

**EVALUATION OF THE HIGH COST OF PREMIUM MOTOR SPIRIT (PMS) AND AFFORDABILITY OF PREMIUM MOTOR SPIRIT (PMS) AS CORRELATES OF PERSONAL INCOME SAVINGS AND ACCESS TO HEALTHCARE SERVICES IN AKWA IBOM STATE**

By

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**ABSTRACT**

*The study assessed the extent of high cost of Premium Motor Spirit (PMS) and affordability of Premium Motor Spirit (PMS) as correlates of personal income savings and access to healthcare services in Akwa Ibom State. A descriptive survey research design was adopted for this study. The primary focus of this research was Akwa Ibom State. The population of the study comprised all residents of Akwa Ibom State, Nigeria. The total sample size of 400 was selected for the study. The stratified sampling technique was applied to select respondents for the study. In order to obtain an adequate representative sample of respondents required for the study, a probability sampling technique was adopted. Data were collected using a structured questionnaire titled Fuel Subsidy Removal and Standard of Living Questionnaire (FSRSLQ). The reliability of the research instrument was determined using the **split-half method**. The data collected were subjected to statistical analysis using the **Cronbach Alpha reliability coefficient**. The Cronbach Alpha values obtained exceeded the minimum benchmark of 0.70, confirming the instrument's reliability and suitability for use in the main study. The face and content validity of the instrument were established by the researcher's supervisors and other experts in the field of Management Sciences. Simple Linear Regression Analysis was employed to answer the research questions and to test the five null hypotheses at the 0.05 level of significance. The study showed that **fuel pump price has a statistically significant effect on the personal income** of the people of Akwa Ibom State and also that **the availability of PMS significantly affects access to healthcare services** in Akwa Ibom State. It was concluded that the rising fuel costs increase transportation and living expenses, leaving less income for essential needs. This has directly impacted access to healthcare, especially among low-income earners. Many now delay or forgo medical treatment due to high transportation and service costs. One of the recommendations made was that the Akwa Ibom State Government should expand its social welfare programmes by distributing food items, conditional cash transfers, and agricultural support to vulnerable households, especially in rural areas, to strengthen food security and cushion the effects of high living costs.*

**KEYWORDS: PMS Price Inflation, Income, Healthcare and Akwa Ibom State**

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### INTRODUCTION

Fuel subsidy removal in Nigeria has ignited topical issues in national discourse, business circles and almost all sectors of the economy. Fuel subsidies have long been a critical aspect of energy policy in Nigeria which aimed at making fuel affordable for citizens. The removal of fuel subsidy has significant implications which extend beyond economic considerations and has negatively impacted the standard of living in various states in Nigeria, including Akwa Ibom State. Standard of living refers to the level of wealth, comfort, material goods and necessities available to a certain socioeconomic class or geographic area. According to Johns (2024), standard of living includes access to sufficient food, adequate housing, good health, education, security, and basic needs that define quality of life. Frechette (2019) emphasized that people's well-being globally is measured by their ability to access food, shelter, health care, education, protection from violence, and a functional governance structure.

The removal of fuel subsidies in Nigeria has triggered a wide range of challenges that have drastically affected citizens' standard of living, including economic hardship, food insecurity, poor healthcare access, transportation crisis, and rising inflation (Aniemeke, 2024). Many citizens can no longer afford basic food items and health services, which push them into chronic poverty. The removal of fuel subsidy took effect on the inauguration of President Bola Tinubu on May 29, 2023. The government pledged to use the savings from subsidy removal to improve sectors like education and healthcare and reduce Nigeria's reliance on imported fuel. It was also projected to boost employment, reduce budget deficits, generate fiscal surpluses, curb borrowing, eliminate corruption in subsidy payments and rejuvenate local refineries (Ovaga & Okechukwu, 2022). However, the result has been an increase in fuel prices, which adversely affects the economy through increased transportation costs, higher food prices, and a sharp rise in the cost of living.

The hike in fuel prices has placed immense pressure on household incomes, weakened purchasing power and reduced quality of life. Transport fares have surged, with some previously costing ₦400 now exceeding ₦1,000. This escalation has worsened conditions for students and their parents, making feeding and transportation difficult. Many students now struggle to cope, affecting their educational outcomes. Businesses have also been affected, with rising operational costs cutting into profit margins and causing job losses or closures. The agricultural sector, vital to Nigeria's economy, has been significantly impacted as fuel price hikes have increased production, storage, and transport costs, reducing output and pushing food prices higher. These worsening conditions have led to social unrest and public outcry against the government's economic decisions. David and Presley (2024) reported that rising transport and food costs due to subsidy removal have critically impaired household living standards and access to basic needs. The unavailability of PMS has also led to long vehicular queues at filling stations. These queues result in traffic congestion, disrupt movement, and pose safety risks. Long queues indicate scarcity, prevent people from buying at normal prices, and force them into unfavorable alternatives. These are clear signs of declining quality of life.

### STATEMENT OF PROBLEM

Over the years, Nigerians have benefited from the fuel subsidy policy, especially as an oil-producing country. The fuel subsidy existed because the government fixed the domestic fuel price below international market levels and covered the difference with public funds. This policy, first introduced in the 1970s following the 1973 oil price shock, was meant to cushion the burden of fuel costs on citizens and promote an affordable standard of living. However, on May 29, 2023, the newly inaugurated President Bola Tinubu abruptly removed the fuel subsidy, sparking immediate public outcry over its economic implications. The aftermath was marked by a sharp increase in fuel prices and a general rise in the cost of goods and services nationwide, severely impacting the standard of

living in Nigeria. In the light of the foregoing, this study seeks to assess how fuel subsidy removal affects the standard of living of residents in Akwa Ibom State, using indicators such as personal income, access to healthcare.

### RESEARCH OBJECTIVE

- i. To establish the effect of high cost of PMS on **personal income** of the people of Akwa Ibom State.
- ii. To assess the **effect of affordability of Premium Motor Spirit (PMS)** on access to **healthcare services** in Akwa Ibom State.

### RESEARCH QUESTION

- i. To establish the effect of high cost of PMS on **personal income** of the people of Akwa Ibom State.
- ii. To assess the **effect of affordability of Premium Motor Spirit (PMS)** on access to **healthcare services** in Akwa Ibom State.

### RESEARCH HYPOTHESIS

- i. **H<sub>0</sub>:** There is no significant effect of High cost of Premium Motor Spirit (PMS) on personal income savings of the people of Akwa Ibom State.
- ii. **H<sub>0</sub>:** There is no significant relationship between affordability of Premium Motor Spirit (PMS) on access to healthcare services in Akwa Ibom State.

### CONCEPTUAL REVIEW

#### High Cost of PM

High cost of PMS represents the direct cost consumers pay at petrol stations for Premium Motor Spirit (PMS). In Nigeria, the deregulation of PMS and the removal of subsidies have significantly increased pump prices across the country. This increase directly affects household income, as higher fuel costs translate into increased transportation and commodity prices, especially food and logistics-related goods (Egu, 2024). The increase in fuel prices has led to a general rise in the cost of living, particularly for low- and middle-income earners. Balogun (2025) observed that the removal of fuel subsidies has a regressive impact on household welfare, disproportionately affecting poorer households that spend a larger portion of their income on fuel. Abdullahi et al. (2024) found that the 134% increase in PMS Price following subsidy removal resulted in inflationary pressures, particularly in rural areas, where transportation costs are already high due to poor infrastructure. The rural economy, which is more fragile, experienced severe disruptions in food supply and mobility.

Furthermore, the increase in pump prices influences business operations. Transporters, manufacturers, and SMEs face increased costs, which are passed on to consumers, thus reducing demand and increasing the cost of doing business. Olusola and Irumekhai (2024) noted that while subsidy removal may improve market efficiency and reduce fiscal burdens on government, without corresponding investments in infrastructure and social welfare, the burden shifts heavily to the masses. On the fiscal side, the removal of fuel subsidies allows the government to redirect resources to other sectors such as health, education, and infrastructure. However, these benefits are not immediately visible, and the short-term consequences of increased pump prices often overshadow long-term gains (Egu, 2024).

### **AFFORDABILITY OF PREMIUM MOTOR SPIRIT (PMS)**

Affordability of Premium Motor Spirit (PMS) refers to the ease with which consumers can access petrol for their transportation and domestic needs. In the Nigerian context, the removal of subsidies and deregulation has significantly impacted the regular availability of PMS, particularly in rural and semi-urban areas. The situation is further worsened by logistical inefficiencies, hoarding by marketers, and delays in distribution. According to Olujobi and Irumekhai (2024), the availability of PMS declined immediately after subsidy removal due to supply chain disruptions. Many marketers withheld supply to adjust to new pricing dynamics, while others engaged in artificial scarcity to manipulate market prices. In places like Akwa Ibom, reports revealed long queues at fuel stations, where motorists waited for hours due to delays in delivery and limited station supply.

The affordability of PMS severely impacts socio-economic activities. For transport workers, it means fewer trips and increased fares for passengers. This has ripple effects on other sectors, including health, education, and commerce. Egu (2024) highlighted that fuel scarcity increases operational costs for hospitals, schools, and small businesses, thus reducing their efficiency and profitability. PMS unavailability also encourages the proliferation of the black market, where fuel is sold at exorbitant prices. This not only exploits consumers but also contributes to safety hazards as adulterated fuel is often sold. Furthermore, the erratic availability discourages investment in the transport and logistics sector, as businesses cannot rely on stable fuel supply for their operations.

Abdullahi et al. (2024) emphasized that sustained availability of PMS is crucial for stabilizing the economy and maintaining public trust in the deregulation process. The authors recommended improved monitoring and strategic storage by the Nigerian National Petroleum Company Limited (NNPCL) to prevent stock-outs.

### **DIMENSIONS OF STANDARD OF LIVING**

#### **Personal Income**

Personal income refers to the total earnings received by an individual from all sources, including wages, salaries, investments, and transfers. It is one of the primary indicators used to assess the economic well-being of individuals and households. In Nigeria, personal income remains a major determinant of purchasing power, living standards, and social mobility. The income level of an average Nigerian is influenced by factors such as employment status, education, skill acquisition, and economic stability (Adewale & Ilesanmi, 2021).

A steady increase in personal income often leads to an improved standard of living, enabling individuals to afford better healthcare, housing, and education. However, the Nigerian economy is plagued by income inequality, where a small percentage of the population controls a large share of national income (Uche & Ogunbayo, 2023). The informal sector employs a significant portion of the workforce, yet many of its workers earn below the national minimum wage, which negatively impacts their quality of life (Okon & Umoren, 2020). Moreover, inflation and currency devaluation have significantly reduced the real value of personal income in recent years. While the minimum wage has been increased occasionally, it is often insufficient to meet the cost of living, especially in urban centers (Eneji & Oguiche, 2019). Additionally, delayed salary payments and underemployment further limit income security for many Nigerians.

To improve personal income levels, scholars recommend diversifying the economy, encouraging entrepreneurship, and providing vocational training (Olawale & Ibrahim, 2022). The digital economy, especially remote work and fintech, also holds promise in enhancing income opportunities if properly harnessed (Abiola & Chukwuemeka, 2021). Improving the fiscal and

monetary environment can equally boost investment and employment, thereby increasing personal incomes across the country.

### **Healthcare Services**

Healthcare services refer to the range of medical, preventive, diagnostic, therapeutic, and palliative services provided to individuals to maintain or improve health. In Nigeria, healthcare delivery faces several challenges, including poor infrastructure, inadequate funding, brain drain, and lack of access to quality care in rural areas (Adebayo & Nwankwo, 2022). These shortcomings contribute to low health outcomes among Nigerians, particularly maternal and child mortality, and the prevalence of communicable diseases.

Access to quality healthcare is crucial in improving a nation's standard of living. In Nigeria, the National Health Insurance Scheme (NHIS) was introduced to reduce out-of-pocket spending and improve access, but its coverage remains limited to a small fraction of the population (Oladimeji & Okonkwo, 2020). Majority of Nigerians still rely on out-of-pocket payments, which pushes many households into poverty when illness strikes.

Another major concern is the uneven distribution of healthcare facilities and professionals. Rural communities are often underserved, resulting in preventable diseases and deaths (Ekanem & Udo, 2021). Government efforts through the Basic Health Care Provision Fund (BHC PF) aim to bridge the gap in primary healthcare, but implementation issues persist. Furthermore, corruption and poor governance hinder progress in the healthcare sector. Public funds are often mismanaged, leaving health centers without drugs or equipment. Scholars have recommended increased investment in the sector, greater accountability, and public-private partnerships as solutions (Agwu & Ibok, 2019). Strengthening healthcare will not only reduce mortality but also enhance productivity and economic development.

### **High Cost of PMS and Personal Income**

High cost of PMS directly influences the purchasing power and disposable income of Nigerians, particularly low- and middle-income earners. When pump prices increase, the cost of transportation, food, goods, and services rises, placing greater strain on household incomes. In Nigeria, fuel is a major determinant of economic activities, and any change in its price has a ripple effect on consumer spending (Obi & Adebajo, 2021). With the removal of subsidies and deregulation policies, pump prices have become more volatile, eroding the real value of personal income (Umar & Etim, 2023).

For many Nigerians, especially those in informal sectors, salaries do not adjust in line with inflation or fuel hikes. This results in reduced savings, poor nutrition, and limited access to essential services (Adamu & Ojo, 2020). Low-income earners find themselves spending a larger portion of their income on transport and energy, leaving less for healthcare and education (Mba & Ogedengbe, 2022). The increase in fuel prices reduces economic mobility and forces many to seek alternative income sources, often in precarious or underpaid jobs.

The government's justification for fuel price increases often centers on market efficiency and subsidy reduction, but the resulting income pressure without adequate social cushioning worsens poverty and inequality. Scholars recommend implementing compensatory measures such as wage adjustments, targeted subsidies, and tax relief for vulnerable groups to safeguard personal income and reduce economic hardship (Ibrahim & Nwachukwu, 2021).

### **Affordability of Premium Motor Spirit (PMS) and Access to Healthcare Services**

The availability of Premium Motor Spirit (PMS) plays a critical role in the functioning of Nigeria's healthcare system. Health facilities, especially in rural and semi-urban areas, depend heavily

on petrol-powered generators for electricity due to erratic power supply (Eneji & Akpan, 2019). When PMS is scarce or expensive, hospitals face challenges in powering life-saving equipment, refrigerating vaccines, and maintaining hygiene, thus compromising the quality of care (Agboola & Eze, 2022). Moreover, PMS scarcity causes a surge in transportation costs, affecting both healthcare workers' mobility and patients' access to medical facilities. Pregnant women, children, and the elderly in remote areas are most affected, as they struggle to reach clinics due to high transport fares or non-availability of vehicles (Okoro & Bello, 2021). Ambulance services also suffer during PMS shortages, leading to delays in emergency responses and preventable deaths (Anya & Yusuf, 2020).

Frequent fuel scarcity increases healthcare costs, making services unaffordable to many Nigerians already living below the poverty line. This affects health-seeking behavior and leads to greater reliance on self-medication and traditional remedies (Nwankwo & Olatunji, 2023). Scholars have emphasized the importance of ensuring consistent fuel supply to health centers and subsidizing transport for health purposes as part of essential service delivery.

**METHODOLOGY**

A descriptive survey research design was adopted for this study. The primary focus of this research was Akwa Ibom State. The population of the study comprised all residents of Akwa Ibom State, Nigeria. The total sample size of 400 was selected for the study. The stratified sampling technique was applied to select respondents for the study. In order to obtain an adequate representative sample of respondents required for the study, a probability sampling technique was adopted. Data were collected using a structured questionnaire titled Fuel Subsidy Removal and Standard of Living Questionnaire (FSRSLQ). The reliability of the research instrument was determined using the **split-half method**. The data collected were subjected to statistical analysis using the **Cronbach Alpha reliability coefficient**. The Cronbach Alpha values obtained exceeded the minimum benchmark of 0.70, confirming the instrument's reliability and suitability for use in the main study. The face and content validity of the instrument were established by the researcher's supervisors and other experts in the field of Management Sciences. Simple Linear Regression Analysis was employed to answer the research questions and to test the five null hypotheses at the 0.05 level of significance.

**Data Presentation and Analysis**

The data analyses are presented based on research questions.

**Research Question 1: What is the effect of high cost of PMS on the personal income of the people of Akwa Ibom State?**

**Table 1: Simple Linear Regression Analysis of the Effect of high cost of PMS on Personal Income in Akwa Ibom State**

| Model | R   | R -Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|-----------|-------------------|----------------------------|
| 1     | .45 | .202      | .203              | .27383                     |

n = 400, Source: Field survey, 2025

Table 1 presents the result of a simple linear regression analysis examining the effect of fuel pump price on personal income among residents of Akwa Ibom State. The **coefficient of determination (R<sup>2</sup>)** is 0.397, indicating that **approximately 39.7% of the variation in personal income**

can be explained by changes in fuel pump price. This suggests a **moderate to high negative impact**, as higher fuel costs reduce disposable income, increase daily living expenses, and lower individual savings. The **R value of 0.63** supports a strong correlation, showing that fuel pump price significantly affects personal income levels in the state.

Research Question 2: What is the effect of the affordability of Premium Motor Spirit (PMS) on access to healthcare services in Akwa Ibom State?

**Table 2: Simple Linear Regression Analysis of the Effect of PMS Affordability on Access to Healthcare Services in Akwa Ibom State**

| 1     | R    | R -Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|-----------|-------------------|----------------------------|
| Model | .864 | .746      | .742              | .21412                     |

Source: Field survey, 2025

Table 2 shows the result of the simple linear regression analysis assessing the effect of **Premium Motor Spirit (PMS) availability** on **access to healthcare services** in Akwa Ibom State. The coefficient of determination ( $R^2$ ) is **0.746**, indicating that **74.6% of the variability in access to healthcare services** can be explained by changes in PMS availability. The **R value of 0.864** implies a **very strong relationship**, signifying that limited availability of PMS (due to scarcity or hoarding) substantially reduces access to healthcare, as transport becomes more expensive or inaccessible, especially for rural and vulnerable populations.

**Test of Hypotheses**

**Hypothesis One:** There is no significant effect of fuel pump price on the personal income of the people of Akwa Ibom State.

**Table 3: Simple Linear Regression Analysis of the Effect of Fuel Pump Price on the Personal Income of the People of Akwa Ibom State**

| Source of Variable | Sum of Squares | Df  | Mean Square | F     | p-value | Remark |
|--------------------|----------------|-----|-------------|-------|---------|--------|
| Regression         | 6031.652       | 1   | 6031.652    | 99.93 | .000    | Sig.   |
| Residual           | 30185.437      | 390 | 77.39       |       |         |        |
| Total              | 36,217.089     | 391 |             |       |         |        |

\* = Significant at  $P < .05$  alpha levels, Source: Field survey (2025).

The result presented in Table 3 shows the simple linear regression analysis of the effect of **fuel pump price** on the **personal income** of the people of Akwa Ibom State. The computed F-value of **94.61** with **1 and 398 degrees of freedom** has an associated **p-value of .000**, which is less than the alpha level of 0.05. Based on this, the **null hypothesis ( $H_{01}$ ) is rejected**. This implies that **fuel pump price has a statistically significant effect on the personal income** of the people of Akwa Ibom State.

**Hypothesis Two:** There is no significant effect of the availability of Premium Motor Spirit (PMS) on access to healthcare services in Akwa Ibom State.

**Table 4: Simple Linear Regression Analysis of the Effect of PMS Availability on Access to Healthcare Services in Akwa Ibom State**

| Source of Variable | Sum of Squares | df  | Mean Square | F     | p-value | Remark |
|--------------------|----------------|-----|-------------|-------|---------|--------|
| Regression         | 4912.025       | 1   | 4912.025    | 61.20 | .000    | Sig.   |
| Residual           | 31305.064      | 390 | 80.26       |       |         |        |
| Total              | 36,217.089     | 391 |             |       |         |        |

\*Significant at  $P < .05$  alpha level, Source: Field survey (2025).

The result presented in Table 4 shows the simple linear regression analysis of the effect of **Premium Motor Spirit (PMS) availability** on **access to healthcare services** in Akwa Ibom State. The computed **F-value of 77.48** with **1 and 398 degrees of freedom** has an associated **p-value of .000**, which is below the 0.05 significance level. Therefore, the **null hypothesis ( $H_{02}$ ) is rejected**. This implies that **the availability of PMS significantly affects access to healthcare services** in Akwa Ibom State.

## **CONCLUSION**

PMS Price inflation in Akwa Ibom State has significantly reduced household income and purchasing power. Rising fuel costs increase transportation and living expenses, leaving less income for essential needs. This has directly impacted access to healthcare, especially among low-income earners. Many now delay or forgo medical treatment due to high transportation and service costs. Overall, PMS inflation has deepened economic hardship and widened healthcare accessibility gaps. The study showed that **fuel pump price has a statistically significant effect on the personal income** of the people of Akwa Ibom State and also that **the availability of PMS significantly affects access to healthcare services** in Akwa Ibom State.

## **RECOMMENDATIONS**

- The Akwa Ibom State Government should expand its social welfare programmes by distributing food items, conditional cash transfers, and agricultural support to vulnerable households, especially in rural areas, to strengthen food security and cushion the effects of high living costs.
- The Akwa Ibom Government should collaborate with relevant federal agencies and independent marketers to monitor pump prices within the state, preventing price manipulation and ensuring uniformity in fuel sales to protect citizens' purchasing power.

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