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IMPACT OF FUEL SUBSIDY REMOVAL ON THE COST OF LIVING IN NIGERIA

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Abstract: *The removal of fuel subsidies has significantly exacerbated inflationary pressures in Nigeria. According to the National Bureau of Statistics (2024), Nigeria's headline inflation rose from 28.9% in December 2023 to 29.9% in January 2024. It continued its upward trajectory, reaching 34.19% by June 2024, marking the seventh consecutive monthly increase and the highest level recorded in nearly two decades. This inflationary trend has been largely driven by rising fuel and food prices, coupled with currency depreciation, and has deepened the cost-of-living crisis. This study aims to simulate the impact of removing the petrol subsidy, as reflected in the increase in PMS prices, on Nigeria's inflation trajectory. We hypothesize that the removal of petroleum subsidies does not generate inflationary pressures and test this hypothesis using the innovative Dynamic Simulated Autoregressive Distributed Lag (DS-ARDL) framework. The outcome of the study shows that fuel-subsidy removal has a significant impact on the cost of living and inflation level in Nigeria, indicating that as 1 unit of subsidy removal increases, the cost of living and inflation level increase by 73.8%. The government should therefore carefully consider the impact of removing fuel subsidies on citizens and provide palliatives and other welfare-enhancing initiatives to cushion the effect on individuals, households, and firms.*

Keywords: fuel subsidy, cost of living, inflationary pressure, currency depreciation, simulation, Nigeria

1.0 Background of the Study

Logistics costs play a critical role in the pricing of goods and services, with fuel expenses—particularly for diesel, petrol, and kerosene—being a major determinant. In Nigeria, the Federal Government has long used fuel subsidies to stabilize domestic fuel prices, thereby cushioning their impact on the cost

of living. Under this regime, the government covered part of the fuel cost to make it more affordable for citizens. However, despite the enactment of the Petroleum Industry Act (PIA), the downstream oil and gas sector has remained underdeveloped. The subsidy system, plagued by corruption, mismanagement, and inefficiency, has deterred investment in the sector. For instance, between January 2020 and June 2022, the government spent approximately ₦3.92 trillion on petrol subsidies, exceeding combined federal allocations to healthcare, education, and defence over the same period (Abayomi, 2023). Cumulatively, Nigeria expended over ₦10 trillion on fuel subsidies between 2006 and 2018, with an additional ₦5.82 trillion spent between 2021 and 2022, and ₦3.36 trillion projected for the first half of 2023.

These expenditures have placed a substantial strain on public finances, limiting the state's capacity to invest in critical sectors that could drive economic growth and improve social welfare. Recently, the government has faced increasing pressure to eliminate subsidies as a pathway to fiscal sustainability. However, subsidy removal carries significant implications for the population, particularly low-income earners. While intended to free up resources and encourage market efficiency, the removal has triggered immediate increases in fuel prices, transportation costs, and consequently, the general price level of goods and services (Sotunde, 2024).

Nigeria's economy is heavily reliant on transportation, and rising fuel prices have had a direct inflationary impact on the cost of essential commodities. This disproportionately affects low-income households, who spend a substantial portion of their income on basic needs. The inflationary trend has further eroded consumer purchasing power, making it more difficult for many Nigerians to afford essential goods and services (Sotunde, 2024).

On May 29, 2023, President Bola Ahmed Tinubu formally announced the removal of fuel subsidies in his inaugural address. This decision led to a sharp increase in the pump price of petrol (from ₦250 to over ₦600 per litre, depending on the location), causing commodity prices to surge by up to 300% (Adewale, 2023). The post-subsidy era has seen increased competition among major and independent marketers, contributing to further price volatility. Rising delivery and logistics costs have led to higher market prices for food, raw materials, and finished goods. To sustain profit margins, producers have adjusted prices upward, transferring the burden to consumers and exacerbating inflationary pressures (Adewale, 2023).

1.2 Statement of the Problem

In Nigeria, the price of petrol plays a central role in determining the cost of living, given its widespread use by households, small businesses, and across the transportation and logistics sectors. Any increase in the price of petrol tends to have an immediate and far-reaching impact on the prices of goods and services. This effect is not only economic but also psychological, as petrol pricing carries a strong symbolic and political significance for many Nigerians. As operating costs rise, especially for small businesses, there is a corresponding increase in the prices of consumables, thereby fueling inflation and worsening the affordability of essential goods and services.

The recent removal of fuel subsidies has significantly exacerbated inflationary pressures in the country. According to the National Bureau of Statistics (2024), Nigeria's headline inflation rose from 28.9% in December 2023 to 29.9% in January 2024, and continued its upward trajectory to reach 34.19% by June 2024, marking the seventh consecutive monthly increase and the highest level recorded in nearly two decades. This inflationary trend has been largely driven by rising fuel and food prices, coupled with currency depreciation, and has deepened the cost-of-living crisis.

These dynamics have had a disproportionate impact on low-income households, who spend a greater share of their income on food, transportation, and other basic needs. The resulting decline in living standards has contributed to rising poverty and inequality. Although the removal of fuel subsidies is often justified on grounds of economic efficiency and fiscal sustainability, its implementation without robust mitigating measures has had severe social and economic consequences.

Given the complex interplay between subsidy removal, petrol price increases, inflation, and the cost of living, it is imperative to examine the extent to which fuel subsidy removal has contributed to the current inflationary trend in Nigeria. This study, therefore, investigates the impact of fuel subsidy removal on the level of inflation, with a view to informing more balanced and equitable policy responses.

1.3 Objectives of the Study

The main objective of this study is to practically examine the impact of fuel subsidy removal on the level of inflation in Nigeria, while the following are the specific objectives:

i. To examine the impact of fuel subsidy removal on the cost of living in Nigeria.

ii. To investigate the economic implications of fuel subsidy removal on the life of Nigeria's populace.
iii. To identify the benefits of fuel subsidy removal on the growth and development of the Nigerian economy.

1.4 Significance of the Study

This study will be of significance to the authorities, policymakers, government, academia, and the general public. The findings of this study will help the government and other agencies to carefully evaluate the impact of fuel subsidy removal on individuals, businesses, and the economy in general. The outcome of this study will also help the executive at both the federal and state levels to find an effective way of managing the impact by providing social credit, palliatives, and other economic relief programs to cushion the adverse effects of subsidy removal.

1.5 Organization of the Study

This study is structured into five parts. The first part is the introduction, while part two deals with the literature review. Part three is the study methodology, part four covers data analysis, and the final part covers the summary, discussion of findings, conclusion, and recommendations.

2.0 LITERATURE REVIEW

2.1 Conceptual Review of the Study

2.1.1 Concept of Subsidy

A subsidy, by definition, is a policy that artificially lowers the cost of goods and services for consumers or raises the prices for producers above the market levels. Subsidies manifest in several forms, while certain subsidies directly affect the pricing of the commodities. These encompass many forms of financial assistance, such as grants, tax deductions, exemptions, and price controls. External factors, such as restrictions that manipulate the market in favour of a specific sector of the economy, government-funded technology or research and development, might indirectly impact pricing or expenses (Adebiyi, 2011). According to research by the OECD, a subsidy is a government measure that reduces the cost of goods and services for consumers.

Subsidy is a form of financial assistance provided by the government to individuals, businesses, or institutions. Payment methods can be categorized as either direct, such as cash payments, or indirect, such as tax breaks. Subsidies are commonly provided to alleviate burdens and are generally regarded as being in the public's best interest, intended to advance social welfare or economic objectives. A subsidy is typically a financial assistance given directly or indirectly to an individual or business entity, Organisation for Economic Co-operation and Development (OECD), (2022).

Subsidies involve significant opportunity costs. For example, during the Great Depression, agricultural subsidies led to increased revenues for farmers and the hiring of additional labour, demonstrating their immediate economic impact. However, the true cost of these subsidies includes the foregone alternatives of how those public funds could have been used if not allocated to subsidies. Furthermore, the subsidies were taxable, meaning recipients had to pay taxes on the financial support received. Consumers also bore part of the burden, as food prices in grocery stores increased, further affecting household budgets.

Subsidies are typically used to provide targeted financial support to specific sectors of an economy. They help mitigate the challenges faced by struggling industries by easing financial pressures or encouraging innovation and development by funding emerging initiatives. Such sectors often suffer from inadequate support within the broader economy or may be disadvantaged by competition from foreign markets (Prateek, 2022). A subsidy is considered to exist when there is a financial contribution by a government or any public body within the territory of a member state. This includes direct transfers of funds (such as grants, loans, or equity infusions) or potential transfers of liabilities (such as loan guarantees). Subsidies are generally categorized into two broad types: **production subsidies**, which are more common in developed economies, and **consumer subsidies**, typically found in developing countries.

2.2 Theoretical Literature Review

There are some key frameworks, theories, and concepts that are often used to examine the implications and consequences of fuel subsidy removal. They are: Demand-Pull Inflation Theory; Cost-Push Inflation Theory; Keynesian Economic Theory; Political Economy Theory; Sustainable Development Theory; and Welfare Economics Theory.

2.2.1 Demand-Pull Inflation Theory

Demand-Pull Inflation occurred when the removal of fuel subsidies led to an increase in fuel prices that triggered a rise in the overall price level in the economy. As fuel becomes more expensive, the cost of production and transportation increases, causing producers to raise prices to maintain profit margins. This leads to a demand-pull inflationary spiral as consumers demand more goods at higher prices, it further driving up prices (Todaro and Smith, 2003).

2.2.2 Cost-Push Inflation Theory

Cost-Push Inflation comes to exist if fuel subsidy removal increases the cost of production inputs, particularly transportation and energy costs. As these costs rise, producers are forced to pass on the higher costs to consumers in the form of higher prices for goods and services. This cost-push inflation can persist until the economy adjusts to the new equilibrium price level (Todaro and Smith, 2003).

2.2.3 Keynesian Economic Theory

Keynesian economics emphasizes the role of government intervention in managing economic fluctuations. Fuel subsidy removal can be seen as a contractionary fiscal policy measure that reduces disposable income and aggregate demand in the short run. This theory examines how economic policies affect social equity and justice. Removing fuel subsidies can have significant implications for social equity. It is crucial to assess how the policy change affects different socio-economic groups and to design measures that ensure fair and equitable outcomes. This can lead to a decrease in economic growth and employment, at least in the initial stages of the policy change (Jhingan, 2012).

2.2.4 Political Economy Theory

This theory analyses how political and economic factors interact to shape policy outcomes. It considers the interests of various stakeholders and the political feasibility of implementing reforms. The removal of fuel subsidies involves a complex interplay of political interests, public opinion, and economic conditions. This framework helps to understand the challenges and strategies involved in pushing through subsidy reforms. The theory analyses the behaviour of politicians, bureaucrats, and interest groups in the political process. Fuel subsidy removal can be viewed as a politically contentious

decision that faces resistance from groups that benefit from the subsidies, such as fuel marketers, transporters, and consumers. Politicians may be reluctant to remove subsidies due to the potential for social unrest and loss of political support (Afonne, 2011).

2.2.5 Sustainable Development Theory

Sustainable Development theory suggests that removing subsidies can lead to a more efficient allocation of resources. By allowing market forces to set prices, the theory posits that resources will be used more effectively, leading to improved economic outcomes. Fuel subsidy removal can be aligned with the principles of sustainable development, which emphasize the need to balance economic growth, social welfare, and environmental protection. By reducing subsidies, governments can redirect resources to investments in renewable energy, public transportation, and social safety nets, promoting a more sustainable and equitable development path. This theory argues that subsidies distort market prices, leading to overconsumption and inefficiencies. Removing subsidies can potentially correct these distortions and align fuel prices with their true economic cost **(**McCulloch, 2021).

2.2.6 Welfare Economics Theory

Welfare economics focuses on how economic policies affect social welfare. It considers how changes in policy impact different groups within society. The removal of fuel subsidies can be analysed in terms of its effects on different socio-economic groups. Subsidy removal may lead to higher fuel prices, which can disproportionately affect low-income households. This framework can be used to assess the need for compensatory measures to protect vulnerable populations. Fuel subsidy removal can be analysed from the perspective of welfare economics, which examines the efficiency and equity implications of government policies. Subsidies can lead to inefficient resource allocation and disproportionately benefit higher-income groups. Removing subsidies can improve overall economic efficiency, but it may also have negative distributional consequences, particularly for low-income households (Atoyebi et al, 2012).

These theoretical frameworks provide a foundation for understanding the complex dynamics involved in fuel subsidy removal and its potential economic, social, and environmental implications in the Nigerian context.

2.3 Empirical Reviews of the Study

2.3.1 Simulating the Inflationary Effects of Fuel Subsidy Removal in Nigeria: Evidence from a Novel Approach

Against this backdrop, the present study attempts to simulate the effect of the removal of the petrol subsidy, as evidenced by increasing PMS prices, on Nigeria's inflation trajectory. We hypothesize that the removal of petroleum subsidies does not generate inflationary pressures and test this hypothesis using the innovative Dynamic Simulated Autoregressive Distributed Lag (DS-ARDL) framework. The framework helps to shed light on the sophisticated interplay between these two variables in the short run and the long run. Furthermore, we dichotomise the effect of subsidy removal on total inflation, rural inflation, and urban inflation to gain further insights.

Nigeria is not the only country to remove fuel subsidies. In 1997, Indonesia removed fuel subsidies after the Asian financial crisis. The removal of fuel subsidies increased the domestic price of fuel and suddenly ignited protests and violent riots, which occurred for weeks and forced the incumbent government to resign in 1998 (Chelminski, 2018). Dartanto (2013) examined the relationship between existing fuel subsidies and fiscal balance in Indonesia between 1998 and 2013 and found that removing 25 percent of fuel subsidies increased poverty by 0.259 percentage points while 100 percent removal of fuel subsidies and the reallocation of 50 percent of them to government spending decreased poverty by 0.277 percentage points. Fathurrahman et al. (2017) showed that the reallocation of subsidy payments to low-income households could slow down economic development but improve social welfare. However, removing fuel subsidies usually comes with the promise of using the money saved from the subsidy to undertake targeted reform. But in Indonesia, citizens find promises to replace fuel subsidies with targeted spending less credible and would resist the reform if they believe the government is corrupt (Kyle, 2018).

Other international studies have also analysed the effect of fuel subsidy removal. Harring et al. (2023) analysed cross-country attitudes towards fossil fuel subsidy removal and found that the public would have positive attitudes towards subsidy removal if there were optimal use of the saved fiscal revenues. In Malaysia, Chatri (2014) assessed the economy-wide effect of gas subsidy removal in the power sector and found that gas subsidy reduction led to an increase in the price of electricity, followed by a decline in demand for electricity by other economic sectors and a decrease in gross domestic product.

Antimiani et al. (2023) showed that fossil fuels are still highly subsidized in EU countries, and there are deliberations to remove fossil fuel subsidies and reuse the revenues to foster the technological transition to a sustainable and decarbonized EU economy. Sampedro et al. (2017) also argued that fossil fuel subsidy is a barrier to tackling climate change in the EU because they divert investment away from clean energy sources, and fossil fuel subsidies amounted to US$233 billion in 2014, which is four times the amount of subsidies allocated to promote renewable energy. However, they showed that fuel subsidy removal would give rise to only a small reduction in CO2 because people would switch from fuel to coal and gas. Nowag et al. (2021) suggest the use of state aid to phase out fossil fuel subsidies in the EU. Erickson et al. (2017) showed that the removal of tax incentives and other fossil fuel support policies could hasten the attainment of the G20 climate commitments.

Lin and Li (2012) examined the case of China and showed that fuel subsidy removal would generate negative externalities in China but would generate positive externalities in other world regions without subsidy removal. In a related study, Ouyang and Lin (2014) showed that the economic benefits of renewable energy subsidies were lower than the economic benefits of fossil fuel subsidies in China.

Another Nigerian empirical study shows that Atoyebi, Kadiri, Adekuyo, Ogundeji, and Ademola (2012) researched the impact of fuel subsidy removal on agricultural sector output. The study employed Spearman's rank correlation and observed the existence of a positive correlation between fuel subsidy removal and prices of agricultural output. This then implies that the removal of fuel subsidy would increase the budgetary allocation to the agricultural sector, thereby increasing agricultural production. The researchers thereby recommended that a cushioned effect should be introduced by the government through the use of savings from the fuel subsidy removal in the agricultural sector, and to fast-track the maintenance of the nation's refineries.

Opeyemi (2016) carried out research on the existence of a long-run effect of fuel subsidy reform on environmental quality in Nigeria for the period of 1970 – 2012 using the Johansen and the Granger Two-step co-integration procedure techniques. The study developed a three-case scenario including (i) a case of subsidy payment, (ii) a case of effective subsidy, and (iii) a case of no subsidy payment. The estimation result showed that the first and the last case scenarios do not significantly influence environmental quality.

Balouga (2012) assessed the political economy of the subsidy removal and found out that the fuel subsidies have not been significantly felt by the average Nigerian whom the subsidy was initiated. Adagunodo (2013) examined the removal of fuel subsidies in Nigeria as an economic necessity and a political dilemma. In his research, he concluded that if implemented correctly, the subsidy funds could lead to major development gains for the country. It will also create the space for Nigeria to finally develop refinery capacity and consequently increase its potential revenue from the oil sector, and create jobs.

2.4 Implications of the Review on the Current Study

There are several implications under review of the impact of fuel subsidy removal on the increased inflation of goods and services in Nigeria. The positive implications are that fuel subsidy removal would free up financial resources for other sectors of the economy, incentivize domestic refineries to produce more petroleum products, reduce Nigeria's dependence on imported fuel, increase employment, channel funds for the development of critical public infrastructure, reduce the budget deficit and generate a budget surplus in the near future, reduce government borrowing, curb corruption associated with fuel subsidy payments, increase competition, reinvigorate domestic refineries and reduce pressure on the exchange rate. The negative implications are that fuel subsidy removal may decrease economic growth in the short term, increase inflation, increase poverty, increase fuel smuggling, increase crime, increase the prices of petroleum products, and loss of jobs in the informal sector. Although the subsidy regime is useful for stabilizing the domestic economy, its effects on long-run growth, agents' welfare, and the government's fiscal operations require further investigation.

3.0 RESEARCH METHODS

3.1 Introduction

This chapter dealt with the methods employed in carrying out this study. It discussed research design, the population of the study, sample size, sampling technique, and procedures. It also discussed the instruments used in collecting needed data and the methods of processing and analysing collected data in the study.

3.2 Theoretical Framework

Many theories can explain the fuel subsidy remover in Nigeria, but for this study, "*Rosenstein-Rodan's Theory*" or "*Big Push*" and "*Classical Economic Theory*". These theories put forward by scholars and philosophers to help us understand the importance and significant impact of fuel subsidy removal on the level of inflation in Nigeria. The theories are;

3.2.1 "Rosenstein-Rodan's Theory" or "Big Push"

Rosenstein-Rodan's theory was propounded so as to gain more insight into the underlying logic, which this study built upon to drive home its major contention. The "Big Push" theory is one associated with Professor Paul Rosenstein-Rodan. It is understood "as a large comprehensive programme which is needed in the form of a minimum amount of investment to overcome the obstacles of development in an underdeveloped economy and to launch it on the path to progress" (Jhingan, 2012). The argument championed by this theory is likened to the taking off of an airplane from the ground. The airplane must assume a critical level of ground speed before it can become airborne. Without this critical ground speed, the airplane cannot take off. Likening it to a country's economy, a high minimum amount of investment must be initiated in order to launch the economy successfully on a development path.

The big push theory in the Nigerian context is that, removal of the fuel subsidy, which has engulfed more funds, would have been used in making investments in various sectors of the Nigerian economy. For instance, with the big push initiated and quantum investment made, more sectors of the economy will be created in a way that they are dependent on each other for the market. Hence, this theory lends support to the contention of this study in that, as the study champions, a removal of fuel subsidy can create huge financial resources that will engender a minimum quantum of investment required to positively turn around the Nigerian economy.

3.2.2 "Classical Economic Theory"

The theory is based on the classical economic theory of regulated monopolies, within which subsidies themselves are perceived as distorting the forces of demand and supply. The theory of regulated monopolies suggests that the subsidies flow from the producers (or marketers) to the consumers, there

is a transmission loss in which, appropriately, about half of the subsidies accrue to the few actors who are licensed in the industry and their agents. At each further point in the value chain, dissipation of the subsidy occurs before final transmission to the consumer. Such overindulgence includes a "dead weight" loss of any subsidy where no one benefits. The NNPC acts through seven major marketers listed as Mobil, NNPC Retail, Oando, Conoil, Total, AP, and MRS Oil. This block essentially captures 50 percent of the subsidies available in the industry.

3.3 Research Method and Research Design

The required research design for this research study will be a Survey Research Design. The survey design method was adopted in this study due to its usefulness in the study of non-observable events, such as sentiments, attitudes, preferences, or dispositions were involved. The survey design focused on investigation and data compilation from the selected study population, which permitted the respondents the chance to express their opinions on the variables or issues under the investigation. Finally, the method also gave the researcher an opportunity to look into the fundamental relationship connecting the dependent and independent variables.

3.4 Study Area and Population of Study

The Study Area of this study will be the Lagos Mainland Local Government Area (LGA) of Lagos State, Nigeria. It is located in central Lagos and has its headquarters at Ebute Metta. Lagos Mainland Local Government is one of the most densely populated areas in Lagos State, with a population of over 500,000 people according to the 2006 Nigerian census, with a mix of residential, commercial, and industrial areas. It is home to several major educational institutions such as the University of Lagos, Yaba College of Technology, and the Federal Science and Technology College.

The local government area is also known for its vibrant markets, including the popular Tejuosho Market, where a wide range of goods can be found, and the Lagos City Mall. Notable towns and areas within the Lagos Mainland local government include Otto/Iddo, Ebute-Metta, Oko-Baba, Olaleye Village, Oyadiran Estate, Iwaya, Makoko, Abule-Oja, Yaba, and Igbobi.

While the population of this study, according to Akuezuilo (2013) a research population is known as a well-defined collection of individuals or objects known to have similar characteristics. All

individuals or objects within a certain population usually have a common, binding characteristic or trait. The population for this study will be in total of 500,000 individual households who lived or work or reside in Lagos Mainland Local Government Area of Lagos state which comprises all levels of categories and professions from the parents, teachers, students, workers, lecturers, bankers, manufacturers and all individual reside in the study location involving male and female gender between the ages 18-55yrs and above participated in the study.

3.5 Sampling Size and Sampling Technique

As the population of this study is made up of individual households in the Lagos Mainland Local Government Area of Lagos state, a sample size of respondents will be selected. The sampling technique for this study will be a simple random sampling technique. This technique was adopted for this research in order to achieve proper representation of all the members of the population. This was adopted with the view of reducing the degree of bias and subjectivity of the respondents' opinions during the administration of the sample. It also enhanced the reliability and validity of the study. Therefore, the sample size was determined from a given population through Taro Yamane's (1967) formula. This formula was adopted because it is the most ideal method used due to its accurate determination of sample size. Thus;

$$n = \frac{N}{1 + N(e)^2}$$

Where;

n= Sample size

N = Population size

e = 0.05 (The degree of accuracy desired is usually at 0.05).

Therefore:

Given that N = 500,000 (as stated earlier),

The sample size is:

$$n = \frac{500{,}000}{1 + 500{,}000\ (0.05)^2}$$

$$n = \frac{500{,}000}{1+ 500{,}000\ (0.0025)}$$

$$n = \frac{500{,}000}{1+1250}$$

$$n = \frac{500{,}000}{1251}$$

n= 399.680 ~ **400,** Therefore, the desired Sample Size = 400.

3.6 Method of Data Collection and Instrument

The method of collecting useful information for this research work will be questionnaire. A questionnaire by definition is a list of question or statement to which individuals are asked to respond by answering the questions. It is used when factual information is needed. In this study, the questionnaire designed by the researcher was a highly structured questionnaire. It contains only relevant information for the study in order to make sure that an adequate number of respondents understand the relevant questions being asked. The research instrument, which is a questionnaire, will be divided into four (4) sections A-E. Section A will contain the Biodata of the respondents, while sections B, C, D, and E will comprise relevant research questions which the respondents are to react or respond to in a Likert Scale format.

3.7 Administration of Research Instrument

Administration of Research Instrument (questionnaire) among the selected sample size of four hundred (400) respondents' households will be randomly administered through both physical administration and online Google form Survey, where respondent will fill in their opinion as regards to the area of concern in the study. All members of the selected samples (respondents) will have their equal right either to participate in the survey or not.

3.8 Validity and Reliability of Research Instrument

3.8.1 Validity

A validity test was carried out in order to ensure that the research instrument measured what it was meant to measure. The method of measuring validity was the face, content, criterion, and construct validity. Face and content validity were deployed for this study through the judgment of the supervisor and experts in academic institutions. Content Validity was used to determine the appropriateness of the wording of the instrument and the objectives of the study, while face validity enables the researcher to assert if he had measured what he set out to measure.

3.8.2 Reliability

Reliability test ensures that the instrument measures consistently as required. It also shows the extent to which the researcher can confidently rely on the information obtained through the use of the instrument adopted to gather data for the research work. Consequently, the data collected was subjected to Cronbach Alpha reliability analysis to establish a test for the internal consistency of the items in the questionnaire. Hence, for reliability of the questionnaire, Cronbach Alpha Coefficient will be computed for the study with a ranged from 0.70, 0.81 to 0.90.

3.9 Method of Data Analysis

The data that obtained during the cause of this study will be analysed using descriptive statistics techniques while formulated hypotheses will be tested using Regression Analysis techniques, Pearson Correlation Coefficient and Chi-square test techniques used to find out whether there was a cause and effect relationship between the dependent and independent variables in the hypotheses at 0.05 significant level. Statistical Package for Social Sciences (SPSS 26.0 Version) will be used in analysing the data.

4.0 DATA ANALYSIS AND PRESENTATIONS OF RESULTS

4.1 Introduction

This chapter contains the data analysis, interpretation, and discussions of findings on the topic of study. The data analysis was a result of data collected from the respondents through an online

survey. The information or data gathered was used to compute descriptive statistics such as frequency count and percentages, presented in tables, while inferential statistics in line with the stated hypotheses were tested using linear regression, Pearson correlation coefficient, and Chi-square statistical test. The questionnaires were administered to 400 participants, of whom 367 were properly filled, and returned for the analysis. The analysis was done using SPSS Statistical software version 26.0, and the decision rule to accept a significant level for any relationship or differences tested is a $P< 0.05$ level of significance.

4.2 Demographic Information of the Respondents

Table 4.1 Demographic Information of the Respondents

Variables		Frequency	Percentage
Gender:	Male	216	58.9%
	Female	151	41.1%
	Total	**367**	**100.0%**
Age Category:	18-25yrs	136	37.1%
	26-35yrs	149	40.6%
	36-45yrs	47	12.8%
	46yrs and above	35	9.5%
	Total	**367**	**100.0%**
Occupation/Profession:			
	Trader	103	28.1%
	Banker	5	1.4%
	Teacher	10	2.7%
	Businessmen	112	30.5%
	Artisan	94	25.6%
	Student	43	11.7%
	Total	**367**	**100.0%**
Educational Qualification:			
	O/Level holder	32	8.7%
	OND/NCE holder	66	18.0%
	HND/BSc holder	178	48.5%
	Master holder	53	14.4%
	Other Qualification	38	10.4%
	Total	**367**	**100.0%**
Working Experience:			
	0-5yrs	116	31.6%
	6-10yrs	144	39.2%
	11-15yrs	62	16.9%

15yrs and above	45	12.3%
Total	**367**	**100.0%**

Source: Field Survey (2024). Analysis with SPSS 26.0

Table 4.1 shows the demographic information of the respondents involved, Age group, Gender, Occupation/Profession**,** Educational qualification, and Working experience of the respondents were participated in the research work. For the ***Gender*** participation, 216(58.9%) of the respondents were male, while 151(41.1%) of the respondents were female. The majority of the respondents who participated in the study were male.

The ***Age Category*** group of the respondents shows that 136(37.1%) of the respondents were between 18-25yrs, 149(40.6%) of them were between 26-35yrs, 47(12.8%) of them were between 36-45yrs, while 35(9.5%) of them were 46yrs and above. The majority of the respondents were between 26-35yrs of age.

Occupation/Profession of the respondents shows that 103(28.1%) of the respondents were Traders, 5(1.4%) of them were Bankers, 10(2.7%) of them were Teachers, 112(30.5%) of them were Businessmen, 94(25.6%) of them were Artisans, and 43(11.7%) of the respondents were Students. The majority of the respondents who participated in the research project were Teachers and Businessmen.

Educational Qualification of the respondents shows that 32(8.7%) of the respondents were O/Level holders, 66(18.0%) of them were OND/NCE holders, 178(48.5%) of them were HND/BSc holder, 53(14.4%) of them were Master holder, and 38(10.4%) of the respondents have Other Qualifications. The majority of the respondents who participated in the research project have an HND/BSc holder as their highest education qualification.

Working Experience of the respondents shows that 116(31.6%) of the respondents have 0-5yrs working experience, 144(39.2%) of them were have 6-10yrs working experience, 62(16.9%) of them have 11-15yrs working experience, and 45(12.3%) of them have 15yrs and above working experience. It revealed that majority of the respondents involved in the study have 6-10yrs working experience.

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4.3 Relevant Research Questions in the Study

Table 4.2 What are the Impact of Fuel-Subsidy Removal on the Cost of Living in Nigeria?

Impact of Fuel-Subsidy Removal on the Cost of Living	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
One of the most immediate and real effects of fuel-subsidy removal is the surge in fuel prices and costs of transportation, which subsequently impacts the prices of goods and services.	57 (15.5%)	130 (35.4%)	39 (10.6%)	68 (18.5%)	73 (19.9%)
Elimination of fuel subsidies has increased the inflationary pressures that have made life more difficult for common individuals to afford their basic necessities.	38 (10.4%)	129 (35.1%)	64 (17.4%)	74 (20.2%)	62 (16.9%)
The nation's high level of inflation has also reduced the consumer purchasing power, which has affected the standard of living of individuals and families in Nigeria.	69 (18.8%)	123 (33.5%)	90 (24.5%)	62 (16.9%)	23 (6.3%)
Small businesses tend to raise their prices to cover the increase in the cost of operation, which leads to higher costs of consumable goods.	108 (29.4%)	96 (26.2%)	60 (16.3%)	32 (8.7%)	71 (19.3%)
The inflationary pressures in Nigeria were largely driven by factors such as currency depreciation, rising food prices, and particularly recent economic policies and fuel subsidies removal	47 (12.8%)	120 (32.7%)	49 (13.4%)	100 (27.2%)	51 (13.9%)

Source: Field Survey (2024). Analysis with SPSS 26.0

One of the most immediate and real effects of fuel-subsidy removal is the surge in the fuel prices and costs of transportation, which subsequently impacts the prices of goods and services. (15.5%) of the

respondents strongly agree, (35.4%) agree, (10.6%) neutral, (18.5%) disagree, and (19.9%) strongly disagree. Majority of the respondents agree that immediate and real effect of fuel-subsidy removal is the surge in the fuel prices and costs of transportation which subsequently impacted on the prices of goods and services.

Elimination of fuel subsidies has increased the inflationary pressures that have made life more difficult for common individuals to afford their basic necessities. (10.4%) of the respondents strongly agree, (35.1%) agree, (17.4%) neutral, (20.2%) disagree, and (16.9%) strongly disagree. The majority of the respondents agree that the elimination of fuel subsidies has increased the inflationary pressures that make life more difficult for common individuals to afford their basic necessities.

The nation's high level of inflation has also reduced the consumer purchasing power, which has affected the standard of living of individuals and families in Nigeria. (18.8%) of the respondents strongly agree, (33.5%) agree, (24.5%) neutral, (16.0%) disagree, and (6.3%) strongly disagree. The majority of the respondents agree that the nation's high level of inflation has also reduced the consumer purchasing power, which has affected the standard of living of individuals and families in Nigeria.

Small businesses tend to raise their prices to cover the increase in the cost of operation, which leads to higher costs of consumable goods. (29.4%) of the respondents strongly agree, (26.2%) agree, (16.3%) neutral, (8.7%) disagree, and (19.3%) strongly disagree. The majority of the respondents strongly agree that small businesses tend to raise their prices to cover the increase in the cost of operation, which has led to higher costs of consumable goods.

The inflationary pressures in Nigeria were largely driven by factors such as currency depreciation, rising food prices, and, particularly, recent economic policies and fuel subsidies. (29.4%) of the respondents strongly agree, (12.8%) agree, (32.7%) neutral, (13.4%) disagree, and (27.2%) strongly disagree. The majority of the respondents agree that the inflationary pressures in Nigeria were largely driven by factors such as currency depreciation, rising food prices, and, particularly, recent economic policies and fuel subsidies removal.

Table 4.3: What are the Economic Implications of Fuel-Subsidy Removal on the Life of the Nigerian populace?

Economic Implications of Fuel-Subsidy Removal on the Life of Nigerians	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The removal of fuel subsidy has triggered a widely protests and social unrest, which has brought economic downturn for the period.	175 (47.7%)	72 (19.6%)	68 (18.5%)	33 (9.0%)	19 (5.2%)
There is an increase in the economic disparities between the poor and the rich segments of the population; disproportionately affected as a result of fuel subsidy removal.	66 (18.0%)	105 (28.6%)	95 (25.9%)	81 (22.1%)	20 (5.4%)
The government of the day faces a dual challenge of implementing reforms while at the same time maintaining social stability to mitigate the backlash of fuel subsidy removal.	205 (55.9%)	43 (11.7%)	57 (15.5%)	28 (7.6%)	34 (9.3%)
The surge or rise in the price of petrol following t removal of fuel subsidy may increase the smuggli of cheaper or less quality of fuel into Nigeria from neighbouring countries.	66 (18.0%)	117 (31.9%)	85 (23.2%)	79 (21.5%)	20 (5.4%)
Reduction in consumption of goods and services produced by firms due to a rise in prices as a result of subsidy removal would translate to weak consumer demand, which in turn decreases the economic output and slows the rate of economic growth in the short term	158 (43.1%)	68 (18.5%)	76 (20.7%)	23 (6.3%)	42 (11.4%)

Source: Field Survey (2024). Analysis with SPSS 26.0

The removal of fuel subsidy has triggered a widely protests and social unrest, which has brought economic downturn for the period. (47.7%) of the respondents strongly agree, (19.6%) agree, (18.5%) neutral, (9.0%) disagree, and (5.2%) strongly disagree. The majority of the respondents strongly agree that

the removal of fuel subsidy has triggered a widely protests and social unrest, which brought economic downturn for the period.

There is an increase in the economic disparities between the poor and the rich segments of the population, disproportionately affected as a result of fuel subsidy removal. (18.0%) of the respondents strongly agree, (28.6%) agree, (25.9%) neutral, (22.1%) disagree, and (5.4%) strongly disagree. The majority of the respondents agree that there is an increase in the economic disparities between the poor and the rich segments of the population, disproportionately affected as a result of fuel subsidy removal.

The government of the day faces a dual challenge of implementing reforms while at the same time maintaining social stability to mitigate the backlash of fuel subsidy removal. (55.9%) of the respondents strongly agree, (11.7%) agree, (15.5%) neutral, (7.6%) disagree, and (9.3%) strongly disagree. The majority of the respondents strongly agree that the government of the day faces a dual challenge of implementing reforms while at the same time maintaining social stability to mitigate the backlash of fuel subsidy removal.

The surge or rise in the price of petrol following the removal of fuel subsidy may increase the smuggling of cheaper or less quality of fuel into Nigeria from neighbouring countries. (18.0%) of the respondents strongly agree, (31.9%) agree, (23.2%) neutral, (21.5%) disagree, and (5.4%) strongly disagree. The majority of the respondents agree that the surge or rise in the price of petrol following the removal of fuel subsidy may increase the smuggling of cheaper or less quality of fuel into Nigeria from neighbouring countries.

Reduction in consumption of goods and services produced by firms due to a rise in prices as a result of subsidy removal would translate to weak consumer demand, which in turn decreases the economic output and slows the rate of economic growth in the short term. (43.1%) of the respondents strongly agree, (18.5%) agree, (20.7%) neutral, (6.3%) disagree, and (11.4%) strongly disagree. The majority of the respondents agree that the reduction in consumption of goods and services produced by firms due to a rise in prices as a result of subsidy removal would translate to weak consumer demand, which in turn decreases the economic output and slows the rate of economic growth in the short term.

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Table 4.4: What are the Benefits of Fuel-Subsidy Removal on the Growth and Development of Nigeria's Economy?

Benefits of Fuel-Subsidy Removal on the Growth and Development	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
With the removal of fuel subsidies, the government could channel the funds appropriately for the development of critical public infrastructure in the country.	62 (16.9%)	122 (33.2%)	75 (20.4%)	70 (19.1%)	38 (10.4%)
Constant government borrowing from the Central Bank of Nigeria (CBN) through the ways and means provision for debt repayment and subsidy payment could be reduced, as the subsidy has been removed.	112 (30.5%)	122 (33.2%)	44 (12.0%)	66 (18.0%)	23 (6.3%)
The removal of fuel subsidies would create more jobs for economic activities to thrive, as total deregulation of the downstream sector will allow more companies to import fuel at competitive rates, thereby hiring workers and creating more jobs.	106 (28.9%)	124 (33.8%)	35 (9.5%)	62 (16.9%)	40 (10.9%)
If the government allows domestic refineries to produce crude oil and other petroleum products, will it increase exportation of locally produced petroleum products while, in turn, conserve foreign exchange from imported fuel?	100 (27.2%)	124 (33.8%)	44 (12.0%)	46 (12.5%)	53 (14.4%)
Removal of fuel subsidy in Nigeria would support ongoing climate change mitigation efforts and increase Nigeria’s contribution to global greenhouse gas emissions by 2030.	130 (35.4%)	109 (29.7%)	44 (12.0%)	37 (10.1%)	47 (12.8%)

Source: Field Survey (2024). Analysis with SPSS 26.0

With the removal of fuel subsidies, the government could channel the funds appropriately for the development of critical public infrastructure in the country. (16.9%) of the respondents strongly agree, (33.2%) agree, (20.4%) neutral, (19.1%) disagree, and (10.4%) strongly disagree. The majority of the respondents agree that with the removal of fuel subsidies, the government could channel the funds appropriately for the development of critical public infrastructure in the country.

Constant government borrowing from the Central Bank of Nigeria (CBN) through the ways and means provision for debt repayment and subsidy payment could be reduced, as the subsidy has been removed. (30.5%) of the respondents strongly agree, (33.2%) agree, (12.0%) neutral, (18.0%) disagree, and (6.3%) strongly disagree. The majority of the respondents agree that constant government borrowing from the Central Bank of Nigeria (CBN) through the ways and means provision for debt repayment and subsidy payment could be reduced, as the subsidy has been removed.

The removal of fuel subsidies would create more jobs for economic activities to thrive, as total deregulation of the downstream sector will allow more companies to import fuel at competitive rates, thereby hiring workers and creating more jobs. (28.9%) of the respondents strongly agree, (33.8%) agree, (9.5%) neutral, (16.9%) disagree, and (10.9%) strongly disagree. The majority of the respondents agree that the removal of fuel subsidies would create more jobs for economic activities to thrive, as total deregulation of the downstream sector will allow more companies to import fuel at competitive rates, thereby hiring workers and creating more jobs.

If the government allows domestic refineries to produce crude oil and other petroleum products will increase exportation of locally produced petroleum products while, in turn, conserving foreign exchange from imported fuel. (27.2%) of the respondents strongly agree, (33.8%) agree, (12.0%) neutral, (12.5%) disagree, and (14.4%) strongly disagree. The majority of the respondents agree that if the government allows domestic refineries to produce crude oil and other petroleum products will increase exportation of locally produced petroleum products while, in turn, conserving foreign exchange from imported fuel.

Removal of fuel subsidy in Nigeria would support ongoing climate change mitigation efforts and increase Nigeria's contribution to global greenhouse gas emissions by 2030. (35.4%) of the respondents strongly agree, (29.7%) agree, (12.0%) neutral, (10.1%) disagree, and (12.8%) strongly disagree. The majority of the respondents strongly agree that the removal of fuel subsidies in Nigeria would support ongoing climate change mitigation efforts and increase Nigeria's contribution to global greenhouse gas emissions by 2030.

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Table 4.5: What are the Possible Solutions to the Effect of Fuel Subsidy Removal on the Nigerians?

Possible solutions to the effect of fuel subsidy removal on the Nigerians	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Available Cash Transfers directly to individual households will serve as financial assistance that will offset the increased cost of living resulting from the removal of fuel subsidies.	144 (39.2%)	114 (31.1%)	24 (6.5%)	42 (11.4%)	43 (11.7%)
Tax incentives on food importation can mitigate the socio-economic impact of the subsidy removal that caused food inflation in an economy.	137 (37.3%)	107 (29.2%)	24 (6.5%)	52 (14.2%)	47 (12.8%)
An increase in minimum wage will increase the purchasing power of individual households to better absorb the higher fuel costs resulting from subsidy removal.	147 (40.1%)	139 (37.9%)	24 (6.5%)	24 (6.5%)	33 (9.0%)
Developed Renewable Energy and Compressed Natural Gas (CNG) as an alternative to power supply and electrification of vehicles to reduce the dependency on fuel imports and vulnerability to fuel price fluctuations.	123 (33.5%)	129 (35.1%)	24 (6.5%)	33 (9.0%)	58 (15.8%)
Locally refined crude oil could eliminate the need for petroleum subsidies and make the market price affordable for the masses.	133 (36.2%)	68 (18.5%)	554 (14.7%)	60 (16.3%)	52 (14.2%)

Source: Field Survey (2024). Analysis with SPSS 26.0

Available Cash Transfers direct to individual households will serve as financial assistance that will offset the increased cost of living resulting from the removal of fuel subsidies. (39.2%) of the respondents strongly agree, (31.1%) agree, (6.5%) neutral, (11.4%) disagree, and (11.7%) strongly disagree. The majority

of the respondents strongly agree that available cash transfers direct to individual households will serve as a financial assistance that will offset the increased cost of living resulting from the removal of fuel subsidies.

Tax incentives on food importation can mitigate the socio-economic impact of subsidy removal that caused food inflation in an economy. (37.3%) of the respondents strongly agree, (29.2%) agree, (6.5%) neutral, (14.2%) disagree, and (12.8%) strongly disagree. The majority of the respondents strongly agree that Tax incentives on food importation can mitigate the socio-economic impact of subsidy removal that caused food inflation in an economy.

An increase in minimum wage will increase the purchasing power of individual households to better absorb the higher fuel costs resulting from subsidy removal. (40.1%) of the respondents strongly agree, (37.9%) agree, (6.5%) neutral, (6.5%) disagree, and (9.0%) strongly disagree. The majority of the respondents strongly agree that an increase in minimum wage will increase the purchasing power of individual households to better absorb the higher fuel costs resulting from subsidy removal.

Developed Renewable Energy and Compressed Natural Gas (CNG) as an alternative to power supply and electrification of vehicles to reduce the dependency on fuel imports and vulnerability to fuel price fluctuations. (33.5%) of the respondents strongly agree, (35.1%) agree, (6.5%) neutral, (9.0%) disagree, and (15.8%) strongly disagree. The majority of the respondents agree that developing renewable energy **and** Compressed Natural Gas (CNG) as an alternative to the power supply and the electrification of vehicles to reduce the dependency on fuel imports and vulnerability to fuel price fluctuations.

Locally refined crude oil could eliminate the need for petroleum subsidies and make the market price affordable for the masses. (36.2%) of the respondents strongly agree, (18.5%) agree, (14.7%) neutral, (16.3%) disagree, and (14.2%) strongly disagree. The majority of the respondents agree that locally refined crude oil could eliminate the need for petroleum subsidies and make the market price affordable for the masses.

4.5 Model Specification

To investigate the significant impact of fuel subsidy removal on the level of inflation in Nigeria. The models for this study are stated below;

$Y = C + \beta_1 X_1 + \beta_2 X_2 + \ldots. + \beta_i X_i + \mu_i$

Where,

Y = Dependent Variable

C = Intercept

β_1 = Slope of the independent variables

X_1 = Independent Variable and

μ = Error term

The general representation of the models is given in the equation of the analysis below:

4.6 Testing of Research Hypotheses

The following hypotheses were tested at 5% level of significance in this study:

4.6.1 Hypothesis One

H_0: Fuel-subsidy removal does not have a significant impact on the Cost of Living in Nigeria.

H_1: Fuel-subsidy removal has a significant impact on the Cost of Living in Nigeria.

Model Representatives (1)

$CLI = \beta_0 + \beta_1 \log (FSR) + \mu_i$

Where: CLI = Cost of Living (dependent variable)

FSR = Fuel-Subsidy Removal (independent variable)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.805[a]	.647	.646	.76324	1.770

a. Predictors: (Constant), Fuel-subsidy Removal.

b. Dependent Variable: Cost of Living.

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ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	390.241	1	390.241	669.900	.000[b]
	Residual	212.626	365	.583		
	Total	602.866	366			

a. Dependent: Cost of Living.

b. Predictors: (Constant), Fuel-subsidy removal.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.826	.092		8.946	.000
	Fuel-Subsidy Removal.	.738	.029	.805	25.882	.000

a. Dependent Variable: Cost of Living.

Interpretation of the coefficients of determination

The analysis above shows the linear regression analysis as we have the independent variable as Fuel-Subsidy Removal (FSR) regressed against the dependent variable, Cost of Living and Inflation level (CLI). From the table above, the estimation results show that the variable "Fuel-Subsidy Removal" has significant impact on the "Cost of Living and Inflation level*"* at the 5% alpha level of significant while the co-efficient of determination R-squared 0.647 in the model of the regression analysis accounted for 64.7% changes on the Cost of Living and Inflation level determined by the Fuel-Subsidy Removal. It further showed the un-standardized coefficient of (FSR/β = 0.738), indicating that a unit increase in Fuel-Subsidy Removal led to a 73.8% increase in Cost of Living and Inflation level at the (P-value of 0.0000 < 0.05%). It tells us the model is of good fit, that the independent variable, to a very large degree, explains the changes in the

dependent variable. It also shows that the explanatory variable has a relationship at the overall level of significance.

The Durbin-Watson statistic is a number that tests for autocorrelation in the residuals from a statistical regression analysis. The Durbin-Watson statistic is always between 0 and 4. A value of 2 means that there is no autocorrelation in the sample. Values approaching 0 indicate positive autocorrelation, and values toward 4 indicate negative autocorrelation. From the estimation, Durbin Watson statistics is (1.770) approximately given Durbin-Watson statistic of 2, which implies that there is no serial correlation or autocorrelation in the residual regression value.

Also, the F-statistic value is (669.900) with a probability or significance level of 0.000 shows the overall analysis of variance of the model, and the result indicates that the explanatory variable is fundamental in explaining the variation in the dependent variable.

In conclusion, since at the overall level, fuel-subsidy removal is explaining significant changes in the cost of living and inflation level, therefore null hypothesis (**H_0**) that says *Fuel-subsidy removal does not have a significant impact on the Cost of Living in Nigeria* is rejected, while the alternative (**H_1**) hypothesis is accepted.

Hypothesis Two

H_0: Economic implications of fuel-subsidy removal do not affect the life of the Nigerian populace.

H_1: Economic implications of fuel-subsidy removal affect the life of the Nigerian populace.

Model Representatives (2)

$LNP = \beta_0 + \beta_1 \log (EFSR) + \mu_i$

Where: LNP = Life of the Nigerian Populace (dependent variable)

EFSR = Economic Implications of Fuel-Subsidy Removal (independent variable)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.317[a]	.301	.298	1.00941	2.024

a. Predictors: (Constant), Economic implications of Fuel-Subsidy Removal.

b. Dependent Variable: Life of the Nigerian populace.

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ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.603	1	41.603	40.831	.000[b]
	Residual	371.902	365	1.019		
	Total	413.504	366			

a. Dependent Variable: Life of Nigeria Populace.

b. Predictors: (Constant), Economic implications of Fuel-Subsidy Removal.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.386	.178		13.383	.000
	Economic Implications of Fuel-Subsidy Removal.	-0.299	.047	.317	6.390	.000

a. Dependent Variable: Life of the Nigerian populace.

Interpretation of the coefficients of determination

The analysis above shows the linear regression analysis as we have the independent variable as Economic Implications of Fuel-Subsidy Removal (EFSR), regressed against the dependent variable, Life of Nigeria Populace (LNP). From the table above, the estimation results show that the variable "Economic implications of Fuel-Subsidy Removal" has significant impact on the "Life of Nigeria Populace*"* at the 5% alpha level of significant while the co-efficient of determination R-squared 0.301 in the model of the regression analysis accounted for 30.1% changes on the Life of Nigeria Populace determined by the Economic implications of Fuel-Subsidy Removal. It further shows the unstandardized coefficient of (EFSR/β = -0.299), indicating that a unit increase in Economic Implications for Fuel-Subsidy Removal led to a 29.9% decrease in Life of

the Nigerian Populace at the (P-value of 0.0000 < 0.05%). It tells us the model is of good fit, that the independent variable, to a very large degree, explains the changes in the dependent variable. It also shows that the explanatory variable has a relationship at the overall level of significance.

The Durbin Watson statistics shows (2.024), implies that there is no serial correlation or autocorrelation in the residual regression value while the F-statistics value is (40.831) with a probability or significant level of 0.000 shows the overall analysis of variance of the model and result indicates that explanatory variable is fundamental explaining the variation in the dependent variable.

In conclusion, since at the overall level, economic implications of fuel-subsidy removal is explaining significant changes in the life of Nigeria populace, therefore null hypothesis (**H_0**) that says, "*Economic implications of fuel-subsidy removal does not affect the life of Nigeria populace"*, is rejected while alternative (**H_1**) hypothesis accepted.

Hypothesis Three

H_0: There are no benefits of fuel-subsidy removal on the growth and development of the Nigerian economy.

H_1: There are benefits of fuel-subsidy removal on the growth and development of the Nigerian economy.

Model Representatives (3)

$GD = \beta_0 + \beta_1 \log (BFSR) + \mu_i$

Where: GD = Growth and Development (dependent variable)

BFSR = Benefits of Fuel-Subsidy Removal (independent variable)

Correlations

		Benefits of Fuel-Subsidy Removal	Growth And Development
Benefits of Fuel-Subsidy Removal	Pearson Correlation	1	.409**
	Sig. (2-tailed)		.000
	N	367	367
Growth And Development	Pearson Correlation	.409**	1
	Sig. (2-tailed)	.000	
	N	367	367

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**. Correlation is significant at the 0.01 level (2-tailed).

The table above shows the Pearson's product-moment correlation Coefficient (PMCC) result shows the relationship between the Benefits of Fuel-Subsidy Removal and Growth and Development. The correlation is significant at the **0.05** level. The (**) highlights that the Probability of this correlation coefficient is not occurring by chance alone but also less than **0.05** (5%). So, the correlation coefficient is therefore statistically significant at a 95% confidence level. The result above shows that there is a correlation between the Benefits of Fuel-Subsidy Removal and Growth and Development Cost at **r = (0.409**).** Implies that as the Benefits of Fuel-Subsidy Removal increase, Growth and Development also increase by 40.9%. As a result of this, the stated hypothesis that says "*There are benefits of fuel-subsidy removal on the growth and development of the Nigerian economy"* is accepted, while the null hypothesis is rejected.

Hypothesis Four

H_0: There are no possible solutions to the effect of fuel subsidy removal on the Nigerians.

H_1: There are possible solutions to the effect of fuel subsidy removal on the Nigerians.

Cross tabulation

			Available Cash Transfer direct to individuals households will serve as a financial assistance that will offset the increased cost of living resulting from the removal of fuel subsidies.					Total
			Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
Locally refining our crude oil could eliminate the need for	Strongly Agree	Observed Count	55	45	9	5	19	133
		Expected Count	52.2	41.3	8.7	15.2	15.6	133.0
	Agree	Observed Count	34	19	10	5	0	68

petroleum subsidies and make the market price affordable for the masses.		Expected Count	26.7	21.1	4.4	7.8	8.0	68.0
	Neutral	Observed Count	30	10	0	14	0	54
		Expected Count	21.2	16.8	3.5	6.2	6.3	54.0
	Disagree	Observed Count	25	20	0	5	10	60
		Expected Count	23.5	18.6	3.9	6.9	7.0	60.0
	Strongly Disagree	Observed Count	0	20	5	13	14	52
		Expected Count	20.4	16.2	3.4	6.0	6.1	52.0
Total		Observed Count	144	114	24	42	43	367
		Expected Count	144.0	114.0	24.0	42.0	43.0	367.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	98.936[a]	16	.000
Likelihood Ratio	133.864	16	.000
Linear-by-Linear Association	20.556	1	.000
N of Valid Cases	367		

a. 4 cells (16.0%) have expected count less than 5. The minimum expected count is 3.40.

The Statistical Package for Social Science (SPSS) was used to run the analysis. From the chi-square analysis of the research hypothesis one, it was observed that the chi-square calculated value of 98.936 is greater than the chi-square tabulated value of 26.296 at 16 degrees of freedom, with the P-value of (0.000 asymptotic sig. level) less than the 0.05 significant level. Based on the above result stated, the null research hypothesis, which says "*There are no possible solutions to the effect of fuel subsidy removal on the Nigerians*", was rejected, while the alternative hypothesis is thus accepted

5.0 DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 DISCUSSION OF FINDINGS

The discussion of findings from the outcome of the analysis in the previous chapter provides information on the impact of fuel subsidy removal on the level of inflation in Nigeria. The findings were discussed based on each variable in line with the research objectives that were used to elicit information from the respondents in the course of the study. The findings are;

- It was found that *fuel-subsidy removal has significant impact on the cost of living and inflation level in Nigeria* as the un-standardized coefficient of ($\beta = 0.738$), indicated that 1 unit increase in Fuel-Subsidy Removal led to 73.8% increase in Cost of Living and Inflation level in Nigeria at the (P-value of $0.000 < 0.05$) alpha level of significant and this was in line with the 33.5% majority of the respondents asserted and agreed that the nation's high level of inflation has reduced the consumer purchasing power which affected the standard of living of an individuals and families in Nigeria. This result is also supported by Dartanto (2013) examined the relationship between existing fuel subsidies and fiscal balance in Indonesia, and found that removing 25 percent of fuel subsidies increased poverty by 0.259 percentage points. Also by Chatri (2014) from Malaysia assessed the economy-wide effect of gas subsidy removal in the power sector, which found that gas subsidy reduction led to an increase in the price of electricity, followed by a decline in demand for electricity by other economic sectors and a decrease in gross domestic product.
- Our second objective also found that *there are economic implications of fuel-subsidy removal on the life of Nigeria populace* shown that un-standardized coefficient of ($\beta = -0.299$), indicated that 1 unit increase in economic implications fuel-subsidy removal led to 29.9% decrease in quality life of Nigeria populace at the (P-value of $0.0000 < 0.05\%$). The outcome was in line with the 175 (47.7%) majority of the respondents strongly agreed that the removal of fuel subsidy has triggered a widely protests and social unrest which

brought economic downturn for the period and also in support of the study by Fathurrahman et al. (2017) reported that the reallocation of subsidy payments to low-income households could slow down economic development but improve social welfare.

- The outcome of the third objective reported that *there are benefits of fuel-subsidy removal on the growth and development of the Nigeria economy,* as indicated by the Pearson's correlation coefficient of r = (0.409**), implies that as benefits of fuel-subsidy removal increases by 40.9%, growth and development of Nigeria economy also increases and this was in line with 124 (33.8%) majority of the respondents agreed that, If government allows domestic refineries to produce crude oil and other petroleum products will increase exportation of locally produced petroleum products while in turn conserve foreign exchange from imported fuel. This finding was very much supported by Adagunodo (2013) in his study, which examined the removal of fuel subsidies in Nigeria. He concluded that if implemented correctly, it will create the space for Nigeria to finally develop refinery capacity and consequently increase its potential revenue from the oil sector, and create jobs.
- And the last objective discovered from the Chi-square analysis of the research hypothesis shows that *there are possible solutions to the effect of fuel subsidy removal on the Nigerians* which was in line with 144 (39.2%) majority of the respondents strongly agreed that Available Cash Transfer direct to individual households will serve as a financial assistance that will offset the increased cost of living resulting from the removal of fuel subsidies.

5.2 CONCLUSION

In conclusion, this study investigates the impact of fuel subsidy removal on the level of inflation in Nigeria. The outcome of the study shows that fuel-subsidy removal has significant impact on the cost of living and inflation level in Nigeria, indicated that as 1 unit of subsidy removal increase, cost of living and inflation level increases by 73.8% which asserted to by the majority respondents that the nation's high level of inflation has reduced the consumer purchasing power which affected the standard of living of an individuals and families in the country. More so, it was reported that there are economic implications of fuel-subsidy removal on the life of Nigeria populace strongly agreed that the removal of fuel subsidy has triggered a widely protests and social unrest which brought economic downturn for the period.

However, the study found that there are benefits of fuel-subsidy removal on the growth and development of the Nigeria economy which widely accepted that if government allows domestic refineries to produce crude oil and other petroleum products will increase exportation of locally produced petroleum products which in turn conserve foreign exchange from imported fuel and increase revenue and create more jobs. Finally, the study concludes that there are possible solutions to the effect of fuel subsidy removal on the Nigerians which suggested that Available Cash Transfer to the individual's households will serve as a financial assistance that will cushion the increases in the cost of living resulting from the removal of fuel subsidies.

5.3 RECOMMENDATIONS

Given this, the following recommendations are put forward to support the literature reviews and findings in this study;

i. It is therefore recommended that the financial resources saved from fuel subsidy removal can be channelled to the development of critical public infrastructure, which will reduce the budget deficit and generate a budget surplus in the near future, reducing government borrowing and pressure on the exchange rate.
ii. The removal of fuel subsidies could also incentivize domestic refineries to produce more petroleum products, which will reduce Nigeria's dependence on imported fuel and increase employment in the country.
iii. Government should carefully consider the impact of removing fuel subsidy on citizens and provide palliatives and other welfare-enhancing initiatives to cushion the effect on individuals, households, and firms.
iv. The government should consider increasing the national minimum wage further, increasing the salary of civil servants, and introducing monetary palliatives to help the poor cope with the effects of fuel subsidy removal.
v. Other social protection measures and social safety nets, such as unemployment benefits and cash transfers, can be adopted.
vi. The government of the day may also need to dialogue with labour unions more to find a middle ground solution that meets the government's needs and the needs of the people.

vii. It is also important to introduce economic reforms that will lead to a more inclusive society, which at the end, the success of the fuel subsidy removal will depend on how the government uses the saved funds from the removal of the fuel subsidy and what they have achieved with it.

Bibliography

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.

Adebiyi, O. (2011). "*Fuel Subsidy: The True Story*": 23 Next. Available Online At: Http://234 Next.Com/Csp/Cms/Sites/Next/Home/5764 67-1822/Fuel Subsidy the true Story.Csp.

Afonne. E. (2011). Politics of Oil Subsidy: The cartel's fraudulent Acts. Nigerian News world Oct14 vol. 15 N0.634

Akinola, A. O. (2018). *Oil Subsidy Administration in Nigeria*. Globalization, Democracy and Oil Sector Reform in Nigeria, 231-265.

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

Akuezuilo, E.O. (2013). *Research Methodology and Statistics*. NUC/NBTE/NCE Minimum Standard. NuelCenti (Nig) Publishers.

Antimiani, A., Costantini, V., & Paglialunga, E. (2023). "*Fossil fuels subsidy removal and the EU carbon neutrality policy*". Energy Economics, 119, 106524.

Atoyebi, K. O., Kadiri, K. I., Adekuyo, F. O., Ogundeji, M. O. and Ademola, I. (2012). Fuel Subsidy, Agricultural Sector, Petroleum and Budgetary Allocation. *International Journal of Humanities and Social Sciences Invention*, 1(1), Australia; New South Wales Research Centre, (NSWRCA) Vol.05 No.04

Bagirov, M., & Mateus, C. (2019). "*Oil prices, stock markets and firm performance: Evidence from Europe*". International Review of Economics & Finance, 61, 270-288.

Balouga, J. (2012). "*The political economy of oil subsidy in Nigeria*". International Association for Energy Economics Second Quarter. 7.

Bazilian, M., & Onyeji, I. (2012). "*Fossil fuel subsidy removal and inadequate public power supply*": Implications for businesses. Energy Policy, 45, 1-5.

Central Bank of Nigeria (2023). *Quarterly Statistical Bulletin*. Available at: https://www.cbn.gov.ng/documents/QuarterlyStatbulletin.asp

Chatri, F. (2014). "*Economy-Wide Effects of Fuel Subsidy Removals in Malaysia*". In Proceedings of the 9th Malaysian National Economic Conference, Kuala Terengganu, Terengganu.

Chelminski, K. (2018). "*Fossil fuel subsidy reform in Indonesia*". The politics of fossil fuel subsidies and their reform, 193-211.

Couharde, C., & Mouhoud, S. (2020). Fossil fuel subsidies, income inequality, and poverty: Evidence from developing countries. *Journal of Economic Surveys, 34(5), 981-1006*.

Dartanto, T. (2013). "*Reducing fuel subsidies and the implication on fiscal balance and poverty in Indonesia*": A simulation analysis. Energy policy, 58, 117-134.

Erickson, P., Down, A., Lazarus, M., & Koplow, D. (2017). "*Effect of Subsidies to Fossil Fuel Companies on United States Crude Oil Production*". Nature Energy, 2(11), 891-898.

Evans, O., Nwaogwugwu, I., Vincent, O., Wale-Awe, O., Mesagan, E., & Ojapinwa, T. (2023). "*The socio-economics of the 2023 fuel subsidy removal in Nigeria*". BizEcons Quarterly, 17, 12-32.

Fathurrahman, F., Kat, B., & Soytaş, U. (2017). "*Simulating Indonesian fuel subsidy reform: a social accounting matrix analysis*". Annals of Operations Research, 255, 591-615.

Gaffey, C. (2016). "*Nigeria Removes Fuel Subsidy, Prompts Mixed Reactions*". Newsweek.

Gupte, E. (2020). "*Nigeria's President Confirms Removal of Gasoline Subsidies*".

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.

Idrisu, B. (2020). "*Fossil Fuel Subsidy Reform for Sustainable Development in Nigeria*": The role of Renewable Energy Diffusion. University of Delaware.

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*.

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

IISD (International Institute for Sustainable Development), (2019). "*Fossil Fuel to Clean Energy Subsidy Swaps: How to Pay for an Energy Revolution*", GSI Report.

IMF (2013). "*Case Studies on Energy Subsidy Reform: Lessons and Implications*", IMF Policy Paper.

Jhingan, M. L. (2012). "*The economics of development and planning*". 40th Edition. Delhi: Vrinda.

Kyle, J. (2018). "*Local corruption and popular support for fuel subsidy reform in Indonesia*". Comparative Political Studies, 51(11), 1472-1503.

Lin, B., & Li, A. (2012). "*Impacts of Removing Fossil Fuel Subsidies on China*": How Large and How to Mitigate? Energy, 44(1), 741-749.

Majekodunmi, A. (2013). The political economy of fuel subsidy removal in Nigeria. *International Journal of Management and Social Sciences Research*, 2(7), 76-81.

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.

Montevirgen, K. (2024). "*Inflation and Economics*". The Editors of Encyclopaedia Britannica; *Article History* Britannica Money.

Michael Adewale (2023). *Effects of Complete Fuel Subsidy removal on the economy & Logistics Companies in Nigeria*.

NBS (2024). "*National Bureau of Statistics*". CPI and Inflation Report April 2024. https://nigerianstat.gov.ng

Nowag, J., Mundaca, L., & Åhman, M. (2021). "*Phasing out Fossil Fuel Subsidies in the EU? Exploring the role of state aid rules*". Climate Policy, 21(8), 1037-1052.

Nwachukwu, Maxwell Umunna, Chike Mba, Harold, Jiburum, Uloma, Erega Okosun, Andrew, 2013, "*Empirical Analysis of Fuel Price and Subsidy Reform in Nigeria*". OPEC Energy Review 37 (3), 314–326.

Odewale Abayomi **(**2023**). "***Consequences of fuel subsidy removal on Nigeria's balance of trade*". News, June 28, 2023. A lecturer at Kaduna Polytechnic and a Free Trade Fellow at Ominira Initiative.

OECD (2022). "*Track Fossil-Fuel Subsidies and other Support Measures with Our Interactive Database*" Organisation for Economic Co-operation and Development (OECD) and the International Institute for Sustainable Development (IISD).

Omitogun, O., Longe, A. E., Muhammad, S., & Adekomi, I. J. (2021). "*Environmental Impact of Economic Growth and Fuel Subsidy in Nigeria*". Economic Insights-Trends & Challenges, (1).

Olujobi, O. J. (2021). "*Deregulation of the Downstream Petroleum Industry*": An overview of the Legal Quandaries and Proposal for Improvement in Nigeria. Heliyon, 7(4), e06848.

Okigbo, P. O., and Enekebe, D. (2011), "*Nigeria: Fuel Subsidy Removal- Achieving the Optimal Solution*", Nextier Policy Brief, December 15, 2011.

Okonjo-Iweala, N., 2011, "*Brief on Fuel Subsidy*", December 6, 2011.

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*.

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.

Prateek, A. (2022). "*Subsidies,*" Intelligent Economist. Last updated: February 2, 2022.

Raji, A. (2018). *Fuel subsidy removal and the lives of rural dwellers in Nigeria (Doctoral dissertation*, Department of Sociology, Faculty of Social Sciences, University of Ilorin, Ilorin, Nigeria.

Sampedro, J., Arto, I., & González-Eguino, M. (2017). *Implications of Switching Fossil Fuel Subsidies to Solar*: A case study for the European Union. Sustainability, 10(1), 50.

Shagali, A. A., & Yusuf, R. (2022). Political Economy of Fuel Subsidy Removal in Nigeria: Issues, Challenges and the Way Forward. *Zamfara Journal of Politics and Development, 3(3), 12-12.*

Sotunde A. (2024). *Effects of Fuel Subsidy Removal on Nigerian Masses.* From the Department of Mass Communication, Veritas University Bwari, Abuja.

Todaro, M.P., and Smith, S.C. (2003). Economic Development. New York: