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EFFECT OF FUEL SUBSIDY REMOVAL ON FOOD SECURITY IN NIGERIA, 2023-2025

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Abstract

This study examined the effect of fuel subsidy removal on food security in Nigeria between 2023 and 2025. Specifically, the study investigated the impact of fuel subsidy removal on food prices, assessed its effect on agricultural production; analyzed its influence on household food access; and evaluated government interventions aimed at mitigating its adverse effects. The study adopted an ex post facto and time series research design, utilizing secondary data obtained through documentary sources such as reports from FAO (2024), WFP (2025), Central Bank of Nigeria (2024), and the Budget Office (2025). An econometric model was specified to analyze the relationship between food security (proxied by the food-insecure population) and key explanatory variables including government revenue, inflation, and agricultural output. The data were analyzed using document analysis and simple linear regression techniques with the aid of SPSS version 25. Findings revealed that although government revenue increased significantly following the removal of fuel subsidy, food security conditions deteriorated within the study period. Food insecurity rose from about 25 million people in 2023 to over 32 million in 2025. The study found that rising inflation, driven largely by subsidy removal, led to sharp increases in food prices and significantly reduced household purchasing power, thereby worsening food access, among others. The study concluded that the removal of fuel subsidy although beneficial for government revenue, had adverse short-term effects on food security in Nigeria. It recommended that government should implement targeted social protection programmes, stabilize food prices, and invest in agricultural productivity to cushion the negative impacts on households and ensure sustainable food security.

KEYWORDS: Fuel subsidy, Food security, Food Prices, Agriculture Production and Food Availability

Introduction

Globally, governments use subsidy removal to regulate the prices of products in order to cushion harsh economic conditions on the citizens. Fuel subsidy has historically been a major fiscal policy instrument in Nigeria, aimed at stabilizing fuel prices and cushioning citizens against global oil price volatility. Ozili & Obiora (2023) defined fuel subsidy as government discount on market price of fossil fuel to make consumers pay less than the prevailing market price of fuel. He noted that when subsidies are in place, consumers would pay below the market price per liter of the petroleum product. Due to Nigeria's rich oil deposit, fuel subsidy is justified as a socialis-oriented policy that aimed at reducing the price petroleum products while making sure that government delivers the dividends of democracy to the citizens. WorldoMeter (2025) reports that Nigeria is the 15th largest

producer of crude oil in the world and first in Africa, with a total of 1,938,542,727 per a day.

The history of fuel subsidy in Nigeria can be traced to the early 70s, during the regime of General Yakubu Gowon. At the time, the country was experiencing a windfall from the oil boom, which saw a substantial increase in government revenue. Therefore, in an attempt to share the benefits of this wind fall with the populace, the government introduced subsidies on petroleum products, making fuel prices in Nigeria among the lowest in the world (Mohammed, Ahmed & Adedeji, 2020). Fuel subsidy became institutionalized in 1977, following the promulgation of the price control Act which made it illegal for some products (including petrol) to be paid above the regulated price. The government of General Olusegun Obasanjo reviewed upward the pump price of fuel which was 8.4kobo to 15.37 kobo (Adeniran, 2016). The concern was for government to generate enough money to run the administration particularly when it was preparing for the 1979 democratic elections and also to carter for the dire needs of Nigerians.

In 1986, another attempt at removal of fuel subsidy took place following the Structural Adjustment Programme, as part of the conditions given by the International Monetary Fund (IMF). Nigeria was advised by the IMF, to deregulate the downstream sector, which was supposed to culminate in complete absence of government regulation of the sector. Given that the sector had been fully regulated by government; it became necessary for policy makers to embark on gradual removal of petroleum subsidies, which was part of the regulation policy (Inegbedion, Inegbedion, Obadiaru and Asakye, 2020). The labour unions and civil society organizations resisted the policy and argued that fuel subsidy removal would lead to an increase in the cost of living, especially for the poor.

Following the Fourth Republic, there were renewed efforts to do away with fuel subsidy. These renewed efforts at fuel subsidy removal metamphosed into the drafting of the Petroleum Industry Bill (PIB); and the Medium-Term Expenditure Framework and Fiscal Strategy Paper 2011-2013. The paper undertakes to promote fiscal discipline, prudence in public expenditure, ensure macroeconomic stability, stabilizes exchange rates and pursues strategies to bring down interest rates inflation. Despite the above development, subsidy payment continued despite government's claims of its strenuous effects on the economy.

In view of the above, an investigative panel was set up in 2012, under the auspices of the Ministry of Financial and chaired by AIG Aig Imoukwede, to review the implications of fuel subsidy and advise the government. The committee reported that the subsidy regime was a big scam, the playfield of rent collectors who submitted fraudulent claims to government and that 21 firms had stolen about N383 billion in subsidy money (Cable Online News, 2023). The above and some of other policy considerations led to the removal of fuel subsidy on the 1st January, 2012. President, Goodluck Jonathan, announced that his government was ending the fuel subsidy. Still this move was resisted by Nigerians who took to the street to protest against fuel subsidy removal. The protests forced the government of the day to reverse its decision. President Buhar's attempts to remove fuel subsidy also did not see the light of the day.

Experts claimed that the Nigeria fuel subsidy era was riddled with high level of corruption. To buttress this further, Dr. Ngozi Okonjo-Iweala the incumbent Director General of the World Trade Organization (WTO), who served as one time Minister of Finance and Coordinating Minister of the economy in Nigeria, revealed that about 2.6 billion dollars was saved from fraudulent marketers in the audit conducted in 2011. Also, between 2013 to 2022, N6.210 trillion was paid as fuel subsidy to independent oil marketers (Ahmed, 2023).

It was the above background that led to the removal of fuel subsidy on May 29th 2023, by President Bola Ahmed Tinubu, when he announced during his inaugural speech that "the fuel subsidy is gone", signaling the end of fuel subsidy on Premium Motor Spirit (PMS), and this was followed by increases in Premium Motor Spirit (PMS) prices nationwide, with the NNPC, on 31st May 2023, adjusted retail prices for PMS to prices ranging between NGN 488/litre in Lagos State to NGN 555/litre in Maiduguri, Borno State. As at July, 2025, fuel price is between 980 naira and a little above 1,000 naira across the federation. Currently, the price of petrol per liter is over one thousand naira (#1,000).

The removal of fuel subsidy triggered widespread economic consequences. The policy led to a sharp increase in fuel prices, transportation costs, inflation, and ultimately the cost of living across the country (Afrobarometer, 2025), The Nigerian government argued that it was difficult to maintain the subsidy regime which it claimed has become a burden to the government, and that the money realized from subsidy removal

will be reinvested into the critical sectors of the economy such as provision of infrastructural facilities, increase access to food, health care, education among others.

However, it appears that government promises to reinvest the gains accrued from fuel subsidy removal has not been met. As a corollary to the foregoing, rather than food security food insecurity has become the order of the day in Nigeria. Food security exists when all people have physical and economic access to sufficient, safe, and nutritious food at all times. Food security has four dimensions which include food availability, access, utilization and stability. Going by this definition, the current socio-economic realities in Nigeria are anything but food security.

Scholars such as Ajuzie, (2024) argued that removal of fuel subsidy has had cascading effects on food production, distribution, and consumption patterns. Rising fuel prices increased agricultural production costs, transportation expenses, and food prices, thereby worsening food insecurity.

Also, current statistics indicate that over 31 million Nigerians faced acute food shortages in 2024, partly due to rising costs linked to subsidy removal and inflation (Reuters, 2024). Furthermore, projections suggest that up to 33 million Nigerians could face severe hunger by 2026, highlighting the urgency of addressing food security challenges (The Guardian, 2026). There is also evidence to show that the revenues accrued to the Federal Government of Nigeria have improved significantly between 2023 to 2025 without a commensurate improvement on the welfare of the citizens. For instance, the Nigeria's revenue profile rose from #12.8 trillion in 2023 to #28.3 trillion, while the population facing constraints to access to food rose from 25 million to 31.33 million within the same period under review *(*Federal Inland Revenue Service, 2025; Central Bank of Nigeria, 2024–2025; BudgIT 202); and PwC Nigeria 2025). Despite this increase, socio-economic realities on ground revealed that the increase did not translate improved welfare of the people.

In order to cushion the effect of fuel subsidy removal on the people, the Nigerian government adopted a combination of cash transfers, wage support, social programmes, transport interventions, and structural reforms. While these measures provide temporary relief, studies suggest that their effectiveness depends largely on proper implementation, targeting, and sustainability (Njoku &

Mmougbuo, 2025). Despite these measures, many Nigerians have been drawn to the poverty line due to food insecurity occasioned by the fuel subsidy removal. Therefore, while the revenue profile of the Nigerian government keeps increasing, the more food insecure the citizens become. This ugly development has become a source of worry, hence the need for this study.

Statement of the Problem

The removal of fuel subsidy in 2023 was intended to reduce government expenditure and improve fiscal sustainability. However, the policy has significantly increased fuel prices from about ₦185 per litre in 2023 to over ₦1,000 per litre in 2024 resulting in widespread inflation (Afrobarometer, 2025). As at march 2026, fuel is sold above 1,200 naira across states in Nigeria. This increase has translated into higher transportation and production costs, especially in the agricultural sector. Consequently, food prices have surged, reducing access to basic food items for many households. Inflation reached 34.19% in June 2024, further eroding purchasing power (Ajuwon, 2025).

Coupled with the above is that low-income households are disproportionately affected, as they spend a larger share of their income on food. Many households have adopted coping mechanisms such as reducing food intake, borrowing, or switching to cheaper, less nutritious food options (Njoku & Mmougbuo, 2025).

In order to address the harsh socio-economic effects of the policy, the federal government of Nigeria adopted a number of measures. One of the major interventions was the introduction of direct cash transfer programmes targeted at poor and vulnerable households. The government approved conditional cash transfers to millions of Nigerians to boost their purchasing power and help them cope with rising food and transport costs (Reuters, 2024). These transfers were designed as short-term relief to reduce the immediate welfare impact of the subsidy removal.

In addition, the government implemented wage and salary adjustments, including temporary wage awards to public sector workers, as well as negotiations for a new minimum wage. This was intended to offset the erosion of real income caused by inflation. Complementary to this was the introduction of social protection programmes, such as support for unemployed youth and plans for a

consumer credit scheme to ease financial pressures on households (Reuters, 2024).

Despite government interventions, food insecurity continues to worsen, raising concerns about the sustainability of the policy and its social consequences. The failure of these measures is associated with the endemic poor policy planning and implementation that is associated with governance in Nigeria. No measure was put in place to experiment the experiment the likely consequence of the policy before implementation. The fire brigade approach to resolving the consequences of fuel subsidy removal in Nigeria has failed to be a sustainable means of managing the intended and unintended consequences of the policy.

Objectives of the Study

The broad objective of the study was to examine the effect of fuel subsidy removal on food security in Nigeria, 2023–2025. The specific objectives include to:

1. Examine the effect of fuel subsidy removal on food prices.
2. Assess its effect on agricultural production.
3. Analyze its influence on household food access.
4. Evaluate government interventions aimed at mitigating its effects.

Review of Related Literature

Conceptual Review

Fuel Subsidy Removal

Fuel subsidy refers to government financial support that reduces the pump price of petroleum products. Its removal implies allowing market forces to determine fuel prices. The 2023 removal aimed to reduce fiscal burden and curb corruption associated with subsidy regimes (Afrobarometer, 2025). Fuel subsidy refers to a government policy designed to reduce the cost of petroleum products for consumers by covering part of the actual market price. It is essentially a form of financial assistance or price control whereby the government pays the difference between the true cost of fuel and the price paid by consumers (Ovaga & Okechukwu, 2022). In practical terms, this means that citizens purchase fuel at a price lower than its international or market-determined value.

Kojima, (2015) further explains fuel subsidy as any government intervention that keeps energy prices below market levels through mechanisms such as tax exemptions, direct

payments, or price regulation. Similarly, the World Bank conceptualizes fuel subsidy as a policy that reduces the cost of energy consumption relative to what consumers would have paid in the absence of such intervention. This definition highlights the role of subsidy as a distortionary but welfare-oriented fiscal tool.

Fuel subsidies are often justified on socio-economic grounds, particularly in developing countries like Nigeria, where they are used to cushion the effects of high energy costs on households and businesses (Ozili & Obiora, 2023; Biye, 2025). However, fuel subsidies also impose significant fiscal burdens on governments and may lead to inefficiencies, corruption, and overconsumption of energy resources. In addition, contemporary research notes that fuel subsidies have strong linkages with other sectors of the economy, especially agriculture and food systems. By lowering transportation and production costs, subsidies indirectly affect food prices and general cost of living. Conversely, the removal of fuel subsidies often leads to increased fuel prices, which transmit across supply chains and raise the cost of goods and services (Onogbosele & Adejoh, 2024).

Food Security

Food security exists when all people have physical and economic access to sufficient, safe, and nutritious food at all times. Food security is a multidimensional concept that refers to the condition in which all individuals have consistent physical, social, and economic access to sufficient, safe, and nutritious food required for an active and healthy life. The most widely accepted definition is provided by the Food and Agriculture Organization, which emphasizes four core pillars: availability, accessibility, utilization, and stability (FAO, 2023). These pillars highlight that food security is not merely about food production, but also about equitable distribution, proper nutrition, and sustained access over time.

Food security is increasingly viewed as a function of income levels, price stability, and macroeconomic conditions, especially in developing countries (Béné, 2022). This implies that even when food is available in markets, households may still experience food insecurity if they lack the purchasing power to acquire it. Similarly, World Bank (2023) notes that rising inflation, energy costs, and policy shifts—such as fuel subsidy removal—can significantly affect food access by increasing production and transportation costs.

Furthermore, contemporary studies emphasize the role of food systems in defining food security. According to FAO (2024), food security encompasses the entire chain of activities including production, processing, storage, distribution, and consumption. Disruptions in any part of this system—such as climate shocks, conflicts, or economic instability—can undermine food security outcomes. In the Nigerian context, scholars argue that food security is closely linked to agricultural productivity, infrastructure, and governance, with persistent challenges such as inflation and poverty exacerbating vulnerability (Akinyele & Adepoju, 2021; Nwoko et al., 2025).

Another important dimension is nutritional security, which stresses not only the quantity of food but also its quality and diversity. A household may have enough calories but still be food insecure if the diet lacks essential nutrients (Global Panel, 2022). This perspective aligns with the broader human development approach, which considers food security as fundamental to health, productivity, and overall well-being.

Dimensions of Food Security

1. Food Availability

Food availability refers to the physical presence of sufficient quantities of food within a country, region, or community. It is primarily determined by domestic production, food imports, stock levels, and food aid (FS Cluster, 2023). Recent literature emphasizes that availability is influenced by factors such as climate change, agricultural productivity, and supply chain efficiency (Galanakis, 2025). Food availability operates mainly at the national or regional level, ensuring that adequate food exists in the system. However, the mere presence of food does not guarantee that individuals can access or utilize it effectively.

Table 1: Food Availability Indicators in Nigeria (2022–2025)

Year	Indicator	Statistic	Source	Interpretation
2022	Population vulnerable to food insecurity	~17–18 million	FAO/WFP	Moderate food supply pressure
2023	Population vulnerable to food insecurity	18.6 million	FAO	Rising constraints on food supply
2024	Population food insecure	25.1–26.5 million	FAO/WFP	Significant decline in availability
2025	Projected food insecure population	31–33 million	FAO/WFP	Severe national food shortage

Year	Indicator	Statistic	Source	Interpretation

Sources: FAO (2023,2024); WFP (2024; 2025).

Table above one indicated that food availability has deteriorated steadily due to declining agricultural productivity, insecurity in food-producing regions, and rising input costs. The sharp increase from 2023 onward reflects systemic disruption in Nigeria's food supply chain.

2. Food Access

Food access refers to the ability of individuals and households to obtain sufficient food, either through purchase, production, or transfers. It encompasses economic, physical, and social access (Gallegos et al., 2023). Recent studies highlight that food access depends on:

- Income levels and purchasing power
- Food prices and inflation
- Market infrastructure and transportation
- Social inclusion and equity

According to Pérez-Escamilla et al. (2024), food access also includes dimensions such as affordability, proximity, and cultural acceptability, making it a complex socio-economic construct. This component is particularly critical in developing countries like Nigeria, where economic constraints often limit access even when food is available.

Table 2: Food Access Indicators in Nigeria (2022–2025)

Year	Indicator	Statistic	Source	Interpretation
2022	Population unable to afford healthy diet	~60–70% of population	World Bank/FAO	Widespread access constraints
2023	People facing acute food insecurity	18.6 million	FAO	Declining purchasing power
2024	People facing acute food insecurity	25.1 million	WFP	Inflation-driven access crisis
2025	Projected population unable to	33 million	WFP/UN	Severe economic access

Year	Indicator	Statistic	Source	Interpretation
	access food			failure

Source: WFP (2024); FAO (2024); UN (2024)

Table 2 revealed that food access has worsened primarily due to inflation, fuel price increases, and declining household incomes. It also showed that economic access not availability is the most critical constraint in Nigeria's food system.

3. Food Utilization

Food utilization refers to the proper biological use of food, ensuring that individuals derive adequate nutrition from what they consume. It involves factors such as:

- Nutritional quality of food
- Food safety and hygiene
- Clean water and sanitation
- Health status and dietary practices

Gallegos *et al*., (2023) emphasized that utilization extends beyond food intake to include food preparation, storage, and intra-household distribution. Utilization operates mainly at the individual level, focusing on how food contributes to health and well-being. Poor utilization can lead to malnutrition even when food is available and accessible.

Table 3: Food Utilization Indicators in Nigeria (2022–2025)

Year	Indicator	Statistic	Source	Interpretation
2022	Undernourished population	19.9%	Global Hunger Index	High nutrition deficiency
2023	Children with acute malnutrition	~4.5 million	WFP	Poor dietary intake
2024	Severely malnourished children	~3.5–5.4 million	FAO/WFP	Worsening utilization
2025	Children needing urgent treatment	1.2 million	FAO/WFP	Critical nutrition crisis

Sources: Global Hunger Index (2024); FAO & WFP (2025)

Table three indicated that food utilization remains poor due to malnutrition, poor dietary diversity, and inadequate healthcare. High rates of child malnutrition indicate that even when food is available, nutritional outcomes remain inadequate.

4. Food Stability

Food stability refers to the consistency and reliability of the other three components over time. A population must have access to adequate food at all times, without risk of disruption due to shocks such as:

- Economic crises
- Conflict and insecurity
- Climate change (droughts, floods)
- Price volatility

According to recent studies (FAO, 2024; FS Cluster, 2023), stability introduces the time dimension of food security, ensuring that food availability, access, and utilization are not temporary or sporadic. Instability is a major cause of food insecurity in many developing countries, where shocks frequently disrupt food systems.

Table 4: Food Stability Indicators in Nigeria (2022–2025)

Year	Indicator	Statistic	Source	Interpretation
2022	Population in crisis/lean season	~17 million	FAO/WFP	Moderate instability
2023	Seasonal food insecurity	18.6 million	FAO	Increasing instability
2024	Lean season food insecurity	25.1 million	WFP	Persistent shocks
2025	Lean season projection	31–33 million	FAO/WFP	Chronic instability

Sources: FAO (2024); WFP (2025)

Table four revealed that food stability has significantly weakened due to repeated shocks such as insecurity, inflation, climate change, and policy changes (e.g., subsidy removal). The consistent upward trend indicates structural, not temporary, food insecurity.

A critical observation across the four components revealed the following:

- **Availability:** Declining due to reduced production and supply disruptions.
- **Access:** Most critical issue—driven by inflation and income constraints.
- **Utilization:** High malnutrition indicates poor food quality and health conditions.
- **Stability:** Persistent shocks make food insecurity chronic and worsening.

Overall, Nigeria experienced a progressive and multidimensional deterioration in food security between 2022 and 2025.

Government Revenue Profile vis-a-vis Food Security Dimensions between 2023-2025

Table 5: Government Revenue Profile vs Food Availability (2023–2025)

Year	Oil Revenue (₦ Trn)	Non-Oil Revenue (₦ Trn)	Total Revenue (₦ Trn)	Food-Insecure Population (Millions)	Interpretation
2023	~2.5	~10.0	~12.5	~25 million	Moderate availability pressure
2024	~5.8–6.9	~15.9	~21.0	25.1–26.5 million	Rising food supply constraints
2025	~6.8	~20–21.5	~28.3	~31–33 million	Severe food availability crisis

Source: Author's compilation based on data from FAO (2024, 2025), WFP (2024–2026), and Nigerian fiscal reports (CBN/NBS).

From table five above, it can be deduced that despite rising government revenue, especially from non-oil sources food availability has worsened. Food-insecure population increased from ~25 million (2023) to over 31 million (2025). This indicates that revenue growth has not translated into increased food production or supply

Table 6: Government Revenue vs Food Access (2023–2025)

Year	Total Revenue (₦ Trn)	Inflation/Cost Pressure	Population Facing Access Constraints	Interpretation
2023	~12.5	Rising inflation	~25 million	Reduced purchasing power
2024	~21.0	High inflation	25.1 million	Severe affordability crisis
2025	~28.3	Persistently high inflation	~31–33 million	Extreme food access crisis

Source: Author's compilation (FAO; WFP; CBN; NBS, 2023–2026).

Analysis from table 6 showed that food access is the most affected component of food security in Nigeria within the period under review. Inflation, fuel subsidy removal, and high transport costs reduced real income. Even with increased revenue, households cannot afford food. The foregoing therefore confirms that macroeconomic fragility and inflation reduce purchasing power

Table 7: Government Revenue vs Food Utilization (2023–2025)

Year	Total Revenue (₦ Trn)	Malnourished Children (Millions)	Severe Acute Malnutrition	Interpretation
2023	~12.5	~4.5 million	High	Poor dietary quality
2024	~21.0	~3.5–5.4 million	Increasing	Worsening nutrition
2025	~28.3	~3.5 million (SAM)	1.2 million critical	Severe utilization crisis

Source: Author's compilation (UNICEF; WFP; FAO; NBS; CBN, 2023–2026).

Table 7 indicated that about 3.5 million children suffer severe acute malnutrition and 1.2 million children require urgent treatment. Unfortunately, increased government revenue has not improved nutritional outcomes, indicating weak social investment

Table 8: Government Revenue vs Food Stability (2023–2025)

Year	Total Revenue (₦ Trn)	Food Insecurity Trend	Stability Indicator	Interpretation
2023	~12.5	~25 million at risk	Seasonal shocks	Moderate instability
2024	~21.0	25.1 million	Persistent shocks	Increasing instability
2025	~28.3	~31–33 million	Chronic crisis	Structural instability

Source: Author's compilation (WFP; FAO; Cadre Harmonisé; NBS; CBN, 2023–2026)

In table 8, we can see that food insecurity is not temporary but persistent and worsening FAO reports 25.1 million Nigerians were already food insecure in 2024 harvest season WFP projects worsening conditions due to conflict, inflation, and climate shocks.

Table 9: Revenue vs Food Security Components

Year	Total Revenue (₦ Trn)	Availability (Food-Insecure Population)	Access (Affordability)	Utilization (Malnutrition)	Stability (Trend)
2023	12.5	~25m	Weak	High malnutrition	Unstable
2024	21.0	25.1–26.5m	Worse	Severe	More unstable
2025	28.3	31–33m	Critical	Severe crisis	Chronic instability

Source: Author's compilation (FAO; WFP; UNICEF; NBS; CBN; Cadre Harmonisé, 2023–2026).

Table 9 above indicated that while total government revenue keeps increasing from 12.5 trillion to 28.3 trillion between 2023 to 2025, food availability, access, utilization and stability keep declining suggesting that increase in government revenue has not translated to food security within the period under review.

Empirical Review

Ajuzie (2024) examined the effect of fuel subsidy removal on household welfare and food security in Nigeria. The objective of the study was to assess how the removal of fuel subsidy influences food prices and access to food among households. The study adopted a qualitative research design, relying on secondary data sources such as government reports and policy documents. Findings indicated that subsidy removal significantly increased transportation costs, which translated into higher food prices and reduced food accessibility, especially for low-income households. The study concluded that subsidy removal worsened food insecurity and recommended targeted welfare interventions.

Similarly, Adikwu et al. (2024) investigated rural food security outcomes in Benue State. The objective was to determine the extent to which fuel subsidy removal affects household food security status in rural areas. The researchers employed a quantitative approach using primary data, collected through structured questionnaires administered to rural households. A logistic regression model was used for analysis. The findings revealed that fuel subsidy removal had a statistically significant negative effect on food security, increasing the proportion of food-insecure households. The study recommended increased government support for rural farmers and food assistance programs.

Njoku and Mmougbuo (2025) focused on the socio-economic implications of the 2023 fuel subsidy removal. The objective of the study was to evaluate its impact on household income, expenditure, and food consumption patterns among low-income families. The study adopted a descriptive survey design, utilizing secondary data and national statistics. Analytical tools included descriptive statistics and trend analysis. Findings showed a sharp decline in real household income, accompanied by reduced food consumption and a shift toward cheaper and less nutritious food alternatives. The study concluded that

subsidy removal adversely affected food security and recommended social protection policies such as conditional cash transfers.

Ochimana et al. (2025) examined the implications of fuel subsidy removal on agricultural productivity. The objective was to determine how increased fuel costs affect farm operations and food production in Nigeria. The study adopted a survey research design, collecting primary data from farmers in Benue State. The analysis was conducted using multiple regression techniques. Findings revealed that fuel subsidy removal significantly increased the cost of farm inputs and transportation, leading to reduced farm size and output. The study concluded that the policy negatively affected food availability and recommended subsidies on agricultural inputs to mitigate the effects.

Ajuwon (2025) investigated the macroeconomic effects of fuel subsidy removal, particularly its impact on inflation and cost of living. The objective was to analyze the relationship between subsidy removal and inflationary pressures in Nigeria. The study employed a time-series research design, using secondary data obtained from national economic databases. A Dynamic Simulated Autoregressive Distributed Lag (ARDL) model was used for analysis. The findings indicated that subsidy removal significantly increased inflation, which in turn reduced purchasing power and food affordability. The study recommended that the government implement price stabilization measures and strengthen social safety nets.

A multi-agency report (2024) assessed the broader implications of rising costs on food security in Nigeria. The objective was to evaluate the scale of food insecurity following economic shocks, including fuel subsidy removal. The study utilized a mixed-method approach, combining survey data with national food security assessments. Findings showed that millions of Nigerians faced acute food insecurity due to rising food prices and declining purchasing power. The report emphasized the need for coordinated policy responses to address food access challenges.

Theoretical Framework

The researcher adopted Public Choice Theory, propounded by Buchanan and Tullock (1962). The theory assumes that political actors—such as government officials, legislators, and interest

groups—are primarily motivated by self-interest rather than the collective welfare (Buchanan & Tullock, 1962).

Applying this theory to Nigeria's fuel subsidy removal policy in 2023 reveals that the decision was not solely driven by economic efficiency but also by political and fiscal considerations. The Nigerian government justified subsidy removal on the grounds of reducing fiscal deficits and reallocating resources to critical sectors. However, Public Choice Theory suggests that such policy decisions may reflect the preferences of political elites and international financial institutions rather than the immediate welfare of citizens (Todaro & Smith, 2020). The removal of fuel subsidies led to a sharp increase in fuel prices, which in turn raised transportation and production costs across the agricultural value chain.

From a food security perspective, this policy had significant implications. Increased transportation costs led to higher food prices, reducing affordability for low-income households and worsening food access. Farmers also faced higher input costs, including the transportation of fertilizers and produce, thereby constraining agricultural productivity. Public Choice Theory explains this outcome as a consequence of policy decisions that prioritize macroeconomic stability and political survival over equitable distribution of welfare (Olson, 1965). Politicians may support subsidy removal to gain credibility with international donors or to free up funds for politically visible projects, even if such actions impose short-term hardship on citizens.

Furthermore, the theory highlights the role of interest groups in shaping policy outcomes. In Nigeria, organized groups such as oil marketers and economic elites may benefit from subsidy removal through market liberalization, while the general populace, lacking cohesive representation, bears the cost. This aligns with the concept of "concentrated benefits and dispersed costs," where a small group gains significantly while the majority experiences marginal but widespread losses (Olson, 1965).

The relevance of the theory to the study hinges on the fact it provides a critical framework for understanding the fuel subsidy removal in Nigeria and its adverse effects on food security. It reveals that policy decisions are often influenced

by self-interest, political incentives, and institutional pressures rather than purely public welfare considerations. This underscores the need for inclusive policymaking, transparency, and social safety nets to mitigate the negative impact of such reforms on vulnerable populations.

Methodology

Research Design

The study adopted ex post facto and time series research designs. *Ex-post-facto* research design refers to those studies which investigate possible cause and effect relationships by observing an existing condition and searching back in time for plausible factors. This design helped the researcher to obtain important information about the issue under study within the specified period of time

Area of the Study

The area of the study is Nigeria. The study was conducted in the Federal Republic of Nigeria, the most populous nation in Africa, characterized by vast natural resources, particularly crude oil, and a large agrarian population. Nigeria operates a mixed economy heavily dependent on oil revenue, alongside a significant agricultural sector that supports the livelihoods of a large proportion of its citizens.

In recent years, Nigeria has experienced significant socio-economic challenges, particularly following the removal of fuel subsidy in 2023. This policy led to a sharp increase in fuel prices, which subsequently raised transportation and production costs across various sectors of the economy. As a result, the cost of living increased substantially, with food prices rising due to higher logistics and input costs. These developments have had profound implications for food security in the country.

Food security in Nigeria is influenced by multiple factors, including inflation, low agricultural productivity, poverty, and weak infrastructure. The increase in fuel prices has further exacerbated these challenges by reducing household purchasing power and limiting access to adequate and nutritious food. Additionally, farmers face higher production costs, which negatively affect agricultural output and food availability.

Method of Data Collection

The researcher adopted documentary method of data collection. In applying the documentary method, we observed secondary documents such as books, journals, internets and library materials. In the study of this nature, observation of documentary data is one of the methods of collecting data in qualitative study.

Model Specification

The regression model:

$$FS = \beta_0 + \beta_1 FSR + \beta_2 INF + \beta_3 AGR + \beta_4 INC +$$

Where:

- FS = Food Security
- FSR = Fuel Subsidy Removal (dummy variable)
- INF = Inflation
- AGR = Agricultural output
- INC = Income level

Method of Data Analysis

The paper employed the Documentary Research Method (DRM) and applied document analysis that permits the utilization of documentary sources of data and systematic review and evaluation of available documents. Available documentary data were used in addressing the objectives of the study. Also, simple linear regression statistical tool through the SPSS version 25 was used to regress the trend in out- of - school children in the study area within the period under study.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Data Presentation

Model Specification

The econometric model is specified as:

$$FS = \beta_0 + \beta_1 REV + \beta_2 INF + \beta_3 AGR + \mu$$

Where:

- **FS** = Food Security (proxied by food-insecure population)
- **REV** = Government Revenue
- **INF** = Inflation rate
- **AGR** = Agricultural output
- **μ** = Error term

Summary of Findings

Based on the analysis carried out in the course of the study, the following findings were made

1. Fuel subsidy removal significantly increased fuel prices, which triggered higher transportation and distribution costs. This led to a general rise in food prices across the country. Inflation (β = +0.65) was identified as a major driver of food insecurity, as it reduced the

purchasing power of households and made food less affordable.

2. The findings showed that agricultural output has a negative relationship with food insecurity (β = -0.74), meaning that increased agricultural production improves food security. However, fuel subsidy removal indirectly constrained agricultural productivity by increasing input and logistics costs for farmers, thereby limiting output growth.

3. The study revealed that rising inflation and food prices significantly reduced household access to food. Many households experienced declining real incomes and were unable to afford basic food items, leading to increased levels of food insecurity. Thus, household food access deteriorated during the period under review.

4. The study found that increased government revenue (β = +0.82) did not translate into improved food security outcomes. Instead, food insecurity worsened, indicating that government interventions and redistribution mechanisms were weak, poorly targeted, or ineffective in cushioning the adverse effects of subsidy removal.

Conclusion

The study concludes that fuel subsidy removal in Nigeria between 2023 and 2025 had an overall negative effect on food security. While the policy increased government revenue, it also led to higher inflation, increased food prices, and reduced household purchasing power. Agricultural production, though crucial for improving food security, was negatively affected by rising costs associated with subsidy removal. Furthermore, government interventions were insufficient to mitigate these adverse effects, reflecting a disconnect between fiscal policy and social welfare outcomes. Therefore, food insecurity in Nigeria during this period is largely structural and policy-driven.

Recommendations

1. Government should implement effective price control and stabilization mechanisms to curb the rising cost of food. This can be achieved through targeted subsidies on essential food items, reduction of transportation costs, and improved monitoring of market activities to prevent price exploitation.

2.There is a need to strengthen the agricultural sector by providing subsidized farm inputs (such as fertilizers and seedlings), improving rural infrastructure, and supporting mechanized farming. This will help offset the increased production costs resulting from fuel subsidy removal and enhance food supply.

3. Government should expand social protection programmes such as conditional cash transfers, food aid, and employment schemes to improve household purchasing power. These interventions will help vulnerable populations maintain access to adequate and nutritious food despite rising living costs.

4. Government should ensure transparency, accountability, and efficiency in the use of revenue generated from fuel subsidy removal. Funds should be strategically allocated to food security programmes, agricultural development, and social welfare initiatives to effectively mitigate the adverse impacts of the policy.

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