



THE EFFECT OF FUEL SUBSIDY REMOVAL ON THE STANDARD OF LIVING IN NIGERIA: A CASE STUDY OF CROSS RIVER STATE, NIGERIA

ABSTRACT

In situations of difficulty and hardship occasion by the removal of fuel subsidy in Nigeria, this study attempt to investigate the effect of fuel subsidy removal on the standard of living in Nigeria, with a specific focus on Cross River State. Using a questionnaire-based survey, the research examines the impact of subsidy removal on household budgets and expenditure patterns, the post-subsidy dynamics of consumer prices for essential commodities, and the accessibility of critical services such as healthcare and education. The findings reveal significant shifts in household financial management, increased consumer prices, and challenges in accessing essential services, underscoring the multifaceted implications of subsidy removal. The study provides recommendations for policymakers to address the adverse effects while leveraging potential benefits to improve the overall standard of living in Cross River State.

Keywords; *The Effect, Fuel Subsidy, Standard of Living and Nigeria;*

INTRODUCTION

Subsidy is a benefit given to an individual, business, or institution, usually by the government. It can be direct (such as cash payments) or indirect (such as tax breaks). The subsidy is typically given to remove some type of burden, and it is often considered to be in the overall interest of the public, given to promote a social good or an economic policy.

In recent years, the discourse surrounding fuel subsidy removal in Nigeria has become a focal point of economic analysis, drawing the attention of policymakers and economists alike. Nigeria's economy, heavily reliant on oil revenues, has experienced both booms and busts driven by fluctuations in global oil prices. While the petroleum sector has historically been the backbone of economic growth and government revenue, its dominance has also exposed the economy to inherent volatility, with oil price shocks leading to significant disruptions in fiscal planning and macroeconomic stability. Fuel subsidies, as a mechanism to shield consumers from the unpredictability of oil price fluctuations, have played a role in stabilizing domestic fuel prices and mitigating inflationary pressures. Nigeria, as an oil-dependent economy, has long relied on petroleum subsidies to ensure affordable fuel prices for its citizens. However, in recent years, the Nigerian economy has faced numerous challenges including the rising rate of inflation, unemployment, and increase in poverty rates.

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Against this backdrop, the decision to remove petroleum subsidy has had a significant impact on the general standard of living, directly affecting the people's welfare and the country's economy(Onuoha 2023).

Nigeria's experience with fuel subsidies dates back to the 1970s, following the nationalization of the petroleum industry and the subsequent boom in oil revenues. With the emergence of oil as a significant source of government revenue, successive administrations introduced fuel subsidies as a means to provide affordable energy to the populace. These subsidies were initially viewed as a social welfare measure, aimed at alleviating the burden of high fuel prices on consumers, particularly in a country where transportation and energy costs play a pivotal role in everyday life. However, the sustainability of fuel subsidies came into question as Nigeria grappled with economic challenges, including fiscal deficits, inflationary pressures, and macroeconomic instability. The oil price shocks of the 1980s and 1990s exposed the vulnerabilities of Nigeria's oil-dependent economy, highlighting the need for reforms to enhance fiscal sustainability and reduce reliance on volatile oil revenues. Despite these challenges, fuel subsidies persisted as a politically sensitive issue, with successive administrations hesitant to implement comprehensive reforms due to concerns about social unrest and political backlash. The discourse on fuel subsidy removal gained renewed momentum in the wake of the global financial crisis of 2008 and the subsequent decline in oil prices. With government revenues dwindling and fiscal pressures mounting, the need for subsidy reform became increasingly urgent. The administration of President Goodluck Jonathan attempted to implement fuel subsidy removal in 2012, triggering nationwide protests and social unrest. The protests, known as the "Occupy Nigeria" movement, underscored the deep-seated opposition to subsidy removal and the complex socio-economic dynamics at play.

"The fuel subsidy is gone," said Nigeria President Bola Tinubu, in his inaugural address on 29 May 2023. "The subsidy can no longer justify its ever-increasing costs in the wake of drying resources. We shall instead rechannel the funds into better investment in public infrastructure, education, health care and jobs that will materially improve the lives of millions."(France 24). The president's pronouncement prompted a spike in the pump price of petrol from about ₦780 a gallon (approximately \$1) to ₦2160 a gallon (\$2.80), driving up the overall cost of living in the country. The president remarks has endangered several hardship on the citizenry, of which Cross River State is part of.

Cross River State, located in the southeastern region of Nigeria, is renowned for its diverse cultural heritage, natural beauty, and economic potential. With a population exceeding 3 million people, Cross River State boasts a rich tapestry of ethnic groups, including the Efik, Atam, and Bekwarra, among others. The state's capital, Calabar, serves as a major economic hub and cultural center, attracting tourists and investors from across the globe. Cross River State's economy is characterized by its strategic location, fertile agricultural lands, and abundant natural resources.

Despite its economic potential, Cross River State faces several socio-economic challenges, including high poverty rates, inadequate infrastructure, and limited access to basic services. In recent years, Cross River State has witnessed significant investments in key sectors such as tourism, agriculture, and manufacturing, aimed at harnessing its economic potential and fostering sustainable development. Despite these efforts, the state's economy remains vulnerable to external shocks, including fluctuations in global commodity prices and political instability. Against this backdrop, understanding the implications of fuel subsidy removal on Cross River State's socio-economic characteristics is essential for informing policy decisions and promoting sustainable development. This study aims to analyze the effects of subsidy removal on various

socio-economic indicators, including household expenditures, access to essential services, and overall quality of life, to provide valuable insights into the consequences for residents of Cross River State. Through rigorous empirical analysis and economic modeling, this research seeks to contribute to the ongoing discourse on subsidy reform and its implications for economic development and social welfare in Nigeria.

THE PROBLEMS

The removal of fuel subsidies in Nigeria has been a contentious issue with significant potential implications for the standard of living, particularly in regions like Cross River State. Despite the government's rationale for subsidy removal, there remains a lack of comprehensive understanding regarding its direct and indirect impacts on various socio-economic indicators. Therefore, the primary problem to be addressed in this study is: How does the removal of fuel subsidies in Nigeria, specifically in Cross River State, affect the standard of living of its residents across different socio-economic strata, including income levels, access to basic amenities, affordability of goods and services, and overall quality of life?

Concerns have been raised regarding the equitable distribution of fuel subsidy benefits among different socio-economic groups in Cross River State. There is a lack of clarity on whether the subsidy effectively translates into improved household welfare, reduced poverty levels, and enhanced access to essential goods and services for residents of Cross River State. Additionally, the sustainability of fuel subsidy in Cross River State is questionable, given the fiscal strains it imposes on the state budget and the potential distortions it creates in resource allocation. Fluctuating global oil prices and the need for economic reforms further compound the challenges associated with maintaining the subsidy system in Cross River State.

The removal or modification of fuel subsidy has been proposed as a potential solution to address fiscal vulnerabilities and promote efficient resource allocation in Cross River State. However, the potential impact of such reforms on the standard of living, particularly for vulnerable or low-income households in Cross River State, remains uncertain and requires thorough examination. This study aims to investigate the multifaceted effects of fuel subsidy removal on the standard of living in Cross River State, shedding light on the challenges, opportunities, and potential policy interventions to mitigate adverse impacts and enhance socio-economic well-being.

THE LITERATURE

Subsidies, as defined by Alozie (2009) and the Oxford Advanced Learners Dictionary (2001), encompass monetary assistance provided by governments to support critical activities and keep prices of goods or services below market level. These subsidies can take different forms, including direct cash transfers, tax breaks, price subsidies, and infrastructure subsidies (Alozie, 2009).

Fuel subsidy is a kind of price subsidy. It is a financial assistance program provided by the government to reduce the cost of fuel for consumers. This typically involves the government covering a portion of the cost of producing or importing fuel, which allows consumers to purchase fuel at a lower price than they would pay without the subsidy. Fuel subsidies are often implemented to stabilize domestic fuel prices, protect consumers from price fluctuations in global markets, and promote affordability and accessibility of fuel for transportation, heating, and other essential purposes. In many countries, fuel subsidies are a contentious

issue due to their significant budgetary costs, potential negative impacts on fiscal sustainability, and environmental consequences. Critics argue that fuel subsidies can lead to inefficient resource allocation, distortions in market signals, and increased pollution and greenhouse gas emissions by encouraging overconsumption of fossil fuels. However, proponents of fuel subsidies argue that they are necessary to support low-income households, promote economic development, and maintain social stability. Overall, the debate surrounding fuel subsidies often centers on balancing the short-term benefits of lower fuel prices with the long-term costs and consequences associated with their continued implementation.

The Nigerian government heavily subsidizes the price of gasoline, often selling it at a significantly lower price than the market value. This subsidy is aimed at ensuring that fuel remains affordable for Nigerian consumers, as petroleum products are essential for transportation, electricity generation, and various other sectors of the economy. Subsidies were introduced in the 1970s in response to the first oil crisis before president OlusegunObasanjo's military government formalised them by enacting the Price Control Act of 1977. Both civilian and military governments over the years have tried to axe the act over its exorbitant costs and problems with subsidy fraud but have ended up backing down following public outcry.

Several weeks of strikes and violent demonstrations, which left seven people dead and many others injured, erupted in 2012, forcing then President Goodluck Jonathan to abandon an attempt to end the subsidies. Nigeria adopted the Petroleum Industry Act to deregulate the market in 2021 and, in theory, put an end to subsidies. However, former president Muhammadu Buhari's government continued to fund the subsidies, keeping prices low for consumers. But fuel subsidy came to an end on the 29th of May 2023 as announced by the current president Bola Ahmed Tinubu as advice by the International Monetary Fund (IMF) and the World bank though they are still underground talks that subsidy on fuel has not been completely removed.(France 24).The issue of fuel subsidy in Nigeria remains a complex and politically sensitive issue.

According to president Tinubu the money used for fuel subsidy will be used for other things. This came as a result of fraud in the fuel subsidy price."Subsidy removal must happen but it requires tact. You have to figure out how to handle food inflation, provide alternative means of transport and ramp up social investment under a well-structured social investment programme," said entrepreneur OluseunOnigbinde in an interview with Nigerian online newspaper Premium Times.

STANDARD OF LIVING IN CROSS RIVER STATE POST FUEL SUBSIDY REMOVAL

The standard of living refers to the overall quality of life experienced by individuals and households (in Cross River State,) particularly in relation to their material well-being, access to essential goods and services, and overall socio-economic conditions.

Cross River State is a state in the South-South geopolitical zone of Nigeria. Named for the Cross River, the state was formed from the eastern part of the Eastern Region on 27 May 1967. Its capital is Calabar, it borders to the north through Benue state, to the west through Ebonyi state and Abia state, and to the southwest through AkwaIbom state, while its eastern border forms part of the national border with Cameroon. Originally known as the South-Eastern State before being renamed in 1976, Cross River state formerly included the area that is now AkwaIbom State, which became a distinct state in 1987. Cross River State has 18 local government areas. The state is home to several natural attractions, including the Cross River National Park, which is known for its biodiversity and conservation efforts. Other tourist destinations

include the Obudu Mountain Resort, Agbokim Waterfalls, and the annual Calabar Carnival, one of the largest street festivals in Africa. It is home to several educational institutions, including universities, colleges, and technical schools. Efforts have been made to improve access to quality education and healthcare services, although challenges such as infrastructure and funding remain.

The state government has invested in infrastructure development projects to improve transportation, energy, and water supply systems. Initiatives such as road construction, bridge rehabilitation, and electricity expansion aim to enhance connectivity and stimulate economic growth. Like many regions in Nigeria, Cross River State faces challenges such as poverty, unemployment, inadequate infrastructure, and environmental degradation. Efforts to address these challenges require collaboration between government, civil society, and the private sector. The major occupation of Cross Riverians are mainly agriculture. Before the fuel subsidy removal prices of food was low cost of living was affordable, standard of living as a whole was fair.

"Twenty-four hours after President Bola Tinubu declared the removal of fuel subsidy, fuel scarcity has returned in Cross River State. This development comes in the wake of Tinubu's inaugural speech, where he announced the abolishment of fuel subsidy, a longstanding issue between Organized Labour and the Federal Government" (The Punch newspaper).

The removal of fuel subsidies means that the government is no longer providing financial assistance to keep fuel prices lower. As a result, fuel prices are expected to increase, leading to higher transportation costs. This makes it harder for people to afford essential goods and services because they have to spend more money on fuel. This situation highlights the complexity of removing subsidies and the need for careful planning to minimize the negative impact on people's lives. Which is what Cross Riverians are currently facing.

After the removal of fuel subsidies in Cross River State, households are currently experiencing a decline in their standard of living due to the following reasons: **Increased Transportation Costs:** With higher fuel prices, transportation costs for households have risen, impacting their ability to travel for work, education, healthcare, and other essential activities. This strains household budgets, especially for low-income families who heavily rely on affordable transportation options.

Higher Cost of Living: The increased cost of fuel has led to higher prices for goods and services across the economy in Cross River State. As transportation costs are passed on to consumers, residents are facing difficulties in affording basic necessities, such as food, housing, and healthcare, thereby impacting their overall cost of living.

Reduced Purchasing Power: With a larger portion of their income allocated to fuel and transportation expenses, households in Cross River State have less disposable income available for other needs. This has resulted in a decline in overall well-being and quality of life, as families struggle to meet their financial obligations and maintain their standard of living.

Impact on Businesses: Higher fuel prices have also affected businesses in Cross River State, leading to increased production costs and potentially lower employment opportunities. Small businesses, in particular, are struggling to absorb the additional expenses, resulting in job losses or reduced working hours for

residents. This economic strain further exacerbates the challenges faced by households, as they grapple with reduced income levels and increased living expenses.

THE EMPIRICAL LITERATURE

Several investigations have examined the effects of fuel subsidy removal in Nigeria, shedding light on its implications for socio-economic development. Some of these studies are in this section. Akande (2017) conducted a study on the enlightenment of petroleum subsidy removal in Nigeria, employing a linear function method. The research found that an increase in petroleum pump price adversely affects the standard of living of the people, given the indispensable role of petroleum in transportation of major commodities in Nigeria, such as agricultural and market products.

Similarly, Osagie (2012) investigated the impact of petroleum subsidy removal on socio-economic development in Nigeria using a price pass-through model. The study revealed that petroleum subsidy removal does not have a short-term impact on the social well-being of people. However, in the long run, deregulation of the downstream sector is expected to lead to imminent economic development in Nigeria.

In a baseline model with fuel subsidies, it was found that a negative oil price shock results in a contraction of aggregate GDP, a boost in non-oil GDP, an increase in headline inflation, and a depreciation of the exchange rate (Omang et al., 2020; Okoi et al., 2022). Counterfactual simulations demonstrated that the removal of fuel subsidies led to heightened macroeconomic instabilities and noteworthy implications for how monetary policy responded to an oil price shock.

Soile et al. (2014) investigated the consequences of subsidy removal on the development of the transport sector in Nigeria, using co integration and error correction models. The study found that subsidies had a positive and substantial correlation with the transport sector, suggesting that eliminating gasoline subsidies can lead to an increase in operational costs of the transportation sector and a reduction in the country's gross domestic product (GDP).

In 2023, Onuoha conducted a study investigating the discourse surrounding the removal of fuel subsidies and its impacts on the Nigerian economy. The research revealed a surge in transportation costs, a steep increase in food prices, and a corresponding upswing in the prices of other essential commodities. The study also observed stagnation in financial situations for certain households lacking a substantial source of income, contributing to a decline in overall income and exacerbating poverty levels within the nation.

The removal of fuel subsidies in Nigeria carries both positive and negative implications for the country's economy (Agbeh et al., 2023; Bisong et al., 2023; Tersoo et al., 2023; Ushie et al., 2023). On the positive side, this action, which constitutes a significant portion of government expenditure, will alleviate the financial burden on the government and curtail overall spending. Consequently, the government can redirect the funds saved towards critical sectors such as infrastructure, healthcare, and education. Furthermore, the discontinuation of fuel subsidies will encourage the growth of renewable energy sources like solar, wind, and hydropower, diminishing the nation's dependence on fossil fuels and promoting sustainable energy alternatives. This shift will also foster private sector involvement, fostering greater market competition, reducing prices, and enhancing service quality. However, without accompanying measures to offset its adverse consequences, including but not limited to heightened living costs, inflation, and potential social unrest, the ramifications of this policy change may disproportionately impact the nation's impoverished citizens, exacerbating existing economic disparities.

THE FRAMEWORK

In the context of the effect of fuel subsidy removal on the standard of living in Cross River State, Nigeria, applying economic theories such as the " Theory of Price Elasticity of Demand, composite demand, and complementary demand "offers valuable insights into the potential ramifications of policy changes on household welfare. And also the theory of consumers behavior.

THEORY OF PRICE ELASTICITY OF DEMAND

The Theory of Price Elasticity of Demand examines how changes in price influence the quantity demanded of a good or service. It measures the responsiveness of quantity demanded to changes in price. In the case of fuel subsidy removal, the resultant increase in fuel prices directly impacts consumers' expenditures and standard of living. By analyzing the elasticity of demand for fuel in Cross River State, policymakers can anticipate the magnitude of this impact.

COMPOSITE DEMAND AND STANDARD OF LIVING

Fuel in Cross River State serves multiple purposes, including transportation, electricity generation, and cooking. Therefore, when the subsidy on fuel is removed, leading to an increase in fuel prices, households must allocate more of their budget towards fuel expenses. Due to the essential nature of fuel in daily life activities, the demand for fuel is often inelastic in the short run, meaning that consumers are not highly responsive to changes in price. As a result, even with an increase in fuel prices, the quantity demanded may not decrease significantly. However, the increased expenditure on fuel directly affects the standard of living by limiting households' capacity to afford other necessities such as food, education, and healthcare.

COMPLEMENTARY DEMAND AND STANDARD OF LIVING

Fuel also acts as a complementary good in Cross River State, particularly in the transportation and electricity generation sectors. For instance, higher fuel prices lead to increased operating costs for transportation services and electricity generators. As a result, public transportation fares rise, impacting commuters' budgets and reducing their disposable income for other needs, thereby lowering their standard of living. Additionally, many households in Cross River State rely on generators as an alternative source of power due to inconsistent electricity supply from the national grid. Consequently, an increase in fuel prices directly translates to higher electricity costs for these households, further squeezing their budgets and diminishing their standard of living.

The removal of fuel subsidies in Cross River State, Nigeria, affects people's lives in two ways: Firstly, while people may not drastically reduce their fuel consumption, they have to spend more money on fuel, leaving less for other important things like food and education. Secondly, since fuel is used for transportation and electricity, higher fuel prices also increase costs for these services, making life more expensive for everyone. Policymakers need to be aware of these impacts when making decisions about fuel subsidies to avoid making life harder for people.

THE THEORY OF CONSUMER BEHAVIOUR

The theory of Consumer Behavior, a foundational concept in economics, provides insights into how households make consumption decisions based on their preferences, income, and budget constraints.

Consumer behaviour is the study of individual customers, organizations, or groups' behaviour while selecting, purchasing, using, and disposing of the goods, ideas, and services so they can meet their wants and needs. In simple terms, consumer behaviour is the study of consumers' actions and reactions in the marketplace and the reason behind their actions. This theory is often attributed to economists such as John Hicks and Paul Samuelson, who developed the concept of consumer utility maximization.

THE DESIGN

This study employs a well-structured survey design to investigate the effects of fuel subsidy removal on the standard of living in Nigeria, focusing specifically on Cross River State. The survey methodology involves the use of a well-structured questionnaires, to enable respondents to freely express their opinions and experiences regarding the effects of this policy change on their standard of living.

THE STUDY AREA

The study area is Calabar Municipal which is situated in the southern part of Cross River State, Nigeria. Calabar Municipal has a total population of 279,800 (2022) and a land mass of 142.2 kilometers square. It is bounded by the Calabar river to the west, Calabar South Local Government Area to the south, Odukpani Local Government Area to the north and Akpabuyo Local Government Area to the east. Calabar Municipal has two dominant ethnic groups which includes the Efiks, and the Quas. The Efiks are the majority ethnic group, while the Quas are the minority ethnic group. Efik and English are the languages spoken in this area.

THE POPULATION

The population of the study is 300110 (Population projection by the National Beaura of Statistics) comprising of several households which makes up to 6.12% of the population of Cross River . It is from this population size that the sample size of the study is determined.

SAMPLE SIZE AND SAMPLE TECHNIQUE

The sample size of the study is 399 respondents which was determined from the total population using the Yamane Taro (1967) formula as follows:

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

Where

n = Sample size

N = Population size = 300110

e = level of significance = 0.05

$$n = \frac{300110}{1+300110(0.05)^2}$$

$$n = \frac{300110}{1+300110 (0.0025)}$$

$$n = 300110/1+750.275$$

$$n = 300110/751.275$$

$$n = 399.46$$

Thus, the studies sample size is 399 approximately, from the estimated population of 300110 people. The study employed the simple random sampling technique in choosing its sample from the population. The simple random sampling technique ensures that all elements in the population have equal chance of being selected in the sampling process.

SOURCES OF DATA COLLECTION

In this study, the data collected and analyzed are primarily derived from primary sources. Primary data refers to firsthand information collected directly from the source of interest, in this case, the residents of Calabar municipality. The primary data were gathered through direct questionnaire administration, allowing for the collection of real-time responses and insights from the respondents regarding the impact of subsidy removal on various aspects of their lives. This approach enabled a detailed examination of the effects of subsidy removal on household budgets, expenditure patterns, consumer prices for essential commodities, and the accessibility of critical services such as healthcare and education.

DATA COLLECTION

The questionnaire is the instrument for data collection. The closed-ended (structured) questionnaire is utilized. The closed-ended questionnaire has two sections. Section A contains personal (demographic) information about the respondents such as: age of respondents, marital status, occupation of respondents, and educational qualification. Section B of the questionnaire contains questions and statements used to obtain respondents opinions on the effect of fuel subsidy removal on the standard of living in Cross River State. The section B part of the questionnaire contains structured statements with a 4-point likert scale response options namely; Strongly Agree, Agree, Disagree and Strongly Disagree.

The direct questionnaire administration method, also known as face-to-face questionnaire distribution, was chosen for this study over other methods such as mailed questionnaires. This decision was based on the advantages it offers, including prompt responses to questions and the ability for the researcher to provide detailed explanations in areas that may not be clear to the respondents. In this approach, the researcher will personally administer the questionnaire to the respondents. This direct interaction allows for face-to-face engagement, enabling the researcher to explain any unclear questions and ensure accurate responses. Respondents will be given 24 hours to properly fill in their respective opinions in the answer spaces provided in the questionnaire. A 95 % confidence interval was set during the planning stage in order to achieve accepted levels of data reliability

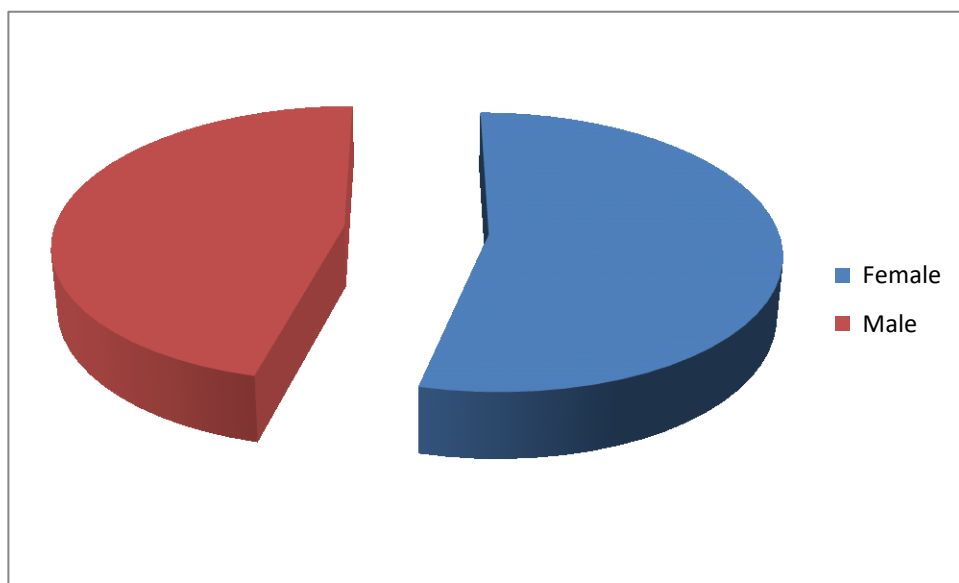
THE RESULTS

The study was made up of different collections of people who were beneficiaries and. The demographic data of beneficiaries that were surveyed from the field are presented in the tables and figures below as follows:

Table 4.1: Showing Gender of beneficiaries

Response		Frequency	Percent
Valid	Female	215	54
	Male	184	46
	Total	399	100

Source: Author's Survey, 2024



The result in table 4.1 and fig. 1 provides information of beneficiaries based on gender. The result showed that 215 beneficiaries representing 54 percent are female respondents, while 184 beneficiaries representing 46 percent are male that live in Cross River State that were affected by fuel subsidy in Cross River State.

Table 4.2: Showing the ages of beneficiaries

Response		Frequency	Percent
Valid	16-25years	100	25
	26-35years	100	25
	36-45years	99	24.8
	46years and above	100	25
	Total	399.0	100

Source: Author’s field Survey, 2024



Fig 2: Pie chart of Beneficiaries Responses based on ages

The result in Table 4.2 and figure 2 above is gives an information of beneficiaries based on their ages. The result as given reveals that 100 beneficiaries representing 25 percent are 16-25years, 100 beneficiaries representing 25 percent are 26-35 years, 99 beneficiaries representing 24.8 percent are 36-45 years, while 100 beneficiaries representing 100 percent are 46 years and above. From the information presented on the pie chart, beneficiaries from 16-25 years, 26-35 years and 46 years and above were found to be the highest were affected by the fuel subsidy in Cross River State.

Table 4.3: Showing beneficiaries based on educational qualification

Response	Frequency	Percent
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GCE/SSCE/NECO	199	50
OND/BSC /HND	120	30.0
M.SC/MBA/PhD	80	20
Total	399	100

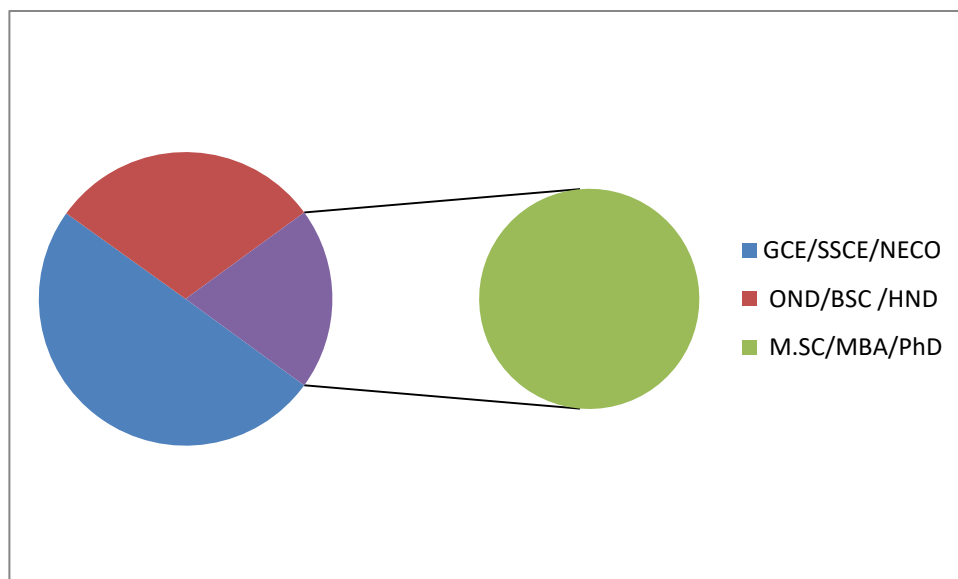


Fig 3: Pie chart of Beneficiaries Responses Based on their Educational qualification

The result in Table 4.3 and figure 3 above is the information of beneficiaries based on their educational qualification. The result as presented showed that 199 beneficiaries representing 50 percent have GCE/SSCE/NECO, and 120 beneficiaries representing 30 percent have OND/BSC /HND and 80 beneficiaries representing 20 percent have M.SC/MBA/PhD in the Cross River State. From the information presented on the pie chart above, there are more have GCE/SSCE/NECO in Cross River State.

Table 4.4: Showing beneficiaries based on their marital status

Response	Frequency	Percent
Valid		
Single	120	30.0
Married	190	47.6
Divorced/Widow/Widower	88	22.0
Total	399	100

Source: Author's fieldy Survey, 2024

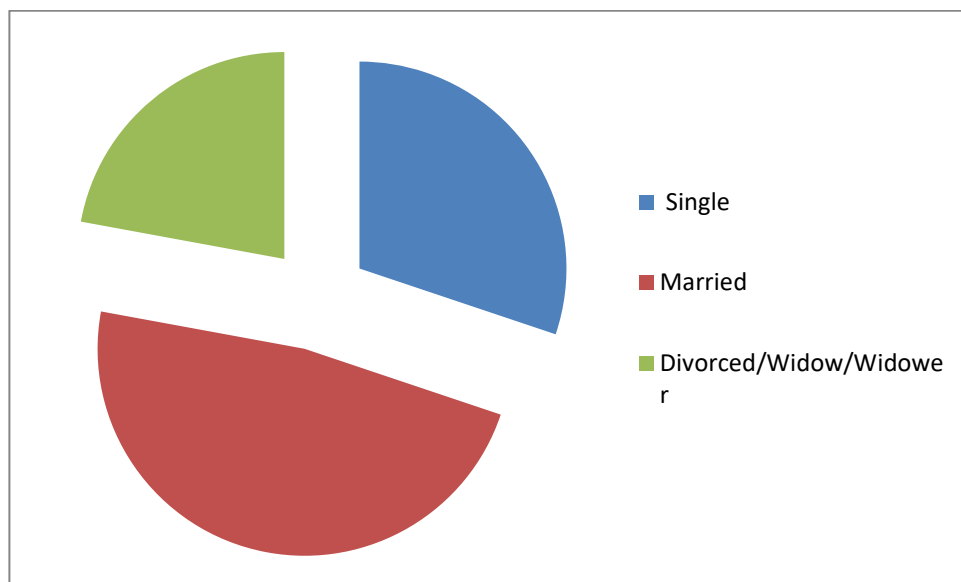


Fig 4: Bar Graph of Beneficiaries Responses Based on their marital status.

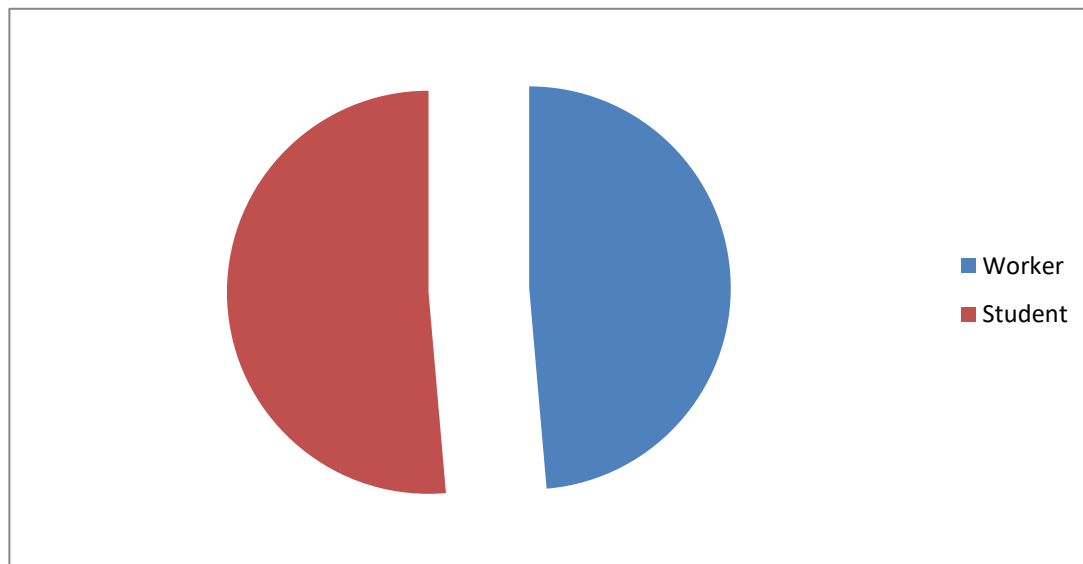
The result in Table 4.4 and figure 4 above is the information of beneficiaries based on their marital. The result as presented showed that 120 beneficiaries representing 30.0 percent are single and 190 beneficiaries representing 47.6 percent are married, and 88 beneficiaries representing 22.0 percent are Divorced/Widow/Widower in the Cross River State. From the information presented on the pie chart above, there are more married people involved in the scenario of fuel subsidy in Cross River State.

Table 4.5: Showing beneficiaries based on those who have occupation

Response	Frequency	Percent
Valid		
Worker	194	48.6
Student	205	51.3
Total	399	100

Source: Author's field Survey, 2024

Fig 5: Bar Graph of Beneficiaries Responses Based on those who have occupation



The result in Table 4.5 and figure 5 above is the information of beneficiaries based on their occupation. The result as presented showed that 194 beneficiaries representing 48.6 percent are workers and 205 beneficiaries representing 51.3 percent are students.

Table 4.6: Showing beneficiaries based on the monthly household income of beneficiaries

Response	Frequency	Percent
Valid		
Less than ₦20,000	100	25
₦20,001 - ₦50,000	100	25
₦50,001 - ₦100,000	45	11.2
₦100,001 - ₦200,000	70	17.5
₦200,001 - ₦500,000	55	13.7
₦500,001 and above	20	5.01
Total	399.0	100

Source: Author's field survey 2024

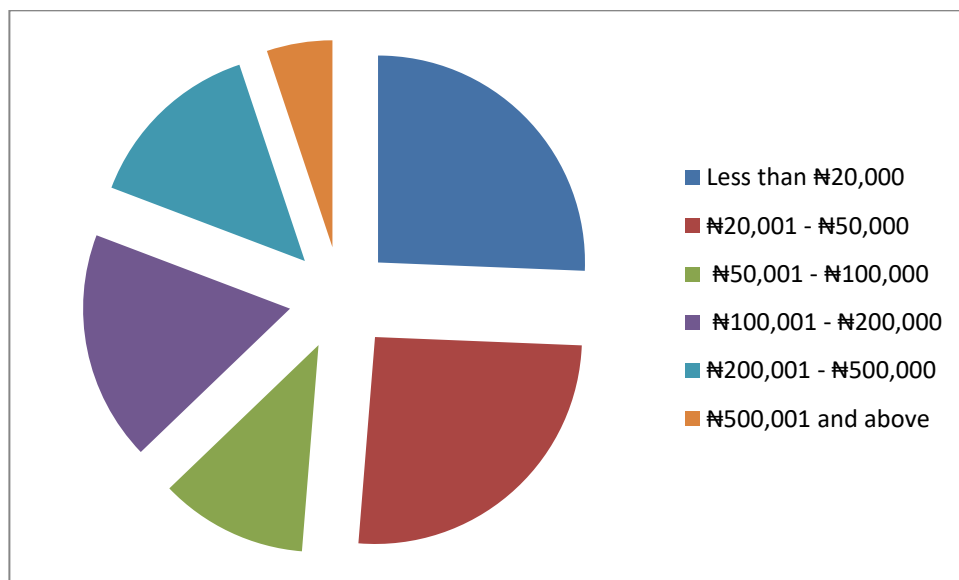


Fig 6: A Pie chart showing Beneficiaries Responses based on the monthly household income of beneficiaries

The result in Table 4.6 and figure 6 above is the information of beneficiaries based on their monthly household income of beneficiaries. The result as presented showed that 100 beneficiaries representing 25 percent earns Less than ₦20,000, 100 beneficiaries representing 25 percent also earns ₦20,001 - ₦50,000, 45 beneficiaries representing 11.2 percent earns ₦50,001 - ₦100,000, 70 beneficiaries representing 17.5 percent earns ₦100,001 - ₦200,000, 55 beneficiaries representing 13.7 percent earns ₦200,001 - ₦500,000 and 20 beneficiaries representing 5.01 percent earns ₦500,001 and above in Cross River State during the subsidy removal.

SECTION B

Table 4.5: Indicating how subsidy removal has a negative effect on household budget and expenditure

Response	Frequency	Percent
Valid Strongly agreed	150	37.5
Agreed	140	35
Disagreed	56	14
Strongly disagreed	54	13.5
Total	399	100

Source: Author’s field survey 2024

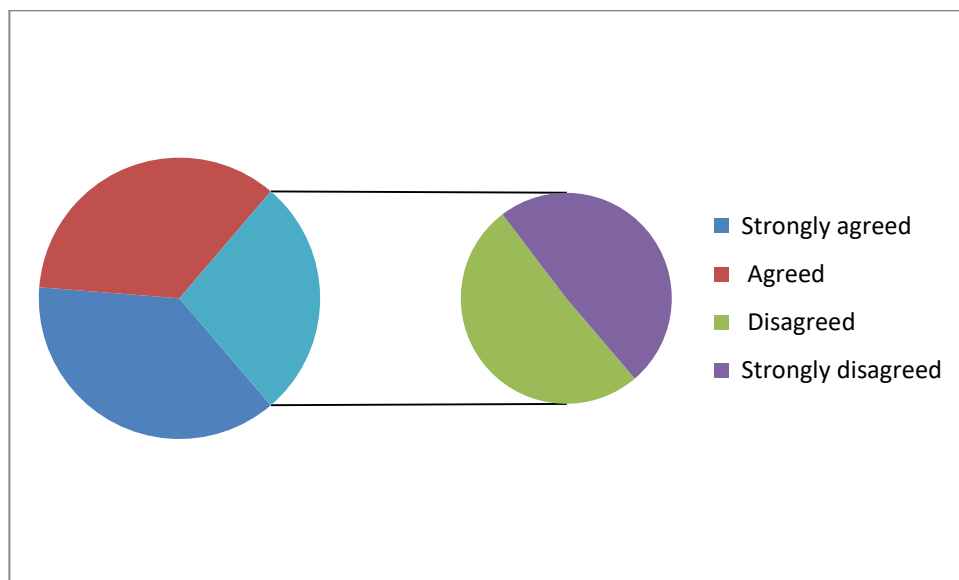


Figure 5: A pie chart of Beneficiary Responses based on how Subsidy removal has a negative effect on household budget and expenditure

Table 4.5 and figure 5 showed that 150 beneficiaries representing 37.5 percent strongly agreed that Subsidy removal has a negative effect on household budget and expenditure, while 140 beneficiaries representing 35 percent agreed that Subsidy removal has a negative effect on household budget and expenditure, 56 beneficiaries representing 14 percent disagreed that Subsidy removal has a negative effect on household budget and expenditure and 54 beneficiaries representing 13.5 percent strongly agreed that Subsidy removal has a negative effect on household budget and expenditure in Cross river State.

Table 4.6: Indicating how the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality.

Response	Frequency	Percent
Valid Strongly agreed	100	25
Agreed	150	37.5
Disagreed	67	16.7
Strongly disagreed	82	20.5
Total	399	100

Source: Author’s field survey 2024

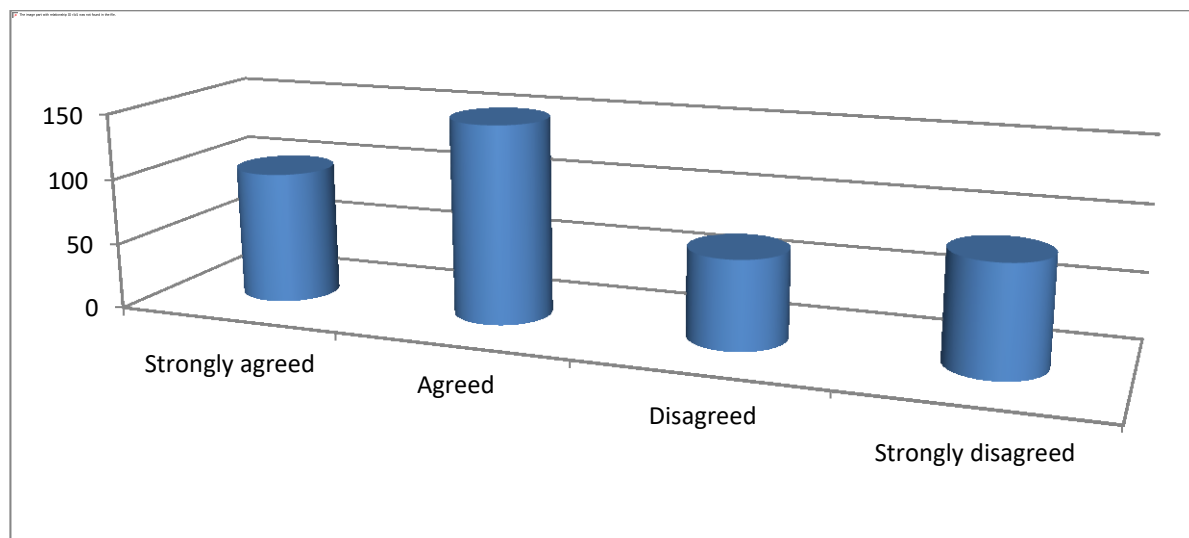


Figure 6: A bar graph showing beneficiaries response on how the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality.

Table 4.6 and figure 6 showed that 100 beneficiaries representing 25 percent strongly agreed that the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality, 150 beneficiaries representing 37.5 percent agreed that the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality, 67 beneficiaries representing 16.7 percent disagreed that the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality and 82 beneficiaries representing 20.5 percent strongly disagreed that the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality

Table 4.7: Indicating how Fuel subsidy removal, has increased the prices of basic necessities such as food and transportation

Response	Frequency	Percent
Valid Strongly agreed	112	28.0
Agreed	119	29.8
Disagreed	69	17.0
Strongly disagreed	99	24.8
Total	399	100

Source: Author’s field survey 2024

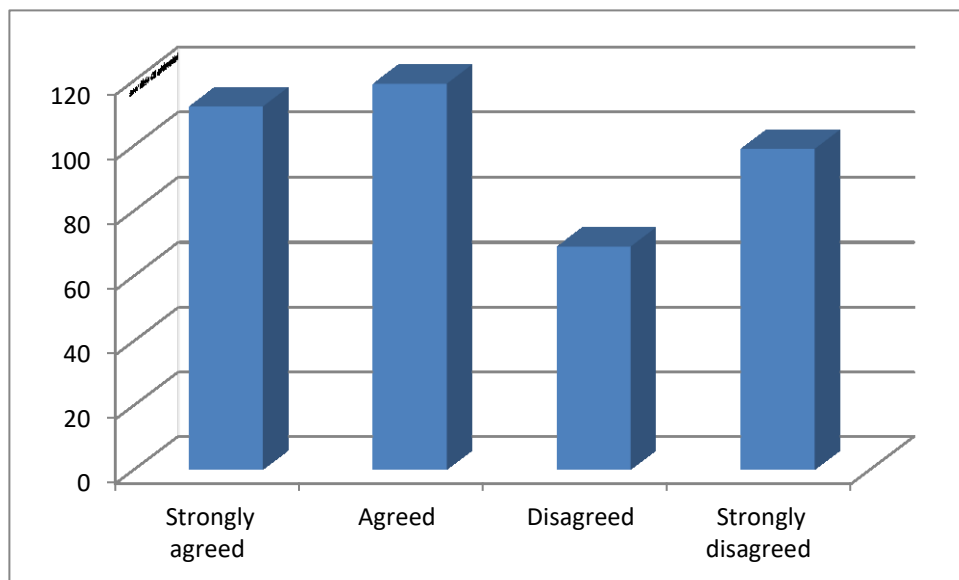


Figure 7: A bar graph showing beneficiaries responses on how Fuel subsidy removal, has increased the prices of basic necessities such as food and transportation.

transportation.

Table 4.7 and figure 7 showed that 112 beneficiaries representing 28.0 percent strongly agreed that how Fuel subsidy removal, has increased the prices of basic necessities such as food and transportation, 119 beneficiaries representing 29.8 percent agreed that Fuel subsidy removal, has increased the prices of basic necessities such as food and transportation, 69 beneficiaries representing 17.0 percent disagreed that fuel subsidy removal, has increased the prices of basic necessities such as food and transportation and 99 beneficiaries representing 24.8 percent strongly disagreed that fuel subsidy removal has increased the prices of basic necessities such as food and transportation.

Table 4.8: Indicating how the removal of fuel subsidy has impacted negatively household budget and purchasing power

Response	Frequency	Percent
Valid Strongly agreed	150	37.5
Agreed	140	35
Disagreed	56	14.0
Strongly disagreed	53	13.2
Total	399	100

Source: Author’s field Survey, 2024

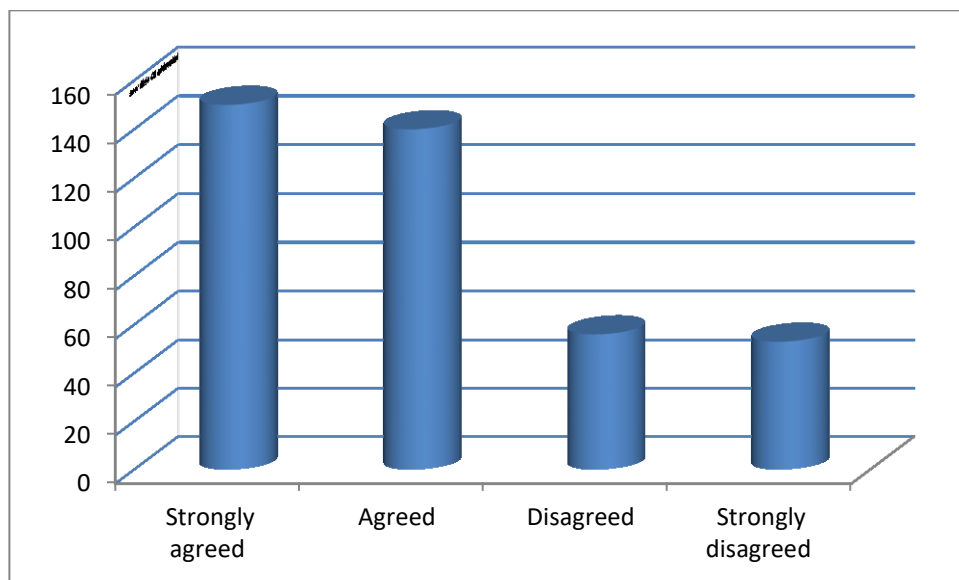


Fig 8: Showing how the removal of fuel subsidy has impacted negatively household budget and purchasing power.

Table 4.7 and figure 7 showed that 150 beneficiaries representing 37.5 percent strongly agreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power. 140 beneficiaries representing 35 percent agreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power, 56 beneficiaries representing 14.0 percent disagreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power., and 53 beneficiaries representing 13.2 percent strongly disagreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power.

Table 4.9: Indicating how the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal.

Response	Frequency	Percent
Valid Strongly agreed	100	29.4
Agreed	150	37.5
Disagreed	67	19.7
Strongly disagreed	82	24.1
Total	339	100

Source: Author’s field Survey, 2024

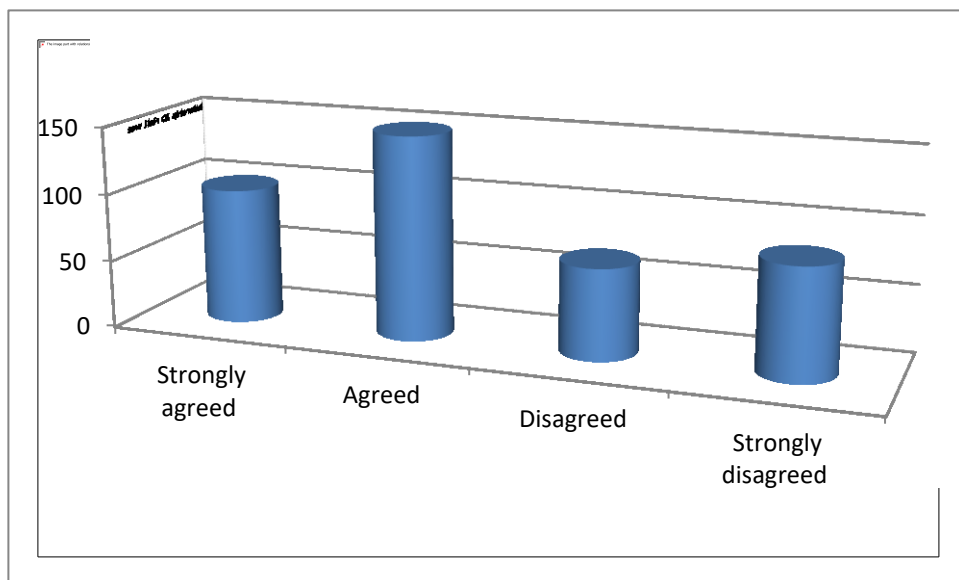


Table 4.9: Showing how the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal.

Table 4.9 and figure 9 showed that 100 beneficiaries representing 29.4 percent strongly agreed that the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal, 150 beneficiaries representing 37.5 percent agreed that the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal, 67 beneficiaries representing 19.7 percent disagreed that the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal and 82 beneficiaries representing 24.1 percent strongly disagreed that the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal.

TABLE 4.10: Showing how fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality

Response	Frequency	Percent
Valid Strongly agreed	150	37.5
Agreed	67	16.7
Disagreed	81	20.3
Strongly disagreed	68	17
Total	399	100

Source: Author's field Survey, 2024

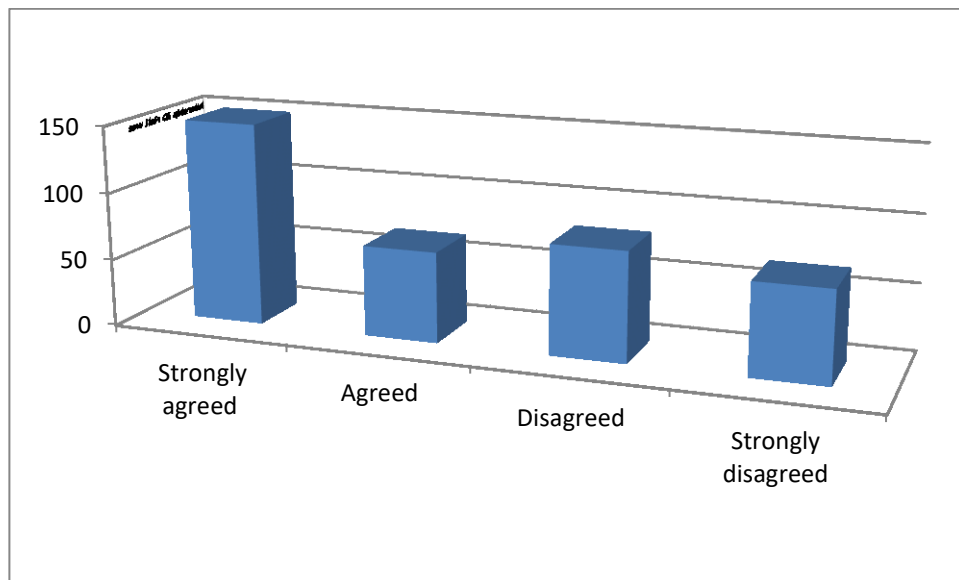


Figure 9: Bar Graph of Beneficiary Responses on how overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality

Table 4.9 and Figure 9 above showed 150 beneficiaries representing 37.5 percent strongly agreed that Overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality, 67 beneficiaries representing 16.7 percent agreed that Overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality, 81 beneficiaries representing 20.3 percent disagreed that Overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality and 68 beneficiaries representing 17 percent strongly disagreed that Overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality.

4.2.1 Analysis of Research Question 1, 2 and 3.

Sample Size (n=399)

S/N	Statement	SA	A	D	SD	Mean	Remark
1	Subsidy removal has a negative effect on household budget and expenditure	150 (150%)	140 (140%)	56 (56%)	53 (53%)	11.85	Strongly Agreed
2	The removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality.	100 (100%)	150 (150%)	67 (67%)	82 (82%)	10.66	Agreed
3	Fuel subsidy removal, has increase the prices of basic necessities such as food and transportation	112 (112%)	119 (119%)	69 (69%)	99 (99%)	10.42	Agreed
4	The removal of fuel subsidy has impacted negatively household budget and purchasing power.	150 (84%)	140 (140%)	56 (56%)	53 (53%)	10.42	Strongly Agreed
5	The accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal.	100 (100%)	150 (150%)	67 (67%)	82 (82%)	10.66	Agreed
6	Overall, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality.	150 (150%)	67 (67%)	81 (81%)	68 (68%)	9.64	Strongly agreed

Notes: (1) SA= Strongly Agreed; A= Agreed; D= Disagreed; SD= Strongly Disagreed.

(2) Mean Score Decision Rule: SA=3.50-4.00; A=2.50-3.49; D=1.50-2.49; and SD=0.00-1.49.

With the mean scores of 11.85 in statement one, respondent strongly agreed that Subsidy removal has a negative effect on household budget and expenditure. With the mean score of 10.66 in statement 2 respondents agreed that the removal of fuel subsidy on essential commodities has increased the cost of living in Calabar municipality. In statement 3, with the mean scores of 10.42 respondents strongly agreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power.

Furthermore, in statement 4, with the mean score of 10.42 respondents strongly agreed that the removal of fuel subsidy has impacted negatively household budget and purchasing power. With the mean score of 10.66 in statement 5, respondents agreed that the accessibility of critical services such as healthcare and education has been affected by the fuel subsidy removal. Lastly, with the mean scores of 9.64 in statement

6, respondent strongly agreed that, the fuel removal of subsidy has had a positive impact on the standard of living in Calabar municipality People.

Test of Hypotheses

The hypotheses of the study are tested using Chi-square test technique. The method was adopted because it is a non-parametric test suitable for statistical significance of survey (primary) data. The Chi-square calculated value (χ^2_c) is obtained using the formula:

$$\chi^2_c = \sum \left(\frac{(Fo - Fe)^2}{Fe} \right)$$

Where Fo = Observed frequencies and Fe = Expected frequencies. The responses from the questionnaires will represent Fo , while Fe for a “one-way sample Chi-square table” is determined using the following formula:

$$Fe = \frac{\text{Sum of entries}}{\text{Number of entries}}$$

The critical value (table value) for the Chi-square (χ^2_t) obtained from the Chi-square table is determined at 5% (=0.05) level of significance, with degree of freedom (df) using the following formula: $\chi^2_t = \chi^2_{0.05, df=12}$.

The decision rule for the acceptance or rejection of hypotheses is given as follows:

- (i) If the calculated Chi-square is greater than the critical value, we reject the null hypothesis.
- (ii) If the critical value is greater than the calculated Chi-square, we fail to reject the null hypothesis.

Table 4.20

Results of the observed and expected frequencies on the relationship between subsidy removal on household budgets, expenditure patterns dynamics of consumer prices for essential commodities and accessibility of critical services, including healthcare and education in Cross River State following subsidy removal.

S/N	SA	A	D	SD	Total
1	150	140	56	53	399
2	100	150	67	82	399
3	112	119	69	99	399
4	150	140	56	53	399
5	150	150	67	82	399
6	150	67	81	82	399
Total	812	766	396	451	2793

To calculate the expected frequency for each cell is to multiply the row total by the column. Total for the cell and divide product by the grand total.

$\frac{399 \times 812}{2793} = 116$	$\frac{399 \times 766}{2793} = 109$	$\frac{399 \times 396}{2793} = 56.5$	$\frac{399 \times 451}{2793} = 6.4$
$\frac{399 \times 812}{2793} = 116$	$\frac{399 \times 766}{2793} = 109$	$\frac{399 \times 396}{2793} = 56.5$	$\frac{399 \times 451}{2793} = 6.4$
$\frac{399 \times 812}{2793} = 116$	$\frac{399 \times 766}{2793} = 109$	$\frac{399 \times 396}{2793} = 56.5$	$\frac{399 \times 451}{2793} = 6.4$
$\frac{399 \times 812}{2793} = 116$	$\frac{399 \times 766}{2793} = 109$	$\frac{399 \times 396}{2793} = 56.5$	$\frac{399 \times 451}{2793} = 6.4$

Source: Author’s field survey 2024

Table 4.21: Contingency table

Row Column	Observed Frequency	Expected Frequency	Fo-Fe	(Fo-fe)²	$\frac{Fo-Fe}{Fe}$
1,1	150	116	34	1156	9.96
1,2	140	109	31	961	8.81
1,3	56	56.5	-0.5	0.25	0.004
1,4	53	6.4	46.6	2171.6	339.3
2,1	100	116	-16	256	2.206
2,2	150	109	41	1681	15.42
2,3	67	56.5	10.5	110.25	1.95
2,4	82	6.4	75.6	5715.4	893.0
3,1	112	116	-4	16	0.137
3,2	119	109	10	100	0.91
3,3	69	56.5	12.5	156.25	2.76
3,4	99	6.4	92.6	8574.8	13.81
4,1	150	116	34	1156	9.96
4,2	140	109	31	961	8.81
4,3	56	56.5	-0.5	0.25	0.004
4,4	53	6.4	46.6	2171.6	339.31
5,1	150	116	34	1156	9.96
5,2	150	109	41	1681	15.42
5,3	67	56.5	10.5	110.25	1.95
5,4	82	6.4	75.6	5715.4	893.03
6,1	100	116	-16	256	2.20
6,2	67	109	-42	1764	16.18
6,3	81	56.5	24.5	600.25	10.62
6,4	82	6.4	75.6	5715.4	893.03

$$X^2=3,483.271$$

Source: Author's field survey 2024

The calculated value is $X^2 = 3,483.271$

$$DF= (R-1) (C-1)$$

$$(5-1) (4-1)$$

$$4 \times 3 = 12$$

$$X^2 = 3,483.271 > 16.92$$

Since the calculated Chi-square value of 3,483.271 is greater than the Chi-square tabular value of 16.92 at 5% level of significance,

- i. We therefore reject the null hypothesis (H_0) and accept the alternative hypothesis and conclude that Subsidy Removal affected household budgets, expenditure.
- ii. Also, the based on the Chi-square result also being greater than the tabular value, it can also be concluded that fuel subsidy removal affected the price dynamics in Cross River State.
- iii. Finally from the chi-square result, it was shown that changes in the accessibility of critical services like healthcare and education was affected before and after subsidy removal in Cross River State.

THE SUMMARY

The study was undertaken to examine the effect of subsidy removal on the standard of living in Nigeria, making Cross River State the case Study. Three objectives were put forward in the study. Three null hypotheses were stated. Both empirical and theoretical literatures were also reviewed. Descriptive statistics such as frequencies, percentages were employed in most of the analyses to aid in summarizing them. Data collected were analyzed with relevant statistical tool such as the Chi-square statistic. The outcome of the result showed that fuel subsidy removal affected the price dynamics in Cross River State; it also revealed that fuel subsidy affected the accessibility of critical services, including healthcare and education, following subsidy removal and finally, critical services such as healthcare and education were affected due to subsidy removal.

THE CONCLUSION

Nigeria's experience with fuel subsidies dates back to the 1970s, following the nationalization of the petroleum industry and the subsequent boom in oil revenues. With the emergence of oil as a significant source of government revenue, successive administrations introduced fuel subsidies as a means to provide affordable energy to the populace. These subsidies were initially viewed as a social welfare measure, aimed at alleviating the burden of high fuel prices on consumers, particularly in a country where transportation and energy costs play a pivotal role in everyday life. To conclude, findings analyzed from the result revealed that fuel subsidy removal affected the price dynamics in Cross River State; it also revealed that

fuel subsidy affected the accessibility of critical services, including healthcare and education, following subsidy removal and finally, critical services such as healthcare and education were affected due to subsidy removal.

THE RECOMMENDATIONS

- i. The government should put in place measures such as the provision of food palliatives especially to low income earners and rural areas where the issue of fuel subsidy removal is biting more.
- ii. To cushion the effect of subsidy removal, the government should increase her social investment programs such as the n-power programs, school feeding programs etc.
- iii. Government should create public awareness campaigns and educational awareness in order to inform the public about the reasons for fuel subsidy removal and its longterm benefits. Transparency in this process will foster understanding and acceptance.
- iv. The government should encourage local refining by investing in and supporting local oil refining capacity to reduce dependence on imported petroleum products. This will stabilise prices and create jobs in the region.
- v. Government should encourage and invest in renewable and alternative energy sources to reduce the country's reliance on petroleum, which can help stabilize fuel prices in the long run.

REFERENCES

- Agbeh, P., Bisong, P. O., Ushie, E. A., & Tersoo, A. (2023). Impact of fuel subsidy removal and the people's well-being in Calabar metropolis, Cross River State, Nigeria. *Journal of Public Administration, Policy and Governance Research (JPAPGR)*, 1(3), 117-126. Available online at <https://jpapgr.com/index.php/research>. ISSN: 2787-0464.
- Akande, L. (2017, September 14). Social intervention programmes-premium times Nigeria. Retrieved from <http://www.premiumtimesng.com>.
- Alozie, E. (2009, October 26). The lies about deregulation. *Nigerian Newswatch*, 3, 15.
- Balouga, J. (2012). The political economy of oil subsidy in Nigeria. *International Association for Energy Economics Second Quarter*.
- Ebingha, E. E., Eni, J. S., & Okpa, J.T. (2019). Population growth and socio-economic development of Cross River State, Nigeria. *European Journal of Economic and Financial Research* 3(3), 20-35
- France 24. (2023). Nigeria ends fuel subsidies amid economic reforms. Retrieved from <https://www.france24.com/en>.
- Muktari Yakubua, Muhammad Mustapha Abdullahib, Rabiui Maijama' and Kabiru Saidu Musa (2023) Investigating the Effect of Petroleum Subsidy Removal on Standard of Living Amidst Rising Poverty in Nigeria *Asian Journal of Economics, Finance and Management* Volume 5, Issue 1, Page 359-364, 2023; Article no.AJEFM.1385

- National Bureau of Statistics. (2023). Population Statistics of Calabar Municipality. Retrieved from National Bureau of Statistics.
- Odewae A. Consequences of fuel subsidy removal on Nigeria's balance of trade, Vanguard, Tuesday, 11th July 2023. Available: <https://www.vanguardngr.com/2023/06/consequences-of-fuel-subsidy-removal-on-nigeria-s-balance-of-trade/>
- Omang, A. T., Okpa, J. T., & Okoi, O. N. (2022). Women's Empowerment and the Well-Being of the Unemployed Women in Yakurr, Nigeria. *Journal of International Women's Studies*, 24(1), 19.
- Onuoha, C.J. (2023). The conversation on fuel subsidy removal: Effects on the Nigerian economy. Enyenaweh Research Blog Series. Retrieved from <https://www.enyeanweh.com/>. (Accessed on August 21, 2023).
- Onyishi, A.O., Eme, O.I. and Emeh, I. E. J. (2012). The domestic and international implications of fuel subsidy removal crisis in Nigeria. Kuwait Chapter of *Arabian Journal of Business and Management Review*, 1(16), 57-83.
- Opeyemi, A., Philip, O. A., Oluseyi, A., Amaghionyeodiwe, L. and Adeyemi, A. O. (2012). Fuel subsidy reform and environmental quality in Nigeria. *International Journal of Energy Economics and Policy*, 5(2), 540-549.
- Osage, E. (2012). Evaluation of the impact of Oil Subsidy Removal in South East Nigeria. Retrieved from <https://www.slideshare.net/mobile.com>. (Accessed on March 12, 2018).
- Patrick Owan Bisong, Evaritus Akpanke Ushie, Asongo Tersoo & Philip Agbeh, (2023), Impact of Fuel Subsidy Removal and the People's Well-Being in Calabar Metropolis, Cross River State, *Nigeria Journal of Public Administration, Policy and Governance Research (JPAPGR)*, Vol. 1, No. 3, Sept., 2023. Available online at <https://jpapgr.com/index.php/research>. ISSN:2787-0464. Covered in google scholar, etc.
- 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.
- Taiwo, O., & Ayo, A. (2023). Fuel subsidy in Nigeria -issues, challenges and the way forward. Retrieved from www.pwc.com/ng. Accessed on 8/8/2023.
- Uzonwanne, Maria Chinecherem, Ezenekwe, Regina Uju and Iregbenu, Paul Chinenye (2015) Fuel subsidy removal and the Nigerian economy, *Australian Journal of Business and Management Research New South Wales Research Centre Australia (NSWRCA)* Vol.05 No.04 August-2015.
- Wikipedia contributors. (2023). Cross River State. Wikipedia, The Free Encyclopedia. Retrieved from https://en.wikipedia.org/wiki/Cross_River_State.