusuf, S. A. (2021). PMS prices and core inflation in Nigeria: A time series analysis. *Nigerian Journal of Economic and Social Studies*, 63(1), 75-90.

Omotosho, B. S., & Yang, B. (2024). *Mitigating the impact of fuel subsidy removal in an oil-producing emerging economy*. Retrieved from AfDB.

Steenblik (1995) A note on the concept of subsidy *Energy Polk3'*. Vol. 23, No. 6. pp. 483 484.