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Effect of Fuel Subsidy Removal on the Standard of Living of Cooperative Members in Anambra State, Nigeria

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Abstract: *In the context of Nigeria's fuel subsidy removal, which has led to difficulties and hardships, this study aimed to investigate the impact of the removal on the standard of living of cooperative members in Nigeria, with a specific focus on Anambra State. The sample size consisted of 400 members from a total population of 19,266 members, drawn from 546 cooperative societies, using Taro Yamane formula. Data was collected from the respondent with the aid of a structured questionnaire. The instrument was validated by experts and the reliability of the instrument was determined using Cronbach Alpha, with a reliability coefficient of 0.97. Data collected were analyzed using descriptive statistics (arithmetic mean and standard deviation) and inferential statistics (multiple regression analysis). The hypotheses were tested at a 5% level of significance. The results obtained showed that fuel subsidy removal significantly increased the cost of education. The R^2 of 0.386 indicated that about 38.6% of the variation in education cost was explained by fuel subsidy removal. It was also shown from the result that fuel subsidy removal had a significant and positive effect on transportation costs. That approximately 46.9% of the variance in transportation costs was explained by fuel subsidy removal. The study concluded that the removal of fuel subsidy has had a great impact on the livelihood and survival of cooperative members in Anambra State and Nigerians in general. The study recommended among others that the policymakers should consider alternative measures to mitigate the danger of subsidy removal and its obvious effect on vulnerable populations in Anambra State Nigeria, while promoting economic stability.*

Keywords: Fuel Subsidy Removal, Standard of Living, Cooperative Members, Anambra State, Cost of Education, Cost of Transportation

INTRODUCTION

The discovery of oil in commercial quantities at Olobiri in the Niger Delta, and later at Afam and Boma in 1955 established Nigeria as an oil-producing nation (Central Bank of Nigeria [CBN] Digital Commons, 2016). The petroleum oil sector as the prime mover of the economy became apparent in the 1970s due to the dramatic increase in the oil process and the rise in the nation's proven oil reserves and production. It became obvious that selling fuel at the prevailing market price may be difficult for the masses to do, hence, fuel subsidy was introduced. Fuel Subsidy is a government discount on the market price of fuel to make consumers pay less than the prevailing market price of fuel (Ovaga and Okechukwu, 2022). When subsidies are in place, consumers would pay below the market price per litre of the petroleum product. Globally, there are debates about fuel subsidy because of its huge amount and its effect on citizens' welfare and the fiscal health of a nation.

The issue of subsidy is not alien to the nations downstream because it existed during the military regime when the four refineries (Old Port-Harcourt Refinery 1965, Warri Refinery and Petrol Chemical Company 1978, Kaduna Refinery and Petrol Chemical Company 1980, New Port-Harcourt Refinery 1989) of the nation could not even satisfy the domestic needs of the people, then a need arose for the importation of finished petroleum products such as diesel, petrol and kerosene to meet the domestic need of Nigerians (Black and Vemon., 2020). For this reason, the influential Nigerians and those in the corridors of power considered the sudden wealth that would result from this opportunity and started acquiring the various oil wells in the country and finally, they overtook the petroleum industries.

Fuel Subsidy can be said to be the financial aid granted to autonomous and foremost oil marketers by the government for them to supply their products at a cheaper rate for the good of the masses (Akinyemi, and Ogundipe, 2013). This move is always aimed at boosting the economy of the country; providing social amenities for the people, stabilizing the market, creating employment opportunities and of course capable of fighting corruption as postulated by the Nigeria government (Oloruntegbe and Odutuyi, 2022). In early 2014, President Goodluck Jonathan was touting the idea of removing what remained of the subsidy which the people thought was the only benefit they derived from the nation's naturally endowed petrol-dollar largesse. The government argued that a tiny percentage of Nigerians called the Cabals are the ones hugely profiting from the subsidy largesse and that the current low price of oil will always encourage smuggling of the product along our numerous borders. The government also said that the total fuel subsidy removal will attract more investment in the downstream oil sector which will boost employment and the economy. This has led to calls for the removal of fuel subsidy so that the saved funds can be channelled to assist the poor and vulnerable ones in need of humanitarian assistance in developing countries (Couhardeand Mouhoud 2020; and Ozen 2021). However, the removal of fuel

subsidy is contentious because there is an argument that fuel subsidy is a form of aid as it makes fuel more affordable for the poor. Despite this favourable argument, a large literature has documented the negative consequences of fuel subsidy which include; an increase in air pollution and greenhouse gas emissions (Sweeney, 2020), road congestion (McColloch, Moerenhout and Yang, 2021), road accidents and premature deaths (Parry, Black and Vemon, 2021), forgone tax revenue (Sweeney, 2020) and increase in inequality between the poor and the rich (Mc.Culloch, 2021).

Due to the removal of fuel subsidy in Nigeria, the standard of living of cooperative members has drastically reduced, thereby, impacting their ability to commute to work, distribute goods and access essential services, ultimately leading to lower incomes and strained household budgets due to higher operational expenses (Eurostat, 2020). Several groups in Nigeria are facing the consequences of this removal, including the cooperative members who are people who join a cooperative organization to benefit from the products or services of a cooperative business (Calvert, 2020). Cooperatives are owned and managed by their members who also make decisions, contribute in some way to the cooperative business activities and receive a share of the cooperative earnings, and the benefits of the cooperative (Ogundeyi,2022). A cooperative society is essentially an association of persons who came together voluntarily for the furtherance of their common economic interests (Bhushan, 2019), and the cooperative members include customers, providers and stakeholders, and these set of members are affected by the subsidy removal, therefore, this study aims to analyze the effects of subsidy removal on their living standard among cooperative members in Anambra state, Nigeria. The specific objectives are to:

1. determine the effect of fuel subsidy removal on the cost of education in Anambra State ;
2. examine the effect of petrol subsidy removal on the cost of transportation by land in Anambra State;

REVIEW OF RELATED LITERATURE

Fuel Subsidy

Subsidy is defined as any measure that keeps prices of goods and services below market level for consumers or producers. Subsidies can take different forms like grants, tax reductions or exemptions, and price control (Alozie, 2019). Subsidy can be seen as a grant of financial aid from the government used to maintain the prices of a particular item at a certain level. Subsidy exists when the government helps the consumers of a particular product to pay a price lower than the prevailing market price of that commodity (Kadiri & Lawal, 2016). Subsidy is a market manipulation whereby the government fixes the prices of a commodity below its actual market price and pays the difference to the retailers. It is to sell a product below the cost of production (Bakare, 2022).

Fuel Subsidy is the financial aid granted to autonomous and foremost oil marketers by the government for them to supply their products at a cheaper rate for the good of the masses (Ogundipe, 2023). Fuel subsidy can properly be defined as government effort in paying for the difference between the pump price of fuel at the petrol station and the actual cost of the importation of the product. So by paying the difference, the government enables the fuel to be sold at lower prices so as to help ease the burden of its people, especially the lower income group. Fuel subsidy is a grant of financial aid from the government used to maintain the low price of petroleum products (Civic Keypoint, 2023).

Fuel Subsidy Removal

Fuel subsidy removal is the process of ending government financial assistance for fuel, thereby, causing the price to rise to market level. This leads to increased fuel costs and can have economic and social impacts (Ozili, 2023). It simply means the government not paying for the difference between the pump price and the actual cost of importing fuel anymore. It technically means full deregulation of the downstream sector to pave the way for vibrant competition by other interested investors. With the removal of fuel subsidy, fuel will have to be sold in accordance with the prevailing market price based on the actual cost of importation (Todaro, 2021).

In a recent independent audit report released by the Nigeria Extractive Industries Transparency Initiative (NEITI, 2022), it was revealed that over 2.145 trillion naira ($42 million) was disbursed as subsidies to marketers between 2019 and 2022. This situation has had severe repercussions on Nigeria's economy, leading to substantial debt accumulation. The total amount paid up for fuel subsidies from 2019 to 2022 is equivalent to the combined budgets allocated for sectors such as healthcare, education, agriculture and defence (Ogbonnaya, 2023). Addressing this issue of fuel subsidy is crucial for Nigeria's economic stability and sustainable development.

Importance of the Removal of Fuel Subsidy

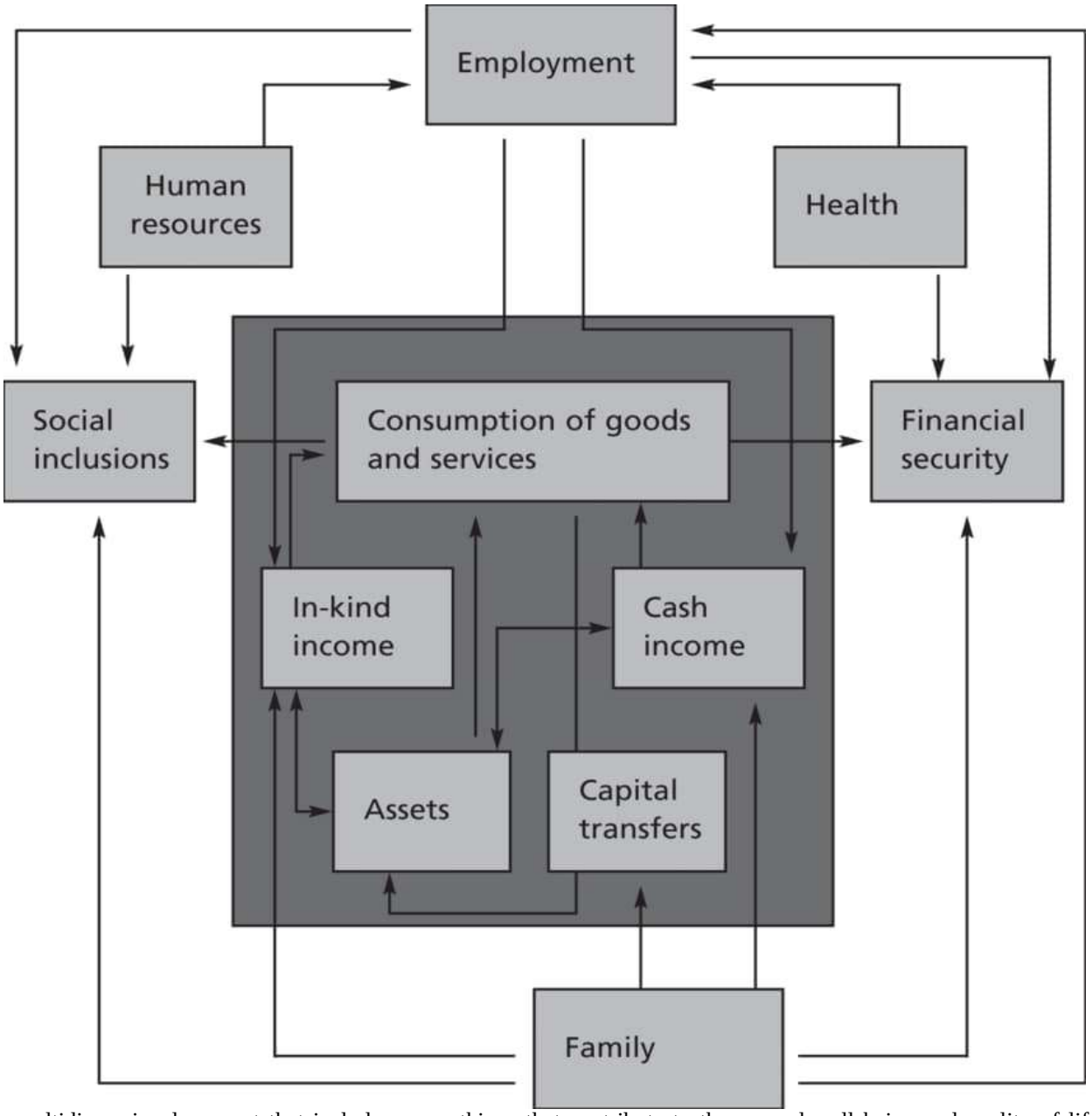
According to Ozili and Obiora (2023), there are very broad and general reasons why fuel subsidy removal is important. Some of the key reasons include;

a. Fiscal relief: Removing fuel subsidy provides significant fiscal relief for the government because this time around they will no longer be investing in the petroleum sector only but also in other sectors of the economy like education, infrastructure, Health etc.
b. Market efficiency: Subsidy removal encourages market efficiency by allowing fuel prices to reflect the actual supply and demand dynamics. This can lead to a more transparent and competitive market.
c. Reduce smuggling: Fuel Subsidy can incite the smuggling of subsidized fuel to neighbouring countries where prices are higher. Removing it curbs this cross-border smuggling.
d. Fiscal sustainability: Subsidy removal can contribute to long-term fiscal sustainability by reducing the burden on government finances. This can help increase a more stable economic environment.
e. Investment in alternatives: Funds saved from subsidy removal can be channelled towards investments in renewable energy sources and infrastructural development.

Standard of Living

The standard of living is important because it is a measure of the well-being of society. It is an economic opulence which measures the amount and quality of commodities that the individual is free to use (Duetsh & Silber, 2021). A high standard of living indicates that people in a society are able to live long, live healthy and have access to resources that allow them to lead productive and fulfilling lives. A low standard of living, on the other hand, indicates that people in a society are more likely to experience poverty, poor health and limited opportunities. This also has implications for the economy, as a low standard of living can lead to a decrease in productivity and an increase in inequality.

Standard of Living is an ideal or norm of consumption which may be described in terms of goods and services of specific quantity and quality (Williams, 2021). Standard of Living can also be referred to as the extent to which a group of people is able to obtain what they need to live. Standard of living can also be defined as the level of material comfort in terms of goods and services available to someone or some group. It is usually measured by standards such as life expectancy, literacy rates, access to education, health care and housing conditions (Pigou, 2021).



Source: Philip J. Hughes 2020

Figure 1: Model for standard of living

The model in figure 1 is an extension of people's standard of living. The standard of living is a multidimensional concept that includes many things that contribute to the general well-being and quality of life of people and households in a certain culture and geographical area. It involves looking at the cost of living, how people spend their money, how much they save and invest their material wealth, how easy it is for them to get the things they need, social and environmental conditions, education, health care, income, assets, employment, financial security, human resources and other important parts of their lives (Tao, Zhi and Shangkun, 2022)

Effect of fuel subsidy removal on the cost of education

There are many effects of fuel subsidy removal on education according to Ogunode and Ahaotu (2021) and some of these effects include:

- **Increment in administrative cost of running schools**

School administration of most educational institutions has been affected in Nigeria due to subsidy removal. The removal of fuel subsidy has increased the cost of running the schools, school administrations, and the internal arrangement of school resources for

the implementation of school programs(Femi, 2023). School administration is the internal activities that deal with coordinating school programs for optimum performance (Zaifada and Olowonefa, 2021).

School administration involves managing, and administering the curriculum, teaching, pastoral care, discipline, assessment, evaluation, and examinations(Ogunode and Ahaotu, 2021). The major objectives of school administration are to integrate and coordinate all the physical and human resources efficiently towards a common goal (Ahaotu and Obi, 2021). The physical resources mainly contribute to building equipment and instructional materials. The human resources that school administration deals with include; students, teachers, supervisors, administrators, and parents. The additional elements comprise the various aspects of educational theory and practice including philosophy of education, objectives of education, curriculum, method of teaching, discipline, the role of the teacher, rules and regulations etc. These elements are parts, made into the whole and are components brought into a harmonious relationship. So, the purpose of school administration is to fulfill different purposes which are known as the objectives. School administration covers the following: school planning, organizing, controlling, coordinating and evaluating performance, decision making, curriculum development and planning, students' activities, teachers' programme, human capacity development, school-community relationship, academic calendar planning, extra curriculum programme, school discipline programme, school sport, school examination and school security(Zaifada, Olowonefa, & Ogunode, 2023).

School administration involves practical organization and arrangement of schoolwork schedules ineffective ways using administrative structures to implement school programmes and realize the school objectives whereby posts are created and assigned for the optimal performance of the school. Materials and human resources required to carry out school administration have gone up because of the increment in fuel prices in Nigeria (Femi, 2023). Office equipment like Stapler, Eraser, Drawing pin, Paper clip, Rubber stamp, Highlighter, pen, Pencil, Marker, Ballpoint, Bulldog clip, Tape dispenser, Pencil sharpener, Label, Calculator, Glue, Scissors, Sticky notes, A4 Paper, Notebook, Envelope, Clipboard, Monitor, Computer, Keyboard, Folder, Fax, Filing cabinet, Telephone, Swivel chair, Desk, Wastebasket, printer and calculators are needed in right quantities and qualities to enable the school carry out their administrative functions (Ogunode, Ahaotu and Solomon, 2021). Most of these resources are imported, Imported goods are transported from seaports and airports to their respective destinations within the country (Okonkwo, 2023). The removal of fuel subsidy has increased transportation costs, as fuel prices directly impact shipping and logistics expenses. As a result, the prices of imported goods, including electronics, machinery, and consumer products, are likely to rise.

The educational institutions rely on fuel and power supplies for carrying out administrative services and functions to the students and parents, such as powering office machinery and transportation. The removal of fuel subsidy has increased the administrative costs of schools running.

- **Reduction in teaching hours**

Teaching programme implementation in Nigerian educational institutions has been affected by the subsidy removal. Teaching programme is one of the most cardinal programmes of educational institutions (Ogunode, 2021). Teaching programme is the act of imparting knowledge to the learners.

Teaching involves physically or virtually delivering a lesson or instruction that can modify behaviour. Teaching in most Nigerian educational institutions is mostly done with the traditional teaching model of physical. Physical teaching method is a system that involves the teachers to deliver the lesson or lecture physically in the school environment. The physical teaching method is characterized by movement from the teachers' abode to the school environment. It involves the use of school buses, cars, or motorcycles to move from the teachers' homes to school facilities. The removal of subsidy in Nigeria has led to an increment in the price of fuel.

The increment in fuel price has led to an increment in transportation fares which directly and indirectly affected the teachers' movement to schools. Many teachers are now missing classes due to their inability to come to school while in tertiary institutions many lecturers have decided to compress their lectures to once or twice a week. And other lecturers have changed to a virtual model of teaching. The post-subsidy removal in Nigeria has affected the implementation of teaching programs in Nigerian educational institutions. Subsidy removal has impacted negatively on the entire educational system leading to a reduction in the teaching hours in schools because teachers cannot cope with the increment of transportation fare. Teachers are also affected by the removal of the fuel subsidy, as they have to pay more for transportation to and from work. Many teachers rely on public transport, such as buses, taxis and motorcycles, which have also increased their fares due to the higher cost of fuel. Some teachers may have to spend more than half of their salaries on transportation alone, leaving little for other expenses such as food, rent and health care (Okonkwo, 2023).

- **Reduction in learning hours**

Learning programs have been negatively affected by the removal of fuel subsidy in Nigeria. A learning program is implemented in educational institutions; it is a planned program for students or learners (Ahmed and Ojo, 2021). Studentship starts from the early child education to basic education to secondary school education and ends in higher institutions. The learning programmes of many Nigerian institutions have been affected by the subsidy removal. Learning programme in most Nigerian educational institutions is anchored on movement from students' homes to schools. Most students or learners in Nigeria move from their homes to school, especially in basic schools and senior secondary schools. This movement is done mostly by buses, motorcycles or cars that use fuel. The subsidy removal has led to an increase in the fuel price which has also led to an increase in transportation fares.

The removal of subsidies has led to a reduction in learning hours since most of the teachers have other businesses they manage that give them money to enable them to cope with the present situation of fuel subsidy removal. It is evident that this hike in the price of fuel makes it difficult for students to movement to school. Students are another group that is affected by the removal of fuel subsidies, as they must pay more for transportation to and from school (Okonkwo, 2023). Some students may have to drop out of school, increase their absenteeism or defer their studies if they cannot afford the transportation costs. Some students may also have to cope with poor learning conditions such as inadequate facilities, overcrowded classrooms and frequent power outages, as schools struggle to provide quality education with limited resources.

- **Reduction in school supervision activities**

Subsidy removal in Nigeria has led to a reduction in the supervision activities in educational institutions across the country (Onele and Aja, 2016). Instructional supervision is a programme of instructions designed to improve teachers' job performance and students' academic performance in schools (Ekundeyo, Oyerinde & Kolawole, 2018). Instructional supervision is a combination of activities meant to advance the work effectiveness of teachers and other personnel in the school business. Instructional supervision is the process of improving teaching and learning in educational institutions because of realizing the goals of education. Instructional supervision is critical to the development of education.

Supervision is divided into external and internal supervision (Emmanuel, Akinloye and Solaoye, 2020). External supervision involves physical and virtual monitoring school of activities for school improvement (Ogunodo, Olatunde & Yemi, 2021). Physical external supervision involves physically verifying school programs for the purpose of improving their quality. It is a system of supervision that involves moving from offices to educational institutions. The physical external supervision depends heavily on fuel to aid its movement from one school to another school. The removal of subsidies on fuel in Nigeria has triggered the price of fuel to rise making it difficult for supervisors to move from school to school for supervision. Supervision of educational institutions has been affected due to the increment in the price of fuel because of subsidy removal.

Effect of fuel subsidy removal on the cost of transportation by land

The effect of fuel subsidy removal on transportation is a multifaceted aspect of transportation economics that encompasses various dimensions including; operational efficiency, and financial sustainability. Subsidies as financial incentives provided by governments or other entities can significantly influence the operating environment of cooperative society when it comes to transportation affecting their revenue streams, cost structures, and overall business viability. Transportation when it comes to cooperative performance encompasses a range of metrics, including but not limited to; revenue generation, cost efficiency, service reliability, customer satisfaction, and environmental sustainability (Tuffour, 2020). The influence of subsidies on these performance indicators varies depending on factors such as subsidy design, implementation mechanisms, and market dynamics.

One key aspect of the impact of subsidies on transporter performance is their role in bolstering financial viability and operational stability. Subsidies can serve as a crucial source of revenue for transporters, particularly in industries characterized by thin profit margins and high operating costs (Adeyemi, 2019). By offsetting operating expenses and providing direct financial support, subsidies enable transporters to maintain service levels, invest in fleet modernization, and expand route networks, thereby enhancing overall performance and competitiveness.

Moreover, subsidies can exert a profound influence on the pricing dynamics within the transportation market, thereby shaping demand patterns and revenue generation for a cooperative society. Subsidy induces fare reduction. Fare stabilization measures can stimulate passenger demand, leading to increased ridership and revenue for transporters (Ogunleye and Adebola, 2018). Conversely, the removal or reduction of subsidies results in fare hikes, which deter some passengers and potentially reduce transporter revenues. Consequently, the design and implementation of subsidy policies play a crucial role in mediating the impact on transporter performance. The relationship between subsidies and transportation is not solely determined by financial considerations. Subsidies can also affect service quality and operational efficiency, thereby influencing customer satisfaction and market competitiveness. For instance, fuel subsidies earmarked for infrastructure investment or fleet modernization initiatives can enhance service reliability, reduce travel times, and improve passenger comfort, thereby bolstering transporter performance (Nwosu and Igwe, 2019). Similarly, subsidies aimed at promoting environmentally sustainable practices, such as the adoption of cleaner technologies or modal shifts; enhance the long-term viability of transporters by reducing operating costs and regulatory compliance burdens (Owoeyeand Adewale, 2020).

Furthermore, the impact of subsidies on transporter performance extends beyond immediate financial and operational considerations to encompass broader socio-economic and environmental outcomes. Subsidies play a pivotal role in promoting inclusive access to transportation services, particularly for underserved communities and marginalized populations by ensuring affordable and accessible transportation options (Ajayi and Adebayo, 2020). Fuel subsidies contribute to social equity objectives while supporting economic development and mobility enhancement initiatives which encompass various dimensions including financial viability, operational efficiency, service quality, and socio-economic equity.

Theoretical framework

Social Welfare State Theory

The study is anchored on the Social Welfare State Theory propounded by William Beveridge in 1942. The theory posits that the government has a responsibility to provide basic economic security and social services to its citizens. This includes things like unemployment benefits, health care, education and housing assistance. This implies that there is a need for the government to make provisions of subsidizing products and services for the consumers in order to better the social life and living standard of its citizens. The term "welfare state" refers to a type of governing in which the government plays a key role in the protection and promotion of the economic and social well-being of its citizens (Pierson and Castle, 2020). A welfare state is based on the principles of equality of opportunity, equitable distribution of wealth and public responsibility for those unable to avail themselves of provisions of good life. A good standard of living relationship arises when there is social security, federally mandated unemployment insurance programs and welfare payments to people unable to work. Under this system, the welfare of its citizens is the responsibility of the state.

Tenets of Social Welfare State Theory: In a welfare state, the government is responsible for the individual and social welfare of its citizens. Welfare donates a range of government programs providing financial or other assistance to individuals or societal groups who cannot support themselves. Qualification for benefits depends upon several factors, including family size and income level. However, the term "welfare state" is a charged one, as critics of such a system say it involves too much government involvement in the lives and well-being of its citizens. The welfare state is sometimes criticized as being a "nanny state" in which adults are coddled and treated like children.

Relevance of the theory: The Social Welfare State Theory is relevant to this study because it appreciates the role of government in achieving the desired standard of living. According to the theory, the government protects and promotes the economic and social well-being of its citizens based on the principle of equal opportunity, equitable distribution of wealth, and public responsibility for citizens unable to avail themselves of the minimal provisions of a good life.

Empirical Review

Olaniyi (2023) studied the effect of fuel subsidy removal on transport costs and transport rates in Nigeria. The objective of the study is to determine the relationship between fuel subsidy removal and its effect on transportation. The study employed regression analysis. The result revealed that fuel subsidy is a major tool for enhancing citizens' welfare, especially among middle and low-income earners. He argued that fuel subsidy removal has reduced the rate at which people travel in the country and the number of working days by civil servants.

Dartanto (2023) examined the relationship between existing fuel subsidies and fiscal balance in Indonesia between 2014 and 2020. The objective of the study is to mitigate the negative impacts of the removal of fuel subsidy on poverty. The study employed correlation and regression analysis. The result of the study revealed 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. He revealed that removing fuel subsidies in Indonesia can have a positive impact on the fiscal balance, but can also lead to a slight increase in poverty.

Chatri (2023) examined the economy-wide effect of fuel subsidy removal in Malaysia. The study is conducted with the objective of examining the economy wide effect of fuel subsidy removal. The study employed descriptive analysis. The result of the study revealed that removing subsidy has led to a significant increase in electricity prices, subsequently causing a decrease in demand from other economic sectors and a decline in overall Gross Domestic Product (GDP). He argued that fuel subsidy removal has brought retardation to the nation's economy.

Adinoyi and Kape (2023) examined the impact of fuel subsidy removal in Nigeria and proposed palliative measures to mitigate its adverse effects. The objective of the study is to ascertain the impact of fuel subsidy removal and the palliative measures to mitigate its adverse effects. The research employed qualitative methodology. The result of the study revealed that due to inadequate provision of palliative during the period of subsidy removal, the economic well-being of the citizens has been damaged thereby increasing the mortality rate. There is a need for accountability and transparency in the distribution of palliatives to enhance public trust.

Izom (2023) examined the impact of fuel subsidy removal in Nigeria, focusing on its challenges and prospects. The objective of the study is to determine the impact of fuel subsidy removal. Content analysis and logical inference were employed as tools for data analysis, with the research anchored on structural functionalism as its theoretical framework. The result of the study indicates that instead of delivering anticipated benefits, the removal of subsidy has had a negative impact on the citizens and no evident arrangements were made by the government to alleviate future hardships foreseen in the implementation among other issues. It argues that the policy has negatively affected citizens and suggests that the government develop effective implementation strategies to mitigate future hardships.

Adepoju (2023) conducted a study to investigate the impact of fuel subsidy removal on gross domestic product and transportation costs in Nigeria. The objective of the study is to obtain the impact of fuel subsidy removal on the Gross Domestic Product. The study utilized a correlational research design and relied on secondary data from the country's Gross Domestic Product (GDP). The result showed that the removal of fuel subsidies in Nigeria has led to a 64% increase in inflation and a 42.5% decrease in GDP. The study revealed that addressing the issue of fuel subsidies can have a significant effect on the economy and suggests that alternative fuels and policies promoting non-motorized transport could help mitigate the impact of fuel price increases.

Sanchi (2023) conducted a study on the sudden exit of fuel subsidy and its implications on agricultural productivity in the production season. The objective of the study is to ascertain how the sudden exit of fuel subsidy has affected agricultural productivity in 2023. The study employed a descriptive analysis method. The result of the study showed that from 1966 to 2012, Nigeria removed fuel subsidies 24 times in 58 years, and the prices of most food items increased astronomically from 2016 to 2023, especially for beef and fish. A review revealed the impact of fuel subsidy removal on selected food prices in Nigeria, focusing on the price of rice, garri, yam, beef and fish.

METHODOLOGY

Research design connotes the approach researcher(s) intend to take in carrying out a study. Hence, the survey research design was adopted as appropriate for this study. Survey research design is described as that which involves a systematic gathering of data through the use of a structural questionnaire and communicates with a reasonably large number and representative sample of respondents (Maxwell, 2012). The population of the study is made up of all the members of Farmers' Multipurpose Cooperatives Societies (FMCS) in Anambra State. The total number of operational farmers' multipurpose cooperative societies in Anambra State is five hundred and forty-six (546) cooperative societies, with membership strength of nineteen thousand, two hundred and sixty-six (19,266) **(**Department of Cooperatives, Ministry of Trade, Commerce and industry, Anambra State, 2024). Taro Yamane's (1964) formula was used to determine the sample size of 400 for the study. The selection of the sample for the study used a multi-stage random sampling technique which involves three stages. The first stage involves a purposive selection of two LGAs that are predominantly rural and agrarian from each of the four agricultural zones in Anambra State, namely; Awka, Onitsha, Aguata and Anambra Zones. The second stage involved the judgmental selection of the societies from the Farmers Multi-purpose Cooperative Society in the selected local government area. The third stage involved the proportional and random selection of 50% of members from each of the selected Farmers Multipurpose Cooperative Society and the final stage was the random selection of individual members of the registered cooperative society in the study area. Therefore, a total of 400 members were selected from 40 Farmers' Multipurpose Cooperatives as sample size as in Table 3.1 below. The main source of data is primary data. The primary data is obtained from the use of a well-structured questionnaire (Likert Scale), which is based on the research questions for the study. The data collection instrument was given to experts to validate alone the lines of face and content validity. The suggestions, amendments and corrections were affected before the administration of the instrument. In order to ensure the reliability of the instrument, the study used the Cronbach Alpha coefficient to test the reliability of the instrument at a 5% level of significance and a coefficient of .970 was obtained. Descriptive statistics were used to analyze collected data. Data were presented and discussed in the form of means, standard deviation, tables, frequency counts, and percentages. In order to test the hypotheses, regression analysis (ordinary least squares [OLS)] approach) was deployed and the level of significance used is 5%.

PRESENTATION AND ANALYSIS OF DATA

The data presented, analyzed and discussed bear direct relevance to the problem and objectives of the study, which are essential for testing the hypotheses formulated in this study. Table 1 shows the summary of the data on the distribution of questionnaires.

Table 1: Questionnaires Distribution and Return Rate for Farmers Multipurpose Cooperative Societies in Anambra State

S/N	Agricultural Zone & L.G.A.	No. of Distribution	Distribution Rate (%)	No. of Returned Questionnaires	Response Rate (%)	No. Not Returned	Not Returned Rate (%)
1	Aguata: Orumba North and South	100	25.0	85	21.25	15	3.75
2	Anambra: Anambra East and Anambra West	87	21.75	73	18.25	14	3.5
3	Awka: Awka North and Dunukofia	101	25.25	88	22.0	13	3.25
4	Onitsha: Ogbaru and Idemili	112	28.0	98	24.5	14	3.5
	Total	**400**	**100%**	**384**	**96%**	**16**	**4%**

Source: Computation from field survey, 2025.

From Table 1 above, it is shown that a total of 400 questionnaires were distributed to members of multipurpose cooperative societies in Anambra State. Out of these, 384 questionnaires were properly completed and returned, resulting in an overall response rate of 96%. This reflects a non-return rate of 4%, with 16 questionnaires not returned.

The table above provides detailed data on the distribution and return rates of questionnaires across the various agricultural zones in Anambra State. In Aguata (Orumba North and South), 100 questionnaires were distributed, and 85 were returned, yielding a response rate of 21.25%, with 15 questionnaires not returned. In the Anambra zone (Anambra East and West), 87 questionnaires were distributed, and 73 were returned, resulting in a response rate of 18.25%, with 14 questionnaires not returned.

In Awka (Awka North and Dunukofia), 101 questionnaires were distributed, and 88 were returned, reflecting a response rate of 22.0%, with 13 questionnaires not returned. Lastly, in Onitsha (Ogbaru and Idemili), 112 questionnaires were distributed, and 98 were returned, leading to a response rate of 24.5%, with 14 questionnaires not returned.

The data indicates a high level of engagement among members of the cooperative societies, showcasing their willingness to participate in the study, which is crucial for assessing the impact of fuel subsidy removal on their standard of living.

Test of Hypotheses

The decision rule is stated thus: Reject Null hypothesis Ho where the calculated probability value (*p*-value) is less than 0.05 level of significance, do not reject Ho, if otherwise.

Hypothesis One

H_{01}: Fuel subsidy removal has no significant effect on the cost of education.

Table 2: Correlation Analysis for Hypothesis One

Variables	(Pearson Correlation) r	Sig. (2-tailed)	N	Interpretation
Fuel Subsidy Removal ↔ Education Cost	0.621	0.000	286	Strong positive correlation; statistically significant (p < .05)

Source: Computation from field survey, 2025.

Regression Analysis

Table 3: Model Summary

R	R^2	Adjusted R^2	Std. Error	F	Sig.
0.621	0.386	0.378	0.912	94.02	0.000

Source: Computation from field survey, 2025.

Decision: Reject H_{01}

Interpretation of result in Table 3: Fuel subsidy removal significantly increases the cost of education. The R^2 of 0.386 indicates that about 38.6% of the variation in education cost is explained by fuel subsidy removal.

Hypothesis Two

H_{02}: Fuel subsidy removal has no significant effect on transportation costs.

Table 4: Correlation Analysis for Hypothesis Two

Variables	r (Pearson Correlation)	Sig. (2-tailed)	N	Interpretation
Fuel Subsidy Removal ↔ Transportation Cost	0.685	0.000	286	Strong positive correlation; statistically significant (p < .05)

Source: Computation from field survey, 2025.

Regression Analysis

Table 5: Model Summary

R	R^2	Adjusted R^2	Std. Error	F	Sig.
0.685	0.469	0.462	0.856	129.68	0.000

Source: Computation from field survey, 2025.

Decision: Reject H_{02}

Interpretation of result in Table 5: Fuel subsidy removal has a significant and positive effect on transportation costs. Approximately 46.9% of the variance in transportation costs is explained by fuel subsidy removal.

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 Anambra State; it also revealed that fuel subsidy affected the accessibility of critical services such as; transportation and education, following subsidy removal, and finally, critical services such as transportation, education, house rent and prices of goods were affected due to subsidy removal.

Recommendations

1 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.
2 To cushion the effect of subsidy removal, the government should increase its social investment programs such as the n-power programs, school feeding programs etc.
3 The government should create public awareness campaigns and educational awareness in order to inform the public about the reasons for fuel subsidy removal and its long-term benefits. Transparency in this process will foster understanding and acceptance.

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