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Impact of fuel subsidy removal on human security in Nasarawa state

BY

[1]Isaac Oluyemi OLUWADAMISI., [2]Abdullahi N. LIMAN Prof., & [3]Yusuf A. USMAN Assoc. Prof.
[1-3]Institute of Governance and Development Studies, Nasarawa State University, Keffi, Nasarawa State Nigeria

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Abstract

The removal of fuel subsidies in Nigeria has generated intense debate due to its wide-ranging implications for economic well-being and social stability, particularly among low- and middle-income households. This study investigates the impact of fuel subsidy removal on human security in Nasarawa State, with specific attention to livelihoods and food security. Anchored on the Human Security Theory and Economic Theory, the study employed a survey research design, utilizing a structured questionnaire administered to a sample of 373 respondents drawn from Keffi, Lafia, and Akwanga Local Government Areas through proportionate and cluster sampling techniques. Descriptive statistics and regression analysis using SPSS Version 27 were employed for data analysis. The findings revealed that 50.9% of respondents experienced a high increase in transportation costs, 44.0% reported a high reduction in income or savings, and 41.8% reported a high disruption in access to healthcare and basic services, indicating a significant decline in economic security. Similarly, in terms of food security, 54.7% of respondents reported a high impact on their ability to purchase the same quantity of food, 47.7% indicated a high reduction in food quality, and 47.4% stated that they frequently skipped meals or reduced portion sizes. These findings demonstrate that the removal of fuel subsidies has severely eroded human security in the region, reinforcing theoretical expectations regarding inflationary pressures and economic vulnerability. The study concludes that although the subsidy removal may align with national fiscal objectives, it imposes disproportionate burdens on vulnerable populations. It recommends the implementation of targeted social protection policies, including transport vouchers, food-price stabilization mechanisms, and support for local agricultural productivity, to mitigate the negative effects and foster equitable economic recovery in Nasarawa State.

Keywords: Economic Theory, Food Security, Livelihood, Petroleum Subsidy Removal

Introduction

The removal of fuel subsidies has been one of the most contentious economic policy decisions in Nigeria, with significant socio-economic implications across various states, including Nasarawa State. Fuel subsidies were introduced to keep the price of petrol affordable for the general population, particularly benefiting low- and middle-income households. However, successive governments have struggled to maintain the subsidy due to the growing fiscal burden it placed on the nation's economy (Ogunbiyi, 2023). The subsidy system, while intended to support the average Nigerian, has faced criticism for encouraging inefficiencies, fuel smuggling, and corruption (Adebayo & Olayinka, 2022).

Among other factors, a violent crime known as armed banditry, which involves robbing, killing, or sexually assaulting the victims (Okoli & Okpaleke, 2014), constitutes a grave threat to human security. Armed banditry refers to instances of armed robbery or similar crimes (Okoli & Ugwu, 2019). It refers to organized

* Corresponding author: **OLUWADAMISI Isaac Oluyemi**
Department of Security and Strategic Studies, Nasarawa State University, Keffi, Nigeria.

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crimes such as rape, kidnapping, looting, livestock rustling, and village raids (Okoli & Ugwu, 2019). Armed criminal gangs that frighten, assault, and forcibly evict people from their property are responsible for carrying out this crime.

Fuel subsidy is a government discount on the market price of fossil fuel to make consumers pay less than the prevailing market price of fuel (Ovaga & 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 subsidies because of their huge amount and their effect on citizens' welfare and the fiscal health of a nation. The size of global fossil fuel subsidies is large and is estimated at $1 trillion in 2022, from $325 billion in 2018, according to the International Energy Agency. This amount is significantly higher than the value of global aid, which was estimated at $204 billion in 2022 and larger than the combined government revenue of developing countries. This has led to calls for the removal of global fossil fuel subsidies so that the saved funds can be channeled to assist the poor and vulnerable in need of humanitarian assistance in developing countries (Couharde & Mouhoud, 2020; Ozili & Ozen, 2021).

However, the removal of fossil fuel subsidies is contentious because there is the argument that fossil fuel subsidy is a form of aid. After all, they make fuel more affordable for the poor. Despite this favourable argument, a large literature document the negative consequences of fuel subsidy which include increasing air pollution and greenhouse gas emissions (Sweeney, 2020), road congestion (McCulloch et al., 2021), road accidents and premature deaths (Parry, Black & Vernon, 2021), foregone tax revenue (Sweeney, 2020) and it increases inequality between the poor and the rich (McCulloch, et al., 2021). However, policymakers in many countries are reluctant to remove fuel subsidy and to implement fuel subsidy reforms because such reforms may result in a significant increase in fuel or electricity prices which could lead to economic hardship for low-income and poor citizens, and might lead to massive protest and increase the risk of a revolution or the overthrow of the incumbent government.

In Nigeria, fuel subsidies were first introduced in the 1970s as a response to the oil price shock in 1973. Fuel subsidies were partially removed in 1986. Since then, the fuel subsidies have been in place. In 2012, the government abruptly removed the fuel subsidy. The removal led to massive protests, which were intended to pressure the government to reinstate the fuel subsidy it had removed. The government subsequently reinstated the fuel subsidy in 2012 due to the massive protests. Since then, fuel subsidy payments in Nigeria have grown enormously. In 2022, fuel subsidy reached ₦4 trillion (US$6.088 billion), which amounted to 23 percent of the national budget of ₦17.126 trillion (US$25.87 billion) in 2022. As a result, Nigeria could no longer sustain fuel subsidies in 2023, and the government announced that fuel subsidies would be removed in June 2023. Recent evidence in the Nigerian literature shows mixed effects of fuel subsidies. Some studies identify

some benefits of fuel subsidies and call for transparency in the administration of fuel subsidies, while other studies highlight the negative consequences of fuel subsidies and advocate for their removal. For example, Omitogun et al (2021) show that the removal of fuel subsidies might reduce the amount of carbon emissions in the Nigerian economy. Similarly, Adekunle and Oseni (2021) argue that fuel subsidy removal could reduce the growth in carbon emissions through low energy consumption channels, even though it could lead to higher energy prices. Asare et al. (2020) argue in support of fuel subsidy removal and that the revenue gained from removing fuel subsidy could provide additional resources for the government to respond with immediate interventions to address the COVID-19 crisis and enable the government to shift resources into more productive spending for long-run post-COVID recovery and resilience (Ozili & Arun, 2023).

In Nasarawa State, a region that shares borders with the Federal Capital Territory (FCT) and several other states, the removal of fuel subsidies has had profound effects on the local economy, social structure, and human security. Human security, as defined by the United Nations Development Programme (UNDP), includes economic, food, health, environmental, personal, community, and political security (UNDP, 2020). In the context of Nasarawa State, the economic strain caused by rising fuel prices has resulted in higher transportation costs, inflation, and reduced access to basic services, which in turn exacerbate the insecurity experienced by the state's residents (Alabi & Oduwole, 2023).

This study contributes to the literature that examines the beneficial and harmful effects of fuel subsidy (Omitogun et al, 2021; Adekunle & Oseni, 2021; Asare et al, 2020; Umeji & Eleanya, 2021; Ovaga & Okechukwu, 2022; Omotosho, 2020; McCulloch et al, 2021). It is on this basis that the study seeks to examine the impact of oil subsidy removal on human security in Nasarawa State.

Statement of the Problem

The impact of fuel subsidy removal on human security in Nasarawa State, Nigeria, is a multifaceted issue that intertwines economic, social, and environmental dimensions. Fuel subsidies have historically been a significant component of Nigeria's economic policy, aimed at alleviating the financial burden on citizens, particularly lower-income groups. However, the removal of these subsidies can lead to substantial increases in fuel prices, which directly affect transportation costs and the prices of essential goods and services, thereby threatening the economic stability and overall human security of the population in Nasarawa State (Mohammed et al., 2020; Inegbedion et al., 2020; Obo et al., 2017).

According to Adeyeye (2023), the new administration's intention to eliminate the current fuel subsidy, which it views as a burden on governments, has a negative impact and, if not properly managed, its economic benefit could be meaningless. The fact remains that the new administration has to act in this way because a significant

amount of money was spent on subsidizing imported fuel into the nation. Additionally, there is the issue of inflation and rapidly rising prices for goods and services. What the President Tinubu administration intends to achieve with the withdrawal of the subsidy policy might contradict peace and security because previous administrations that tried it were confronted with serious resistance from the Nigerian Labour Congress (NLC). As Omoniji (2012) opine that while young Nigerians always react to the withdrawal of fuel subsidy through protest on the major highways, government workers, especially members of NLC, engaged the government in negotiation, and whenever this fails, members always embark on strike action to express their dissatisfaction. Such developments in the past made the central government lose millions of dollars, translating into billions of naira.

The economic implications of fuel subsidy removal are profound. As observed in various studies, including those conducted in other regions such as Ethiopia and Bangladesh, the removal of fuel subsidies often leads to immediate increases in transportation costs, which in turn escalate the prices of commodities (Fuje, 2020; Amin et al., 2018). In Nigeria, the removal of fuel subsidies has been linked to a significant rise in the cost of living, particularly affecting the most vulnerable populations who rely heavily on affordable transportation and goods (Inegbedion et al., 2020; Obo et al., 2017). The economic strain resulting from these price increases can lead to heightened poverty levels, food insecurity, and reduced access to essential services, thereby exacerbating human security challenges in Nasarawa State (Mohammed et al., 2020; McCulloch et al., 2021; Dennis, 2016).

Overall, the relationship between petrol price increases, inflation, and the cost of living in Nigeria is complex and multifaceted. While petrol price deregulation can contribute to higher costs of living and inflation, the impact can be moderated if complemented with effective policies and a well-thought-out implementation strategy. This study, therefore, aims to fill this gap by examining the impact of oil subsidy removal on human security in Nasarawa State.

Research questions

The following research questions guided the paper;

i. How does the removal of fuel subsidies affect the livelihoods of individuals in Nasarawa State?
ii. What is the impact of fuel subsidy on food security in Nasarawa State?

Objectives

The study's main objective interrogates impact of fuel subsidy removal on human security in Nasarawa state. While specific objectives:

i. Examine how the removal of fuel subsidies affects the livelihoods of individuals in Nasarawa State.

ii. Determine the impact of fuel subsidy on food security in Nasarawa State.

Literature Review

Conceptual Framework

Petroleum Subsidy Removal

The conceptualization of petroleum subsidy removal within the human security framework begins with understanding subsidies as government interventions that artificially lower the market price of fossil fuels, enabling consumers to pay below prevailing market rates (Ovaga & Okechukwu, 2022). When subsidies are removed, the resulting price adjustment from approximately ₦184 to over ₦1,200 per litre in Nigeria's 2023 reform triggers cascading economic effects that fundamentally alter household welfare (National Bureau of Statistics, 2023). The World Bank (2023) estimates that this policy shift pushed an additional 7.1 million Nigerians into poverty, demonstrating that subsidy removal, while potentially justifiable on fiscal grounds, operates as a regressive shock that disproportionately burdens vulnerable populations (National Bureau of Statistics, 2023).

From a human security perspective, subsidy removal represents what the United Nations Development Programme (UNDP, 1994) terms a "sudden and hurtful disruption in the patterns of daily life "precisely the type of economic shock that human security frameworks are designed to anticipate and mitigate. The political economy literature emphasizes that generalized subsidies, despite their inefficiencies, often serve as implicit social protection mechanisms, and their removal without adequate compensatory measures constitutes a withdrawal of the state's welfare function (World Bank, 2013). Thus, petroleum subsidy removal is conceptualized not merely as a fiscal adjustment but as a structural intervention that reconfigures the relationship between citizens, the state, and the satisfaction of basic needs.

Livelihood as a construct of human security

Livelihood as a construct of human security encompasses the capabilities, assets, and activities required for securing the necessities of life, and its erosion following subsidy removal represents a fundamental threat to human well-being. Within the human security paradigm, livelihood security is inextricably linked to economic security defined as "an assured basic income" from productive and remunerative work (UNDP, 1994). The empirical evidence from Nasarawa State demonstrates that subsidy removal has severely compromised livelihood security through multiple pathways: 50.9% of respondents experienced high increases in transportation costs, 44.0% reported high reductions in income or savings, and 41.8% indicated high disruption in access to healthcare and essential services. These findings align with the World Bank's (2013) observation that fuel price increases directly affect mobility, access to services, and the operational costs of small enterprises, which constitute the backbone of local economies (World Bank, 2013). The

contraction of economic activity forces households to deploy coping strategies including depletion of savings, reduced consumption, and diversification into precarious income sources yet these mechanisms often prove insufficient to prevent descent into poverty (National Bureau of Statistics, 2023; Odok et al., 2024).

From the lens of Human Security Theory, livelihood erosion represents not merely income loss but the systematic undermining of human capabilities the freedom to work, to access markets, to afford healthcare, and to participate in community life. As Eric-Ogri and Odey (2025) argue, there exists a strong connection between citizens' welfare and national security, for as the saying goes: 'a hungry man is an angry man' (Eric-Ogri & Odey, 2025). Thus, livelihood is conceptualized as the foundational capability that enables the exercise of all other human security dimensions, and its systematic erosion through subsidy removal constitutes a structural violence that fractures household resilience and community stability.

Food Security as a construct of Human Security

Food security as a construct of human security represents perhaps the most visceral manifestation of the subsidy removal shock, as rising fuel prices translate directly into diminished access to adequate, safe, and nutritious food. The Human Security Theory identifies food security as one of seven interconnected dimensions, emphasizing that threats to food access cascade rapidly into health deterioration, social instability, and the erosion of human dignity (UNDP, 1994). The findings from Nasarawa State provide stark empirical confirmation: 54.7% of respondents reported high impact on their ability to purchase the same quantity of food, 47.7% indicated high reduction in food quality, and 47.4% stated that they frequently skipped meals or reduced portion sizes. These outcomes reflect the classic mechanism of cost-push inflation, where increased fuel prices elevate transportation and distribution costs throughout the food supply chain, ultimately landing on consumers' plates at unaffordable prices (National Bureau of Statistics, 2023).

The World Bank (2023) documents that food inflation in Nigeria exceeded 30% following subsidy removal, rendering basic nutrition inaccessible for millions of households (National Bureau of Statistics, 2023). Odok et al. (2024) further reveal that elderly persons among the most vulnerable population segments have experienced "traumatizing adversity and hunger" since subsidy removal, with poor eating habits culminating in domestic violence against them (Odok et al., 2024). Within the human security framework, food insecurity is not merely a nutritional issue but a comprehensive threat that undermines health security (through malnutrition and disease susceptibility), personal security (through domestic tensions and violence), and community security (through social fragmentation). The interdependence principle of Human Security Theory illuminates how fuel price increases (economic security threat) directly impact food affordability (food security threat), which in turn affects nutritional status and health outcomes (health security threat), creating cascading vulnerabilities that conventional sectoral analysis would miss. Thus, food security is

conceptualized as both an indicator and a determinant of broader human security, revealing the profound human costs of macroeconomic policy decisions that proceed without adequate social protection architectures.

The theoretical integration of these constructs reveals that petroleum subsidy removal, livelihood erosion, and food insecurity are not discrete phenomena but interconnected dimensions of a systemic human security crisis. Human Security Theory's foundational principle that "freedom from want" and "freedom from fear" are inseparable objectives provides the analytical lens for understanding how a single policy intervention reverberates through the entire fabric of human well-being (Eric-Ogri & Odey, 2025). The removal of subsidies triggers transportation cost inflation, which constricts livelihood opportunities and erodes household income; diminished income, in turn, curtails food purchasing power, forcing households into desperate coping strategies that further undermine their long-term productive capacity. This vicious cycle demonstrates what the UNDP (1994) identified as the cascading effect of human security threats, where each dimension of insecurity amplifies the others.

The empirical evidence from Nasarawa State validates this theoretical framework, demonstrating that the 50.9% experiencing high transportation cost increases are the same populations reporting severe food access limitations and livelihood disruption. As the World Bank (2013) emphasizes, the transition from universal subsidies to targeted social assistance must be managed with careful attention to these interconnected vulnerabilities, ensuring that reform processes do not inadvertently dismantle the implicit safety nets on which vulnerable populations depend (World Bank, 2013). This study's conceptual framework therefore positions petroleum subsidy removal as the independent variable whose effects are transmitted through livelihood and food security pathways to produce the observed outcomes in human security, providing a theoretically grounded and empirically validated architecture for understanding the human dimensions of macroeconomic reform in Nasarawa State.

Theoretical Framework

Economic Theory

This study is anchored on two complementary economic theories that provide lenses for understanding how fuel subsidy removal affects livelihoods and food security in Nasarawa State. This study interrogates Welfare Economics Theory and Price Elasticity of Demand Theory. These theoretical frameworks illuminate the mechanisms through which a single policy intervention the removal of petroleum subsidies transmits economic shocks through transportation systems, household consumption patterns, and food access pathways, ultimately reshaping the human security landscape of the state.

Welfare Economics Theory: Understanding Livelihood Impacts

The Welfare Economics Theory, which underpins the first research question examining how fuel subsidy removal affects livelihoods in Nasarawa State, provides a comprehensive framework for analysing the distributional consequences of economic policies on household well-being. Welfare economics, as articulated by Pigou and subsequently developed by successive scholars, is concerned with evaluating the economic policies in terms of their effects on the well-being of individuals and communities, focusing particularly on resource allocation efficiency and income distribution equity (Yusufu et al., 2024). This theory posits that policy interventions create winners and losers, and the net social welfare effect depends on whether the gains to some groups outweigh the losses to others, with particular attention to how burdens are distributed across different segments of society.

Applying Welfare Economics Theory to fuel subsidy removal reveals that while the policy generates fiscal savings for the government estimated at over ₦4 trillion annually these macroeconomic gains are achieved at significant microeconomic cost to households, particularly those in the informal sector who lack the buffers to absorb price shocks (Okoroafor et al., 2025). The theory's emphasis on consumer surplus the difference between what consumers are willing to pay and what they actually pay is particularly illuminating. Fuel subsidies historically preserved consumer surplus by enabling households to access transportation and goods at artificially low prices. Their removal transfers this surplus away from consumers, reducing their effective purchasing power and constraining their ability to meet basic needs (Yusufu et al., 2024).

The empirical evidence from Nasarawa State validates this theoretical framework. Yusufu et al. (2024), in their study of commercial drivers in Agwada, found that fuel subsidy removal increased operational costs by over 50%, leading to reduced disposable income, increased indebtedness, depleted savings, and restricted access to healthcare (Yusufu et al., 2024). These findings reflect the welfare economics principle that policy-induced price increases generate deadweight loss efficiency losses that reduce overall societal welfare even when government revenues increase. The 50.9% of respondents in the current study who reported high increases in transportation costs, coupled with 44.0% who indicated high reductions in income or savings, demonstrate precisely the welfare transfers and deadweight losses that Welfare Economics Theory predicts (Yusufu et al., 2024).

Furthermore, Welfare Economics Theory emphasizes the importance of considering the marginal utility of income the additional satisfaction derived from an additional unit of income which varies across income groups. For low-income households, every naira lost to increased transportation costs represents a proportionally larger welfare loss than for wealthier households, as it forces trade-offs between essential needs (Yusufu et al., 2024). Bemgba and Adadu (2025) confirm this theoretical prediction, documenting that

rural dwellers in Nasarawa State have been disproportionately affected by subsidy removal due to increased transportation costs, food insecurity, and limited access to palliative measures (Bemgba et al., 2025). This distributional inequity underscores the welfare economics insight that policies must be evaluated not only by their aggregate outcomes but by their impact on the most vulnerable members of society.

Price Elasticity of Demand Theory: Understanding Food Security Impacts

The Price Elasticity of Demand Theory provides the theoretical foundation for the second research question investigating the impact of fuel subsidy removal on food security in Nasarawa State. This fundamental microeconomic concept, central to consumer theory, measures the responsiveness of quantity demanded to changes in price, expressed as the percentage change in quantity demanded divided by the percentage change in price (Abdul et al., 2025). The theory posits that goods can be classified as elastic (where demand is sensitive to price changes) or inelastic (where demand is relatively insensitive), with essential goods like food typically exhibiting inelastic demand because consumers cannot easily reduce consumption when prices rise.

The application of Price Elasticity of Demand Theory to fuel subsidy removal illuminates the mechanism through which petroleum price increases translate into food insecurity. When fuel prices rise, transportation costs throughout the food supply chain increase from farm inputs to harvest transport to market distribution. These increased costs are passed forward to consumers in the form of higher food prices (Abdul et al., 2025). Because food is a necessity with low price elasticity, households cannot proportionally reduce their food consumption when prices rise; instead, they are forced to make difficult adjustments: reducing food quality, skipping meals, or reducing portion sizes (Abdul et al., 2025).

The empirical findings from Nasarawa State provide compelling evidence of these theoretical predictions. The study reveals that 54.7% of respondents experienced high impact on their ability to purchase the same quantity of food, 47.7% reported high reduction in food quality, and 47.4% indicated that they frequently skipped meals or reduced portion sizes. These outcomes reflect the classic inelastic demand response: when food prices rise due to fuel-induced transportation cost inflation, households cannot simply stop eating, so they adjust along intensive margins quality and frequency rather than reducing consumption to zero (Abdul et al., 2025). Abdul, Pius-Ajibade, and Moses (2025), employing Price Elasticity of Demand Theory in their analysis, found that fuel subsidy removal generates high inflationary pressures that increase poverty and vulnerability, precisely because the inelastic nature of food demand means households absorb price increases through welfare-reducing consumption adjustments (Abdul et al., 2025).

The theory also explains the transmission mechanism from fuel prices to food prices through the concept of derived demand. Transportation services are a derived demand they are demanded not for their own sake

but for the value they add in moving goods to consumers. When fuel prices increase, the cost of providing transportation services rises, shifting the supply curve for food distribution upward and leftward, resulting in higher equilibrium prices (Okoroafor et al., 2025). Mohammed et al. (2024) found that fuel subsidy removal negatively and significantly affects consumption patterns and cost of living in north-central Nigeria, confirming this theoretical transmission mechanism (Mohammed et al., 2024).

Integrating the Theoretical Frameworks

Together, Welfare Economics Theory and Price Elasticity of Demand Theory provide a comprehensive analytical framework for understanding the dual impacts of fuel subsidy removal on livelihoods and food security in Nasarawa State. Welfare Economics Theory illuminates the income effects how reduced purchasing power and increased transportation costs erode household livelihoods, force coping strategies, and deepen poverty, particularly among vulnerable populations (Bemgba et al., 2025; Yusufu et al., 2024). Price Elasticity of Demand Theory illuminates the price effects how fuel price increases cascade through the food supply chain, raising food prices and forcing households into consumption adjustments that compromise nutritional adequacy and food security (Abdul et al., 2025).

The theoretical integration reveals that fuel subsidy removal operates simultaneously through both channels. Increased fuel prices directly reduce household real income (the income effect predicted by Welfare Economics Theory) while simultaneously increasing the relative price of food (the substitution effect central to Price Elasticity of Demand Theory). These effects interact to produce the observed outcomes: households with less income facing higher food prices are forced into increasingly desperate coping strategies that undermine both current consumption and future productive capacity (Mohammed et al., 2024). The structural weaknesses in existing social safety nets, which Bemgba and Adadu (2025) document as failing to provide meaningful protection for the most vulnerable populations, compound these theoretical predictions, ensuring that the burdens of adjustment fall disproportionately on those least able to bear them (Bemgba et al., 2025).

Policy Implications of the Theoretical Framework

The economic theories underpinning this study carry profound implications for policy design. Welfare Economics Theory suggests that where policies create significant welfare losses for vulnerable populations, compensatory mechanisms are ethically imperative and economically efficient (Yusufu et al., 2024). This translates into recommendations for targeted social protection programmes, including transport vouchers for low-income earners, subsidized public transit systems, and conditional cash transfers to stabilize household expenses (Mohammed et al., 2024). Price Elasticity of Demand Theory suggests that policies addressing the root causes of food price inflation such as investments in local agricultural productivity, food-price

stabilization mechanisms, and support for smallholder farmers can moderate the transmission of fuel price increases to food prices (Abdul et al., 2025).

Ultimately, the theoretical framework demonstrates that sustainable policy reforms must integrate comprehensive livelihood support and food security interventions to absorb the inevitable shocks of economic transition. As Abdul et al. (2025) recommend, funds saved from subsidy removal should be transparently redirected toward critical infrastructure development, transportation investment, and social protection mechanisms that not only create jobs but also promote long-term economic growth while cushioning the most vulnerable (Abdul et al., 2025). Without such measures, the policy risks perpetuating cycles of poverty and food insecurity, ultimately constraining the very economic growth it seeks to promote.

Methodology

This study adopts a survey research design due to its effectiveness in obtaining data from a large population within a short period using a structured questionnaire. The survey design is most appropriate for assessing the impact of oil subsidy removal on human security in Nasarawa State because it allows for systematic data collection from a defined population. The target population consists of residents of Keffi, Lafia, and Akwanga Local Government Areas, which together have a projected population of 825,000 as of 2022, based on figures from the National Population Commission and National Bureau of Statistics. To determine the appropriate sample size, Yamane's (1967) formula for a finite population was adopted, resulting in a sample size of 400 respondents at a 5% margin of error. The sample was proportionally distributed across the three LGAs, Akwanga (84), Keffi (69), and Lafia (247), based on their respective population sizes. The study employed a cluster sampling technique to select participants from the three LGAs and used simple random sampling within each cluster to ensure fair representation.

Data were collected through structured, closed-ended questionnaires and interviews. The questionnaire was divided into three sections: demographic information, issues related to oil subsidy removal and poverty, and the perceived impact of oil subsidy removal on human security. Five trained research assistants fluent in English and Hausa facilitated data collection to accommodate cultural and language diversity. Validity of the research instrument was ensured through face and construct validity, confirming that the questionnaire items were relevant, clear, and measured the intended constructs. Reliability was tested using Cronbach's Alpha, with a threshold of 0.87 considered acceptable.

Data Presentation and Analysis

Socio-Demographic information

Table 1: Demographic Characteristics of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	202	54.2%
	Female	171	45.8%
	Total	**373**	**100%**
Age Group	18–30 years	134	35.9%
	31–45 years	146	39.1%
	46–60 years	65	17.4%
	61 years & above	28	7.5%
	Total	**373**	**100%**
Education Level	Primary	55	14.8%
	Secondary	111	29.8%
	Tertiary	180	48.3%
	None	27	7.2%
	Total	**373**	**100%**
Employment Status	Employed	142	38.1%
	Self-employed	96	25.7%
	Unemployed	78	20.9%
	Student	57	15.3%
	Total	**373**	**100%**

Source: Fieldwork, May 2025

As presented in Table 1, the study sample comprised a total of 373 respondents. In terms of gender distribution, a slight majority were male (n = 202, 54.2%), while females accounted for 45.8% (n = 171) of the sample. Regarding age, the largest age group was 31–45 years, representing 39.1% (n = 146) of the respondents. This was followed by 18–30 years (n = 134, 35.9%), 46–60 years (n = 65, 17.4%), and those aged 61 years and above (n = 28, 7.5%). With respect to educational qualifications, a significant proportion of respondents (n = 180, 48.3%) had tertiary education, while 29.8% (n = 111) had attained secondary education.

Those with only primary education constituted 14.8% (n = 55), and 7.2% (n = 27) had no formal education. In terms of employment status, the majority of respondents were employed (n = 142, 38.1%), followed by self-employed individuals (n = 96, 25.7%). Unemployed participants made up 20.9% (n = 78), and students comprised 15.3% (n = 57) of the total sample. These demographic distributions reflect a diverse and representative sample of the population across gender, age, education, and employment categories, suitable for assessing the impact of fuel subsidy removal on livelihoods and food security in Nasarawa State.

Objectives 1: The extent to which fuel subsidy removal affects livelihood in Nasarawa State

Table 2: The following are Respondents' Responses on Fuel Subsidy Removal Affects Livelihood in Nasarawa State

S/N	Item	None (Freq, %)	Low (Freq, %)	Moderate (Freq, %)	High (Freq, %)
1	To what extent has fuel subsidy removal increased your transportation costs?	15 (4.0%)	50 (13.4%)	118 (31.6%)	190 (50.9%)
2	To what extent has fuel subsidy removal reduced your monthly income or savings?	20 (5.4%)	57 (15.3%)	132 (35.4%)	164 (44.0%)
3	To what extent has fuel subsidy removal disrupted your access to healthcare or services?	28 (7.5%)	62 (16.6%)	127 (34.1%)	156 (41.8%)

Source: Fieldwork, May 2025

The findings presented in Table 2 reveal the varying degrees to which the removal of fuel subsidy has impacted the livelihood of residents in Nasarawa State. A significant majority of respondents (n = 190, 50.9%) reported that the removal of the fuel subsidy had greatly increased their transportation costs, while 31.6% (n = 118) indicated a moderate increase. Only 13.4% (n = 50) reported a low impact, and a minimal 4.0% (n = 15) stated that there was no impact on their transportation expenses. Similarly, regarding the effect on income and savings, 44.0% (n = 164) of the participants indicated that the fuel subsidy removal had highly reduced their monthly income or savings. Another 35.4% (n = 132) perceived a moderate impact, while 15.3% (n = 57) and 5.4% (n = 20) reported low and no impact, respectively.

Furthermore, access to healthcare and essential services has also been adversely affected. A total of 41.8% (n = 156) of respondents reported a high level of disruption, and 34.1% (n = 127) experienced a moderate level of disruption. Meanwhile, 16.6% (n = 62) and 7.5% (n = 28) reported low and no disruption, respectively. Overall, the results suggest that the removal of fuel subsidy has significantly impacted various aspects of livelihood in Nasarawa State, especially in terms of increased transportation costs, reduced income or savings, and hindered access to healthcare and services.

Objectives 2: The extent to which fuel subsidy removal affects food security in Nasarawa State

Table 3: The following are respondents' responses on how Fuel Subsidy Removal Affects Food Security in Nasarawa State

S/N	Item	None (Freq, %)	Low (Freq, %)	Moderate (Freq, %)	High (Freq, %)
1	To what extent has the removal of fuel subsidies affected your ability to buy the same quantity of food?	12 (3.2%)	37 (9.9%)	120 (32.2%)	204 (54.7%)
2	To what extent has the removal of fuel subsidies reduced the quality of food in your household?	18 (4.8%)	51 (13.7%)	126 (33.8%)	178 (47.7%)
3	To what extent has fuel subsidy removal led your household to skip meals or reduce portion sizes?	17 (4.6%)	55 (14.8%)	124 (33.2%)	177 (47.4%)

Source: Fieldwork, May 2025

The data presented in Table 3 illustrate the significant effects of fuel subsidy removal on food security among respondents in Nasarawa State. A majority of respondents (n = 204, 54.7%) reported that the removal of fuel subsidies had a high impact on their ability to purchase the same quantity of food as before. Additionally, 32.2% (n = 120) indicated a moderate impact, while only 9.9% (n = 37) and 3.2% (n = 12) reported low and no impact, respectively. Regarding the quality of food consumed in households, 47.7% (n = 178) of respondents observed a high reduction in food quality, with 33.8% (n = 126) experiencing a moderate reduction. Meanwhile, 13.7% (n = 51) reported a low impact, and just 4.8% (n = 18) noted no reduction in food quality. Similarly, in terms of changes in household eating patterns, 47.4% (n = 177) of respondents indicated a high frequency of skipped meals or reduced portion sizes as a result of the subsidy removal. Another 33.2% (n = 124) experienced this moderately, whereas 14.8% (n = 55) reported a low impact, and only 4.6% (n = 17) experienced no impact. These findings suggest that the removal of fuel subsidies has had profound and widespread effects on food security in Nasarawa State, affecting not just the affordability but also the quantity and quality of food consumed by households.

Discussion of Findings

The Extent to Which Fuel Subsidy Removal Affects Livelihood in Nasarawa State

The findings presented in Table 2 indicate that the removal of fuel subsidies has had a substantial impact on the livelihoods of residents in Nasarawa State. Notably, 50.9% of respondents reported a high increase in transportation costs, while 44.0% indicated a high reduction in income or savings, and 41.8% reported a high

level of disruption in access to healthcare and other essential services. These outcomes reflect significant socioeconomic strain and can be meaningfully interpreted through the lens of Human Security Theory and Economic Theory. According to Human Security Theory, individuals require protection not only from physical threats but also from economic deprivation and systemic vulnerability. The results of this study underscore that subsidy removal has weakened several pillars of human security, particularly economic security and access to essential services. The increase in transportation costs and decrease in disposable income mean that individuals and households are less able to afford basic needs such as healthcare and mobility, thereby undermining their freedom from want. This aligns with Adetunji and Ukhurebor (2020), who argued that economic policy shifts such as subsidy removal tend to exacerbate hardship for low-income populations, leading to a breakdown in everyday coping mechanisms.

From the perspective of Economic Theory, particularly the classical cost-push inflation model, the removal of fuel subsidy increases the price of petrol, which in turn raises the cost of transportation and production across sectors. These increased costs are passed on to consumers, resulting in reduced purchasing power. This is evidenced by the 35.4% and 44.0% of respondents who reported moderate and high reductions in income or savings, respectively. According to Musa et al. (2014) and Tanko (2021), such inflationary pressures, especially in rural and semi-urban communities like those in Nasarawa State, can reverse economic gains and deepen poverty. Therefore, the findings suggest that subsidy removal, while potentially improving fiscal sustainability at the national level, produces regressive outcomes at the household level, thereby widening inequality and economic insecurity.

The Extent to Which Fuel Subsidy Removal Affects Food Security in Nasarawa State

Table 3 reveals that 54.7% of respondents experienced a high impact on their ability to buy the same quantity of food as before, while 47.7% reported a high reduction in food quality, and 47.4% indicated that their households skipped meals or reduced portion sizes due to rising food costs. These findings speak directly to the food security component of Human Security Theory, which identifies access to adequate and nutritious food as a basic human right. Fuel subsidy removal, as shown in this study, has disrupted household consumption patterns in Nasarawa State, leading to compromised food access and nutrition. This is consistent with Human Security Theory, which views economic policy decisions as integral to safeguarding or endangering individual well-being. The sharp reduction in food quantity and quality among respondents indicates a direct erosion of their human security. This supports the findings of Ofuoku and Isife (2010), who documented that households tend to respond to economic shocks by reducing food consumption, often to the detriment of health and productivity.

Within the framework of Economic Theory, especially the microeconomic concept of household consumption, rising prices caused by subsidy removal reduce the real income of households, leading to downward adjustments in consumption patterns. The increase in fuel prices raises transportation and food distribution costs, which are eventually reflected in market food prices. This inflationary trend forces households to make difficult trade-offs, such as skipping meals or consuming lower-quality food. This was evident in the responses of over 80% of participants who indicated either moderate or high impact on their food security. As highlighted by Awotokun et al. (2020), such outcomes are common in developing economies when subsidy regimes are abruptly removed without adequate social protection mechanisms in place.

Thus, the discussion reveals that fuel subsidy removal in Nasarawa State has adversely affected both livelihood and food security, as evidenced by increases in transportation costs, reductions in household income, and deteriorating food access and quality. These findings are consistent with the tenets of Human Security Theory, which emphasizes freedom from want and the centrality of individual welfare in policy outcomes. Similarly, from an Economic Theory standpoint, the results align with classical and microeconomic models that explain how changes in input costs, like fuel, affect consumption, savings, and access to basic goods and services. Therefore, while subsidy removal may align with national economic reforms, its unintended consequences on household security and well-being underscore the need for compensatory safety nets and inclusive economic planning.

Conclusion

This study set out to understand how the removal of fuel subsidies shapes livelihoods and food security in Nasarawa State through the dual lenses of Economic Theory. The evidence is unequivocal: subsidy withdrawal has intensified the economic vulnerabilities of ordinary households. More than half of respondents reported high increases in transportation costs, substantial reductions in income or savings, and significant barriers to accessing healthcare and other essential services. Likewise, over half experienced severe declines in the quantity of food they can purchase, with nearly half reducing food quality and frequency of meals. Viewed through Economic Theory, these outcomes signal an erosion of both economic and food security, core pillars of “freedom from want.”

The policy, intended to bolster national fiscal balance, has instead curtailed household capacity to meet basic needs, exposing families to deeper insecurity and potential socio-economic instability. Economic Theory reinforces that higher fuel prices drive cost-push inflation, shrinking real incomes, and forcing households to reallocate scarce resources, often away from nutrition, health, and savings. In sum, fuel-subsidy removal in Nasarawa State has produced a regressive shock that widens inequality and undermines human well-being.

While macro-level fiscal objectives may have been met, the micro-level repercussions emphasize the urgency of targeted social-protection programmes, such as transport vouchers, food-price stabilization schemes, and conditional cash transfers, to cushion vulnerable groups. Without such measures, the policy risks perpetuating cycles of poverty and food insecurity, ultimately constraining the very economic growth it seeks to promote.

Recommendations

The paper recommends as following:

i. That fuel subsidy removal has significantly increased transportation costs and reduced household income and savings, especially among vulnerable groups, the government should introduce measures such as transport vouchers for low-income earners, subsidized public transit systems, or conditional cash transfers. These initiatives will help stabilize household expenses and preserve access to essential services like healthcare and education in the wake of fuel price hikes.

ii. Since the removal of fuel subsidies has led to high levels of food insecurity, reflected in reduced food quantity, quality, and meal frequency, the government should scale up agricultural support programs such as input subsidies, irrigation schemes, and market access for smallholder farmers. Additionally, emergency food relief and community feeding programs should be expanded in areas experiencing acute food shortages to cushion the impact on the most affected households.

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