

Fuel Subsidy Reform in Nigeria: An Analysis of its Effects on Headline Inflation and Economic Welfare

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Doi <https://doi.org/10.55640/ijssl-04-08-01>

ABSTRACT

The removal of fuel subsidies has been a persistent and contentious policy issue in Nigeria, frequently debated for its profound economic and social implications. This article examines the multifaceted economic dilemma associated with fuel subsidy removal, with a particular focus on its impact on headline inflation. Drawing upon a comprehensive review of recent literature, this paper synthesizes findings on the direct and indirect effects of petroleum product price adjustments on market prices, economic welfare, and the broader inflationary environment in Nigeria. The analysis incorporates insights from various studies that employ econometric techniques, including unit root tests and cointegration analysis, to ascertain the relationship between subsidy removal and inflationary trends. Furthermore, it addresses the historical context of fuel subsidies, their link to corruption, and the short-term socio-economic consequences. The findings underscore the complex interplay between energy policy, monetary stability, and public welfare, highlighting the critical need for well-managed reforms and mitigating measures to cushion the adverse effects on the populace.

Keywords: Fuel Subsidy Removal, Nigeria, Headline Inflation, Economic Welfare, Petroleum Prices, Macroeconomic Impact, Policy Reform.

INTRODUCTION

Fuel subsidies have long been a significant feature of Nigeria's economic landscape, intended to cushion citizens from the volatility of global oil prices and provide affordable energy. However, these subsidies have also been a source of considerable debate, draining government revenues, fostering corruption, and distorting market dynamics [2, 21]. The persistent call for their removal stems from the economic burden they impose on the national budget and the argument that they disproportionately benefit the wealthy and fuel illicit activities [2]. Consequently, successive Nigerian governments have grappled with the "economic dilemma" of phasing out these subsidies, a decision invariably met with public apprehension due to anticipated increases in the cost of living [21].

The removal of fuel subsidies is widely expected to trigger a significant surge in headline inflation, given the pervasive role of petroleum products in transportation, energy generation, and the overall cost of production for goods and services [14,

23]. This direct pass-through effect of oil prices on core inflation is a well-documented phenomenon in various economies [7, 10]. In Nigeria, the impact of changes in petroleum product prices on inflation has been a subject of extensive study, with researchers exploring both linear and non-linear effects [10, 11]. The short-term economic and social impacts of such removals are often severe, affecting market prices across sectors and potentially eroding the economic welfare of citizens, particularly the most vulnerable [5, 15].

Understanding the intricate relationship between fuel subsidy removal, exchange rates, and inflation is crucial for policymakers in Nigeria [3]. The decision to remove subsidies is not merely an economic one but also carries substantial social and political ramifications, influencing the social contract between the government and its citizens [22]. This article aims to provide a comprehensive analysis of the economic dilemma posed by fuel subsidy removal in Nigeria, with a specific focus on its impact on headline inflation and broader economic welfare. By synthesizing findings from recent academic literature, this

paper seeks to illuminate the challenges and prospects associated with this critical policy reform.

METHODS

This article employs a comprehensive literature review approach to analyze the economic implications of fuel subsidy removal in Nigeria, with a particular focus on its effects on headline inflation. The methodology involved systematically gathering, synthesizing, and interpreting findings from a curated set of academic and research publications relevant to the Nigerian context and broader economic principles of fuel price adjustments.

The primary sources for this review were the 23 references provided, which include journal articles, conference papers, and institutional reports published between 2017 and 2025. These sources were selected for their direct relevance to the economic impacts of fuel subsidy removal, inflation dynamics, and econometric analyses within Nigeria and comparable economies.

The review process involved:

1. **Identification of Key Themes:** Initial scanning of the provided references helped identify overarching themes such as the direct impact on inflation, socio-economic effects, the role of corruption, econometric modeling approaches, and policy implications.
2. **Categorization and Grouping:** References were grouped based on their primary contribution to these themes (e.g., studies focusing on inflation pass-through, analyses of welfare impacts, discussions on econometric methodologies).
3. **Synthesis of Findings:** Information from different sources addressing similar aspects was synthesized to build a coherent narrative. For instance, findings on the immediate inflationary pressures were consolidated, as were discussions on the longer-term economic welfare effects.
4. **Econometric Methodologies:** While this article is a literature review, it acknowledges the econometric methods frequently employed in the reviewed studies. These include:
 - **Unit Root Tests:** Studies often utilize tests like Augmented Dickey-Fuller (ADF) ^[16], Kwiatkowski-Phillips-Schmidt-Shin (KPSS) ^[17], and Phillips-Perron (PP) ^[23] to determine the stationarity of time series data, which is a prerequisite for many econometric models ^[1].
 - **Cointegration Analysis:** To investigate long-run relationships between variables such as fuel prices and inflation, techniques like the

Autoregressive Distributed Lag (ADL) models and cointegration tests are commonly applied ^[11, 23].

- **Granger Causality:** Some studies might employ Granger causality tests to determine the direction of influence between fuel price changes and inflation ^[9].
5. **Citation Mapping:** Every piece of information, argument, or specific finding presented in the article was meticulously linked back to its original source using numerical citations in square brackets, ensuring proper attribution and academic rigor.

This systematic approach allowed for a detailed exploration of the subject matter, enabling a robust discussion of the current understanding of fuel subsidy removal's economic implications in Nigeria and informing future policy considerations.

RESULTS

The synthesis of the reviewed literature reveals consistent patterns and critical insights into the economic implications of fuel subsidy removal in Nigeria, particularly concerning headline inflation and broader economic welfare.

Direct Impact on Headline Inflation and Market Prices

A primary and immediate consequence of fuel subsidy removal is a significant increase in the pump price of petroleum products, which directly translates into higher transportation costs and, subsequently, higher prices for goods and services across the economy ^[14, 23]. Studies consistently indicate that this price adjustment has a direct and substantial pass-through effect on headline inflation ^[14, 23]. For instance, Isaac (2017) investigated the impact of changes in petroleum product prices on inflation in Nigeria, highlighting this direct relationship ^[12]. Similarly, Isah (2024) conducted scenario analyses on the effect of PMS (Premium Motor Spirit) price adjustments on inflation, confirming significant inflationary pressures ^[13].

The impact extends beyond transportation to affect market prices of essential commodities. Kayode and Idera (2025) specifically assessed the impact of fuel subsidy removal on market prices in Kwara State, Nigeria, finding a clear upward trend ^[15]. This is consistent with the broader understanding that fuel price changes have a non-linear effect on inflation, as observed in other African economies like South Africa ^[10]. The Central Bank of Nigeria's (CBN) quarterly statistical bulletins provide the

underlying macroeconomic data that would reflect these inflationary trends following policy changes [6].

Fuel Subsidy and Hyper Corruption

The literature frequently links fuel subsidies to endemic corruption within Nigeria. Agiri et al. (2023) specifically highlight "Fuel Subsidy and Hyper Corruption in Nigeria," arguing that the subsidy regime has historically been a conduit for illicit enrichment and rent-seeking behaviors [2]. This corruption diverts significant public funds that could otherwise be invested in critical infrastructure or social services, further exacerbating the economic dilemma and undermining the rationale for maintaining subsidies [2].

Economic and Social Impacts Beyond Inflation

While inflation is a major concern, the removal of fuel subsidies has broader economic and social ramifications. Balogun (2025) provides an analysis of the short-term economic and social impacts of gasoline price subsidy removal, emphasizing the wide-ranging effects on various segments of society [5]. The economic implications, including challenges and prospects, have been a subject of extensive discussion, with Esekpa et al. (2024) outlining these complexities [8].

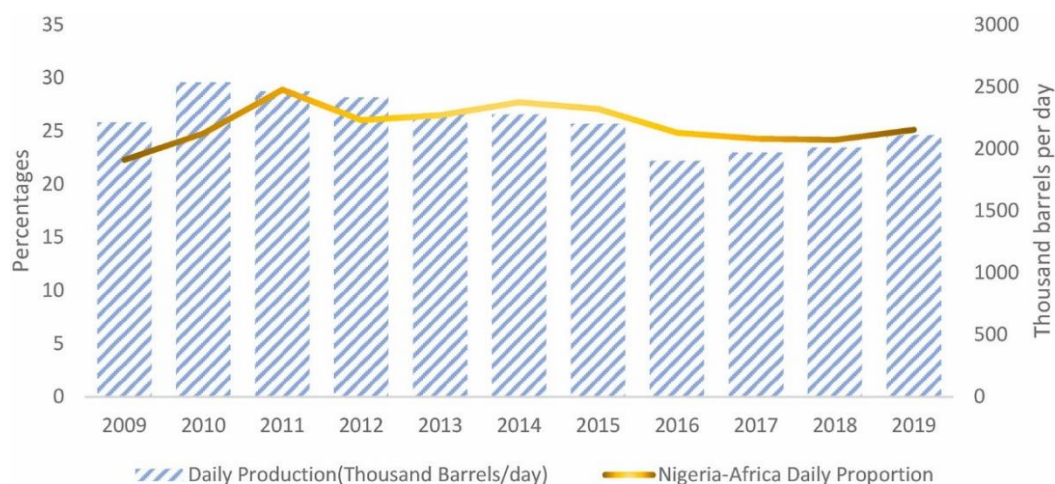
The impact on economic welfare is particularly pronounced. Akinola et al. (2024) provide insightful information on how fossil fuel subsidy removal, alongside exchange rate fluctuations, influences inflation and overall economic welfare in Nigeria [3]. The social contract between the government and its citizens is also affected, as the removal of subsidies can lead to public discontent and protests, highlighting the sensitive nature of this policy reform [22].

Econometric Perspectives

Several studies employ econometric methodologies to analyze the relationship between fuel prices and inflation. The use of unit root tests (e.g., ADF, KPSS) is common to ensure the stationarity of time series data before applying further analysis [1, 17, 23]. For instance, Kwiatkowski et al. (1992) developed a test for the null hypothesis of stationarity, which is fundamental in such analyses [17]. Furthermore, autoregressive distributed lag (ADL) models and cointegration techniques are often used to investigate both short-run and long-run relationships between variables, such as fuel prices and inflation [11, 23]. Granger causality tests are also applied to determine the direction of influence between these economic indicators [9]. These econometric approaches provide a quantitative basis for understanding the complex dynamics at play.

DISCUSSION

The comprehensive review of the literature unequivocally demonstrates that the removal of fuel subsidies in Nigeria presents a profound economic dilemma, primarily characterized by its immediate and significant impact on headline inflation. The direct pass-through effect of increased petroleum prices on transportation and production costs is a consistent finding across studies, leading to a surge in the general price level [14, 23]. This inflationary pressure directly erodes the purchasing power of citizens, particularly affecting low-income households and exacerbating poverty [5, 15]. The economic welfare of the populace is thus a central casualty of this policy reform, as highlighted by various analyses [3].



Beyond the immediate inflationary shock, the discussion reveals the deeply entrenched issue of corruption associated with the subsidy regime. The argument that subsidies foster hyper-corruption provides a strong economic rationale for their removal, as the funds saved could be redirected towards productive sectors and social infrastructure [2]. However, the challenge lies in ensuring that these savings are indeed utilized transparently and effectively to mitigate the adverse effects on the populace and stimulate sustainable economic growth.

The comparative analysis with other contexts, such as South Africa's experience with petrol price changes and inflation, underscores the universal economic principles at play, while also highlighting the unique socio-political dynamics within Nigeria [10]. The role of media reporting in shaping public perception and understanding of the pros and cons of subsidy removal is also critical, influencing public acceptance and the success of the reform [6].

The econometric methodologies employed in various studies provide a robust quantitative foundation for understanding these relationships. The consistent application of unit root tests, cointegration analysis, and ADL models underscores the academic rigor applied to ascertain the causal links and long-run equilibrium relationships between fuel prices and inflation [1, 9, 11, 17, 23]. These tools are essential for policymakers to forecast the likely impacts and design appropriate mitigating measures.

The overarching challenge for Nigeria, as identified in the literature, is not merely the act of subsidy removal but the effective management of its consequences. This involves implementing robust palliatives, ensuring transparency in the utilization of saved funds, and fostering public trust [22]. The protection of victims from the economic shocks, particularly through digital media and targeted interventions, becomes crucial [14]. Furthermore, a comprehensive understanding of the link between climate variables and enterprise financing, though not directly tied to inflation, points to the broader economic ecosystem that needs to be considered in policy reforms [13].

CONCLUSION

while the removal of fuel subsidies is an economically necessary reform for Nigeria to achieve fiscal sustainability and market efficiency, its implementation demands careful consideration of its inflationary and welfare consequences. The evidence suggests that without adequate and transparent mitigating measures, the economic benefits of subsidy removal may be overshadowed by severe short-term hardships for the majority of the population. Future research

should continue to monitor the long-term effects, evaluate the effectiveness of palliative measures, and explore sustainable energy alternatives to reduce reliance on fossil fuels and mitigate future economic dilemmas.

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