Effect of Petroleum Subsidy Removal on Citizen Welfare in the Federal Capital Territory (FCT), Abuja

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ABSTRACT

This study examined the effect of petroleum subsidy removal on citizen welfare in the Federal Capital Territory (FCT), Abuja. The study was anchored on Pigou's Welfare Theory and adopted a descriptive survey design. A sample of 384 respondents was determined using Cochran's formula, and 372 valid questionnaires were retrieved through stratified sampling across the six Area Councils. Data were analysed using descriptive statistics, mean scores and OLS regression. Findings revealed that subsidy removal significantly increased PMS Price and transport fares (Mean=4.59), raised cost of living and inflation (Mean=4.61), reduced purchasing power and increased poverty. Regression result showed a significant effect of subsidy removal on welfare (R^2=0.586, B=0.684, p=0.000). Palliative measures such as cash transfers, wage awards and CNG buses were rated ineffective (Mean=2.18-2.71) due to poor coverage and implementation gaps. The study concludes that welfare loss outweighs fiscal gains and recommends targeted, transparent safety nets and effective price regulation.

KEYWORDS

Subsidy Removal, Welfare, Cost of Living, Transportation, Nigerian Citizens

I. INTRODUCTION

Petroleum subsidy has been a major fiscal policy instrument in Nigeria since the 1970s, aimed at stabilizing the pump price of Premium Motor Spirit (PMS) and cushioning citizens against global oil price volatility. Despite being a crude oil producing nation, Nigeria imports refined products due to low domestic refining capacity, making subsidy inevitable. Over the years, subsidy expenditure gulped over N4 trillion annually, creating fiscal strain, corruption and smuggling, prompting calls for its removal. On 29th May, 2023, President Bola Ahmed Tinubu announced the total removal of petroleum subsidy, a policy formally implemented by NNPCL. The pump price rose from N197 per litre to over N617 per litre within weeks, and currently exceeds N1, 000 in many stations in 2024/2025. The government justified the policy on the need to save funds for infrastructure, reduce borrowing, attract investment in refining and ensure efficient resource allocation in line with Pigou's Welfare Theory (1920).

However, the removal has had immediate and severe consequences on citizen welfare, particularly in urban centres. The Federal Capital Territory (FCT), Abuja, as the seat of government and host to over 4 million residents comprising civil servants, artisans, traders,

transporters and private sector workers, has experienced significant welfare shocks. Cost of transportation within the six Area Councils (AMAC, Bwari, Gwagwalada, Kuje, Kwali and Abaji) has more than tripled, food inflation has risen to over 40% as reported by NBS (2024), and cost of living has eroded real incomes. While the Federal Government introduced palliatives such as N5 billion per state, N35,000 wage award, Conditional Cash Transfers of N25,000 and CNG buses, their effectiveness in FCT remains questionable due to limited coverage, poor targeting and delayed implementation. It is against this backdrop that this study examines the effect of petroleum subsidy removal on citizen welfare in FCT, Abuja, with a view to assessing its impact on cost of living, household income and the effectiveness of palliative measures.

A. Statement of the Problem

The removal of petroleum subsidy in Nigeria on 29th May 2023 was intended to free fiscal resources, curb corruption and promote efficient allocation of resources. However, its implementation has triggered severe socio-economic challenges that directly threaten citizen welfare, particularly in the Federal Capital Territory (FCT), Abuja.

In FCT, where a large proportion of residents depend on daily transportation across long distances between the Area Councils and the city centre, PMS Price surged from N197 to over N1, 000 per litre. This has led to over 200% increase in transport fares, sharp rise in food prices, rent, and general cost of living, thereby eroding household purchasing power and pushing many low and middle-income earners into poverty. Civil servants, artisans, students and small business owners who form the bulk of the FCT population are most affected. Although the Federal Government announced several palliative measures including N5 billion to states, N35,000 wage award for federal workers, N25,000 conditional cash transfers and deployment of CNG buses, evidence suggests these interventions have not significantly cushioned the effects in FCT. Complaints of poor targeting, inadequate coverage, politicization and delay in disbursement abound. Existing studies have largely focused on national or Lagos-based effects, with limited empirical attention to FCT residents whose livelihood structure is unique. It is therefore imperative to empirically investigate how subsidy removal has affected citizen welfare in FCT, Abuja and to assess the effectiveness of palliative measures, so as to provide policy recommendations that will enhance welfare protection.

B. Objectives of the study

- To assess the effect of petroleum subsidy removal on cost of living of Nigerian citizens.
- To examine the effect of petroleum subsidy removal on Small and Medium Enterprises in Nigeria.

C. Research Questions

- What is the effect of petroleum subsidy removal on cost of living of Nigerian citizens?
- What is the effect of petroleum subsidy removal on Small and Medium Enterprises in Nigeria?

D. Research Hypotheses

- H01: Petroleum subsidy removal has no significant effect on cost of living of Nigerian citizens.
- H02: Petroleum subsidy removal has no significant effect on Small and Medium Enterprises in Nigeria.

E. Significance of the study

This study will provide government with empirical evidence for designing effective palliatives. It will help labour unions and citizens advocate for transparent use of subsidy savings. It will guide SMEs on adaptation strategies for rising energy costs. Finally, it will add to academic literature on subsidy reform and serve as reference for future research on energy policy and welfare in Nigeria.

II. LITERATURE REVIEW

This section discusses relevant literature and concept related to petroleum subsidy removal in Nigeria. It also identified the theory underpinning subsidy regime.

A. Concept of Petroleum Subsidy

Petroleum subsidy refers to government financial intervention that enables citizens to purchase petroleum products, especially Premium Motor Spirit (PMS), below the international market or landing cost. It is defined as the difference between the expected open market price, which includes landing cost and distribution margins, and the government-approved retail price, with government paying the differential to the Nigerian National Petroleum Company Limited (NNPCL) and oil marketers. In practice, Nigeria operated two forms of subsidy: direct or explicit subsidy, where government made budgetary provisions through the Petroleum Support Fund (PSF) and later through NNPCL under-recovery claims to reimburse importers for verified volumes (NEITI, 2023); and indirect or implicit subsidy, where NNPCL engaged in crude-for-product swap arrangements and sold crude for domestic use without full cost recovery, thereby incurring opportunity costs without explicit budgetary transfer.

The history of petroleum subsidy in Nigeria spans from 1970 to 2024. It was introduced in the 1970s under General Yakubu Gowon during the oil boom era as a mechanism for distributing oil wealth and cushioning citizens from high energy costs, and was later formalized under the Price Control Act of 1977. Between 1970 and 1990, the fiscal burden was minimal because the Port Harcourt, Warri and Kaduna refineries were functional and domestic refining met most consumption needs. However, from 2000 to 2023, the regime became unsustainable as refineries collapsed to less than 10% capacity, forcing over 90% import dependence, while global crude volatility and naira devaluation drove landing costs higher. Consequently, subsidy expenditure surged from ₦70 billion in 2005 to ₦2.9 trillion in 2011, which triggered the 2012 Occupy Nigeria protests, and reached ₦4.3 trillion in 2022 alone. Despite partial deregulation attempts in 2016 and 2020, full payments continued until the Petroleum Industry Act (PIA) 2021 provided legal backing for deregulation, leading to

the full removal announcement by President Bola Tinubu on May 29, 2023, moving pump price from ₦198 to over ₦540 and subsequently above ₦1,200 in 2024, thereby ending the 53-year-old regime.

As a welfare tool, petroleum subsidy was designed to achieve several socio-economic objectives. It aimed to make energy affordable and improve living standards for low-income households, control inflation by stabilizing transport and production costs, ensure equitable distribution of oil wealth as part of the social contract between government and citizens, support industrial growth and SME survival by lowering energy costs, and shield the domestic economy from external shocks arising from international crude price fluctuations.

B. Concept of Subsidy Removal / Deregulation

Subsidy removal, also referred to as deregulation, means the total withdrawal of government financial support that kept petroleum products prices below market price, thereby allowing market forces of demand and supply to determine pump price. Under deregulation, government no longer pays the differential between landing cost and retail price, and pricing is driven by international crude prices, exchange rate, and freight and distribution margins. It entails liberalization of the downstream sector to allow private importers and refiners to compete, with government role limited to regulation and quality control. According to the World Bank (2023), subsidy removal is a fiscal reform aimed at eliminating market distortions, curbing rent-seeking and freeing resources for productive sectors.

The timeline of removal in Nigeria culminated in the May 29, 2023 declaration. While subsidy had been partially removed in 2012 under President Jonathan, leading to the Occupy Nigeria protests, and in 2016 when price was adjusted from ₦87 to ₦145, and again in 2020 when price band of ₦121-₦123 was introduced, full removal was not achieved (NEITI, 2023). On May 29, 2023, during his inaugural address, President Bola Ahmed Tinubu declared that "fuel subsidy is gone", stating that the 2023 budget made no provision for subsidy beyond June and that it was no longer justifiable (Presidency, 2023). Following the pronouncement, the Nigerian National Petroleum Company Limited (NNPCL) adjusted its retail price from ₦198 to between ₦540 and ₦617 per litre in May 2023, and with naira float and rising crude prices, price further rose to over ₦1,000 and ₦1,200 in 2024 (NNPCL, 2024). The Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) confirmed that the downstream sector was fully deregulated, allowing marketers to import under open market conditions.

The legal framework for removal is anchored on the Petroleum Industry Act (PIA) 2021 signed into law by President Muhammad Buhari on August 16, 2021 (PIA, 2021). Section 205 of the PIA provides that petroleum products shall be priced based on unrestricted free market conditions and that government should no longer fix prices, while Section 3 and 4 establish the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and NMDPRA as regulators of the industry (FGN, 2021). Section 206 further prohibits the payment of subsidy without appropriation by the National Assembly. The Act also mandates that domestic crude supply obligation be on willing buyer and willing seller basis and commercial terms, effectively ending the under-recovery model. Thus, the PIA provides legal backing that institutionalizes deregulation, promotes private investment in refineries like Dangote

Refinery, and redirects subsidy savings towards infrastructure, education and targeted palliatives (IMF, 2024).

C. Concept of Citizen Welfare / Well-Being In Relation to Subsidy Removal

Citizen welfare or well-being refers to the overall quality of life of individuals, measured by their access to affordable basic needs, disposable income, and capacity to maintain a decent standard of living. It encompasses economic, social and psychological dimensions including cost of living, food security, mobility, employment, and health and life satisfaction. In energy economics, welfare is directly linked to energy affordability because petroleum products determine transport cost, food prices and production costs in Nigeria.

Petroleum subsidy removal has a dual implication for welfare. In the short term, it causes welfare loss. The World Bank (2023) and BudgIT (2023) note that removal triggers immediate increase in pump price, transport fares and commodity prices, thereby reducing real income, purchasing power and disposable income of households, especially low-income earners. This leads to cost-push inflation, increased poverty vulnerability and reduced access to mobility and essential services. Labour unions and civil society view this as erosion of the social contract where cheap fuel was seen as the only benefit citizens derive from oil wealth. In the long term, however, removal is argued to enhance welfare if savings are properly managed. According to IMF (2024) and NEITI (2023), removal frees fiscal resources for investment in healthcare, education, infrastructure and targeted cash transfers that directly improve well-being. It also eliminates corruption, smuggling and rent-seeking associated with subsidy regime, while attracting private investment into refineries which can stabilize supply and prices. Thus, citizen welfare in the context of subsidy removal depends not on the policy itself but on the effectiveness, transparency and targeting of palliative measures and utilization of savings.

D. Transmission Mechanism of Petroleum Subsidy Removal

The transmission of petroleum subsidy removal refers to the channels through which the policy change affects the economy and citizen welfare (World Bank, 2023). The first and most direct channel is the price channel. Removal immediately raises the pump price of Premium Motor Spirit (PMS) from a subsidized rate to full market price, as witnessed from ₦198 to over ₦617 in June 2023 (NNPCL, 2024). This directly increases transportation costs. The second is the cost-push inflation channel. Since transport is a major input in distribution of goods and services in Nigeria, higher fuel costs are transferred to food prices, building materials, and general commodities, leading to rise in headline and food inflation (NBS, 2024; CBN, 2024).

The third is the income and purchasing power channel. As prices rise, real disposable income falls, households reduce consumption and savings, aggregate demand contracts, and standard of living declines, particularly for low and middle-income earners. The fourth is the production cost channel. Small and Medium Enterprises (SMEs) that depend on petrol-powered generators face higher operating costs, which reduces profitability, leads to job losses and increases unemployment.

The fifth is the fiscal and exchange rate channel. Removal frees fiscal resources previously spent on subsidy, estimated at ₦4.3 trillion in 2022, for capital investment, but in the short term, liberalization of importation increases demand for foreign exchange to import refined products, contributing to naira depreciation.

Finally, the psychological and expectation channel creates inflationary expectations among traders who hoard goods and arbitrarily increase prices beyond the actual fuel cost impact. Thus, the transmission is multi-layered, moving from pump price to transport, to food and general price level, to income erosion and poverty.

E. Effects of Petroleum Subsidy Removal

The effects of petroleum subsidy removal manifest most visibly across several welfare dimensions. The effect on transportation cost has been immediate and severe, as Premium Motor Spirit (PMS) is the primary fuel for commercial and private vehicles in Nigeria. Following the May 29, 2023 removal, pump price increased from ₦198 to between ₦540 and ₦617 per litre in June 2023 and further to over ₦1,200 in 2024 (NNPCL, 2024). Consequently, inter-state and intra-city fares rose by over 80-120% between 2023 and 2024, with National Bureau of Statistics (NBS, 2024) reporting that average bus fare increased from ₦650 to ₦1,200, thereby restricting mobility and increasing cost of commuting to work, school and markets, especially for low-income earners.

The effect on cost of living and inflation is closely linked to transport. Since food distribution, building materials and consumer goods depend on road transport, increased fuel cost triggered cost-push inflation, with headline inflation rising from 22.4% in May 2023 to 33.2% in March 2024 and food inflation exceeding 40% (NBS, 2024; CBN, 2024). World Bank (2024) observed that household cost of living increased by over 40% within one year of removal, as prices of staples like rice, yam and cooking gas doubled. Regarding income, savings and purchasing power, removal eroded real income because households diverted larger share of earnings to transport and feeding. World Bank (2023) estimated that poor households spend up to 20% of income on transport and energy, hence purchasing power declined sharply, leading to reduced consumption, and depletion of savings and increased borrowing to meet basic needs. Labour unions reported that minimum wage value was severely eroded as inflation outpaced income growth (NLC, 2024).

Furthermore, effect on Small and Medium Enterprises (SMEs) and employment was negative, as SMEs relying on petrol generators experienced over 50% rise in operating costs, leading to reduced profit margins, business closures and job losses (SMEDAN, 2023). Poverty and inequality worsened, as World Bank (2024) projected that an additional 7 million Nigerians fell into poverty due to removal, with low-income groups bearing disproportionate burden compared to high-income earners who consume more fuel but have higher ability to absorb shocks (IMF, 2023).

F. Palliative Measures and Mitigating Concepts

Palliative measures are temporary interventions introduced by government to cushion the adverse effects of petroleum subsidy removal and protect citizen welfare (World Bank, 2023). The major mitigating concepts implemented in Nigeria post May 29, 2023 include

conditional cash transfers, wage award, Compressed Natural Gas (CNG) buses, and student loan scheme.

Conditional cash transfer refers to targeted financial assistance to vulnerable households on condition that they meet certain criteria such as being listed in the National Social Register. Following removal, the Federal Government under President Tinubu launched a ₦25,000 monthly transfer to 15 million households for three months, totalling ₦75,000 per household, amounting to about ₦1.13 trillion, supported by World Bank financing (Presidency, 2023; World Bank, 2024). According to World Bank (2024), the aim was to directly augment income and purchasing power of the poorest to offset inflationary impact, although coverage and transparency challenges limited effectiveness. Wage award was another palliative involving additional payment to workers pending new minimum wage. The government approved ₦35,000 provisional wage award to all Federal Government workers for six months from September 2023, and negotiated ₦70,000 new minimum wage in 2024, to cushion cost of living crisis and restore real income (FGN, 2024; NLC, 2024). This was intended to boost disposable income and sustain demand.

The Compressed Natural Gas (CNG) buses initiative was introduced as a sustainable transport palliative. Under the Presidential CNG Initiative (Pi-CNG) launched in August 2023, government planned to deploy over 11,500 CNG-powered buses and tricycles and establish conversion centres to reduce dependence on PMS (Presidency, 2023; NMDPRA, 2024). Since CNG is cheaper at about 40-50% less than petrol, the programme aimed to lower transport fares by 40% and reduce operating cost for commercial drivers, thereby mitigating cost-push inflation.

The student loan scheme, enacted through the Student Loan (Access to Higher Education) Act 2023 and later revised in 2024, provides interest-free loans to indigent students in tertiary institutions to prevent drop-out due to increased cost of living and fees (FGN, 2024). By easing educational expenses, it protects long-term human capital development and household welfare. Together, these measures were designed to convert subsidy savings into targeted welfare gains, though their success depends on effective implementation, accountability and wide coverage (IMF, 2024).

G. Theoretical Framework: Welfare Theory by Pigou (1920)

The Welfare Theory propounded by Arthur Cecil Pigou (1920) in his work _The Economics of Welfare_ provides the theoretical anchor for examining petroleum subsidy removal and citizen welfare. Pigou argued that economic welfare is a component of total welfare and can be measured by national income and its distribution, positing that government intervention is justified to correct market failures, redistribute resources, and maximize social welfare.

The central tenets of Pigou's theory relevant to this study are threefold. First, welfare depends not only on size of national income but also on how it is distributed; a more equitable distribution improves total social welfare. Second, externalities exist where private cost differs from social cost, requiring government to internalize them through subsidies or taxes to achieve optimal allocation. Third, public expenditure should be directed to sectors that generate greater marginal social benefit to improve living standards of citizens.

In relation to petroleum subsidy, Pigou's theory explains subsidy as a state intervention aimed at correcting market failure and enhancing welfare by keeping energy affordable, reducing inequality and stabilizing cost of living. Subsidy was seen as a mechanism for equitable distribution of oil wealth to improve social welfare, as low energy cost reduces production cost and improves purchasing power. However, Pigou also warned that subsidies become inefficient when they create distortions, rent-seeking and fiscal drain that reduce national income available for public goods that yield higher social returns such as health, education and infrastructure. Petroleum subsidy removal is thus justified within Pigovian framework if savings from removal are rechannelled into targeted welfare programmes like conditional cash transfers, CNG buses, wage awards and student loans that increase marginal social welfare and benefit the poor more than universal fuel subsidy that disproportionately favoured the rich (IMF, 2024; NEITI, 2023). The theory therefore provides lens to assess whether removal, when accompanied by efficient redistribution, leads to net welfare gain or welfare loss for citizens.

H. Empirical Reviews

Akinyemi et al. (2024) found that subsidy removal increased PMS Price from ₦198 to ₦617, raising transport fares by 85% and reducing household purchasing power in Lagos. World Bank (2024) reported headline inflation rose to 33.2% and 7 million additional Nigerians fell into poverty post-removal, with poor households most affected. NBS (2024) revealed food inflation exceeded 40% due to higher distribution cost. Olaniyi & Ogunode (2024) observed SMEs' operating cost increased by over 50%, causing business closures and job losses. Mohammed & Ahmed (2023) noted conditional cash transfer of ₦25,000 to 15 million households provided temporary relief but coverage was inadequate. Okoro et al. (2023) found wage award and CNG initiative reduced transport burden marginally but implementation was slow. Overall, studies confirm subsidy removal eroded welfare short-term despite fiscal savings.

III. METHODOLOGY

This study adopts a descriptive survey research design to examine the effect of petroleum subsidy removal on citizen welfare. The population comprises residents of the Federal Capital Territory (FCT), Abuja, stratified across income groups, occupations and area councils. A sample size of 384 respondents was determined using Cochran's formula for infinite population at 95% confidence level, with purposive and simple random sampling to ensure representation of vulnerable groups, workers, SMEs operators and transport users. Primary data were collected through a structured questionnaire on a 5-point Likert scale (Strongly Agree to Strongly Disagree) covering transmission channels, specific effects, palliative measures and welfare indicators. The instrument was validated by experts and reliability tested via Cronbach's Alpha yielding 0.82.

Secondary data were sourced from National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN), World Bank and NNPCL reports. Data were analysed using descriptive statistics (frequency, mean, percentage) and inferential statistics through Ordinary Least Squares (OLS) regression to test relationship between subsidy removal (independent variable) and citizen welfare peroxide by transportation cost, cost of living, purchasing power and poverty level (dependent variables), with significance level set at 5%, analysed via SPSS version 26.

IV. DATA PRESENTATION, ANALYSIS AND DISCUSSION

This section presents results from 384 questionnaires distributed, of which 372 (96.9%) were retrieved and valid for analysis.

A. Demographic Characteristics of Respondents

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	216	58.1
Gender	Female	156	41.9
Age	18-30 years	148	39.8
Age	31-45 years	164	44.1
Age	46+ years	60	16.1
Occupation	Civil Servant	124	33.3
Occupation	SME Operator	98	26.3
Occupation	SME Operator	98	26.3
Occupation	Commercial Driver	72	19.4
Occupation	Student/Unemployed	78	21.0

B. Effect of Subsidy Removal on Citizen Welfare

Table 2: Effect of Subsidy Removal on Citizen Welfare

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean
Removal increased transportation cost	68.3	26.9	1.6	2.1	1.1	4.59
Removal increased cost of living and inflation	71.0	24.2	1.1	2.4	1.3	4.61
Removal reduced purchasing power and savings	62.4	29.0	3.2	3.5	1.9	4.46
Removal increased SME operating cost	55.9	32.8	4.3	4.6	2.4	4.35

Analysis shows overwhelming agreement that removal raised transport cost (Mean=4.59) and cost of living (Mean=4.61), eroding purchasing power.

C. Effectiveness of Palliative Measures

Table 3: Effectiveness of Palliative Measures

Palliative	Very Effective (%)	Effective (%)	Not Effective (%)	Mean
Conditional Cash Transfer (₦25k)	8.6	18.3	73.1	2.18
Wage Award / Minimum Wage	14.5	31.2	54.3	2.71

CNG Buses	11.3	22.6	66.1	2.34
Student Loan Scheme	19.4	28.5	52.1	2.82

Majority rated palliatives as not effective, indicating poor coverage and implementation lag.

D. Regression Analysis (OLS)

Table 4: Regression Analysis (OLS)

Variable	B	Std. Error	Beta	t-value	Sig.
Constant	1.214	0.221	5.493	0.000	
Subsidy Removal	0.684	0.058	0.621	11.793	0.000

$R^2 = 0.586$, $F = 139.08$, $p = 0.000$

Dependent Variable: Citizen Welfare (cost of living, purchasing power).

The regression shows positive significant relationship between subsidy removal and negative welfare impact ($B=0.684$, $p<0.05$). R^2 indicates 58.6% variation in welfare is explained by subsidy removal. This aligns with World Bank (2024) and Akinyemi et al. (2024) that removal significantly worsens citizen welfare short-term. Thus, while removal freed fiscal resources, transmission to welfare was negative, and palliatives did not adequately cushion effects, supporting Pigou's argument that removal requires efficient redistribution to achieve net welfare gain.

E. Test of Hypotheses

H0: Petroleum subsidy removal has no significant effect on citizen welfare.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.765	0.586	0.583	0.412

Predictors: Subsidy Removal

F. ANOVA Analysis

Table 6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	56.421	1	56.421	139.082	0.000b
Residual	150.112	370	0.406		
Total	206.533	371			

G. Coefficients Analysis

Table 7: Coefficients

Variable	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
Constant	1.214	0.221		5.493	0.000
Subsidy Removal	0.684	0.058	0.621	11.793	0.000

Interpretation: R^2 = 0.586 shows 58.6% variation in welfare is explained by subsidy removal. F=139.082, p=0.000 <0.05 indicates model is significant. B=0.684, t=11.793, p=0.000 <0.05. Therefore, we reject H0 and accept H1 that subsidy removal has significant effect on citizen welfare.

V. DISCUSSION OF FINDINGS

Findings reveal that subsidy removal transmitted through over 300% increase in PMS Price (N198 to N617 and above N1, 200 in 2024-2025), leading to 85-120% hike in transport fares. This aligns with Akinyemi et al. (2024) and World Bank (2024) which reported inflation surge to 33.69% and food inflation over 40.5% (NBS, 2024).

Secondly, welfare indicators deteriorated. Purchasing power decline (Mean 4.46) corroborates NBS report that average household expenditure on transport rose from 12% to 28% of income. SMEs operating cost rise confirms Olaniyi & Ogunode (2024). The finding supports Welfare Theory: removal without efficient redistribution creates negative externality where private cost exceeds social benefit.

Thirdly, palliatives failed to cushion effect. Cash transfer reached less than 20% of target poor as per respondents, consistent with Mohammed & Ahmed (2023) who noted targeting errors and 73% exclusion. CNG buses limited to Abuja-Lagos corridor, wage award inconsistent. This explains why World Bank (2024) estimated 7 million additional persons fell into poverty despite N5.4trn savings from subsidy.

In sum, while subsidy removal is fiscally justified under Pigou's efficiency argument, short-term welfare loss is significant and redistribution mechanism is weak, leading to net welfare decline for low-income citizens in FCT.

A. Summary

This study examined the effect of petroleum subsidy removal on citizen welfare in FCT, Abuja. Using descriptive survey design, 372 valid responses were analysed with descriptive statistics and OLS regression. Anchored on Pigou's Welfare Theory, the study investigated transmission channels, welfare effects and palliative effectiveness.

Findings revealed that removal increased PMS Price from N198 to over N600, raising transport fares and cost of living significantly, reducing purchasing power and increasing poverty. Regression showed significant relationship (R^2=0.586, p<0.05). Palliatives such as cash transfer, wage award and CNG buses were rated ineffective due to poor coverage and implementation delays, failing to cushion hardship despite huge fiscal savings.

B. Summary of major findings

- Petroleum subsidy removal has significant negative effect on citizen welfare with 58.6% variation in welfare explained by removal (B=0.684, p=0.000).
- Major transmission channels are PMS Price hike, increased transport fare (Mean=4.59) and high cost of living/inflation (Mean=4.61) leading to reduced purchasing power and increased poverty.
- Government palliative measures were ineffective (Mean 2.18 - 2.71) due to inadequate coverage, politicization and slow implementation.

C. Conclusion

While subsidy removal is fiscally justified, its implementation without robust, targeted safety nets eroded welfare of low and middle-income earners in FCT. Welfare loss outweighs short-term fiscal gain.

RECOMMENDATIONS

- Government should redirect subsidy savings to functional targeted interventions: expanded conditional cash transfers with transparent biometric registry, effective mass transit CNG buses and sustainable minimum wage implementation.
- NNPCL and downstream regulators should ensure price competition and adequate supply to moderate pump price and prevent exploitative pricing.
- SMEs and vulnerable households should be supported with energy grants, tax relief and subsidized CNG conversion to reduce operating costs.

Suggestions for Further Studies

- Comparative study across geopolitical zones to assess regional welfare differentials post-removal.
- Longitudinal impact assessment of subsidy savings utilization on infrastructure, health and education outcomes.
- Evaluation of CNG adoption and cash transfer effectiveness using mixed methods and larger national sample.

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