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Examining the Relationship between Petroleum Subsidy Removal, Cost of Transport and Cost of Living in Nigeria

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Abstract

This study examines the relationship between petroleum subsidy removal, transport costs and cost of living in Nigeria. The study extracts monthly data on the key variables from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). The data were analysed using correlation analysis and covariance (ANCOVA) analysis. The results of the correlation analysis show a positive and significant relationship between the removal of petroleum subsidies, the cost of transportation and the cost of living in Nigeria this mean that the subsidy removal is associated with increased transport costs and the cost of living. Similarly, the results of the ANCOVA showed that petroleum subsidy removal and transport costs significantly correlated with the cost of living while controlling for the impact of crude oil prices. Most Nigerians found it difficult to cope with the increased cost of transport and living costs. Based on the result, the study recommended governments to review their policy on removing petroleum subsidies and put measures in place to reduce the cost of transport and living. This could include providing adequate transportation infrastructure and improving the efficiency of the energy resources supply.

Keywords: Cost of Living, Cost of Transport, and Petroleum Subsidy in Nigeria
JEL Classification: E31 L91 G18

1.0 Introduction

Nigeria's fuel subsidies began in the 1970s as a temporary fiscal response to an oil price surge; the Price Control Act was passed in 1977, making it unlawful to sell some products, including petrol, for more than the regulated price. Subsequent governments continuously retained the subsidies (IISD, 2016). Since 1999, there have been attempts for upward fuel price adjustment, often accompanied by civil unrest and protests. The government has attempted to reform subsidies several times. It has not succeeded, mainly due to robust and widespread opposition to reform (Nwachukwu et al., 2013) and the coalition of interest groups had kicked against the removal of subsidies (Akov, 2015). As a result, fuel subsidies always re-emerged, particularly following currency depreciation and related increases in inflation (McCulloch, 2021).

Subsidy is a laudable concept; however, in Nigeria, its administration has been beset by significant accusations of incompetence and corruption. However, the largest obstacle to the Nigerian economy has been the Petroleum Motor Spirit (PMS) subsidy, as a substantial amount of the country's annual intake is used to pay for the program (Price Water House Cooper [PWC], 2023). World Bank (2018) reports that fuel subsidy has had a major impact

on the amount of money available for defence, health, education, and other vital sectors and important infrastructure. The government borrowed N1 trillion in 2022 to fund gasoline subsidies, which increased the nation's public debt stock (PWC, 2023).

The downstream subdivision of the gas and oil industry had the smallest overseas investment compared to the mid and upstream segments, and the motive for this may not be unrelated to the current subsidy regime and the legal context of the downstream industry generally (NNPC, 2022). The porous borders between Nigeria and its neighbours such as Cameroon, Chad, Niger and the Benin Republic have established a business for smugglers who buy huge volumes of fuel in Nigeria at a discounted price and resell it at market rates in neighbouring nations (NNPC, 2022).

In June 2022, NNPC Limited indicated that daily consumption of PMS had increased to over 103 million litres per day, meaning that at least 58 million litres were being smuggled (PWC, 2023). According to Denham, Nigerian petroleum products are smuggled out of the country daily in quantities estimated at 15.64 million litres due to their average retail price being 3.7 times lower than that of its neighbours (PWC, 2023).

The Nigeria Customs Service also affirmed that PMS was being smuggled out of the country in large quantities, which was estimated to be about 58 million litres per day after it had been subsidised by the Federal Government, adding that the petroleum product is being diverted to as far as Mali (NNPC, 2022).

Eliminating petroleum subsidy has significantly impacted the standard of living, particularly for the already economically disadvantaged segments of the population. It raises the price of petrol at the pump, which raises the cost of food, transportation, and other necessities, placing more strain on low-income families and individuals' budgets and lowering their standard of living as a result of inflationary pressures that drive up the cost of goods and services. Income inequality in the nation exacerbates due to rising living expenses and petroleum pump prices, which disproportionately affect those with lower incomes (Yakubu et al., 2023). If fuel subsidies are eliminated, transportation costs rise immediately, driving up passenger rates and transport providers' operating costs. Transport operators may use cost-cutting tactics like reducing vehicle maintenance or overcrowding vehicles to maximise revenue in response to rising fuel costs. The study has broader implications for the efficiency and reliability of the transportation system and disproportionately affect low-income individuals who depend heavily on public transportation for their daily activities (Abaekih, 2024). The study is organised as follows: section one introduction, section two review of related literature, section three: methodology, section four results and discussion, and section five: conclusion and recommendations.

2.1 Literature Review

2.1.1 Concept of Subsidy

Subsidy refers to the financial motivation introduced by the authorities to the businesses to lower the price of the produce of the worried sector and to raise its competitive power to keep prices below the cost of production (Ocheni, 2015).

Furthermore, subsidy is a measure that makes consumers' prices for goods or products below market price levels. Subsidies have a positive influence on price. Price controls, tax exemptions and reductions, and grants are examples. Government-sponsored technology, research and development, and rules that tilt the market in favour of a specific industry are other factors that indirectly impact fees or expenses. Thus, two major subsidies are production subsidies related to developed nations and Consumer subsidies, which are found mainly in developing nations like Nigeria (Ocheni, 2015).

Subsidies are enjoyed extensively in several countries, especially on petroleum products, food, or farm inputs like fertiliser and machinery. However, a subsidy can be a potent policy instrument that can be used to address market failures. It can be an artificial tool to skew markets, imposing enormous economic costs with massive negative externalities like corruption (Ocheni, 2015). Since the government is the primary provider of subsidies, policymakers must be well-equipped to recognise the costs to the economy of changing competition when assessing subsidies and identifying where, if possible, such costs may be minimised (Ocheni, 2015).

2.2 Stylized Facts on Fuel Subsidy Removal in Nigeria

As per the Centre for Public Policy Alternatives (2011), the Federal Government maintains that eliminating subsidies is a crucial component of the overall plan to expedite Nigeria's economic progress. Nigeria has a lengthy history of eliminating fuel subsidies, especially because of the negative impacts on the political system. Specifically, subsidy withdrawal began in 1978 when Gen. Olusegun Obasanjo's military government raised the petrol pump price from 8.4 kobo to 15.37 kobo. The government's ability to raise sufficient funds to fund its operations and meet the social needs of Nigerians was a worry, especially as it prepared for the 1979 democratic elections. (Premium Times Newspaper, May 29 2023).

During the eight years of Obasanjo-led administration, the country had multiple increases in fuel prices. The first began on June 1, 2000, when a ₦30.00 per litre increase in gasoline prices was implemented. Following widespread protests by organised labour, civil society organisations, and regular Nigerians, it was lowered to ₦25 a week later. The pump price was further reduced to ₦22.00 per litre five days later, on June 13, 2000. The Obasanjo regime raised the price from ₦22.00 to ₦26.00 on January 1, 2002, and then, just one year later, to ₦40.00 on June 23, 2003. The same administration increased the fuel price per litre in 2007 to ₦70 and then to above ₦100 (Olaniyi, 2016). In May 2007, when the late President Umaru Musa Yar' Adua assumed office, the Nigeria Labour Congress (NLC) resisted the increase and forced the government to return to ₦65 per litre. In January 2012, the administration of President Goodluck Jonathan attempted to get rid of the acclaimed subsidy, but this was stoutly resisted. As a result, the price was later pegged at ₦87 per litre. President Buhari's administration in 2015 increased the price to ₦145 per litre. The

government pronouncement in this respect is informed by the fact that despite the drop in the price of crude oil in the global marketplace, marketers are finding it increasingly tricky to import refined petroleum products due to the scarcity of foreign exchange (Olaniyi, 2016). In May 2023, the price increased to ₦550, and subsequently, in July, it rose ₦630 due to the complete removal of petroleum subsidy by President Ahmad Bola Tinubu on May 29 2023 (Premium Times Newspaper, May 29 2023).

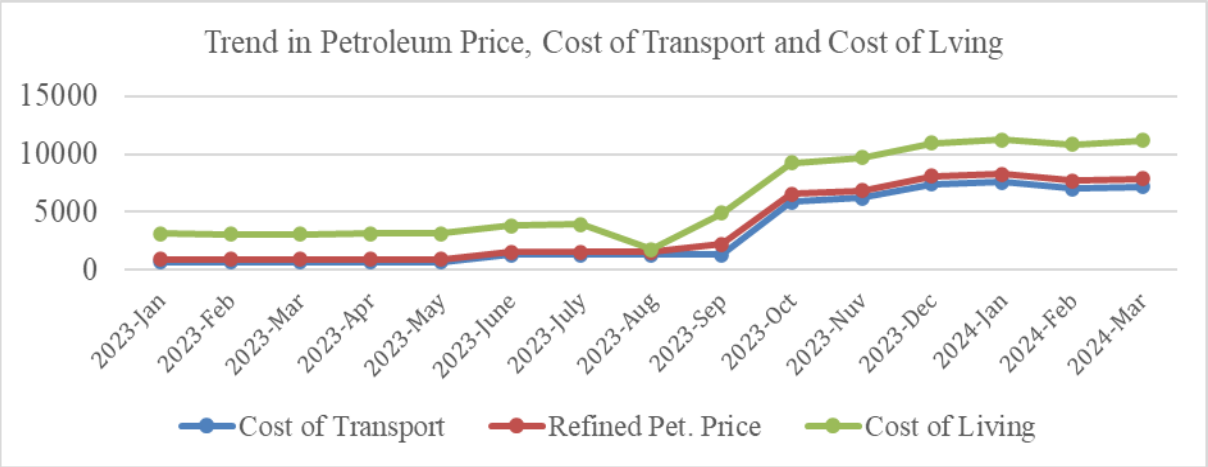

Figure 1: Trend in Cost of Transport, Price of Petroleum and Cost of Living

From Figure 1, it can be seen that the cost of transport, petroleum price and cost of living move together in the same direction, indicating a positive relationship, but the cost of living is higher, meaning that if there is a slight increase in the price of petroleum and transport cost will lead to higher cost of living.

2.3 Theoretical Literature

This study is based on the cost pass-through theory, which describes what happens when a business changes the price of the products or services it sells following a change in the cost of producing them. It arises when a business changes the prices of the products or services it supplies following a change in its costs (Auer & Schoenle, 2013). In this case, subsidy removal leads to higher petroleum prices, increases transport and production costs, and contributes to higher prices passed on to consumers, leading to higher living costs.

2.4 Empirical Review

Su et al. (2020) argued that removing fuel subsidies determines the price of petrol via the forces of demand and supply rather than being defined by government regulation. It will stop petrol from being underpriced, stop corruption brought on by fuel subsidies, and result in fair pricing that accurately represents the state of the global market.

Sheyin (2018), Itumo and Onyejiuba (2019) believe that removing fuel subsidies will have a positive microeconomic implication because it will end corruption in fuel subsidy payments. Okongwu and Imoisi (2022) posit that the detrimental impact of gasoline subsidy payments on government borrowing has been discussed. Nigeria's subsidy system has increased

government borrowing, which was worsened by the COVID-19 pandemic in 2020 and the recession in 2016. Ozili (2022) contended that eliminating gasoline subsidies would have a positive macroeconomic impact by generating employment. According to Olujobi (2021), more businesses can import fuel at competitive prices if the downstream industry is completely deregulated.

According to Houeland (2020), removing gasoline subsidies may have a negative macroeconomic impact by slowing economic growth. The cost of necessities would go up if the fuel subsidies were eliminated. Because of growing expenses, stagnant salaries, and a national minimum wage, individuals and small companies would have fewer disposable cash.

Mohammed et al. (2020) believed that the adverse macroeconomic consequence of removing fuel subsidies would increase the inflation rate. Using the discourse analysis method, Ozili and Obiora (2023) examined the macro and microeconomic effects of Nigeria's petroleum subsidy removal; they concluded that removing fuel subsidies had some positive macroeconomic effects, such as helping to free up economic resources for the progress of other economic sectors so that the government could increase spending on infrastructure development, healthcare, and education. Additionally, it might encourage local refineries to generate more petroleum products, lessen Nigeria's reliance on fuel imports, and create jobs. However, eliminating fuel subsidies in Nigeria has detrimental macroeconomic effects, such as accelerating inflation and slowing economic growth.

A study by Soile et al. (2014) showed that subsidies had a positive and significant association with the transportation sector, which indicates that removing gasoline subventions can increase the transport sector's operational cost and reduce the country's gross domestic product (GDP). Onyeizugbe and Onwuka (2014), in their study of fuel subsidy elimination, state that it is imperative to enhance business development in Nigeria. Their findings show no significant connection between fuel subsidy removal and job creation in Nigeria.

A study by Omotosho (2019) shows that oil price shocks cause significant and persistent effects on output; the results show that unfavourable oil price shocks contract total GDP, boost non-oil GDP, increase headline inflation, and depreciate the exchange rate. However, results generated via a model without fuel subsidies indicate that the contractionary outcome of a damaging oil price shock on aggregate GDP is moderated, and headline inflation decreases. At the same time, the exchange rate depreciates more in the short run. Contrary to the fact that fuel subsidy removal leads to higher macroeconomic instabilities and generates non-trivial consequences for a monetary policy response to an oil price shock.

Olaniyi (2016) argues that fuel subsidies are a significant tool for enhancing citizens' welfare, especially for middle- and low-income earners; meanwhile, the disbursement of fuel subsidies must be appropriately monitored to guide against corruption. Stringent policies can be set aside as penalties (such as death sentence, life imprisonment and other costly penalties) for any corrupt political officeholder before considering subsidy removal.

Ocheni (2015) revealed a significant affiliation between the fuel price increase and Nigeria's economic growth. Inegbedion et al. (2020) reveal that a reduction in petroleum subsidies stimulates increases in the prices of petroleum products and can cause upsurges in transport costs; increases in transport fares subsequently lead to increases in the values of supplementary products due to the degree of interdependency among the various sectors and suggest that policymakers be alert of the economic implications of subsidy removal.

Gidigbi and Bello (2020), Ogunode et al. (2023), Harun et al. (2018), Adagunodo (2022), and Su et al. (2020) claimed that the removal of fuel subsidies would have good macro- and microeconomic effects since the money saved could be used to support the growth of other economic sectors. Has detrimental macroeconomic effects, such as accelerating inflation and slowing economic growth.

Others, such as Okongwu and Imoisi (2022), Holland (2020) and Mohammed et al. (2020), believe that subsidy removal has adverse effects on the economy because it leads to inflationary pressure on the economy and lowers consumer demand. Hence, due to the divergent opinions on the impact of subsidy removal on the economy, this study investigates the impact of subsidy removal and the cost of transportation on the cost of living in Nigeria.

3.0 Methodology

3.1 Data Sources

In this study, monthly secondary data from July 2019 to March 2024 on the inflation rate ($Cost_L$) proxied cost of living, average refined petroleum price (Sub_R), the average price of crude oil ($Crude_P$) representing subsidy removal was sourced from the Central Bank of Nigeria (CBN) statistical bulletin 2024, and the average transport fare proxied as cost of transport ($Cost_T$) was obtained from the National Bureau of Statistics (NBS, 2024).

3.2 Model Specification

The study employs econometric procedures to estimate the impact of subsidy removal and transport costs on living costs in Nigeria.

The model for the study is as follows:

$$Cost_L = f(Cost_T, Sub_R, Crude_P) \quad 1$$

$$Cost_L = \propto_1 + \propto_2 Cost_T + \propto_3 Sub_R + \propto_4 Crude_P + U_t \quad 2$$

Model two was transformed into a dummy variable model, as shown below, to capture the effect of the transport cost and subsidy removal while controlling for the impact of crude oil price.

$$Cost_L = \propto_1 + \propto_2 D_1 + \propto_3 D_2 + \propto_4 Crude_P + U_t 2 \quad 3$$

Where: $Cost_L$ Represent cost of living, $Cost_T$ transport cost, Sub_R subsidy removal, $Crude_P$ crude oil price and U_t is the error term. $\propto_1$ is the intercept, $\propto_2$ through $\propto_4$ are the coefficients

linked with the explanatory variables of the model. D_1 and D_2 are the dummy variables for the transport cost and subsidy removal, respectively.

The hypotheses of the study are:

$H_o: D_1 = 0$ (Transport cost has no significant impact on cost of living in Nigeria)
$H_o: D_2 = 0$ (Subsidy removal has no significant impact on the cost of living in Nigeria)

Variables and their Unit of Measurement

The dependent variable is the cost of living measured by the rate of inflation, that is, the average change in prices of goods and services over some time. The explanatory variables are the cost of transport measured by the average monthly transport fare between inter-city transport in Nigeria, subsidy removal measured by the monthly average price of refined petroleum in Nigeria and the average monthly price of crude oil.

3.3 Method of Data Analysis

The study uses correlation analysis and the covariance modelling technique to analyse the data. The correlation analysis was conducted to discover the direction and the strength of the relationship among the study's variables and to see those that might lead to multicollinearity due to their high correlation coefficients. The analysis of covariance was carried out to measure the effect of subsidy removal and cost of transport on the cost of living while controlling the impact of covariate crude oil prices.

4.0 Results and Discussion

Table 1: Correlation Results

	Cost of living	Subsidy removal	Cost of transport	Price of argic products	Price of refined petroleum
Cost of living	1				
Subsidy removal	0.484**	1			
	0.000				
Cost of transport	0.375**	0.255	1		
	0.004	0.056			
Price of argic products	0.979**	0.513**	0.328*	1	
	0.000	0.000	0.013		
Price of crude oil	0.974**	0.508**	0.435**	0.930**	1
	0.000	0.000	0.001	0.000	

Source: Author's Computation Using SPSS Version 21 (2024)

The results of the correlation analysis from Table 1 show that all the variables have a positive relationship with the cost of living. The correlation coefficient of subsidy removal concerning the cost of living is 0.484 with a p-value of 0.000, indicating a positive and

significant correlation between subsidy removal and the cost of living in Nigeria. The correlation between the cost of transport and cost of living was also positive and significant, with a correlation coefficient of 0.375 and a p-value of 0.004. If less than 0.05, the cost of transport will increase the cost of living. The correlation coefficient of the price of agricultural products and cost of living was 0.974 with a p-value of 0.000, indicating a strong, positive and significant correlation. Similarly, the price of crude oil products also shows a strong, positive and significant correlation concerning the cost of living with a correlation coefficient of 0.974 and p-value of 0.000, meaning that if the price of refined petroleum products increases, the cost of living will also increase.

However, the correlation between the transport cost and subsidy removal was also positive but insignificant at 5%, only significant at the 10% level, with a correlation coefficient of 0.255 and a p-value of 0.056. The correlation between the price of agricultural products concerning subsidy removal and that of the price of refined petroleum products were positive and significant, with correlation coefficients of 0.513 (p = 0.000) and 0.508 (p = 0.000), respectively, meaning that the variables move together that is whenever there is subsidy removal price of agricultural products and price of refined petroleum products will increase.

Likewise, there is a positive and significant link between the price of agricultural products and the cost of transport, as well as refined petroleum products and the cost of transportation. The correlation coefficient of the price of agricultural products about the transport cost was 0.328, with a p-value of 0.013. In contrast, the price of refined petroleum products is 0.435 with a p-value of 0.001, meaning that the price of agricultural products, refined petroleum products and transport costs moved together. Finally, there is a high, positive and significant correlation between the price of crude oil products and the price of agricultural products, with a correlation coefficient of 0.930 and p-value of 0.000, that is, increase if there is an increase in the charge of crude oil, price of the agricultural product also increases.

Table 2: Descriptive Statistics

	Minimum	**Maximum**	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
Cost of Living	0.6441	0.7840	0.6857	0.0336	0.625	0.061

Source: Authors' Computation Using SPSS Version 21 (2024)

From Table 2, the results indicate that the mean value of the dependent variable cost of living (Cost_L) of 0.6857 is greater than its standard deviation (0.0336), meaning that the data points tend to be closer to their mean. Comparing the minimum and the maximum values of 0.6441 and 0.7840 indicates that they are narrowly dispersed. Also, skewness (0.625) and kurtosis (0.061) values are positive and less than one; hence, they fall within the acceptance region where the dependent variable is normally distributed.

“A one-way ANCOVA was conducted to compare the" impact of subsidy removal and cost of transport on the cost of living in Nigeria. Leven's test and normality checks were conducted, and the assumptions were met.

Table 3: Leven's Test of Equality of Error Variance

Dependent Variable: Cost of living			
F	df1	df2	Sig.
0.236	2	54	0.791

Source: Authors' Computation Using SPSS Version 21 (2024)

From Table 3, the results of Leven's test of equality of error variance hold since the F (2, 54) = 0.236 and has a p-value of 0.791, greater than the 5% significance level.

Table 4: Tests of Between-Subjects Effects

Dependent Variable: Cost of living						
Source	Sum of squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	0.039	3	0.013	27.734	0.000	0.611
Intercept	0.127	1	0.127	272.025	0.000	0.837
Sub_R	0.002	1	0.002	4.116	0.048	0.072
$Cost_T$	0.012	1	0.012	25.654	0.000	0.326
$Crude_P$	0.000	1	0.000	0.682	0.413	0.013
Error	0.025	53	0.000			
Total	26.860	57				
Corrected Total	0.063	56				

Source: Authors' Computation Using SPSS Version 21 (2024)

Table 4 discloses a significant difference in the group's mean [F (3,53) = 25.6541, p = 0.000] before and after subsidy removal. Going by Cohen's guidelines, the partial Eta squared, which measures the effect size, shows that subsidy removal accounts for only a 7.2% variation in the cost of living while the cost of transport accounted for 32.6% changes in the dependent variable with low and one can say they have small side effects. From the results, subsidy removal (Sub_R) significantly affect the cost of living ($Cost_L$) having its p-value of 0.048, which is less than 0.05 when controlling for the effect of crude oil price ($Crude_P$). Similarly, when the effect of crude oil price is held constant, the cost of transport ($Cost_T$) significantly affects the cost of living in Nigeria with a p-value of 0.000, which is less than the 0.05 tracheole, implying that when the subsidy is removed, petroleum prices increase, leading to an increase in transport fare, which will, in turn, increase the cost of living.

5. Conclusion and Recommendations

The study examines the relationship between subsidy removal, transport cost, and cost of living in Nigeria from 2019-2024 using correlation and analysis of covariance; the results of correlation analysis show the existence of positive and significant relationship. The findings

of the analysis of covariance revealed that subsidy removal and transport costs have a significant relationship with the cost of living while controlling for the effect of crude oil prices. Based on these findings, it concluded that subsidy removal led to higher transport costs and an increase in the cost of living and made life unbearable.

Consequently, the study recommended that since subsidy removal is inevitable, hence to cushion its effects, there is a need to subsidise the country's transport sector to avoid a situation in which an upsurge in transport costs leads to a surge in the prices of goods and services. Also, the government's current mass transit buses must be increased to cover more expansive areas, and the money realised from their services should be adequately invested in their future maintenance to reduce the effect of the cost of transport on the cost of living in the country.

REFERENCES

Adagunodo, M. (2022). The effect of oil receipts and fuel subsidy payment on the current account deficit in Nigeria and Venezuela. Annals of Spiru Haret University. *Economic Series*, 22 (1), 137-152.

Akov, E. (2015). Fuel Subsidy Corruption and the Illusions of Economic Reconstruction in Nigeria. *Academic Journal of Interdisciplinary Studies* 4 (1).

Gidigbi, M. O., & Bello, K. M. (2020). Petroleum Subsidy Reduction and Poverty in Nigeria: A Choice between Maintaining the Subsidy or Providing Infrastructural Services Equivalent to the Deadweight Loss. *Asian Development Perspectives* (ADP), 11 (1), 70-81.

Harun, M., Mat, S. H. C., Fadzim, W. R., Khan, S. J. M., & Noor, M. S. Z. (2018). The effects of fuel subsidy removal on input costs of productions: Leontief input-output price model. *International Journal of Supply Chain Management*, 7 (5), 529-534.

Houeland, C. (2020). Contentious and institutional politics in a petro-state: Nigeria's 2012 fuel subsidy protests. The Extractive Industries and Society, 7 (4), 1230-1237.

IISD (International Institute for Sustainable Development), 2016, "Compensation Mechanisms for Fuel Subsidy Removal in Nigeria", GSI (Global Subsidies Initiative) Report.

Inegbedion, H. E., Obadiaru, E., & Asaleye, A. (2020). Petroleum Subsidy Withdrawal, Fuel Price Hikes and the Nigerian Economy. *International Journal of Energy Economics and Policy*, 10(4), 258-265.

Itumo, A., & Onyejiuba, E. I. (2019). Oil subsidy and development of local refineries In Nigeria: A Critical Analysis. *African Journal of Politics and Administrative Studies*, 12, 1.

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

Mohammed, A. B., Ahmed, F. F., & Adedeji, A. N. (2020). Assessment of Impact of Fuel Subsidy Removal on Socio-economic Characteristics: A Survey of Households in Maiduguri, Borno State, Nigeria. *Journal of Business and Economic Development*, 5 (1), 10.

Nigeria National Petroleum Corporation, 2022.

Nwachukwu, M. U., Chike, M., Harold, J., Uloma, E., & Okosun, A. (2013). Empirical Analysis of Fuel Price and Subsidy Reform in Nigeria. *OPEC Energy Review* 37 (3), 314–326.

Ocheni, S. I. (2015). Impact of Fuel Price Increase on the Nigerian Economy. *Mediterranean Journal of Social Sciences*, 6 (1), 560-569.

Ogunode, N. J., Ahmed, I., & Olugbenga, A. V. (2023). Application of Petrol Subsidy Funds to Address the Problems of Universal Basic Education for Sustainable Development in Nigeria. Web of Scholars: *Multidimensional Research Journal*, 2 (1), 1-9.

Okongwu, C. J., & Imoisi, S. E. (2022). Removal of Petrol Subsidy: Legal Implications for the Nigerian Economy. *Nnamdi Azikiwe University Journal of International Law and Jurisprudence*, 13(2), 135-139.

Olaniyi, A. A. (2016). Effects of Fuel Subsidy on Transport Costs and Transport Rates in Nigeria. *Journal of Energy Technologies and Policy*, 6 11), 1-10.

Olujobi, O. J. (2021). Deregulation of the downstream petroleum industry. An overview of the legal difficulties and proposal for improvement in Nigeria. Heliyon, 7 (4), e06848.

Omotosho, B. S. (2019). Oil Price Shocks, Fuel Subsidies and Macroeconomic Instability in Nigeria. Central Bank of Nigeria (*CBN) Journal of Applied Statistics*, 10 (2), 1-38.

Onyeizugbe, C.U., & Onwuka, E. M. (2014). Fuel Subsidy Removal as an Imperative for Enhancing Business Development in Nigeria. *International Journal of Business and Management Research*, 2 (9), 454-461.

Ozili, P. (2022). COVID-19 in Africa: socio-economic impact, policy response and opportunities. *International Journal of Sociology and Social Policy*, 42 (3/4), 177-200.

Ozili, P., & Obiora, K. (2023). Implications of Fuel Subsidy Removal on the Nigerian Economy. Public Policy's Role in Achieving Sustainable Development Goals, 1-25.

Premium Times Newspaper Article (2023). Fuel Subsidy is gone — Tinubu declares. May 29 2023, https://www.premiumtimesng.com/news/top-news/601239-fuel-subsidy-is-gone-tinubu-declares.html.

PWC (2023). Fuel subsidy in Nigeria - issues, challenges and the way forward. www.pwc.com/ng

Sheyin, A. O. (2018). The Effects of Subsidy Removal on the Escalation of Political Corruption in Nigeria. *KIU Journal of Social Sciences,* 4 (3), 157-168.

Soile, I. O., Tsaku, H., & Yar' Adua, B. M. (2014). The Impact of Gasoline Subsidy Removal on the Transportation Sector in Nigeria. *American Journal of Energy Research,* 2 (3), 60-66.

Su, C. W., Qin, M., Tao, R., Moldovan, N. C., & Lobonţ, O. R. (2020). Factors driving oil price—from the perspective of United States. Energy, 197, 117219.

World Bank (2018). Nigeria - AFRICA- P151488- National Social Safety Nets Project-Procurement Plan (English).

Yakubu, M., Abdullahi, M. M., Maijama'a, R., & Musa, K. S. (2023). Investigating the effect of petroleum subsidy removal on standard of living amidst rising poverty in Nigeria. *Asian Journal of Economics, Finance and Management, 5(1), 359-364.*

Abaekih, C. E., Abaekih, I. S., & Unachukwu, S. S. (2024). Impact of fuel subsidy removal on transportation system in Nigeria. *International Journal of Advance Research and Innovative Ideas in Education, 10(2), 5400-5407.*

Auer, R., & Schoenle, R. (2013). Market structure and exchange rate pass-through. Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 130.